



SCENARIO PLANNING FOR CLIMATE CHANGE

A Guide for Strategists

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First published 2019
by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

and by Routledge
52 Vanderbilt Avenue, New York, NY 10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

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This complimentary chapter introduces readers to key concepts surrounding climate change and scenario planning, and why it is important to use scenario planning to develop climate change strategies. It also provides an overview of the scenario planning method detailed throughout the book, which has four overarching steps, each with sub-steps: Step 1: Set the agenda, focal question and time horizon, and identify key stakeholders; Step 2: Identify, rate, and rank the driving forces; Step 3: Develop the scenarios; Step 4: Identify warning signals, develop a climate change strategy, and assess the scenario planning process. The chapter concludes by suggesting how readers can put the book into practice to use it to greatest effect.

Introduction

Having opened this book, you likely understand that regardless of your ideological leanings on climate change, or the state of policy in any given country at any specific point in time, it is increasingly important to understand how climate change will shape the future of business.

It is a rare day that something related to climate change is not covered by news media. A simple search using Google shows that in the two years to 30 June 2018, there were on average more than 250,000 news stories per month using the term “climate change,” and over the past decade, the number of news stories using the term has grown from approximately 19,200 to 1,630,000 per year.ⁱ Many recent news stories relay the latest climate science discoveries, while others are thick with rhetoric and opinion. They run the gamut of topics from physical issues like rising sea levels and rising temperatures, to technological innovations aimed at curbing or sequestering carbon emissions, and debates surrounding international climate policy and the Paris Climate Agreement. These media can give some insight into how climate change is broadly affecting your country, region, and occasionally your industry, but they cannot answer the question “How could climate change affect my organization?” and therefore cannot answer the equally important question of “What should we be doing about it?” This book will teach you a method to find and interpret climate science, anecdotal stories, and other evidence to answer these questions, so your organization can develop a rigorous but flexible long-term climate change strategy.

Climate change affects organizations

Climate change refers to long-term changes in the broader climate (not shorter-term weather), and accommodates anthropogenic (human-caused) changes, as well as changes that are naturally occurring. Below is the International Panel on Climate Change’s (IPCC’s) definition of climate change:

Climate change refers to a change in the state of the climate ... that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings such as modulations of the solar cycles, volcanic eruptions and persistent anthropogenic changes in the composition of the atmosphere or in land use.¹

ⁱ Figures derived using Google searches for news stories using the term “climate change” each month from June 30 2016 until June 30 2018, and each year from June 2008 to June 2018.

Climate change can affect your organization in many ways, but three types of impacts stand out – changes in the physical natural environment, changes in policy, and changes in shareholder and/or market sentiment.

The first and most fundamental impact is through climate change in the physical natural environment, which can affect assets and infrastructure, suppliers, and markets. Regardless of which side you occupy in debates about the impact of industrial activity on climate change, the fact remains that organizations cannot negotiate with nature, and yet they exist within its physical confines. Regardless of which industry your organization is in, all the resources it needs, like energy, minerals, food, water, building materials, land, and air are ultimately derived from a natural environment with which you cannot negotiate. Consider the following examples.

Some of those organizations that found ways to adapt to physical climate change have been farmers in the Okanagan Valley in British Columbia, Canada, who noticed their warming winters early. Douglas Belkin reported in the *Wall Street Journal*² that the Okanagan Valley region has historically been dairy farming and apple growing country, but since 1947 the growing season has increased by 11 days and the average summer temperature has become 4°F warmer. Farmers began capitalizing on the increasing temperature by planting a more profitable crop – grapes – and early movers have benefited greatly, because their vines are now maturing and producing quality wine. These farmers already had deep connections with the land through their other agricultural practices, and developed a strategy to make the new emerging physical environment work for them. They were able to leverage their existing agricultural capabilities and knowledge of their land, while developing new skills for the new crop. As a result, between 1987 and 2007 the value of land in Okanagan Valley increased from US\$5,000 to US\$200,000 an acre (a massive increase in the value of a key asset), and from 1990 to 2007 the number of wineries in British Columbia increased from 17 to 136. A variation on the Okanagan Valley winemakers' story is being echoed all around the world, as winemakers from Australia to France seek out cooler locations to retain the ability to produce high quality wine.³

Other businesses have struggled with the impacts. The 2011–2017 California drought had a significant and detrimental effect on the State's almond crops. Blue Diamond Growers, a cooperative owned by half of California's almond growers, is one organization that has felt the effects of the drought. In a 2014 monthly market update, Blue Diamond Growers reported that the year's crop would be smaller than projected (read, produce less revenue) due to an early harvest and smaller crop associated with "rain-free weather" and that 2015 would be similar.⁴ The lack of rain prompted Blue Diamond's network of almond growers to collectively invest US\$3 Billion in "smart irrigation systems" to reduce their consumption of water.⁵ By late 2016 the outlook was better, ample rain and snow produced a healthier crop, and 75% of California had been declared drought-free by the U.S. Drought Monitor.⁶ However, by mid-March 2017 the tables had turned and high rainfall threatened to damage almond blooms and disrupt bees' willingness to fly and pollinate them.⁷ Further, while rain broke the *surface water* drought, *groundwater* has not recovered and may not for years.⁸ Adding to this, policymakers had altered irrigation allocations in some regions because of the drought, and they have not been reset, so farmers did not receive a full water allocation in 2017.⁹ A combination of low rainfall and high surface temperatures made this an archetype climate change drought that also brought more of California's familiar wildfires and

some of the lowest water storage and snowpack levels on record.¹⁰ Blue Diamond's experience is an example of what can occur as global temperatures rise, precipitation patterns change, and more precipitation falls as rain rather than snow. Droughts like it were projected by the IPCC's 2014 regional report.¹¹

If the above examples about wine and almonds lead you to assume only agricultural organizations might be affected, then consider that any organization operating in or serving Shishmaref, Alaska, is facing great disruption and costs as the entire village of approximately 600 people moves to avoid coastal erosion caused by melting sea ice and storm surges. Christopher Mele and Daniel Victor reported in *The New York Times*¹² that since 1969, Shishmaref (which is on Sarichef Island) has lost more than 200 feet of its shoreline to erosion, including the loss of infrastructure and buildings. Online searches of Google Maps and chamberofcommerce.com show a long and varied list of affected organizations, including the airport, United States Postal Service, State Police, the electricity company, a civil engineering and construction company, an electrician and general contractor, a University of Alaska Anchorage campus, Shishmaref School, Shishmaref Native Store, Nayok General Store, a tannery, a laundromat, a community center, Shishmaref Lutheran Church, a barge serving the island, Norton Sound Health Corporation, water and telecommunications utilities, and the City of Nome (since Shishmaref is within Nome's census area). The cost of moving the village is estimated to be US\$180 Million according to Mele and Victor, and even though the plan is to move just five miles to mainland Alaska, the disruption to peoples and organizations will be significant, and some organizations may be left with stranded assets, or become obsolete if others like them are already established in the new location.

A second way that climate change can affect your organization is through the development of city, state, and national policies to regulate, reduce, and put a price on carbon emissions, driven primarily by ratification of the Kyoto Protocol. The Kyoto Protocol is an international treaty of the United Nations Framework Convention on Climate Change (UNFCCC), which was ratified in 2005 and obligated developed nations to reduce their carbon emissions on the basis that climate change is occurring and that man's industrial activity is contributing to it.¹³ Since 2005, there have been many meetings working on its implementation, with the most recent Paris Climate Accord agreeing the details of how international mitigation and adaptation efforts will be financed, undertaken, and reported, and how each country will contribute to those efforts.

As countries negotiate their roles and obligations under the international agreement, and even decide whether they want in or out of it, businesses within each country consider the possible implications for themselves. Much research by myself and others^{14, 15, 16, 17} has found that at the first inkling of potential policy, businesses in carbon-intensive sectors like electricity, oil and gas, and mining, typically lobby to prevent, stall, or water down carbon regulation arguing that it will increase costs, increase the price of their products and potentially create stranded assets by reducing the viability of existing long-term investments. On the other hand, companies that are less carbon-intensive, such as renewable energy companies and manufacturers of energy efficient products, will simultaneously lobby to accelerate, broaden, and strengthen policy to regulate and put a price on carbon emissions; arguing that their products and technologies are needed to meet international obligations. This tug-of-war can sway governments one way or the other in response to corporate, NGO, constituent,

and international pressure, and in turn bring a great deal of uncertainty to businesses needing to make long-term investments in capital assets, products, and markets. Policies to reduce carbon emissions can translate into such things as rebates for investing in renewable technologies (e.g. cogeneration or solar power), the opportunity to invest in new carbon markets (e.g. the EU Emissions Trading System), more choice among energy efficient technologies (e.g. electric vehicles), but also potentially increase taxes (e.g. a carbon tax) or the price of fossil fuels at the gas pump or electricity meter depending on the policy measure implemented.

A third way that climate change can affect businesses is through changes in market and shareholder sentiment. In particular, shareholders are becoming activists, and are using shareholder resolutions, which are voted on by all shareholders at annual general meetings, to compel companies to act on climate change through such things as altering their investments in fossil fuels, and reporting their potential climate change vulnerabilities. Exxon has been a target of shareholder activists for some time, and in 2017 the new CEO Darren Woods faced resolutions demanding that Exxon cut new oil field investments and instead give shareholders a larger dividend, and demanding the company use climate change accounting methods to quantify its climate change risk.¹⁸ These types of resolutions are gaining traction with Exxon's shareholders as activists increasingly frame them in terms of broad shareholder interests. In a survey by law firm Schulte Roth & Zabel,¹⁹ corporations expected shareholder activism to grow in coming years, and this is supported by the growth of organizations such as Ceres (a non-profit that advocates for sustainability leadership) that has been instrumental in advocating for action on climate change through its networks. Your organization may not be in a carbon-intensive industry as is Exxon, and it may not be a multi-national corporation, but as shareholder awareness of climate change and its potential to affect investments like retirement nest eggs grows, it is increasingly likely that shareholders of both private and publicly listed companies will voice their concerns about how their investments could be affected by climate change over the long term.

Climate change brings uncertainty

A characteristic shared by many of the climate change issues described above is that they can bring uncertainty to organizational strategizing, because they are dynamic and largely beyond the control of decision-makers. Research conducted by Katy Maher and Janet Peace at the Center for Climate and Energy Solutions²⁰ suggests that you may already be feeling some of this uncertainty. They found that businesses are increasingly concerned about climate change risks to public infrastructure providing electricity, water, communications, roads, and public transport, which in turn affect operations (but are all outside the control of a single organization). Maher and Peace's research shows that businesses are also concerned about how exposed their suppliers are to the same issues. As one of their research subjects stated, "you are only as resilient as your weakest link, so it is important to identify where that link is."

Uncertainties can make strategizing complex, but as eminent scenario planner Peter Schwartz said, "The world may be uncertain and unpredictable but that's no excuse for being unprepared."²¹ The scenario planning method laid out in this book will help you manage a considerable amount of uncertainty without over-simplifying it. There is much information available on climate change, its impacts, and mitigation and adaptation strategies that just need to be interpreted for organizations, including your organization, so you can identify and address your own "weakest links." In the back of

the book, the Appendix provides overview summaries for a sample of known driving forces of climate change, to help you determine how they may already be affecting organizations, or may affect them in future.

Organizational responses to climate change

In response to the climate change issues mentioned above, and others, your organization has several broad options for action. Where other people are involved – shareholders, policymakers, customers, suppliers, etc. – you may be able to communicate, negotiate, or lobby for more favorable conditions. For instance, you can negotiate with shareholder activists to withdraw or amend a shareholder resolution, and if your organization, industry association, or chamber of commerce is powerful enough, you may be able to sway policymakers. You can also communicate with customers and suppliers to understand their needs (and relay your own). However, your options when responding to changes in physical natural environment are limited to: (a) Adapting strategies, operations, assets and/or infrastructure to become resilient to unfavorable conditions (or to leverage conditions changing in your favor). This includes making changes to your physical environment; (b) Avoiding unfavorable conditions, or pursuing more favorable conditions, by relocating; or (c) Doing neither and experiencing the full force of whatever conditions unfold, and adapting on the fly where possible.

To respond with the greatest likelihood of success, this book will teach you a method of scenario planning to find what is driving physical, policy, shareholder, and other changes that could affect your organization. It will teach you how to develop a range of potential scenarios based on the drivers you identify, and how to translate those scenarios into a climate change strategy you can use to move forward with increased confidence.

What is scenario planning?

Scenario planning is the development of multiple scenarios about the future, and use of them to make decisions. In his organizational adaptation book, William Fulmer emphasized the need for organizations to consider “what if” questions about the future, so decision-makers are prompted to think ahead.²² Scenarios are plausible hypothetical “what if” stories about what your organization’s future might look like based on forces that could shape it. Scenarios are not projections, predictions, or forecasts, but are powerful narratives to help you anticipate and prepare for possible changes your organization might encounter in future. As Hawken, Ogilvy, and Schwartz noted in their early scenario book, *Seven Tomorrows*, the aim of scenarios is to “project alternative futures so that responsible and intelligent choice is possible.”²³

The aim of scenario planning is not to predict the future (as a forecast or projection might attempt). Rather, scenario planning recognizes that we live in an uncertain world and are limited in our ability to control or predict the future, and works with that uncertainty by considering how issues might develop along different pathways.²⁴ Scenario planning “allows for the inclusion of realism and imagination, comprehensiveness and uncertainty, and most of all ... plurality of options.”²³

Former Royal Dutch Shell scenario planner Pierre Wack noted that scenario planning can serve you in two main ways: (a) by helping you anticipate and understand your risk

exposure; and (b) by helping you identify strategic options of which you are currently unaware.²⁵ The broad set of potential futures to which decision-makers are exposed are complete with both challenges and opportunities, to help people: Perceive change emerging over the horizon; identify early warning signals; prepare for potential surprises; identify effective ways to respond; and communicate it all with important stakeholders.^{26, 27, 28} Scenario planning is useful for businesses that face high uncertainty, have experienced costly surprises, find it difficult to generate opportunities, are bureaucratic, are in a changing industry, or whose competitors are using scenario planning.²⁸

Scenario planning links your organization to the future by making you think about what would be required in a range of possible futures, and compare those requirements to current resources, capabilities, operations, policies, strategies, and administrative practices. Scenario planning also links the future to the present by enabling you to situate shorter-term strategies within the longer-term scenarios to see how they may play out. If your organization has a strategic plan in place, then it is already considering and preparing for one scenario. How much more resilient could your organization become if it prepared for other possible scenarios? It would likely become significantly more resilient.

A little scenario planning history

The purpose of this book is not to recall the complete history of scenario planning. The likes of Malaska and Virtanen,²⁹ van der Heijden,³⁰ Lindgren and Bandhold,³¹ Chermack,³² Schwartz,²⁴ and Martelli³³ all provide good overviews for those wanting to read about the history of scenario planning; however, it is useful to know a little about where scenario planning started.

The use of scenario planning dates back to the 16th century, when Luis de Molina and his contemporaries considered that the future may not be a pre-determined singular path, but rather a set of “futuribles” or what Pentti Malaska and Ilkka Vertanen called a “fan of possible futures.”²⁹ Fast-forward to the 1950s, Herman Kahn used it to help the U.S. military forecast and strategize,³¹ and in France, futurist Gaston Berger and colleagues were also using scenario planning.²⁶ During the 1960s and 1970s, a dedicated group of people at Royal Dutch Shell developed and experimented with scenario planning in detail,^{30, 34} which famously led the company to anticipate and prepare for potential opportunities and threats, including the 1970s oil crisis and the 1980s Iran–Iraq conflict.^{26, 30, 34}

In the 1990s, Shell’s scenario planning efforts recognized that climate change threats were emerging, and this led to climate change being acknowledged in its 1998 sustainability report (one of the first sustainability reports to acknowledge climate change).²⁶ In 2003, Peter Schwartz and Doug Randall³⁵ used scenario planning at the national level to assess the potential consequences of climate change for U.S. national security, food, water, and energy. At the global level, the IPCC^{1, 36} also uses scenarios to determine possible futures based on differing levels of atmospheric carbon.

Many companies have followed the lead of early scenario planners, and today it is an integral element of many companies’ strategy-making processes.³⁰ A global survey of over 8,500 executives regularly conducted by Bain & Company showed that the use of scenario and contingency planning nearly doubled after the 9/11 terrorist attacks. After

its 2006 survey, Darrell Rigby and Barbara Bilodeau of Bain & Company reported that 65% of companies studied were expecting to use scenario and contingency planning in the near future (up from 38% in 1993). Rigby and Bilodeau believe their results show that businesses recognize an “increasing need to anticipate crises and develop robust contingency plans.”³⁷

The need to apply scenario planning to climate change

Scenario planning is eerily and perfectly suited to climate change, because many climate change trends are long-term and systemic, and because climate science projects the state of many physical impacts long into the future. In its 2002 report, *Abrupt Climate Change*, the National Research Council³⁸ recommended generating scenarios to understand potential abrupt climate change, and scenario planners such as Angela Wilkinson,³⁹ James Ogilvy,²³ Paul Hawken,²³ Peter Schwartz,^{23, 40} and Rafael Ramírez³⁹ have all specifically noted the usefulness of scenario planning for climate change. The Intergovernmental Panel on Climate Change has been developing global climate change scenarios for many years.¹

The usefulness of strategizing for climate change is also now understood on Wall Street, especially since in 2010 the U.S. Securities Exchange Commission published guidelines to help companies disclose material climate change risks, and Ceres created an online Sustainability Disclosure Tool⁴¹ that provides the public with easy access to climate change risks that companies have disclosed. To assist climate change risk disclosure efforts, the Financial Stability Board Task Force on Climate-Related Financial Disclosures (TCFD) recently advised companies to use scenario planning to analyze and understand the risks and opportunities that climate change may bring,⁴² and described scenario planning as:

... an important and useful tool for an organization to use, both for understanding strategic implications of climate-related risks and opportunities and for informing stakeholders about how the organization is positioning itself in light of these risks and opportunities.

In their book *Predictable Surprises*, Harvard Professor of Business Administration, Max Bazerman, and his colleague Michael Watkins advocated the use of scenario planning to identify potential “predictable surprises.”⁴³ They anticipated that climate change would become a predictable surprise, or “event[s] ... that take an individual or group by surprise, despite prior awareness of all of the information necessary to anticipate the events and their consequences.” They argued that businesses would only avoid climate change surprises if they establish systems to recognize, prioritize, and mobilize for them. In previous research, I found that among a sample of businesses across various industries, only 61% had recognized climate change issues, 43% had progressed to prioritizing them, and only 22% had gone further to mobilize to do anything about them.⁴⁴ Other of my own research suggests that businesses struggle with climate change issues – in one study of organizational response to climate change issues, organizations I studied only responded to climate change issues on the fly after they had been surprised by their physical impacts.⁴⁵ Bazerman and Watkins’ work and my own research both suggest that unless you invest time and energy to understand how climate change may affect your organization, it will likely be surprised.

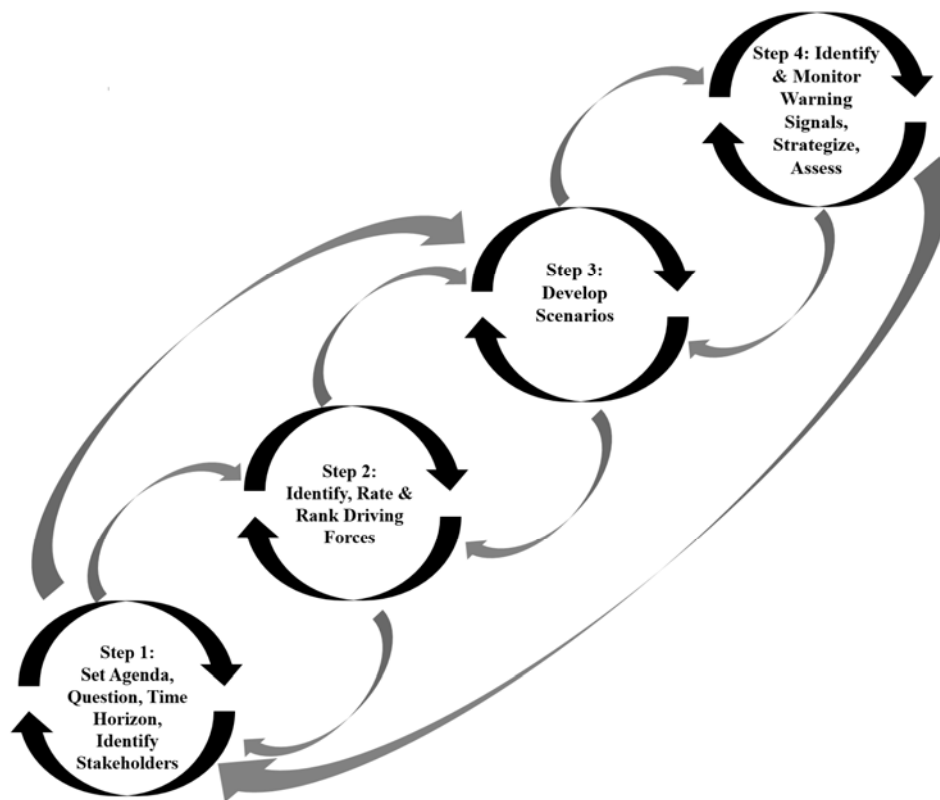
The aim of this book is to improve your recognition and prioritization of, and mobilization in response to climate change issues so that your organization is prepared. Decision-makers who can anticipate a broader array of potential future states have greater capabilities to defend against threats and leverage opportunities, and can address some of the limitations of traditional strategy development approaches, such as its short time horizons and focus on a single desired future, which are discussed in detail in Chapter 1.

Having had an introduction to how climate change can affect businesses and to scenario planning, below is an overview of the method.

The scenario planning method

The scenario planning method in this book has four main steps, illustrated in Figure 1. Each step contains sub-steps, and covers a mixture of scenario planning content and project logistics. The steps are described briefly below, and are covered in great detail in Chapter 2 through Chapter 5. When the book is published, links to online education modules based on the method will also be available at www.nardiahaigh.com.

Figure 1 Scenario planning method



This method stands on the shoulders of those who have gone before, and recognizes there is no best method to undertake scenario planning, no best number of steps, and no best way to determine a successful scenario planning effort. It is a method that has benefited from the published scenario planning expertise of Peter Schwartz,²⁴ Pierre Wack,^{25, 34} Shell,²⁷ Rafael Ramírez and Angela Wilkinson,³⁹ Thomas Chermack,³² Bill Ralston and Ian Wilson,⁴⁶ Mats Lindgren and Hans Bandhold,³¹ the TCFD,⁴² and

others, and is applied specifically to climate change. It is also the culmination of my own experience applying and refining the method, and teaching it to nearly 450 executives and students over more than a decade. It is a rich and analytical method that complements the qualitative knowledge, skills, and professional intuition of you, your colleagues, and other key stakeholders, with your needs to quantify some aspects of the project.

Like all scenario planning methods, it will challenge you, and later chapters will explain those challenges and how to manage them. Like all scenario planning methods, it can also be iterative (as indicated by the arrows in Figure 1). Many scenario planning books overlook the iteration involved with scenario planning, and I will explain where it can occur. If followed closely, the method will produce focused scenarios that will suggest what your organization can do now and in future to adapt to the positive and negative implications of climate change.

Step 1: Set the agenda, focal question and time horizon, and identify key stakeholders

As the heading suggests, Step 1 is a collection of four sub-steps to set the agenda, define the focal question and time horizon, and identify key stakeholders. It will cover the planning you need to undertake to get your scenario planning project off the ground, by helping you identify who could champion the project (ideally, the Chairman of the Board or CEO), who should lead the project and be on the team, and to determine a suitable duration and budget for the project. The overarching points here are to ensure the project is supported from the top with a champion and a budget, and that your team includes as many executives as is practical and is inclusive of all parts of the organization. With this planning done, you will learn how to define the focal question that scenario planning will answer for you. A sample question is suggested: “How could climate change plausibly affect our organization, what should we do, and when?” You can develop a different question if needed, perhaps one that is more specific surrounding one production plant, asset, or market, or a question that is more deductive in nature; focusing on exploring different paths to one specific outcome, depending on your needs. You will also define a scenario planning time horizon that is appropriate for your organization. The book centers on a 25-year time horizon, but if this is not appropriate for your organization, you will be shown how to choose a more appropriate one. Finally, you will identify key stakeholders inside and outside the organization that are relevant to your focal question, such as key suppliers or partners that may be affected by climate change.

Step 2: Identify, rate and rank the driving forces

Step 2 is where the bulk of your analytical efforts will occur, since good scenarios depend on the ability of the project team to identify and analyze underlying driving forces that will shape the organization’s future. Driving forces are such things as sea level change, drought, the implementation of policy, or changes in market sentiment relating to climate change, and potentially to the goods and services your organization provides. To get you started, the Appendix contains summaries for a sample of known climate change driving forces, including how they are affecting organizations now and how these impacts could play out in 25 years. When the book is published, more summaries will be available at www.nardiahagh.com, and these summaries will be updated periodically. This step will guide you through the analytical process of identifying driving forces, rating the uncertainty of each, and rating the degree to which

each could affect the organization if it were to occur. In addition to research, this analytical process will also draw on your expertise and that of your team, since you know your organization best. You will be guided through the rating process to ensure you are prepared to avoid potential stumbling blocks. The outcome of this step is a ranked list of climate change drivers that are, in combination, most uncertain and most impactful for your organization, and that could (because of the uncertainty) plausibly go in various directions in future. In Lindgren and Bandhold's words, you will have identified important "wild cards."³¹

Step 3: Develop the scenarios

Using your ranked list of climate change driving forces, the method will help you develop four plausible scenarios based on the two highest-ranking driving forces identified in Step 2, and show you how to incorporate some of the lower-ranking driving forces where appropriate. You will also undertake some quality control to ensure each scenario makes sense and is internally consistent, before you present a set of initial scenarios for feedback, and then use feedback to develop your final scenarios. The outcome of this step is a set of four detailed scenario narratives that describe how your organization could be affected by combinations of climate change drivers at the chosen time horizon, and explain how each scenario could have emerged from the present day. You will be given insights about how to present your scenarios to others, and suggestions about how to work through their feedback to build useful scenarios that will help you strategize.

Step 4: Identify warning signals, develop a climate change strategy, and assess the scenario planning process

The final step is a process of identifying warning signals, outlining a strategy that will prepare the organization for whatever scenario unfolds, and assessing your experiences with the process. Identifying warning signals is an important process of detecting what the organization should track so it can determine which scenario might be unfolding as time proceeds. Basic warning signals are those relating to each driver, such as the amount of sea level change or the implementation of climate policy initiatives at various levels of government, while others may be secondary or tertiary indicators that are not immediately apparent but are nonetheless important to track. The next sub-step is developing a climate change strategy that identifies actions the organization needs to take or could take regardless of which scenario unfolds, and actions it may need to take at certain points in future contingent upon warning signal indicators. As was the case with scenario development, this step includes developing a draft strategy for feedback, and then using the feedback to produce the outcome of the entire process: A rigorous but flexible long-term climate change strategy based on multiple plausible futures. This step also includes ways to complement scenario planning with existing strategic planning processes, and will prompt you to make a commitment to redoing your scenario planning process at regular intervals or when the situation changes. Finally, to provide a feedback loop that will build your in-house scenario planning skills and capabilities, the final sub-step is to assess your scenario planning project to understand its effectiveness, and to improve it for next time.

How to use this book

Scenario planning is a practice. It is participatory.²⁴ In my experience, Ramírez and Wilkinson's statement below is true:

... learning scenario planning is like riding a bicycle: you can read all the "how to" guide books and operating manuals, and someone can tell you how to ride it, but you only know how to ride after you get on the bike, feel the balance and turn the pedals, and even fall off a few times. So too with learning scenario planning; like learning to cycle, it requires practice and reflection as well as engaged fun.³⁹

To that end, I would emphasize using this book to do, rather than just to think, about scenario planning for climate change.

The book is divided into seven chapters. The Introduction has introduced you to scenario planning and climate change and given you an overview of the method. Chapter 1 takes you through some of the limitations of current strategizing and the strengths of scenario planning, as well as some of the challenges involved in scenario planning. Chapter 2 through Chapter 5 set out the scenario planning method in detail, which you can follow (including hints and tips on process and logistics). Chapter 6 wraps up what you will likely have achieved if you've followed the method, and offers concluding thoughts. Finally, to put you on a fast track, the Appendix in the back of the book provides summaries for a sample of climate change drivers to help you start thinking about how climate change might affect your organization now and 25 years into the future, and if you need more inspiration, any updated summaries and summaries for other drivers will be available at www.nardiahaigh.com, along with links to online education modules based on the book.

In just a few hours, you can skim through the book quickly to grasp the overall method, and then dive more deeply into each step and make a start on your own scenario planning project. By doing this, my aim is to give you confidence that, in most cases, scenario planning skills can be developed in-house, or with facilitation costs that run at the lower end of costs estimated by Harvard Business School⁴⁷ back in 2000, which ranged from around US\$10,000–20,000 for smaller projects to well over US\$1 Million for large projects. Even today, the upper ranges of this estimate can be prohibitive or simply not justifiable for businesses that are not multi-national corporations, and this book will enable you to run a substantial scenario planning project for far less.

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