Spotlight

EMERGING FROM THE CRISIS

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Learning from the *Future*

How to make robust strategy in times of deep uncertainty

HOW CAN WE FORMULATE strategy in the face of uncertainty?

That's the fundamental question leaders must ask as they prepare for the future. And in the midst of a global pandemic, answering it has never felt more urgent.

Even before the Covid-19 crisis, rapid technological change, growing economic interdependence, and mounting political instability had conspired to make the future increasingly murky. Uncertainty was so all-encompassing that to fully capture the dimensions of the problem, researchers had devised elaborate acronyms such as VUCA (volatility, uncertainty, complexity, and ambiguity) and TUNA (turbulent, uncertain, novel, and ambiguous).

ABOUT THE ART

During the quarantines in March and April of this year, photographers in cities around the world captured images of deserted tourist sites.

In response, many leaders sought refuge in the more predictable short term—a mechanism for coping with uncertainty that research has shown leaves billions of dollars of earnings on the table and millions of people needlessly unemployed. By the start of 2020, the sense of uncertainty was so pervasive that many executives were doubling down on efficiency at the expense of innovation, favoring the present at the expense of the future.

And then the pandemic hit.

Now the tyranny of the present is supreme. A lot of organizations have had no choice but to focus on surviving immediate threats. (There are no futurists in foxholes.) But many business and political discussions still demand farsightedness. The stakes are high, and decisions that leaders make now may have ramifications for years—or even decades. As they try to manage their way through the crisis, they need a way to link current moves to future outcomes.

So how best to proceed?

Strategic foresight—the history, theory, and practice of which I have spent years researching—offers a way forward. Its aim is not to predict the future but rather to make it possible to imagine multiple futures in creative ways that heighten our ability to sense, shape, and adapt to what happens in the years ahead. Strategic foresight doesn't help us figure out *what* to think about the future. It helps us figure out *how* to think about it.

To be sure, a growing body of research has demonstrated that it is possible to make more-accurate predictions, even in chaotic fields like geopolitics. We should use those techniques to the extent we can. But when predictive tools reach their limits, we need to turn to strategic foresight, which takes the irreducible uncertainty of the future as a starting point. In that distinctive context, it helps leaders make better decisions.

The most recognizable tool of strategic foresight is scenario planning. It involves several stages: identifying forces that will shape future market and operating conditions; exploring how those drivers may interact; imagining a variety of plausible futures; revising mental models of the present on the basis of those futures; and then using those new models to devise strategies that prepare organizations for whatever the future actually brings.

Today the use of scenarios is widespread. But all too often, organizations conduct just a single exercise and then set whatever they learn from it on the shelf. If companies want to make effective strategy in the face of uncertainty, they need to set up a process of constant exploration—one that allows top managers to build permanent but flexible bridges between their actions in the present and their thinking about the future. What's necessary, in short, is not just imagination but the *institutionalization* of imagination. That is the essence of strategic foresight.

THE LIMITS OF EXPERIENCE

Uncertainty stems from our inability to compare the present to anything we've previously experienced. When situations lack analogies to the past, we have trouble envisioning how they will play out in the future.

The economist Frank Knight famously argued that uncertainty is best understood in contrast with risk. In situations of risk, Knight wrote, we can calculate the probability of particular outcomes, because we have seen many similar situations before. (A life insurance company, for example, has data on enough 45-year-old, nonsmoking white men to estimate how long one of them is going to live.) But in situations

IDEA IN BRIEF

THE CHALLENGE

Good strategy creates competitive advantage over time, but the uncertainty of the future makes it difficult to identify effective courses of action, particularly in the midst of a crisis. As a leader, how can you prepare for an unpredictable future while managing the urgent demands of the present?

THE PROMISE

The practice of strategic foresight provides the capacity to sense, shape, and adapt to change as it happens. One important element of the practice is scenario planning, which helps leaders navigate uncertainty by teaching them how to anticipate possible futures while still operating in the present.

THE WAY FORWARD

To make effective strategy in the face of uncertainty, leaders need to institutionalize strategic foresight, harnessing the power of imagination to build a dynamic link between planning and operations.

At the very moment when the present least resembles the past, it makes little sense to look back in time for clues about the future.

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of uncertainty—and Knight put most business decisions in this category—we can only guess what might happen, because we lack the experience to gauge the most likely outcome. In fact, we might not even be able to imagine the range of potential outcomes.

The key in those situations, Knight felt, was judgment. Managers with good judgment can successfully chart a course through uncertainty despite a lack of reference points. Unfortunately, Knight had no idea where good judgment came from. He called it an "unfathomable mystery."

Of course, in something of a catch-22, conventional wisdom holds that to a large extent good judgment is based on experience. And in many uncertain situations managers do, in fact, turn to historical analogy to anticipate the future. This is why business schools use the case teaching method: It's a way of exposing students to a range of analogies—and thus ostensibly helping them develop judgment—much more quickly than is possible in the normal course of life.

But Knight's point was that uncertainty is marked by novelty, which, by definition, lacks antecedents. At the very moment when the present least resembles the past, it makes little sense to look back in time for clues about the future. In times of uncertainty, we run up against the limits of experience, so we must look elsewhere for judgment.

That's where strategic foresight comes in.

"STRANGE AIDS TO THOUGHT"

In the United States, strategic foresight can be traced back to the RAND Corporation, a think tank that the U.S. Air Force

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set up after World War II. Rather than plumbing the mystery of judgment, RAND scholars hoped to replace it with the "rational" tools of quantitative analysis. But as they grappled with the military demands of the postwar world, they could not escape the fact that nuclear weapons had fundamentally changed the nature of warfare. Two countries, the United States and the Soviet Union, had acquired the ability to destroy each other as functioning civilizations. And because no one had ever fought a nuclear war before, no one knew how best to fight (or avoid) one.

One RAND analyst, who approached the problem of a potential apocalypse with a glee that made him a model for Stanley Kubrick's Dr. Strangelove, was a mathematician named Herman Kahn. In the atomic age, Kahn realized, military strategists faced uncertainty to an absolutely unprecedented degree. "Nuclear war is still (and hopefully will remain) so far from our experience," he wrote, "that it is difficult to reason from, or illustrate arguments by, analogies from history."

How, then, Kahn asked, could military strategists develop the judgment crucial to making decisions about an uncertain future? It was the very question Knight had posed, but unlike Knight, Kahn had an answer: "ersatz experience." What strategists needed, he suggested, were "strange aids to thought," in the form of multiple imagined futures that could be developed through simulations such as war games and scenarios.

In 1961, Kahn left RAND to help found the Hudson Institute, where he eventually shared his ideas with Pierre Wack, an executive from Royal Dutch Shell. In the early 1970s Wack famously applied Kahn's ideas in the business world, by devising scenarios to help Shell prepare for what might take place as the oil-rich nations of the Middle East began to assert themselves on the world stage. When change did come, in the form of the price shocks induced by the 1973 OPEC oil embargo, Shell was able to ride the crisis out much better than its competitors. (In 1985, Wack chronicled Shell's efforts in two articles for this magazine: "Scenarios: Uncharted Waters Ahead" and "Scenarios: Shooting the Rapids.")

The Shell exercises marked the birth of scenario planning as a strategic tool for business managers. In subsequent years, Wack's successors at the company refined his method, and scenario

planners from Shell went on to become some of the most prominent scholars and practitioners in the field. Nonetheless, few of the organizations that have conducted scenario-planning exercises in recent decades have institutionalized them as part of a broader effort to achieve strategic foresight.

One of the rare exceptions is the U.S. Coast Guard, which describes its work with scenario planning as part of a "cycle of strategic renewal." As such, it offers a model that many organizations can learn from.

One might ask how relevant the Coast Guard's experience is for businesses, but in fact it constitutes what social scientists call a "crucial-case test." As a military service, the Coast Guard has less organizational flexibility than most private firms, with a mission mandated by statute and a budget determined by Congress. What's more, for a long time its need to react daily to numerous emerging situations—from ships in distress to drug interdictions—forced it to focus almost exclusively on the short term, leaving it with little bandwidth to formulate strategy for the long term. Nevertheless, in recent years it has managed to leverage scenario planning to its advantage, reorienting the organization in an ongoing way toward the future. And that, in turn, has allowed it to respond and adapt to disruptive changes, such as those that followed the September 11 terrorist attacks.

FUTURE-PROOFING THE COAST GUARD

On that tragic morning, hundreds of thousands of people found themselves trapped in Lower Manhattan, desperate to escape the burning chaos that was Ground Zero. While some were able to walk uptown or across bridges, which officials had closed to vehicles, for many the best way off the island was by water. So over the next hours, an impromptu flotilla—of ferries, tugs, private craft, and fire and police boats—took clusters of people away from the wreckage of the World Trade Center and across the water to safety.

Although many vessels operated on their own initiative, a significant part of the evacuation was directed by the Coast Guard, which had issued a call for "all available boats" and coordinated the chaotic debarkation with remarkable poise, creativity, and efficiency. The effort reminded many of the storied British evacuation across the English Channel of several hundred thousand troops that Nazi forces had trapped in Dunkirk, on the coast of France.

That the Coast Guard rose to the challenge is no surprise. Although it has a broad set of responsibilities, ranging from search-and-rescue to environmental protection to port security, the organization's motto is *Semper paratus,* or "Always ready," and it prides itself on responding to emergencies. As one retired captain told me, "Our whole idea is, when the alarm goes off, to be able to fly into action."

But September 11 ended up being more than a short-term challenge. In its aftermath, the Coast Guard found its mission quickly expanding. Within a day it was tasked with implementing radically heightened port-security measures around the country: Port security had previously accounted for 1% to 2% of its daily operational load, but it soon consumed 50% to 60%. In March 2003 the Coast Guard was integrated into the new Department of Homeland Security, and that same month it was given the job of securing ports and waterways all over Iraq, following the U.S.-led invasion. In subsequent years the service's budget would double and its ranks would swell. A new future had arrived.

The Coast Guard adapted to this future nimbly—and did so in part because in the late 1990s it had conducted a scenario-planning exercise called Project Long View, which was designed to help the organization contend with "a startlingly complex future operating environment characterized by new or unfamiliar security threats." Its aim, in effect, was to future-proof the Coast Guard.

The service ran Long View in 1998 and 1999—and then, in 2003, in response to the shocks of September 11, renamed it Project Evergreen and began running it every four years. Ever since, the organization has relied on Evergreen to help its leaders think and act strategically.

ROBUST STRATEGY—NO MATTER WHAT THE FUTURE HOLDS

When the Coast Guard decided to launch Long View, it enlisted the help of the Futures Strategy Group (FSG), a consultancy specializing in scenario planning. FSG maintains that uncertainty precludes prediction but demands anticipation—and that imaginatively and rigorously exploring plausible futures can facilitate decision-making.

Working with FSG, the Coast Guard identified four forces for change that would have a significant impact on its future: the role of the federal government, the strength of the U.S. economy, the seriousness of threats to U.S. society, and the demand for maritime services. By exploring them and looking forward some 20 years, the team came up with 16 possible "far-future worlds" in which the

The Future: A Glossary

Managing the uncertainty of the future requires many tools, some of which have similar or even overlapping functions. To cut through the confusion, here's a brief guide.

BACKCASTING asks participants to work backward in time from a particular future to ascertain what in the present caused its emergence. The practice is most often used to identify a path to a preferred future but can also be used to avoid steps toward a negative future. "Premortems," for example, aim to identify the causes of a hypothetical future failure.

CONTINGENCY PLANNING aids decision-making by preparing participants for specific events that are considered possible or even likely. A contingency plan provides a playbook in case of emergency.

CRISIS SIMULATIONS and **TABLETOP EXERCISES** have participants respond to specific scenarios and then analyze their actions, to help people prepare for real-life situations. They differ from war games in that they involve a specific possible future rather than a range of plausible futures.

FORECASTING involves making probabilistic predictions about the future and, as such, is a tool that practitioners of strategic foresight tend to avoid. But it, too, has its place in helping strategists manage uncertainty, adding a quantitative angle to the qualitative methods preferred by, say, scenario planners. The best approach is this: Predict what you can; imagine what you cannot; and develop the judgment to know the difference.

HORIZON SCANNING asks participants to search for "weak signals" of change in the present with an eye toward monitoring their development and assessing their potential impact. The practice is guided by the idea that the future often first comes into view in places that most of us are not paying attention to, such as specialized scientific journals.

SCENARIO PLANNING uses stories about alternative futures to challenge assumptions and reframe perceptions of the present. The process does not attempt to predict the future but instead aims to explore plausible futures to inform strategy.

TREND ANALYSIS asks participants to consider the potential influence of patterns of change that are already visible. A popular structured approach is the STEEP framework, which disaggregates patterns of change into five categories: social, technological, economic, environmental, and political.

WAR GAMES ask participants to engage an opponent in simulated conflict, often to explore reactions to novel circumstances. Like scenario planning, war games do not attempt to predict what will happen; rather, they project what could happen, thereby providing insight into decision-making. Despite the name, war games can address far more than just the military aspects of conflict.

Coast Guard might have to operate. Of those, Coast Guard leaders selected five that were as distinct as possible from one another (while remaining plausible) and represented the range of environments the service might face. FSG then wrote detailed descriptions of those futures and the fictional events that led to them.

Each future world was given a name intended to capture its essence. "Taking on Water" described a future in which the U.S. economy struggled amid significant environmental degradation. In "Pax Americana," a humbled United States had to contend with a world rent by political instability and economic catastrophe. "Planet Enterprise" was dominated by giant transnational corporations. "Pan-American Highway" featured regional trade blocs oriented around the dollar and the euro. And "Balkanized America" presciently warned of a divided world in which "terrorism strikes with frightening frequency, and increasingly close to home."

Using those scenarios, the Coast Guard convened a three-day workshop, which FSG facilitated. Teams of civilians and officers were assigned to different future worlds and charged with devising strategies that would enable the Coast Guard to operate effectively in them. At the end of the workshop the teams compared notes on what they had come up with. Strategies that appeared again and again, across different teams, were deemed "robust." In their final report the organizers of Long View listed 10 of these strategies, ranging from the creation of a more unified command structure to the development of a more flexible human-resources system to the establishment of "full maritime domain awareness"—which the Coast Guard defines as the "ability to acquire, track, and identify in real time any vessel or aircraft entering America's maritime domain." All of these strategies, they argued, would help the Coast Guard carry out its mission, no matter what the future held.

Many of the strategies weren't novel. But Long View allowed participants to think about them in new ways that proved crucial in the post–September 11 world. In effect, Long View allowed the Coast Guard to pressure-test strategies under a range of plausible futures, prioritize the most-promising ones, and socialize them among the leadership—which meant that after the attacks, when the organization found its mission changing dramatically, it was able to respond quickly.

Launching Long View and subsequently establishing Evergreen as a continuous process wasn't easy. It took exceptionally strong leadership—in particular from admirals James Loy

and Thad Allen. The program has also faced challenges in implementing ideas; there is a difference between strategic foresight and strategic execution. But once established, the program developed significant momentum, fueled in part by a growing cadre of alumni who saw the value of a dynamic relationship between the present and the future. The Coast Guard had institutionalized imagination.

EXPLORATION ENABLES EXPLOITATION

Long View and Evergreen weren't designed to bring about a wholesale organizational shift from the operational to the strategic or to train the Coast Guard's attention primarily on the long term. Instead, the goal was to get its personnel thinking about the future in a way that would inform and improve their ability to operate in the present.

That was no small challenge. Management scholars have long noted that, in order to survive and thrive over time, organizations need to both exploit existing competencies and explore new ones. They need to be "ambidextrous."

The problem is that those two imperatives compete for resources, demand distinct ways of thinking, and require different organizational structures. Doing one makes it harder to do the other. Ambidexterity requires managers to somehow resolve this paradox.

Long View and Evergreen helped the service's leaders do that. The programs didn't reduce the organization's ability to attend to the present. If anything, the opposite occurred. Exploration *enabled* exploitation.

The Coast Guard members I interviewed for my research reported that Long View and Evergreen accomplished this in several ways. At the most explicit level, they identified strategies that the Coast Guard then pursued. Take maritime domain awareness. The scenarios made it clear to Coast Guard leaders that in any plausible future, they would want the ability to identify and track every vessel in U.S. waters. Although this may seem like an obvious need, it's not a capability that the service had in the 1990s. As one retired admiral explained, "Ships could come in 10 miles off or even three miles off the United States' coast, and we might not know it." That was in part because U.S. agencies had no integrated system for gathering and disseminating information.

Even though the Coast Guard didn't have the organizational and technological infrastructure to establish full maritime domain awareness immediately, Long View built consensus about its value among top leadership, which helped the service implement it more quickly after 9/11. In fact, the Coast Guard captain who had managed Evergreen led the interagency effort to develop the first National Strategy for Maritime Security, which ultimately prompted the creation of the Nationwide Automatic Identification System—a sort of transponder system for ships.

The strategies that emerged from the scenario-planning exercises also enabled personnel who participated in them to act with a greater awareness of the service's future needs. For example, the first iteration of Evergreen stressed the importance of building strategic partnerships at home and abroad. With this in mind, one senior Coast Guard leader prepared for threats that might emerge in the Pacific by developing bilateral relationships with island nations there; sharing information, coordinating patrols, and holding joint exercises with counterparts in China, Russia, Canada, South Korea, and Japan; and finding ways to work more closely with other U.S. agencies, from the FBI to the National Oceanic and Atmospheric Administration.

At the most basic level, Long View and Evergreen simply got the service's people to think more about the future. The master chief petty officer of the Coast Guard Reserve described how Evergreen had changed his thinking, citing a recent conversation with a colleague: "He and I were here in my office this morning, talking about, 'Twenty-five years from now, what is the Coast Guard Reserve component going to look like?'" Before taking part in Evergreen, he added, "I just wouldn't understand how to think that way."

Perhaps most interesting, however—and most important in resolving the supposed paradox between exploration and exploitation—is the way that Long View and Evergreen helped participants understand the demands of the past and the future not as competing but as complementary. The exercises changed the very way in which participants thought about time.

Humans tend to conceive of time as linear and unidirectional, as moving from past to present to future, with each time frame discrete. We remember yesterday; we experience today; we anticipate tomorrow. But the best scenario planning embraces a decidedly nonlinear

The best scenario planning embraces a decidedly nonlinear conception of time. It treats thinking about the future as an essential component of taking action in the present.

conception of time. That's what Long View and Evergreen did: They took stock of trends in the present, jumped many years into the future, described plausible worlds created by those drivers, worked backward to develop stories about how those worlds had come to pass, and then worked forward again to develop robust strategies. In this model, time circles around on itself, in a constantly evolving feedback cycle between present and future. In a word, it is a loop.

Once participants began to view time as a loop, they understood *thinking about the future* as an essential component of *taking action in the present*. The scenarios gave them a structure that strengthened their ability to be strategic, despite tremendous uncertainty. It became clear that in making decisions, Coast Guard personnel should learn not only from past experience but also from imagined futures.

GETTING STARTED

The prospect of organizing a scenario exercise can intimidate the uninitiated. There are distinct benefits to enlisting one of the individuals, boutique consultancies, or even large firms that specialize in scenarios to provide helpful direction. However, regardless of who runs the process, managers should follow these key guidelines:

Invite the right people to participate. One of the chief purposes of a scenario exercise is to challenge mental models of how the world works. To create the conditions for success, you'll need to bring together participants who have significantly different organizational roles, points of view, and personal experiences. You'll also need people who represent what Kees van der Heijden, one of Wack's successors at Shell, has described as the three powers necessary for any effective conversation about strategy: the power to perceive, the power to think, and the power to act.

Identify assumptions, drivers, and uncertainties. It's important to explicitly articulate the assumptions in your current strategy and what future you expect will result from its implementation. Think of this scenario as your projected scenario—but recognize that it's just one of many possible futures, and focus on determining which assumptions it would be helpful to revisit. Rafael Ramirez, who leads the Oxford Scenarios Programme, advises that in doing this you disaggregate *transactional actors,* which you can influence or control, from *environmental forces,* which you cannot. How might those forces combine to create different possible futures?

Imagine plausible, but dramatically different, futures. This can be the most difficult part of the exercise, particularly for those used to more analytical modes of thinking. Push yourself to imagine what the future will look like in five, 10, or even 20 years—without simply extrapolating from trends in the present. This takes a high degree of creativity and also requires the judgment to distinguish a scenario that, as the Coast Guard puts it, pushes the envelope of plausibility from one that tears it—an inherently subjective task. Good facilitators can both prime the imagination and maintain the guardrails of reality.

Inhabit those futures. Scenario planning is most effective when it's an immersive experience. Creating "artifacts from the future," such as fictional newspaper articles or even video clips, often helps challenge existing mental models. It's also a good idea to disconnect participants from the present, so hold workshops off-site and discourage the use of phones at them.

Isolate strategies that will be useful across multiple possible futures. Form teams to inhabit each of your far-future worlds, and give them this challenge: What should we be doing *now* that would enable us to operate better in that particular future? Create an atmosphere in which even junior participants can put forward ideas without hesitation. Once the groups develop strategies for their worlds, bring them together to compare notes. Look for commonalities, single them out, and identify plans and investments that will make sense across a range of futures.

Implement those strategies. This may sound obvious, but it is the place where most companies fall down. Using scenario planning to devise strategies isn't resource-intensive, but implementing them requires commitment. To couple foresight with action, leaders should set up a formal system in which managers have to explain explicitly how their plans will advance the firm's new strategies. Realistically, foresight will not drive every initiative, but scenario exercises can still be valuable in several ways. First, they can provide participants with a common language to talk about the future. Second, they can build support for an idea within an organization so that when the need for implementation becomes clear, it can move faster. Finally, they can enable

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participants to act at the unit level, even if the organization as a whole fails to link the present and future as tightly as it should.

Ingrain the process. In the long run you'll reap the greatest value from scenario exercises by establishing an iterative cycle—that is, a process that continually orients your organization toward the future while keeping an eye on the present, and vice versa. This ambidexterity will allow you to thrive under the best of conditions—and it's essential for survival under the worst. Moving in a loop between the present and multiple imagined futures helps you to adjust and update your strategies continually.

THIS LAST POINT is critical. As the current pandemic has made clear, needs and assumptions can change quickly and unpredictably. Preparing for the future demands constant reappraisal. Strategic foresight—the capacity to sense, shape, and adapt to what happens—requires iterative exploration, whether through scenario planning or another method. (See "The Future: A Glossary," page 44.) Only by institutionalizing the imaginative process can organizations establish a continual give-and-take between the present and the future. Used dynamically in this way, scenario planning and other tools of strategic foresight allow us to map ever-shifting territory.

Of course, strategic foresight also enables us to identify opportunities and amplifies our ability to seize them. Organizations don't just prepare for the future. They make it. Moments of uncertainty hold great entrepreneurial potential. As Wack once wrote in these pages, "It is precisely in these contexts—not in stable times—that the real opportunities lie to gain competitive advantage through strategy."

It takes strength to stand up against the tyranny of the present and invest in imagination. Strategic foresight makes both possible—and offers leaders a chance for legacy. After all, they will be judged not only by what they do today but by how well they chart a course toward tomorrow.

HBR Reprint R2004B

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