



FRACTAL STRATEGY

RESPONDING TO COVID-19 ON MULTIPLE TIMESCALES

By Martin Reeves, Kevin Whitaker, and Saumeet Nanda

AS THE COVID-19 OUTBREAK spread across the globe, organizations initially focused on reacting to the immediate issues posed by the pandemic. However, as the crisis unfolded, several other challenges rapidly emerged: preparing for a potential recession in the near term; anticipating an eventual rebound in demand (when social distancing restrictions are relaxed and, later, when consumer and business confidence returns); and reimagining operations, products, and business models for the postcrisis world.

Leaders must not wait to take on these challenges sequentially—because of the lead times required to build and execute, and the speed and unpredictability with which events can unfold, they should already be considering and acting on the longer-term implications of the crisis. During critical periods in history, pivotal changes were often concentrated in a very short period of time, and the new reality arrived quickly. We have the agency to shape history, if we act preemptively. In the case of COVID-19, as consumers adjust

to life under social distancing restrictions, they form new habits that can persist long after the outbreak, and businesses' actions today can shape the formation of those behaviors.

In other words, leaders and organizations need to consider all levels of strategic response—reaction, recession, rebound, and reimagination—simultaneously. Yet our benchmarking shows that many companies have delayed their responses to the longer-term implications as they focus on more immediate issues.

This delay reflects a more general challenge that business leaders increasingly face: the need to think and operate on multiple timescales simultaneously. Companies need to manage on longer timescales to avoid disruption from social, technological, and economic shifts. And they need to manage on shorter timescales to perform well in the current business, maintain viability, and fund long-term opportunities, particularly as competitive advantage becomes less persistent.

This challenge has increased in a world where business-relevant timescales have been stretched to both extremes—from the speed of algorithms (operating in milliseconds) to the increased importance of planetary and social timescales (operating over decades). And critical timescales are now converging; issues that could previously be considered far off in the future, such as climate change, have reached a point where they directly affect businesses and require action today. As the response to COVID-19 shows, companies’ traditional methods for managing on multiple timescales are often not up to this challenge.

The Focus on Near-Term Responses

To better understand how businesses have structured their response to the COVID-19 crisis, we conducted a survey of more than 300 companies across 55 countries and 24 industries. (See Exhibit 1.) Not surprisingly, we found that nearly all companies have reacted to the immediate threats. About 85% of companies have taken multiple measures to protect the health and safety of employees and ensure business continuity. Roughly 60% of companies have taken measures to plan for and navigate a likely recession, such as putting cost

control measures in place and revising capital investment plans.

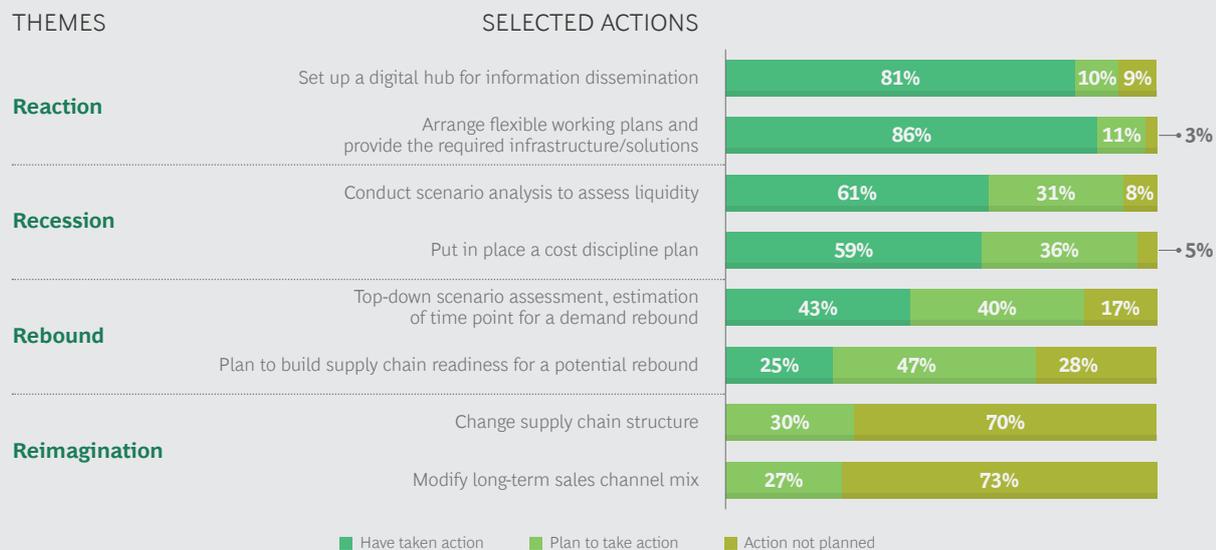
In contrast, only about 40% of companies have taken measures to prepare for a potential rebound of demand, and very few have begun reimagining the business for a post-COVID-19 world. Although the distinct challenges of reaction, recession, rebound, and reimagination will likely affect all businesses, only about 10% of survey respondents are planning on all four pillars.

Traditional Mechanisms Fall Short

Companies do have a few traditional ways to balance multiple timescales. However, the extreme challenges posed by COVID-19 have exposed their limitations.

Discount Rate. One method is to apply a discount rate to expected cashflows and compute a net present value for various options in order to make choices across different timescales. But many opportunities are not easily quantified in this way. For instance, the potential long-term shifts in customer behaviors that result from COVID-19 can be hard to calibrate, and there are several plausible scenarios.

EXHIBIT 1 | Companies Focused First on Immediate COVID-19 Effects and on Recession Preparation



Sources: BCG COVID-19 Company Survey (through 15 April); BCG Henderson Institute analysis.

Human decision makers are also known to apply hyperbolic discounting (applying different discount rates at different times), which can distort time tradeoffs. This can become more pronounced in the heat of a crisis, when the focus shifts to the short term. Finally, discounting is complicated by path dependence; the actions taken today will determine which opportunities are available tomorrow.

Organizational Hierarchy. Hierarchy is an implicit mechanism for managing multiple timescales. Employees at operational levels focus on day-to-day issues, while senior leaders focus on longer-term strategic decisions. However, if a short-term issue arises that requires immediate structural action, hierarchical organizations can lack the reliable override mechanisms needed to reallocate issues between levels. And when senior leaders are spurred to act against immediate threats, the balance can then shift away from longer-term opportunities, as demonstrated by many organizations' responses to COVID-19. Furthermore, there are time lags in the transmission and translation of information up and down the hierarchy.

Mixed Planning Cycles. Some organizations have mixed planning cycles on different, fixed timescales, such as a detailed annual operating plan and a three- or five-year strategic plan. However, predetermined timescales may not be appropriate for each specific situation. For instance, construction projects typically operate on extended planning cycles, but Chinese construction firm CSCEC adopted a 24-hour cadence to construct two hospitals for coronavirus patients in ten days. Rather than being fixed according to internal precedent, strategy processes need to be modulated according to the drumbeat set by the environment.

Unit-Specific Timescales. Finally, companies often have separate units focused on different timescales—for example, sales, development, and research usually have very different time horizons. However, the timescales of business are becoming more continuous, expanded, and intertwined,

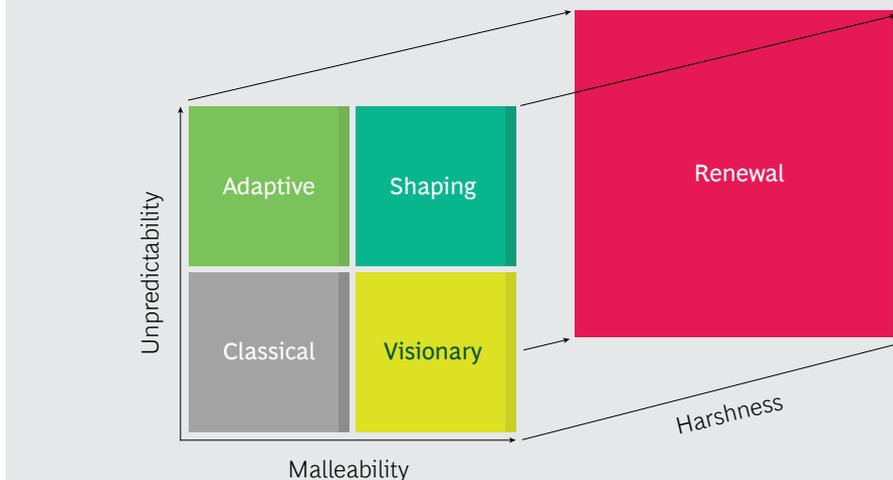
and a fixed number of predetermined timeframes may not reflect important shifts, such as the emergence of new, algorithmic timescales. Moreover, the “long term” and the “short term” can converge as phenomena speed up. For example, new medical products are usually developed on multiyear cycles, but the COVID-19 crisis has demanded greatly accelerated timelines. Finally, the appropriate timeframe may not be predictable (as in the case of potential new waves of infection) and thus cannot be boxed into any fixed timescale.

Strategy on Multiple Timescales

A fundamental challenge in realizing a multiscale strategy is that different timescales call for different strategic approaches. We have identified five distinct approaches to strategy and execution that reflect the predictability, malleability, and harshness of the business environment to which they are applied (see Exhibit 2):

- **Classical Strategy.** For markets that are predictable, analyze the drivers, plan your actions, and execute against stable plans.
- **Adaptive Strategy.** For markets that are unpredictable, vary your bets, select the most promising ones, and scale them up quickly to capitalize on shifting opportunities.
- **Visionary Strategy.** For markets that can be predicted and shaped, envision the future, build a business to pursue the defined vision, and persist in pursuing that goal.
- **Shaping Strategy.** For markets that can be shaped but not predicted, engage a broad ecosystem of partners, orchestrate their actions, and evolve together.
- **Renewal Strategy.** For harsh markets and situations (such as a crisis or recession), react promptly and pragmatically to avoid danger, economize on resources, and later pivot to growth.

EXHIBIT 2 | The Strategy Palette: Five Approaches to Strategy and Execution



Source: Reeves, Love, and Tillmanns, "Your Strategy Needs a Strategy," *Harvard Business Review*, September 2012.

The COVID-19 crisis illustrates how issues on different timescales often require the application of different strategic approaches. For many large companies, day-to-day operations and demand have been highly predictable, so a classical strategy based on planning and disciplined execution often dominates. However, during the COVID-19 crisis, markets have become unpredictable even on short timescales, requiring an adaptive approach that focuses on rapid learning and real-time adjustment. For example, as the outbreak began in Italy, energy infrastructure operator Snam recognized the risk to its dispatching center, which manages gas distribution. It adapted rapidly, purchasing residential facilities, testing all dispatching center staff, and identifying a group of healthy employees to work and live on the premises. This response helped maintain operational viability and ensured that dispatching center staff were protected from the outbreak even as it intensified in the surrounding area.

Over timescales of a few months, the effects of government-imposed lockdowns and a likely recession will threaten many businesses' survival, forcing them to operate a renewal strategy. And although there is high uncertainty about the postcrisis future, consumer preferences will likely be malleable as people adjust to the forced

changes in their lifestyles, calling for a visionary or a shaping strategy.

The crisis also illustrates how business-relevant timescales can rapidly change or converge. For example, pymetrics, an AI- and neuroscience-based hiring and talent deployment startup, initially developed a roadmap for the year that prioritized its hiring support offering. However, many companies reduced their hiring plans as the outbreak unfolded and instead focused on redeploying their existing workforce. As a result, pymetrics shifted to focus on redeployment offerings, which had previously been considered a longer-term priority. The company is now working together with partners to build and orchestrate a platform for matching furloughed workers to job opportunities.

As new timescales emerge and existing timescales converge, businesses need to cultivate temporal ambidexterity—the ability to apply different strategic approaches to different problems on different timescales and to modulate an approach according to changing circumstances.

Realizing Fractal Strategy

To succeed with a multiscale, fractal strategy, leaders should keep three imperatives in mind.

Understand the required clock speed and the strategic approach of each business. Within any company, each business line or geographically based unit may have different relevant timescales and require correspondingly different approaches to strategy. Hence, leaders need to identify and apply the right strategic approaches in the right place at the right time. For example, consumer packaged goods companies are generally accustomed to operating in a classical environment with predictable demand. But now some business lines, such as health and safety products, may face temporary spikes in short-term demand, requiring an adaptive approach. Other business units may be more stable in the short run but see long-term changes in distribution models as consumer activity shifts online, perhaps requiring a shaping strategy to collaborate on new channels and partnerships.

Master the capabilities underpinning different approaches to strategy. Leaders in established companies are often used to working in classical (stable, predictable) environments, but a classical approach is not always optimal. In order to address challenges on all timescales, a company must be able to apply the entire palette of strategic approaches. Traditional top-down strategy is not feasible on algorithmic timescales; companies must instead take an adaptive approach, integrating AI, data platforms, and decision systems in autonomous learning loops. For example, global food giant Danone dealt with supply chain uncertainties by feeding AI tools with new data on COVID-19 spread patterns to help distribute materials and keep their factories running. For slow-moving issues, classical strategy misses opportunities to envision and shape the market to advantage, such as by harnessing the power of organizational imagination.

Master the ability to function on multiple timescales simultaneously. Balancing short-term exploitation and long-term exploration is a perennial business challenge, made more critical by the emergence and convergence of timescales.

Businesses face many short-term challenges that naturally demand leaders' attention. However, our research shows that companies that act preemptively in the face of disruptions outperform those who wait, reinforcing the need to attend to longer-term issues early. For instance, in response to the COVID-19 crisis, Lego set up a small team to think about the postcrisis future, even as most of management was still focused on steering through the immediate crisis.

As the business environment becomes more complex and diverse, traditional approaches to strategy are increasingly limiting. Businesses should view crises like COVID-19 as opportunities to revisit and strengthen their approaches to strategy. By being able to vary the clock speed of each part of the business and think on multiple timescales simultaneously, leaders can improve their odds of succeeding in this crisis and the next one.

Inspiration from Biology

We see that companies need to operate on multiple timescales to respond to the biological threat posed by the novel coronavirus. But they can also turn to biology for inspiration. Biological systems have evolved to survive both short- and long-run challenges, and their behaviors illustrate some key principles of a multi-timescale strategy.

Optimizing for Multiple Timescales.

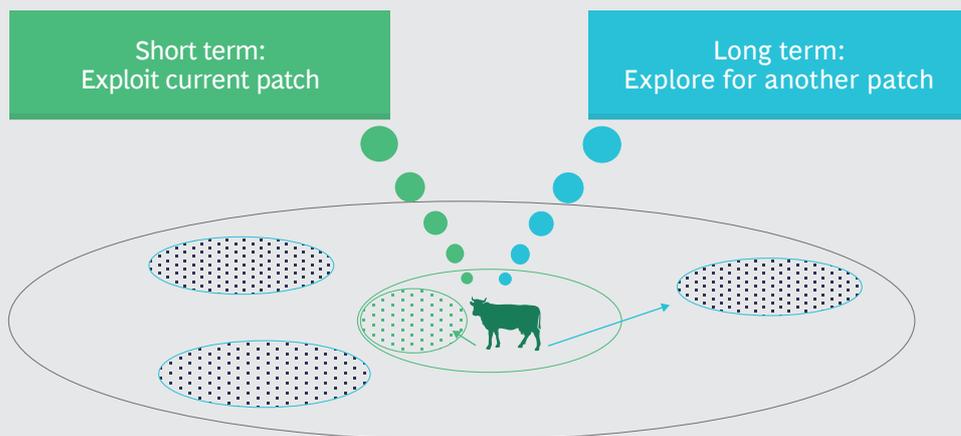
Animals that forage in patchy environments face a tradeoff between feeding from their current patch (which provides short-term benefit but eventually exhausts the patch) and searching for a new patch (which incurs immediate costs but offers greater long-term security). (See Exhibit 3.) Many animals therefore begin searching for a new patch at the optimal point to balance short- and long-term benefits—an example of the Marginal Value Theorem. When is the right time for your business to start looking for a new patch?

Matching Response Mechanisms to Timescales. Organisms respond to a

change in the environment by making adjustments that cascade from short-term to long-term with decreasing reversibility, using different mechanisms. (See Exhibit 4.) For example, if the environment becomes colder, animals might immediately shiver, an action that is fast and easily reversible. But if cooling persists, they will make more substantial adjustments, such as sheltering, moving to warmer places, or increasing fat storage, which are moderately reversible adjustments. If changes persist, they may eventually evolve genetically to adapt better to cold environments. What are the cascading adaptation mechanisms for your business?

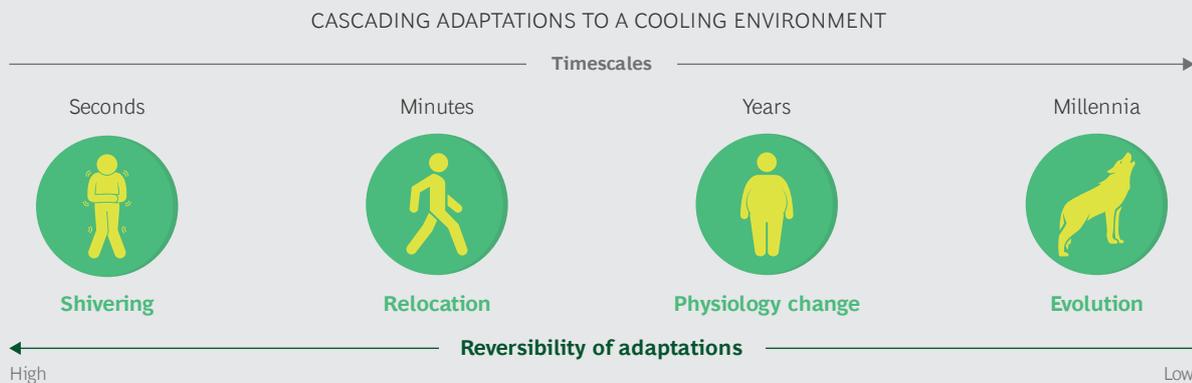
Applying Different Strategies for Different Environments. Reproductive strategies fall into two categories: r-selection, which involves many, highly diverse offspring, low selection pressure, and low parental investment; and K-selection, which involves fewer offspring and higher parental investment. (See Exhibit 5.) Species such as bacteria and rodents, which operate in disrupted or uncertain environments, tend to use r-selection strategies to ensure many “shots on goal,” whereas species such as elephants and humans, which operate in more stable environments, tend to use K-selection strategies. Which innovation or new business build strategy should your business adopt in the current environment?

EXHIBIT 3 | Foraging Animals Optimize for Multiple Timescales



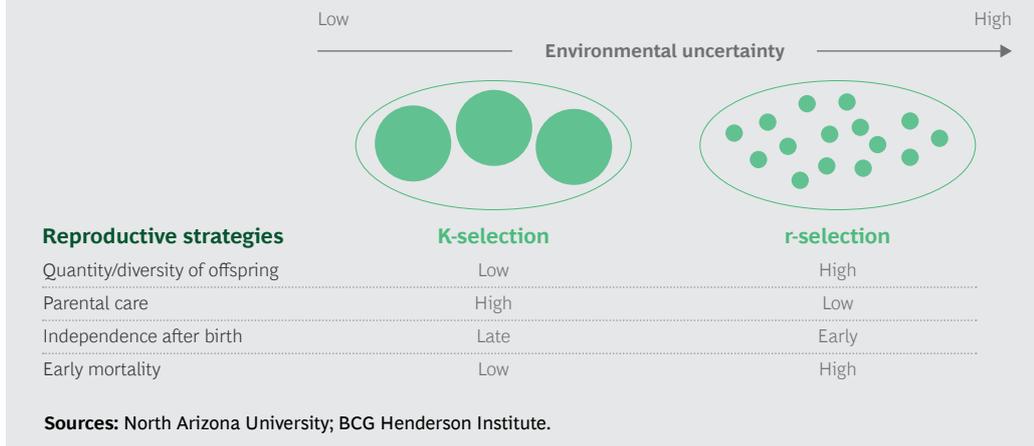
Source: “Preemptive Innovation: Leaping Before the Platform Burns,” BCG Henderson Institute, 2018.

EXHIBIT 4 | Organisms Match Adaptations to Appropriate Timescales



Sources: Slobodkin and Rapoport, “An Optimal Strategy of Evolution,” *The Quarterly Review of Biology*, September 1974.

EXHIBIT 5 | Species Tailor Selection Strategies to Different Environments



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