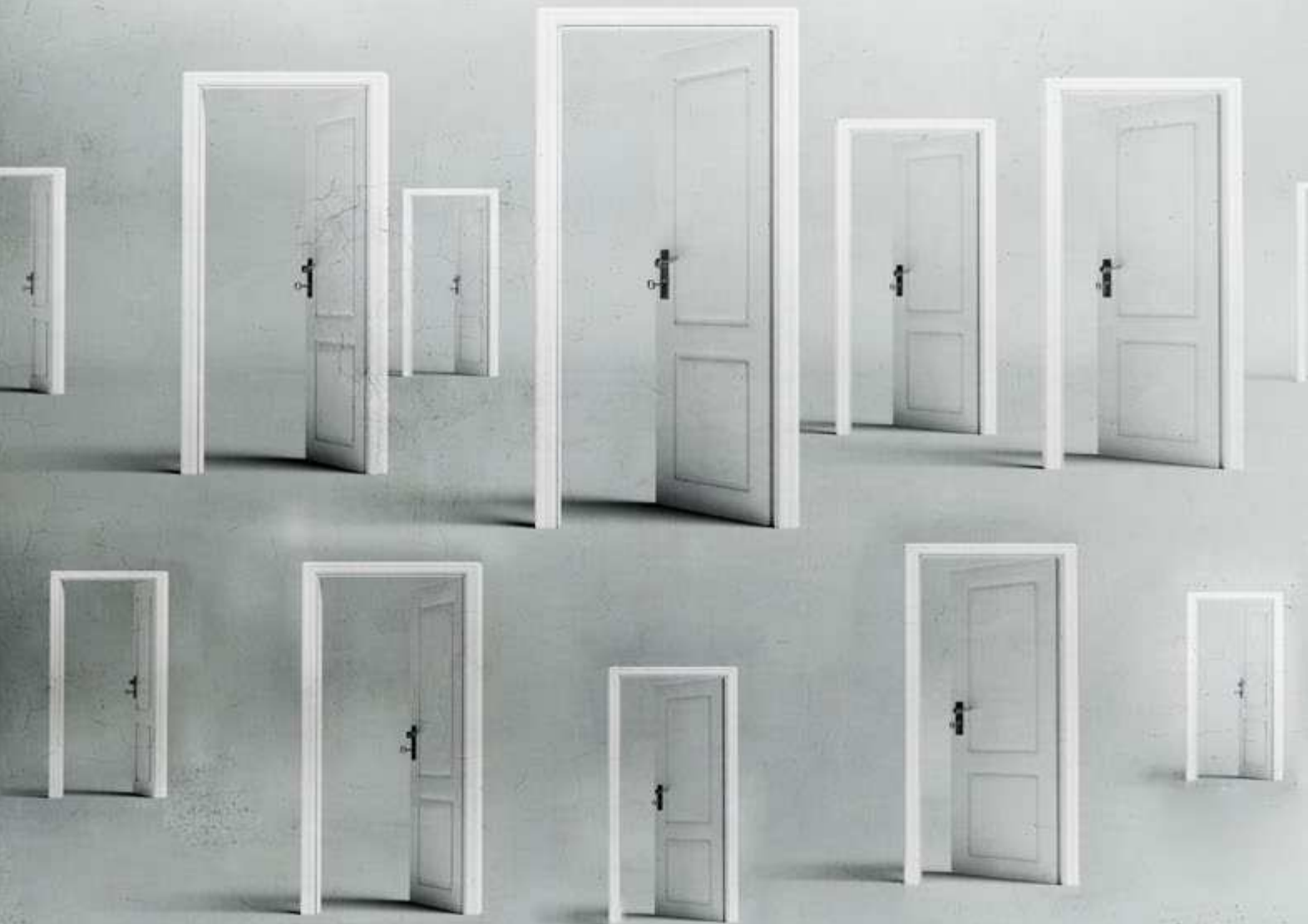


Nobody knows what the future holds in store. How, then, should businesses prepare for the mind-boggling array of scenarios that might arise in the coming years? It turns out there are ways to reduce the risk of being mauled by the savage beast of the unexpected, as this intriguing article explains.

# CORPORATE FORESIGHT IN AN EVER-TURBULENT ERA

BY ALEX FERGNANI, ANDY HINES, ALESSANDRO LANTERI AND MARK ESPOSITO



### Foresight as an indispensable firm capability

Recent global developments have led many firms to be more attentive to potential surprising future events. As a result, they are devising new business models and product lines that allow them to perform well even in the midst of disruptions or crises. Exploring the future is becoming an intrinsic part of business intelligence. However, this practice is not new. More and more corporations are systematically looking into the future to change their current offerings and make them more “future-prepared”, with varying degrees of success. The Mercedes Benz S-class, for instance, had prototypes of customisable perfume generators, air balance ionisation, and massage functions. It was one of the many products that emerged from Daimler corporate research on the future of mobility and its implications for the automotive industry – work that has been going on since 1979<sup>1</sup>.

At Philips, a similar research unit has been scanning since the 1990s for potential societal discontinuities that could change consumption patterns in the future. Among the many prototypes envisioned and developed by this unit was Ambilight, an LCD screen that projects its light beyond the television and onto the wall, allowing the user to enjoy a movie-theatre-level experience at home<sup>2</sup>.

Efforts like these comprise *corporate foresight*, the capability of an organisation to interpret changes in the business environment, outline and evaluate plausible future based on these changes, and to use that information for sustainable competitive advantage<sup>3</sup>. Using corporate foresight, organisations can reconfigure their strategy based on the analysis of business opportunities suggested by future possibilities.

We have seen an upsurge in interest in, and implementation of, foresight in organisations all over the globe<sup>4</sup>. Companies have begun recognising that the VUCA (volatile, uncertain, complex, and ambiguous) world is not an

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anomaly but a consistent feature of the business environment. Corporate foresight is increasingly relevant, because it offers a response to this environment; it systematically analyses contrasting signals of change that make the environment erratic. It synthesises them into plausible futures that, in turn, can be used to derive strategic guidelines and options. In other words, it decomposes the VUCA world into future states that can be anticipated and prepared for<sup>5</sup>.

Leading firms globally are embedding the use of foresight in their organisational routines. UPS uses foresight, building and regularly revising ten-year scenarios to aid its corporate strategy and to sense innovation opportunities<sup>6</sup>. Shell has been using foresight, regularly creating tiered future scenarios since the 1970s to support decision making<sup>7</sup>. Disney has been using foresight since 2012, establishing 15 teams across 10 geographical regions, specifically tasked with analysing the emergent opportunities for the company by exploring the futures of talent, consumers, childhood entertainment, government, and wellness. It has been transforming the company culture and allowing it to face the rapidly changing environment of the entertainment industry<sup>8</sup>.

What these firms and many others have in common is that they use corporate foresight to complement strategic management in order to

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respond to the uncertain dynamics of doing business today. Corporate foresight is a procedural component that affects and reshapes the *modus operandi* behind ordinary activities of the firm and improves the chances for long-term survival and success.

However, as corporate interest in foresight is increasing and many firms are starting to get acquainted with the concept, they are using it in a piecemeal, rather than integrated, fashion. This article provides an account of how foresight can be successfully implemented. We organise this account according to three related themes: what corporate foresight is and is not; what the benefits of corporate foresight are; and guidelines on how to start with, and be proficient at, corporate foresight.

### What corporate foresight is and is not

Corporate foresight is a set of capabilities guided by systematic methods to explore the futures of the business environment and the implications for the firm. Traditional corporate planning is also concerned with the future, but corporate foresight differs from corporate planning in a substantial way. Better yet, corporate planning and corporate foresight are complementary (see table 1)<sup>9</sup>.

At the most basic level, corporate foresight activities can be organised into three sequential stages, or components: *scanning*, *futuring*, and *reconfiguring*. Corporate foresight methods can be categorised under these three foresight components (table 2), and used in a modular fashion according to context.

Several companies do some forms of *scanning*. Scanning is referred to in many ways, e.g. horizon scanning, environmental scanning, trend analysis, trend spotting, looking at the fringes, etc. It generally involves detecting patterns and trends in the business environment that can point to change, discontinuities, or disruptions that could impact the future of the firm. But scanning is not enough; it is just the first component of foresight. It is followed by the second component, *futuring*, when a firm creates and analyses plausible futures synthesised from the information emerged from scanning. Finally, there is the third

component, *reconfiguring*, when the firm uses information about these futures to guide systematic strategic change. Only when *scanning*, *futuring* and *reconfiguring* are implemented together and in sequential order, can we say that a firm is practising corporate foresight in full.

A proficient corporate foresight capability, including these three components and no less, can help companies to maintain competitive advantage over the long term. Shell, for instance, not only scans the environment, it also uses the scanned material to build several plausible futures: global scenarios to depict the futures of energy at the global level, 'focused' scenarios to depict the reverberation of the global scenarios at the local level, and project scenarios to depict the relevance of the global and focused scenarios on specific projects.

This multi-futured approach allows Shell to have multi-pronged options for further investment and to be prepared for any eventuality, including potential impending risks such as pandemics and political impasses<sup>10</sup>.

Using only scanning procedures might limit the firm to less-sophisticated exploration of the future, more akin to prediction. In the late 90s, Nokia used environmental scanning to look for potential technological discontinuities in the business environment. The information gathered via scanning spurred the firm to project that mobile phones would soon include functions from digital industries such as MP3, GPS, internet browsing, office suites and games. Nokia then used roadmaps to determine technological developments that would allow the company to lead in that space. This eventually led to the development of the Symbian operating system and a new series of phones (the N-series)<sup>11</sup>. But since the company didn't explore possible futures, it didn't take into account a possible scenario: the emergence of the online app market. This gave leeway to new market players in this space, such as Apple and Google. As the company had gambled on a single future, that of the multifunctional digital industry embedded

## SCANNING

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in mobile phones, it wasn't prepared for additional future possibilities. Between 2008 and 2010, from the position of market leader, Nokia's Symbian market share dropped from 52 percent to 32.6 percent, and its smartphone sales were matched by those supporting the Android system. This downfall might have been avoided with a comprehensive foresight approach, including the creation of plausible futures and the deployment of strategic reconfiguration based on information from these futures.

In view of this explanation, many managers might believe they are already practising foresight, considering in their heads impactful trends and possible scenarios of the business environment emerging from those trends. But that is not foresight either. Foresight is not a process in the minds of decision-makers; it is not a conscious or subconscious thought experiment. In its ideal form, foresight is an activity involving individuals from all levels of the organisation. Ideally, it also includes representatives of communities of interest outside the organisation, in a series of interactive, participatory and dialogic exercises where the futures are crafted and negotiated in an iterative manner. Research on foresight practices in UK-based technology firms such as Interlab, Kemitech and Mercury has revealed that foresight is an open-ended, continuous, and contextual practice of negotiations about the futures<sup>12</sup>. At a bare minimum, these practices involve specialised teams in an organisation, with the role of reporting their foresight intelligence output to the organisation at large for further usage.

### The benefits of corporate foresight

Practising foresight can bring a number of benefits to an organisation. At the individual level, it allows organisation members practising foresight to have a better grasp of the *future complexity*<sup>13</sup> of the business environment, 'decomposing' it into readable chunks of information, and translating it into potential future states. This process *challenges their mental models*, the assumptions about how the future will unfold, making foresight practitioners more prepared for disruptive future conditions of the business environment, while also enhancing creativity.

But the most crucial benefits of foresight are those to the organisation as a whole. That is, foresight allows an organisation to be more prepared for potential futures. Longitudinal research by

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Rohrbeck and Kum<sup>14</sup> has shown that firms that implemented appropriate corporate foresight practices related to their business environment in 2008 were more profitable and enjoyed a significantly higher market capitalisation in 2015 than those that didn't. Firms practising corporate foresight become more prepared for the futures, increasing their chances of long-term survival and success. This is because corporate foresight allows a firm to identify new business opportunities or spurs it to abandon unprofitable ones.

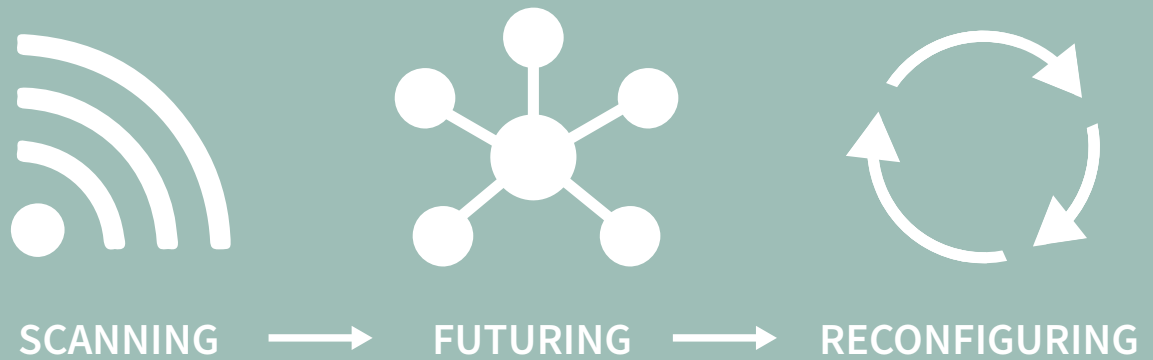
At Daimler, corporate foresight activities investigating the futures of mobility enabled the company to see that improving the living and sleeping conditions of truck drivers could serve as a source of competitive advantage against competitors. This led

**Table 1. Differences between corporate planning and corporate foresight**

	Corporate planning	Corporate foresight
<b>Epistemology</b>	The future is predetermined and predictable	The future is open to possibilities and can be shaped
<b>Outcome</b>	Single-point estimate	Complex scenarios
<b>Time horizon</b>	Short-term future (1-5 years)	Long-term futures (5-50 years)
<b>Involvement</b>	Upper management	Participatory
<b>Prioritised interests</b>	Interest of shareholders	Interests of a variety of stakeholders
<b>Methodology</b>	Variation in mathematical models, contingency planning, decision trees	Scenario planning, roadmaps, Delphi surveys, backcasting, causal layered analysis, etc.

**Table 2. Main corporate foresight methods for each foresight component**

Foresight Component	Foresight methods
<b>Scanning</b>	Future wheel, environmental scanning, horizon scanning, emerging issues analysis, futures triangle
<b>Futuring</b>	Scenario-planning methods (2x2 matrix, Shell approach, Manoa method, scenario archetypes, etc.), causal layered analysis, future persona, futures triangle 2.0, science fiction prototyping
<b>Reconfiguring</b>	Backcasting, roadmapping, policy stress testing/wind tunneling



to the offering of new packages such as truck insulation, larger beds and flexible seats with built-in massage functions<sup>15</sup>.

At Disney, using a variety of foresight methods, such as environmental scanning, scenarios, causal layered analysis and future wheels, helped the company to realise that consumers' requirements have been shifting towards proactive engagement and co-creation, and that the line between entertainment and education has blurred as a new industry is emerging: "edutainment". Foresight allowed the company to reconfigure its strategic positioning in the edutainment sector in a variety of segments, including parks and resorts, consumer products and studios<sup>16</sup>.

This doesn't mean that a company has to bet substantial resources on every scenario envisioned. The potential prototypes that Daimler develops out of future scenarios of transport and mobility aren't necessarily marketed. Instead, they are stored in an "idea memory bank", ensuring that the firm is prepared in the event that the market dynamics change<sup>17</sup>. Similarly, Sunshine, an internet bank in the UK, uses environmental scanning and scenarios and then develops and probes several potential innovations that could help the company to succeed in each generated future. These readily available incipient projects allow the company to adapt to quick changes in a fast-paced world, such as that of internet banking<sup>18</sup>.



**Often, new business opportunities discovered with corporate foresight not only improve the bottom line of the firm, but also promote the well-being of a society as a whole.**

Often, new business opportunities discovered with corporate foresight not only improve the bottom line of the firm, but also promote the well-being of a society as a whole. This is due to the very nature of foresight, which takes into account the interests of a variety of stakeholders from within and outside the organisation. Tesla's foray into the electric car market was in great part due to the substantial effort of the company in practising environmental scanning, which led to the realisation that a more sustainable business model was needed for the automotive industry<sup>19</sup>. Tesla saw that it could reap monetary benefit by aligning its environmentally friendly vision with the betterment of the world. At Daimler, corporate foresight was responsible for the creation of a one-way car sharing service, known as car2go, which has been successfully implemented in a number of cities internationally, substantially reducing traffic congestion<sup>20</sup>. Indeed, embedded into future preparedness is the concept of *innovation*, as corporate foresight positively affects the firm's ability to innovate its products and business models.

#### How to start with, and be proficient at, foresight

Starting a corporate foresight process has never been easier, as foresight experts are growing in number and sharing an increasing amount of resources online. The typical way to get acquainted with foresight is to collaborate with a foresight expert in order to investigate the future of your industry. This will allow your organisation to pick up the basic methods and techniques. Alternatively, organisation members can be trained in foresight methods. Several institutions are offering online foresight courses and degrees, such as the University of Houston and the Institute for the Future.

As firms start to get acquainted with foresight, however, they often use it in a piecemeal fashion.

Proficiency in foresight requires mastering its three basic components: *scanning*, *futuring* and *reconfiguring*. We provide guidelines on how to be proficient in each of the three components.

## SCANNING

- *Scan widely.* Scanning for trends and discontinuities in the business environment requires looking closely into a variety of data not limited to customer satisfaction reports and market developments, but also including new patents, and blogs and magazines about the future, innovation and technology, as well as scientific publications.
- *Vary the scanning talent pool.* It is counter-productive to have a team of people from the same department doing scanning, as these individuals will be very likely to look for signals using similar sources of information which they know and consult often, given their professional expertise. It is more productive to assign scanning tasks to organisation members from different backgrounds, who will be acquainted with different sources of information and will, therefore, be attentive to different signals.
- *Decentralise scanning tasks.* It's important to involve people from different levels of the organisation in scanning procedures, and not just from the upper echelons of management, as individuals at lower levels will be relatively less constrained by the company culture and more likely to identify challenging signals in the environment.

## FUTURING

- *Know your methods.* Being well aware of how to use foresight methods, such as scenario planning, is important. The information gathered in the scanning component of foresight has to be translated, in a series of sequential steps, into plausible and coherent future narratives of the business environment. This analysis requires depth and rigour. The necessary skills are often acquired through experience, but a big chunk of this methodological knowledge can be picked up via collaboration with

Proficiency in foresight requires mastering its three basic components: scanning, futuring and reconfiguring.

foresight experts and by reading up on relevant foresight literature.

- *Vary and integrate your methods.* It's important to have a toolkit of futuring methods at one's disposal, to be able to integrate them well and most importantly, to choose the right method according to contextual needs. Foresight methods are highly modular and can be easily combined in a suitable manner according to a specific project. A foresight project aimed at looking at changes in customer values towards health products in the next ten years may require a very different set of methods from a foresight project aimed at looking at the long-term futures of fossil fuels at a national level.

## RECONFIGURING

- *Link foresight and strategy.* The information on plausible futures generated in the futuring process has to be ultimately translated into reconfiguration of the firm's *modus operandi*, perhaps the most important skill in corporate foresight. This can be done with systematic policy stress tests, or wind-tunnelling procedures, which help identify the implications of the futures for



the firm's strategy and the gaps of the firm's current activities against all possible futures. Once the new strategy has been identified, it has to be disseminated to all necessary levels of the organisation.

In the mid-1990s, British Airways undertook a massive foresight project, building global scenarios, identifying threats and opportunities for the airline carrier business, and plotting potential corporate-level reactions. They ran a total of 28 workshops and 20 presentations within the company. This solid dissemination programme allowed learning to reach several levels of the company. The scenarios were used by the corporate strategy team to prompt new strategic thinking, by the marketing team and customer relations to envision new ways to reach customers, and by the cargo team to research new issues with relevance to the cargo segment<sup>21</sup>.

Cisco's corporate foresight practice, the Technology Radar, spots potential technologies and builds scenarios of what could happen if they became widespread. Cisco has been relying on the acquisition of smaller enterprises rather than internal R & D for its expansion. By assessing and filtering technological opportunities, the Radar has substantially helped acquisition decisions, an important component of the company expansion strategy, successfully translating insight from foresight into strategic choices<sup>22</sup>.

- *Institutionalise foresight.* Foresight is not a one-time event. For foresight to be effective, there must be a system in place that incentivises organisation members to undertake it on a regular basis and routinises it into the company culture. Incentives to spur organisation members to undertake foresight should be put in place to make it an institutionalised routine in the firm. Previously terminated foresight endeavours and the strategy reconfiguration that emerged from them should also be monitored over time for updates. Indeed, it is detrimental to create large temporal gaps between foresight projects, as interest tends to decrease between them. It is ideal to build a consistent capacity of foresight, training as many employees as possible in its methodology.

At Dow Chemical, for instance, several hundred employees were trained in various aspects of foresight to enhance new business development<sup>23</sup>. At Disney, it is 5 percent of the whole workforce<sup>24</sup>.

### Conclusion

Corporate foresight goes beyond simply satisfying future customer needs. It generates a variety of hypotheses about latent customer needs derived from the analysis of plausible future business environments. It then transforms those latencies into ready-to-market prototypes, business model reconfigurations, and intelligence to be stored in case a different future were to come into being, preparing the firm to withstand the unpredictability of the VUCA world.

As corporate foresight takes into account a wide variety of stakeholders' interests in order to formulate plausible futures, the innovations and systematic firm-level reconfigurations that emerge from foresight are often aligned to the latent needs of bettering society as a whole. Being proficient at corporate foresight means being able to see emerging futures around those latencies and their level of importance against the present business model of the firm. With corporate foresight, a firm doesn't have to stop running its present value-creation process, but it will explicitly know in which basket to put some, not all, of the eggs that were originally earmarked for the current business so as to hedge against a series of potential futures, and achieve balance between the pursuits of current and potential business opportunities.

In sum, corporate foresight has gradually and almost stealthily been gaining influence in the corporate world. As the business and global environment continues to change rapidly and often discontinuously, we feel that, one day, corporate leaders will wonder how they ever did without it. **EB**



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