MAKING ORGANISATIONS FIT TO DRIVE DESIRABLE FUTURES

WHITE PAPER
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EXECUTIVE SUMMARY

In an era of relentless change, many organisations are ill-prepared to make strategic decisions and deliver at pace. Based on more than a decade of research, this paper shows that driving desirable futures requires an integrated set of practices for detecting, sensing and acting on change in a manner that is aligned to the rate of change in the environment in which the organisation operates. The paper also shows that future FITness leads to superior firm performance in the mid-term. Future FITness refers to the ability of an organisation to create foresight, innovation and transformation (FIT) advantages.

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1. WELCOME TO THE DIGITAL AGE
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1.1. THE NEED TO TAKE MORE COMPLEX DECISIONS FASTER

The digital revolution is increasing the complexity of environments that businesses operate in, and the expectations placed on organisations.

Technology innovations such as artificial intelligence (AI), blockchain and biotechnology are on an exponential growth trajectory. Large data sets are being used to develop future products and influence real-time decisions, despite concerns about security, ownership and ethical use of data. The integration of physical machinery with Internet-connected sensors and software systems, and the use of 3D printers to manufacture finished parts and goods is disrupting traditional supply chains. In such dynamic environments, the ability to change direction to commercialise opportunities that may be outside an organisation’s core becomes highly valued.

There is also a growing expectation that business must play its role in delivering improvements in the lives of customers and employees and protecting the environment, not merely deliver shareholder value. Ongoing improvements in healthcare imply that we will live healthier for longer, but many elderly people have worryingly low levels of savings and income. Many pension schemes are also underfunded, and healthcare costs continue to rise, with unequal access an ongoing challenge.

As we live and work longer, more career transitions will be necessary to upskill, reskill and balance shifting demands.

The scale of consumerism and urbanisation continues to place our ecosystem under significant strain. Today, just 100 corporations produce 71% of greenhouse-gas (GHG) emissions. The wealthiest 10% of people are responsible for around 50% of GHG emissions, while the poorest 50% produce 10% of emissions. By 2030, it is expected that nearly 5 billion (61%) of the world’s 8.1 billion people will live in cities. The majority will live in megacities (i.e. cities with a population of 10 million or more) concentrated in Asia and Africa. Geopolitical tensions have led to a doubling in the number of migrants seeking refuge since 2000. The myriad of intertwined global developments will pose for organisations new challenges on how they are creating desirable futures for themselves and the societies within which they operate.

The complexity of decision making and the need to take decisions at pace, often without complete information, poses a significant challenge for businesses. Research on the long-term survival of established firms in the 1980s shows that average company life expectancy was around 42 years. Since then, longevity of well-established, market-leading firms has fallen even further, to 20 years on average.
It is expected that the lifespan of a company on the S&P 500 will shrink to just 12 years by 2027. Thriving businesses will have to be built on both the ability to understand and **profit from complexity** as well as **speed in decision-making and execution**.

**1.2. WHY ORGANISATIONS FAIL TO CREATE DESIRABLE FUTURES**

In a world where taking complex decisions at pace is an imperative, creating superior market positions requires an approach that adapts the current source of advantage to disruptive change while dynamically seeking new sources of advantage. This calls for organisations to embrace change, learn continuously, and take an active role in shaping the future. Yet, many are unprepared. Reasons for this include:

- **Short-termism**
  
  Financial rewards are often based on targets being met. Investments made to achieve those targets are accompanied by reputational and career risk. It is therefore unlikely that the manager who must act as a champion for current solutions will question whether they are suitable, even when new products, service, and business models may be required. Promotion decisions may also emphasise current financial performance over one’s ability to create growth and high profit options. In such situations, it is unlikely that an individual will invest in new opportunities that will take time to mature, especially if the current path is successful.

- **Lack of tangibility of the factors that threaten survival**
  
  Many managers and their boards judge company performance by quarterly or annual financial figures. These are lag measures. They are backward-looking, indicating whether the goal has been achieved. In a constantly changing environment, it is more meaningful to assess whether it is likely that a goal will be achieved, so course corrections can be made. In times of industry evolution and change, selecting measures that indicate progress on dimensions that an organisation can control is critical. These forward-looking indicators help an organisation to make sense of what levers they can pull to drive the achievement of goals.

- **Failure to interpret the key drivers of change**
  
  Many organisations have mature systems and capabilities to identify signals of change but fail to scan broadly enough. Inefficient flow of information, narrow or outdated assumptions, or decision-making biases (e.g. status quo bias, confirmation bias) may contribute to this. Regardless, managers must move from detecting changes to making sense of them. They must align various stakeholders on the significant opportunity or threat for the business to motivate action at pace. Yet significant energy tends to be dedicated to urgent tasks, or to building consensus, leading to decreased capacity to interpret and understand drivers of fundamental change.
change and slowness to respond. The halo effect may also exist, which is the belief that someone who has succeeded before will be able to make any initiative work.

**Failure to experiment and learn from failure**

Several biases influence ability and willingness of individuals at all levels in an organisation to learn from failure. For example, attribution bias leads people to believe that success is the result of hard work and skill, while failure is the result of bad luck. Those with a good idea might not take the risk for fear that they might damage their career. This leads to loss aversion, a tendency to act in order to minimise loss, rather than playing to win\(^\text{10}\).

In complex, rapidly changing environments, experiments within clearly defined parameters are an effective way to assess opportunities. Facebook and YouTube started out as dating-site experiments, but pivoted to something more unique when that experiment failed due to an apparently over-crowded market\(^\text{11}\). If people perceive that failure is equivalent to incompetence, they will invest minimal effort to get better through effort and practice. This will make them less able to move forward with confidence as circumstances change.

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2. HOW ORGANISATIONS ATTAIN SUPERIOR POSITIONS IN MARKETS OF THE FUTURE
2.1. RESEARCH OBJECTIVES AND DESIGN

EDHEC conducted rigorous, groundbreaking research to better understand how organisations achieve consistent returns in the face of external changes, and to identify best practices across industries. A particular emphasis of our research was to understand how organisations overcome the seemingly unsurmountable dilemma of building strategic agility in the short term, while persistently developing, often over many years, the most promising growth opportunities.

To measure consistency of organisation performance, we used the S&P Capital IQ database to capture:

- **Profitability (EBITDA)**: earnings before interest, taxes, and the depreciation adjustment of the organisations in 2015

- **Market capitalisation growth**: market valuation difference between 2008 and 2015.

This longitudinal research design is consistent with the aims of the study. The practices of more than 300 companies were examined, and were selected on the following criteria:

- Annual revenues above €100 million, which was a measurable indicator of being able to observe practices to address change at an organisation-wide level

- Multinational European companies

We introduced the concept of future FITness to compare the relative need for practices that enable organisations to attain a superior position in future markets with the ability of organisations to attain such positions. The aim of this was to consider cases where a relatively stable environment would imply less need for such practices, which allowed us to control for industry differences. We defined four states:

- **Vigilant**, organisations whose practices are adequate for its given environment

- **Neurotic**, organisations whose practices exceed the needs of its given environment

- **Vulnerable**, organisations whose practices fall considerably short of what would be required to match the need

- **In danger**, organisations whose practices fall significantly short of what would be required to match the need

To identify best practices, we first highlighted outperformers: organisations that performed significantly better than their industry peers. These were identified within industry-specific performance clusters, to eliminate the error that an organisation may be assessed as an
outperformer merely because it was in a more profitable industry than others.

We examined the relationship between outperformance and likelihood of an organisation moving up the performance ranking in their industry performance cluster, seeking causal evidence through interviews, public sources and research reports.

The link between future preparedness and firm performance is even more pronounced when looking at growth. Here the vigilant firms outcompete the average by a 200% higher market capitalisation growth rate. This indicates that investors value future preparedness as a predictor for future firm performance. Less prepared firms might be superior in maximising short-term profitability, but as our longitudinal study shows, when looking at a 7-year timeframe, future preparedness is a strong predictor of firm performance on profitability and growth.

As Figure 1 shows, vigilant organisations achieved, on average, 16% profitability, which surpassed the overall industry average profitability of 12%. Vigilant organisations also experienced 33% more market capitalisation growth than the average. In contrast, neurotic and vulnerable organisations had 37% lower profitability when compared to the profitability of vigilant organisations. In-danger organisations realised a 44% lower profitability.

In general, our findings suggest that aligning practices to the needs of the environment leads to performance benefits. We found that 3 in 4 organisations are not prepared for the pace of change in and around their industry, and therefore fail to systematically build superior positions in markets of the future. In contrast, vigilant organisations are ready to maximise their positions in markets of the future, and thereby ensure growth and longevity.
2.2. 3PS OF FUTURE FITNESS: PRACTICES OF VIGILANT ORGANISATIONS

Our research highlights three inter-connected, observable practices that enable vigilant organisations to transform signals into insights, which inform new courses of action:

- **Perceiving**, which enables an organisation to detect changes. The aim is to identify signals ahead of competitors to gain a foresight advantage.

- **Prospecting**, which enables an organisation to make sense of detected changes. The aim is to identify tipping points and invest once the time is right, to gain an innovation advantage.

- **Probing**, which enables an organisation to act on insights from prospecting. The aim is to legitimise and starting a new course of action, mainly through experimentation. It provides a transformation advantage.

We refer to these as the 3Ps of Future FITness (Figure 2). FITness refers to the ability of an organisation to create foresight, innovation and transformation advantages. We will look at these in more depth next.

### Perceiving: Creating a foresight advantage

In perceiving, often also called scanning, the company seeks to identify factors that are affecting its industry and operating environment today and anticipate new factors that may affect it in the future. It involves:

- Scanning broadly, across a variety of qualitative and quantitative sources to identify the factors and forces of change

- Building a continuous scanning process to explore how the confluence of forces may impact current models, instead of examining each force separately

- Building scouting networks or create specific learning journeys that allow the company to generate first-hand information and collect exclusive insights

Cisco is a prime example of perceiving. Traditionally, Cisco relied on acquisition of start-up companies to fuel its innovation pipeline. After the financial crisis, Cisco struggled to acquire key companies before their competitors. In 2011, the Cisco Business Development function created a Corporate Technology Radar to identify and monitor key technology trends and identify leading companies. The continuous scanning activities involved many different internal units including the engineering department, sales and marketing functions and corporate business development.
The permanent radar allowed to create a common frame of reference and align research, development and venturing activities across the different Cisco business and drive business development (Figure 3).13

Prospecting : Creating an innovation advantage

Prospecting is when a company anticipates how its industry might look like in the mid-term future and how it can win competition there. In changing environments, identifying a superior course of action that is distant from the status quo of the industry and adds value to customers provides an innovation advantage. This requires creativity, imagination and visioning.

Achieving this involves:

- Anticipating changes in the value chain
- Examining unexpected effects or unintended consequences of stakeholder actions
- Challenging basic assumptions about how competition is won
- Preparing alternative narratives of the future and alternative winning business models across multiple futures

Bosch has understood that in uncertain environments traditional practices are doomed to fail in creating winning positions. As one of the leading automotive systems suppliers, Bosch systematically consolidates assessments about technologies and market trends across its business and functional units. Bosch uses scenarios at the corporate and business unit level to examine the impact of different futures on current strategies. These can be quantified, enabling more efficient and robust strategy development.14

Vigilant organisations work under the assumption that strategies can no longer be fixed for 3 or more years. They engage in continuous strategising where progress is regularly monitored and changes quickly implemented, which creates an innovation advantage.
advantage. To facilitate this process, they leverage a very different but re-usable set of tools from traditional strategy processes (Figure 5):

- **Radar of change drivers**: Such a radar is used to track a large number of change drivers and communicate them across the organisation. They also form the basis for developing scenarios, and by monitoring them over time, they also act as a dashboard that provides an ongoing robustness check for strategic actions.

- **Shared future outlook**: This consists of scenarios and their quantitative impact on business lines. While change drivers are often updated every 3-4 months, the scenarios are stable and allow synchronising the strategic discussion across regions and business units.

- **Pre-developed multiple alternative strategies**: A business traditionally would implement only one strategy which often has been the result of a long and intensive strategy and negotiation process. However, vigilant organisations deliberately pre-think alternative consistent strategies. There are three reasons for this. The first is the need to fight the ‘force of gravity’ towards the current strategy. Once alternative strategies are pre-defined it becomes much more likely that management can agree to also more radical changes in strategy. The second reason is that it is often necessary to consider different strategies in home and/or core markets versus secondary markets or lag-markets, which are not as mature as the primary market. The third reason to have alternative strategies is the ability to better analyse competitor intentions. Today, such rivals are often digital disruptors.

**Probing: Creating a transformation advantage**

In probing, the aim is to move from identifying and understanding future solutions (perceiving and probing) to real-world testing of these solutions. Such iterative practical experiments may take the form of developing or acquiring a key technology, experimenting with new solutions in trial markets, creating intrapreneurship units or internal venture funds. Many organisations today have created acceleration and venturing units but only few have succeeded in creating significant
value from them. In contrast, vigilant organisations emphasise either a very close link to prospecting and their strategy work or emphasise autonomy and build market feedback loops.

Axel Springer, a traditional media company, understood that they could not rely on traditional resources and capabilities to enter the digital age. The probing approach at Axel Springer was built around a multi-level external venturing process, which has created significant value and allowed Axel Springer to be among the leading digital media companies (Figure 5). Other vigilant organisations aim to create a self-reinforcing cycle between probing and prospecting by connecting their venturing activities with their strategy work. This typically involves taking only minority stakes in external ventures and start-ups and using those stakes to identify opportunities and identify key capabilities for winning in the future of their industry.

A new paradigm

The practices of vigilant organisations form a self-reinforcing system, which creates many benefits for the organisations that can build it. As Figure 6 shows, these practices are distinctively different from traditional strategy approaches, and offer unique advantages to address the challenge of making complex decisions quickly despite incomplete information.

The reusability of the set of tools creates a common framework and language about the long-term future that enables strategy development cycles for which less and less time is required. It also creates alignment among multiple stakeholders on the drivers of change and uncovers hidden assumptions about the way things work. This allows organisations to prepare for threats and predefine strategic responses that have not yet materialised. Similarly, it allows them to grasp opportunities earlier, which is often crucial to gain access to scarce resources and secure favourable positions quicker than rivals. This relies on internal expertise and experience, which reduces the dependence on external consultants over time, and triggers continuous learning.
Those who are able to develop an integrated corporate foresight system build a valuable and rare capability, strategic agility. This is difficult to imitate and thus creates a stable source for competitive advantage. Size or market dominance may offer a temporary advantage for a slower, less capable rival. However, in volatile, uncertain, complex and ambiguous environments the ability to perceive, prospect and probe is imperative for superior firm performance.

Figure 6: Comparing traditional scenario development with strategising based on Future FITness

<table>
<thead>
<tr>
<th>Traditional Strategy Development</th>
<th>Future FITness Strategising</th>
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<tbody>
<tr>
<td><strong>Optimisation</strong></td>
<td><strong>Rapid Iteration</strong></td>
</tr>
<tr>
<td>Best-suited to stable environments where market and competitor data can be relied on. Value is created by choosing options that optimise shareholder value.</td>
<td>Best-suited to volatile, uncertain, complex and ambiguous environments or new markets for which data availability is poor. Value is created through foresight and test-and-learn approaches that satisfy multiple stakeholder requirements.</td>
</tr>
<tr>
<td><strong>Linear</strong></td>
<td><strong>Continuous</strong></td>
</tr>
<tr>
<td>Tried-and-tested process that results in clear response recommendations</td>
<td>A set of tools (radar, scenarios, alternative strategies) is regularly updated which enhances speed of changing from one strategy to another</td>
</tr>
<tr>
<td><strong>Limited</strong></td>
<td><strong>Multi-faceted</strong></td>
</tr>
<tr>
<td>Top management team typically involved, or activity delegated to member of top management team</td>
<td>Engagement across organisational levels and functions with tools</td>
</tr>
<tr>
<td><strong>Constant</strong></td>
<td><strong>Decreasing</strong></td>
</tr>
<tr>
<td>Large-scale strategy development efforts on an annual cycle</td>
<td>Regularly updated tools reduce the data collection and analysis effort</td>
</tr>
<tr>
<td><strong>Limited</strong></td>
<td><strong>High</strong></td>
</tr>
<tr>
<td>Can be one-off projects outsourced to consultants</td>
<td>Multiple stakeholders rehearse the future</td>
</tr>
<tr>
<td><strong>Low to Medium</strong></td>
<td><strong>High</strong></td>
</tr>
<tr>
<td>Limited to the time it takes to execute a strategy development project</td>
<td>Alternative strategies tested under multiple scenarios increase speed of decision making and execution</td>
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2.3. 3PS IN ACTION: GE CASE STUDY

Our research on vigilant companies suggests that creating a superior position over time requires an integrated approach to perceiving (detecting changes), prospecting (making sense of changes) and probing (acting on insights).

An interesting example that ties the 3Ps together is General Electric (GE). In 2004, GE launched a search processes for new growth opportunities. One of the key change drivers identified through perceiving was water scarcity. GE had no investments in the water industry at that time. Many could have dismissed this as an opportunity. However, prospecting involved matching opportunities to capabilities that if redeployed could provide an advantage. In GE’s case, business development quickly confirmed that the energy sector had many customers that faced water scarcity and that technologies from the oil and gas sector could be redeployed to create water solutions. This led to a major probing effort in which GE’s strategic research center developed a demonstrator plant for a new generation of desalination plants. With the encouraging feedback from current and prospective customers the opportunity was pursued further through the acquisition of two companies that complemented GE’s capabilities and a new business unit “Energy and Water” was formed. This business unit became the most profitable with an EBITDA contribution of 31% while accounting only for 16% of the revenues (Figure 7). In October 2017, the water and process technologies division was sold to multinational water management firm SUEZ for $3.4 billion, in part due to the overlap of product lines with Baker Hughes, which merged with GE earlier that year.

Figure 7: Illustrative case for the 3Ps. GE’s creation of its water business

2.4. FUTURE FITNESS TOOLKIT

Vigilant firms build success through integrating their perceiving, prospecting and probing practices, which forms a self-reinforcing system that is more than the sum of its parts. Figure 8 below illustrates how various tools in each of the 3Ps can be used to create Future FITness.

Vigilant organisations understand that scanning for signals (perceiving) is most valuable in areas that they know least about and may prove an existential threat to their business. For example, a chemical company will often have well-developed sensors to detect competitor developments in its core technologies but might fail to scan for substitution technologies.
Vigilant firms will use formal sources, like patent databases, and informal sources, like talking directly with researchers instead of relying on a patent being filed. Deutsche Telekom for example leverages an international network of scouts based in the Silicon Valley, Israel, China, India and Berlin to identify change drivers ahead of competitors.\(^{15}\)

Detecting trends and signals must then be translated into consequences for the business and/or industry (prospecting). Technology radars or opportunity radars, that map existing technologies or market opportunities into a standardised one-page overview, creates a common frame to diagnose issues that bridge functional (vertical) and hierarchical (horizontal) divides and make decisions at pace. Cisco has developed a company-wide radar that helps to spot and monitor highly disruptive technologies early. It is even used as an interface to customers (Figure 3).

Vigilant firms with a broad set of technologies and/or markets would typically integrate the scanning and radar activities with portfolio management in R&D. This ensures that R&D investments are allocated appropriately towards future growth potential. To drive innovation in new business fields and deliver breakthrough innovations, vigilant firms regularly run matching and roadmapping exercises. Matching exercises are typically workshops used to match technologies to customer needs. It can take the form of crowd matching, where the community of engineers interact with the community of product managers and customer-facing marketing and sales professionals through an online system, building on each other’s ideas and engaging in healthy debate. The output from matching can be used to create transparent strategic roadmaps on how technologies may be used to add value to customers. These are widely distributed to allow those not directly involved in R&D to find their opportunity to contribute. Philips used these techniques to develop a roadmap for the high-end segment in television. The process improved cross-disciplinary team building and communication as market, product, technology and customer needs were triangulated. The roadmap revitalised the innovation pipeline, informed product ranges and production processes that ultimately saved the firm from bankruptcy.

Strategic roadmapping can be further enhanced by scenario planning. Scenarios represent plausible narratives of the future. They allow roadmaps to be visualised relative to the position that a firm wants to attain in future markets, rather than being limited by current positioning. These form a stable platform from which to discuss competitors’ actions and the organisation’s strategic initiatives in future contexts.\(^{16}\)

Vigilant firms accelerate execution of business ideas (probing phase) in various ways. Internal venture units or acceleration programmes allow building of new businesses in areas where growth through mergers and acquisitions is not available or financially not viable. Working with external partners is also common. Vigilant firms do not use broad scans to find partners. Instead, they use laser-like search, highly focused on finding the best partner on specific criteria.

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3. HOW EDHEC CAN HELP
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We believe that organisations as we have built them for stable environments are ill-equipped for the era of relentless changes that they face today. Change creates challenges, but also opportunities. The ability to embrace and profit from change will separate winners from the losers in the 21st century.

Over more than a decade we have studied organisations that profit from change. This has led to the development of a maturity model to examine the future preparedness of organisations and a comprehensive set of practices for enabling foresight, innovation and transformation (FIT).

The Chair for Foresight, Innovation and Transformation (FIT) has developed an integrated model on the practices that allow organisations to drive desirable futures. Through research, continuous development and projects, we aim to increase understanding of the Future FITness of an organisation, which has been proven to be an important predictor of organisation performance.

3.1. RESEARCH

The chair can leverage a research programme started in 2006. Over 450 organisations have been benchmarked to date. New methods, best practices, in-depth case studies of Future FITness spanning several years are in use around the world in academia and practice.

Going forward we will pursue three development paths:

- Building an **Indicator for Future FITness** which compares the maturity of an organisation with its need to innovate and transform, which is influenced by environmental complexity, volatility, hostility and its own strategic ambition. Such an indicator can then be used to provide a concrete, timely view on the Future FITness of business units, organisations in different industries, nations and regions.

- Offering **Benchmarking as a service** to provide practical insights and opportunities for cross-fertilisation of ideas through Future FITness, benchmarking.

- Creating a **best-practice library** which provides details on Future FITness.
methods, tools and approaches, and support mechanisms to embed them.

3.2. CONTINUOUS DEVELOPMENT
We illustrate the fundamentals of foresight, innovation and transformation through courses and seminars on planning and decision-making under uncertainty, scenario planning, trend management, business model innovation and venturing. We are uniquely placed to share in-depth stories of how large organisations have navigated the opportunities and challenges posed by disruptive change over recent years.

3.3. PROJECTS
We conduct ‘Future of...’ projects with partners to study transitions (e.g. digital transition), explore new markets and businesses and identifies business opportunities and threats. These projects typically run for 6 to 12 months and provide a safe environment to critically challenge core assumptions, explore diverse perspectives on trends and drivers of change, and develop a roadmap to navigate increasingly unpredictable evolution of value chains.

A customised dashboard with leading indicators further provides partners with an early warning system and the ability to trigger timely organisational responses.

Figure 8: Executive Education - status and planned future courses

<table>
<thead>
<tr>
<th>Scenario Planning</th>
<th>Future of...</th>
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<tbody>
<tr>
<td>3-day training for tool based and intuitive scenario planning</td>
<td>Trainings based on ‘Future of...’ projects of the chair</td>
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<tr>
<th>Corporate Foresight</th>
<th>Business Wargaming</th>
</tr>
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<tbody>
<tr>
<td>4-days training on trends, scenario planning and strategizing under uncertainty</td>
<td>2-day training for planning, running and using wargaming for strategizing</td>
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Done Planned