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Donald N. Sull

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Closing the Gap Between **Strategy and Execution**

In fast-paced industries, companies should think of strategy as an iterative loop with four steps: making sense of a situation, making choices, making things happen and making revisions.

Donald N. Sull

In an ideal world, managers could formulate a long-term strategy, methodically implement it and then sustain the resulting competitive advantage. Reality, however, is rarely so neat and tidy. Technologies evolve, regulations shift, customers make surprising choices, macroeconomic variables fluctuate and competitors thwart the best-laid plans. Thus, to execute strategy as circumstances change, managers must capture new information, make midcourse corrections and get the timing right because being too early can often be just as costly as being too late. But how can managers implement a strategy while maintaining the flexibility to roll with the punches?

The first step is to abandon the long-held view of strategy as a linear process, in which managers sequentially draft a detailed road map to a clear destination and thereafter implement the plan. This linear approach suffers from a fatal flaw: It hinders people from incorporating new information into action. How so? First, the linear approach splits the formulation of strategy from its execution. (Indeed, many business schools still teach formulation and implementation as separate courses.) Thus planners craft their strategy at the beginning of the process, precisely when they know the least about how events will unfold. Executing the strategy, moreover, generates new information — including the responses of competitors, regulators and customers — that then becomes difficult to incorporate into the prefabricated plan. Second, a linear view of strategy pushes leaders to escalate commitment to a failing course of action, even as evidence mounts that the original strategy was based on flawed assumptions.[1] Leaders commit to a plan, staking their credibility on being right. When things go awry (the U.S. involvement in Vietnam is a classic example), they find it difficult to revise their strategy and instead attribute problems to "unexpected setbacks," which is just another way of saying new information. Third, a linear approach ignores the importance of timing. When companies view strategy as a linear process, they sprint to beat rivals. But rushing to execute a flawed plan only ensures that a company will get to the wrong place faster than anyone else. Instead, managers need to notice and capture new information that might influence what to do and when to do it, including the possibility of delaying as well as accelerating specific actions.

Many managers, of course, recognize these limitations and attempt to work around them. One approach is to identify big bets up front and then think exhaustively in the planning process to envision possible outcomes ex ante.[2] But managers can rarely identify all the factors that will end up mattering in the future, let alone predict how events will unfold. Another approach is to accept the presence of uncertainty, make a best guess on a strategy based on the data at hand, commit to the strategy and then hope for the best.[3] But even though executives might try to mitigate risk by, for example, diversifying their lines of business, the fundamental logic remains: Place your bets and take your chances.

***Donald N. Sull** is an associate professor of management practice at the London Business School. Comment on this article or contact the author through smrfeedback@mit.edu.*

There is an alternative. Instead of thinking of strategy as a linear process, why not consider it as inherently iterative — a loop instead of a line? According to this view, every strategy is a work in progress that is subject to revision in light of ongoing interactions between the organization and its shifting environment. To accommodate those interactions, the strategy loop consists of four major steps: making sense of a situation, making choices on what to do (and what not to do), making those things happen and making revisions based on new information. (See "About the Research," p. 32 and "The Strategy Loop," p. 33.) These steps can be embedded within formal processes, such as strategic planning, budgeting, resource allocation or performance management, but they should also be contained within the myriad informal conversations that fill out the typical manager's day. And these discussions should not be concentrated at the top; they must take place at every level of the organization. Strategy will remain stranded in the executive suites unless teams throughout the organization can effectively translate broad corporate objectives into concrete action by making sense of their local circumstances, making choices on how best to proceed, making things happen on the ground and making revisions in light of recent events.

The fundamental advantage of strategy loops is their ability to incorporate new information and translate it into effective action. They integrate formulation and execution into a strategic yin and yang that cannot be separated. They also explicitly call for ongoing revision as new information emerges, mitigating the tendency to escalate commitment to a failed course of action. Finally, by breaking time into discrete chunks (defined by each iteration) and by building in an explicit step for revision, they increase the odds that managers will spot changes in context that open a window of opportunity and will act before the window closes.

Reconceptualizing strategy as an iterative loop is simple enough, but putting that new mind-set into practice is extremely difficult. Here, the crucial thing to remember is that discussions — formal and informal, short and long, one-on-one and in groups — are the key mechanism for coordinating activity inside a company, especially within large corporations. Thus, to put the strategy loop into practice, managers at every level in the organization must be proficient at leading discussions that reflect the four major steps (making sense, making choices, making things happen and making revisions).

All too often, though, conversations at companies bog down in an endless series of unproductive meetings in which the usual suspects cover the same ground without making progress. Frustration mounts as participants "spin their wheels" or "talk in circles." To avoid that, managers should start by asking a simple question: Are we having the right type of conversation? Specifically, are we trying to make sense, prioritize, make things happen or revise assumptions? (See "What Are We Talking About?" p. 35.) Moreover, managers who understand the intricacies of the four different types of discussions will be better able to translate understanding into action — and to revise both understanding and action in light of new information.

Although each type of discussion is simple in principle, they are all prone to breakdowns in practice. Indeed, the path through the strategy loop is strewn with pitfalls, but the crucial thing is that each of the four types of discussions has a different objective, requiring a specific tone, supporting information, leadership traits and accompanying tactics. (See "Discussions Through the Strategy Loop," p. 36 for a high-level summary of those differences.)

Making Sense of a Situation

The first step of the strategy loop consists of gathering raw data from different sources to identify patterns from a welter of information that is complex, incomplete, conflicting, ambiguous and of uncertain reliability. The objective is to develop a shared mental model that helps people anticipate how events might unfold. But the goal of the process should not be accurate long-term predictions. Instead, people should strive for just enough clarity to proceed through one iteration of the strategy loop.

To make sense of a situation, managers should establish a tone of open inquiry rather than advocacy. Teams are most likely to make sense of novel situations if they dig into the data with an open mind. In this step, the advocacy of a preconceived interpretation can be dangerous. Consider the Cuban missile crisis.[4] While President John F. Kennedy was trying to assess the situation, his military advisers reflexively advocated invading Cuba, a course of action they had favored for some time, even though the specific situation at hand suggested that a military strike could easily escalate into nuclear war.

Research on effective decision making has found that groups in rapidly changing markets do best to avoid anchoring too quickly on a single view.[5] In novel situations, the best interpretation is rarely obvious, and the obvious one is often wrong. Therefore, the discussion leader must ensure that participants feel safe to put forth alternative interpretations.[6] Kennedy's team might have settled on the "obvious" interpretation that Nikita Khrushchev's intentions were hostile, but Llewellyn "Tommy" Thompson, a former ambassador to the Soviet Union, argued that the Soviet leader probably felt backed into a corner and might accept a face-saving way to de-escalate the tensions — an interpretation that proved accurate. (This example also illustrates the benefit of empathy in making sense of an ambiguous situation. Thompson knew Khrushchev personally, which helped him to see the situation from Khrushchev's perspective rather than viewing the Soviets as an abstract enemy.)

Instead of passively waiting for divergent views to emerge, leaders can actively stimulate them. President Kennedy required his advisers to generate different alternatives to a military strike, which made it safe for them to discuss the apparently "soft" options of blockade and diplomatic negotiation — alternatives that ultimately prevailed, allowing the United States to avoid a nuclear war. A quick test of whether a team feels comfortable proposing alternative interpretations is to track the number of framings that were proposed and seriously discussed.

Conversations to make sense of a situation can, of course, derail in many ways. The team might cower before a powerful

About the Research

Over the past decade, I have investigated dozens of companies in volatile markets. The core of this research consisted of comparative case work analyzing how similar companies in highly uncertain environments responded to unexpected opportunities and threats.[i] The first study contrasted 10 pairs of established Brazilian firms, in which the focal company succeeded during the turbulent decade of the 1990s while its matched pair was less successful. The second study followed a similar design, matching six Chinese startups that adapted successfully to shifting environmental conditions with similar, but less successful, ventures (with an additional two companies analyzed without a matched pair). In both studies, conversations within the company were a central research focus, and I conducted hundreds of one-on-one interviews, supplemented by a review of archival records within the businesses and direct observations of management team meetings.

The development of the strategy-loop framework is the result of that research as well as a general review of the existing literature on iterative processes and agility in diverse domains, including entrepreneurship, military theory and software programming. Reviewing those diverse fields provided insight into the fundamental characteristics of strategy loops that appear to be robust across domains. In addition, a review of the existing literature on decision making helped refine and enhance the different steps within the strategy loop.

Concepts of the strategy loop have been implemented at several companies to enhance their quality of discussions. In this research, I typically worked with dozens (and even up to hundreds) of managers at various levels within each firm over the span of months (and sometimes years). A typical session would last approximately two days, during which the participants would learn about the framework, complete a diagnostic exercise to identify common breakdowns in their organization at each stage in the strategy loop and collectively brainstorm to develop tactics for overcoming those obstacles. I have also worked directly with various management teams, observing their formal and informal meetings to identify impediments to effective discussions and to coach the participants on potential ways to improve those discussions.

i. D.N. Sull and M. Escobari, "Success Against the Odds: What Brazilian Champions Teach Us About Thriving in Unpredictable Markets" (São Paulo: Elsevier, 2003); and D.N. Sull with Y. Wang, "Made in China: What Western Managers Can Learn From Trailblazing Chinese Entrepreneurs" (Boston: Harvard Business School Press, 2003).

In novel situations, the best interpretation is rarely obvious, and the obvious one is often wrong. Therefore, the discussion leader must ensure that participants feel safe to put forth alternative interpretations.

leader, lapse into "groupthink" or ignore the available data when forming conclusions. One warning sign is when some participants check out of the conversation altogether, perhaps because they believe the leader has already made a decision in a "meeting before the meeting" and is just trying to obtain everyone's buy-in.

One of the most dangerous pitfalls is when a team prematurely develops a "bias for action." This risk is particularly acute among managers who pride themselves on getting the job done. The result: The team shortchanges the sense-making discussion and jumps right into a debate about what to do and how to do it. But if the conversation rushes too quickly through the messy thrashing around of sense making, managers risk diving into the details of implementation before they've explored alternative assessments, surfaced and checked key assumptions, or tested the fit between their interpretation and the facts on the ground. Executives can mitigate this risk by separating discussions to make sense from those to make choices. For example, the top management team of Diageo Ireland, which handles alcoholic beverages such as Guinness, Smirnoff and Baileys, breaks the monthly performance management process into distinct meetings. On the second day of the month, managers update their assessment of the market situation and identify possible issues, and on the seventh day they decide what to do, thereby reducing the risk of shortchanging sense making in a rush to action. When action proposals do arise in sense-making discussions, the leader can dig backward to unearth and examine the assumptions that underlie the plan of action rather than rush forward into details of implementation. Questions that help uncover that information include, "If that's the solution, what exactly is the problem?" and "What fresh data would convince us that this is the wrong course of action?"[7]

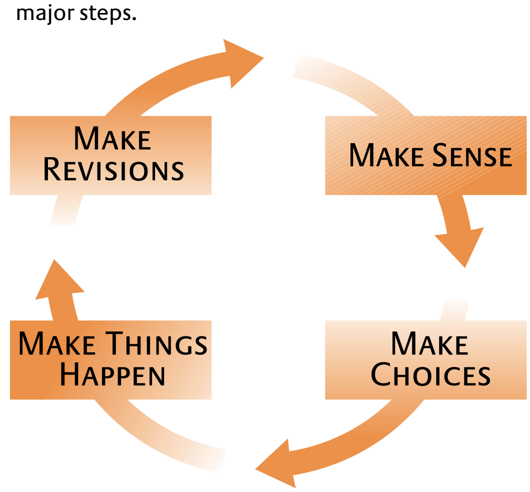
Guiding discussions to make sense requires a distinct set of management traits. The first is coup d'oeil, or the ability to grasp the essence of a situation based on limited data, akin to a person quickly being able to visualize the overall picture of a jigsaw puzzle after glimpsing just a few pieces. Another critical attribute is curiosity. Managers with that trait remain open to new interpretations and are likely to explore unfamiliar ways of framing a situation. Curiosity also helps people remain alert to weak signals from many different sources — an important skill because the crucial piece of a puzzle often comes from an unexpected source. That's why some leaders use specific techniques to reinforce their curiosity. Robert Rubin, the former U.S. Treasury secretary and co-managing director of Goldman Sachs & Co., would tackle any new situation, from evaluating a risk arbitrage deal to managing an economic crisis, by pulling out a pad of yellow legal paper to write down a long list of questions — in stark contrast to many managers who try to affirm authority by asserting answers rather than asking good questions.[8] Finally, leaders need to do more than just tolerate different points of view; they must actively seek them out. Various tactics can help, including arguing the opposite of a given position and appointing a devil's advocate to probe contrary views.

Making Choices

The objective of discussions to make choices is a small set of clear priorities that will focus organizational resources and attention. Determining the right priorities is a critical function of management under any circumstances, but the process is all the more important (and difficult) in dynamic markets. In such environments, the constant deluge of potential opportunities

The Strategy Loop

The strategy loop is an iterative process that consists of four major steps.



The most successful companies did not seek complete consensus, but neither did they go to the other extreme of having one person call all the shots. Instead, they followed a policy of "qualified consensus."

and threats can lead managers to hedge their bets against every foreseeable contingency, thereby spreading corporate resources too thin and failing to execute on key initiatives. Conversations to make choices conclude when a group agrees on a set of priorities that are both consistent with its interpretation of the situation and sufficiently concrete to be understood by everyone required to execute the strategy.

These conversations are, at their core, about making hard trade-offs. As a result, the leader should establish a tone of respectful argumentation, in which team members can express valid disagreements that might otherwise simmer below the surface. Without active efforts to stimulate debate, these conversations can easily drift toward superficial agreement while unresolved conflicts lurk below. The danger is particularly acute if prioritization becomes politicized — participants from different business units refrain from challenging an initiative to respect a colleague's turf, for example, or they horse-trade support for their pet initiatives. Leaders can actively counterbalance such tendencies by insisting that all choices be made in public meetings, thus adding transparency to the process, which can help keep political prioritization in check. In addition, holding team members collectively responsible for delivering on priorities will increase their willingness to raise potential conflicts in order to avoid being held accountable for initiatives that are ill-advised for the organization as a whole.

Discussions to make choices frequently derail when people add priorities without either increasing resources or removing other initiatives. Such cases of priority proliferation can arise when managers make decisions by focusing on specific issues in isolation without considering the existing portfolio of activities going on within the organization. As a result, decision makers fail to consider which current activities they should terminate to free the resources required for a new initiative and, over time, the result is a plethora of so-called priorities.

To avoid priority proliferation, managers can inject discipline into the prioritization process by making choices more explicitly and systematically. At Diageo Ireland, for instance, issues are triaged into one of three categories: soft opportunities or threats, which receive ongoing monitoring but no action; hard opportunities or threats, which require immediate action and become a priority within the company; and nonissues, which are dropped from the agenda. Teams can also adopt a small set of simple rules to guide the prioritization process.[9] Consider All America Latina Logistica S.A., which began life as a privatized branch of Brazil's freight railway. The new company had only $15 million for capital spending to offset decades of underinvestment. So, to select from among countless capital budgeting proposals, management adopted a set of simple rules, such as "eliminate bottlenecks to growing revenues," "lowest up-front cash beats highest net present value" and "reuse of existing resources beats acquiring new."

Simple rules can also help prevent discussions from bogging down in an endless quest for perfect agreement. Achieving consensus is, of course, desirable, but the process takes time, and the costs of delay can often outweigh the benefits, particularly in fast-moving markets. Indeed, research on successful decision making in such environments has found that the most successful companies did not seek complete consensus, but neither did they go to the other extreme of having one person call all the shots.[10] Instead, they followed a policy of "qualified consensus," in which the top management team would seek agreement up to a certain point and then invoke a set of prespecified rules. The rules depended on the team and the decision; for example, the person with the most authority (or functional expertise) might decide, or the team might take a vote. Interestingly, the exact rules mattered less than the fact that they were clear, considered to be legitimate and known by everyone in advance.

In discussions to make choices, the central leadership quality is decisiveness, and a related trait is the ability to say no. Generally speaking, the hardest choices are not about deciding what to do; instead, they involve determining what not to do (or what to stop doing). Because such decisions might be unpopular, they must typically be based on a compelling rationale grounded in the overarching strategy and objectives of the organization. In making choices, managers should also consider the overall enterprise rather than setting parochial priorities that make sense only for their individual units. Finally, leaders need sufficient credibility to have their decisions stick. The return of company founders Steve Jobs (Apple Inc.), Charles Schwab (Charles Schwab Corp.) and Michael Dell (Dell Inc.) might stem in part from the credibility they possess within their organizations, which enables them to bring people along even when they make very difficult decisions.

Making Things Happen

A simple but powerful mechanism — the promise — can help managers make things happen.[11] A promise is a personal pledge a provider makes to satisfy the concerns of a customer within or outside the organization. Both "customer" and "provider" refer to roles (and not individuals), which can vary depending on the specific situation. A business unit head within a bank, for example, is a customer when requesting technology support from the chief technology officer. But she is a provider when supplying products to another division.

Companies can use promises to ensure that employees understand what they need to do and that those individuals deliver on their commitments. To a large extent, then, execution will hinge on the quality of promises made and on the consistency with which those commitments are honored. In this context, the objective of the discussions to make it happen should solicit personal promises (between employees and their managers) to perform actions that are aligned with agreed-on priorities. The promises might take place within an existing procedure, such as performance management, or in off-line negotiations, but their purpose is the same — to weave a web of commitments that ensure coordinated action.

A common mistake is that people often equate a promise with a contract and focus on the specific clauses of what the provider has committed to deliver. But the conversations that lead to a promise and keep it alive are far more important than the actual terms of the deal. When leading such discussions, managers should adopt a tone of supportive discipline, demanding explicit promises and holding people accountable for them but also helping those individuals to deliver on their commitments. That support can take several forms, providing, for example, additional resources, relief from other priorities or the political cover needed to deliver on the commitments.

Managers should remember that the most effective promises share five fundamental characteristics: They are public, actively negotiated, voluntary, explicit and linked to corporate priorities. A commitment can easily derail when any of the five is absent. For instance, private (and not public) side deals can allow people to wriggle out of what they said they'd do. Passive (and not active) promises occur when people agree to do something without probing to understand what they are really signing up for. Coerced (and not voluntary) commitments arise when people feel compelled to accept a request — even one that is unrealistic — because it comes from someone more powerful in the organization. Vague (and not explicit) commitments offer too much scope for interpretation of what constitutes execution, making it difficult to hold people accountable. Lastly, commitments that are ad hoc (and not linked to corporate priorities) arise when people make promises that might be optimal locally but are poorly aligned with the organization's objectives.

Scrum, which takes its name from a play in rugby, is an approach used in the software industry that exemplifies how to elicit good promises. In the process, a programming team convenes in the same place and time each workday to make and track each member's promises publicly. During a meeting, the participants (typically fewer than 10) stand in a circle and answer the same three questions: What have you done since the last scrum? What will you do between now and the next scrum? And what's getting in the way of you delivering on your promises? The public forum is effective because of peer pressure — people don't want to let down their team, nor do they want their reputations to suffer from a failure to do what they said they would. Scrums also allow the programmers to actively talk through what they are promising, which helps ensure that the promises are sufficiently

What Are We Talking About?

Understanding the four types of discussions that make up the strategy loop is necessary but not sufficient. Leaders must also exercise judgment in deciding which type of conversation to have, when to have it and how to lead it most effectively. ("Discussions Through the Strategy Loop" summarizes some key differences among the four types of discussions.) The following questions should help:

- What are we talking about? This simple question often reveals a disturbing lack of focus in discussions.
- Are the right people in the room? Discussions to make sense work best when different points of view are brought to bear; making things happen requires the presence of the people who will ultimately do the work; and discussions for revision often benefit from an outside viewpoint.
- Are we currently talking about the right thing? Managers must make a call on what conversation is appropriate for the current situation. Are people jumping to choices before they've made sense of what is going on, for example, or are they revisiting assumptions when they should instead be getting things done? The timing of when to shift a conversation from one stage to another is a crucial decision that executives must make.
- Does the conversation have the right tone? Managers must understand what an effective discussion sounds like for each step of the strategy loop. For example, they should establish and maintain a spirit of open inquiry during discussions to make sense of a situation, and they should promote respectful arguments during discussions to make choices.
- Are we skipping key conversations? Execution-focused teams are particularly prone to ignore discussions to make sense and make revisions, while more strategic groups might favor discussions about the market but omit critical discussions to ensure that everyone does the necessary work.

explicit for others to adjust their behaviors accordingly. Moreover, work is not assigned — instead, people volunteer for it — and everyone's commitments are always linked back to the priorities set in monthly meetings with customers.

In discussions to make things happen, the most important leadership trait is trustworthiness. Here, a manager can set the right tone by consistently honoring his or her own promises. When making a commitment, an executive takes on the responsibility for all the unexpected contingencies that could occur. As such, overcoming inevitable setbacks and obstacles requires flexible tenacity — the ability to try different courses of action until the desired results are achieved. Finally, a leader must inspire others to make ambitious promises without coercing them to do so, and one of the most effective ways to accomplish that is by linking the assignment to a mission or corporate objective that matters to the person making the commitment.

Making Revisions

Managers need to recognize emerging patterns in order to anticipate new opportunities and threats. But spotting such patterns also requires people to revise and sometimes even abandon their existing mental models, and therein lies the rub. When a person's established patterns of thinking clash with changing circumstances, the existing mental models typically prevail. But letting go of the old is as important as spotting the new. Thus managers must keep their mental models fluid, modifying them in light of changes in the broader context. And they must remain open to the possibility of abandoning those established models altogether.

In any discussion to make revisions, people should treat actions as experiments: They should analyze what's happened and use the results to revise their assumptions, priorities and promises. As such, the appropriate time to have such conversa-

Discussions Through the Strategy Loop

Discussions at each stage in a strategy loop have different objectives, face different pitfalls and require distinct management approaches to improve the quality of the conversation.

	Make Sense	Make Choices	Make Things Happen	Make Revisions
Objective	Develop a shared mental model of a situation	Agree on clear priorities to guide action and resource allocation	Ensure that people make good promises and deliver	Sense anomalies and revise key assumptions
Appropriate Tone	Open inquiry	Respectful argumentation	Supportive discipline	Dispassionate analysis
Information Support	Shared dashboard of real-time, granular data	Ongoing monitoring of "hard" and "soft" priorities	Monitor performance against promises	Variance reporting of key variables to spot anomalies
Required Leadership Traits	• Coup d'oeil • Curiosity • Empathy to see other points of view	• Decisiveness • Enterprise perspective • Credibility to make the call	• Trustworthiness • Flexible tenacity • Ability to inspire others	• Intellectual humility • Respect for other viewpoints • Sensitivity to anomalies
Pitfalls	• Advocating pre-existing positions • Anchoring too quickly on one viewpoint • Bias for premature action	• Superficial agreement • Politicized prioritization • Priority proliferation • Searching for complete consensus	• Private promises • Passive agreement • Meaningless yes • Implicit agreements • What without why	• Blame game • Escalating commitment to failed course of action • Cognitive biases toward confirming evidence
Helpful Tips	• Question assumptions • Interact frequently	• Explicit prioritization • Simple rules to prioritize	• Publicly monitor promises • Link promises to priorities	• Build in regular reviews • Bring in external reviewers
Killer Questions	• What fresh data would convince us that our assessment is wrong?	• What will we stop doing?	• What did you promise to do? • What have you done? • What is hindering you?	• What did we expect to happen versus what really happened? • Why the difference? • What should we change?

Many anomalies provide clues to outdated and otherwise inaccurate assumptions, and people who discover and act on that information can seize the initiative from rivals who are slower to respond.

tions is after the team has reached a significant milestone in making things happen. Discussions to make revisions tend to add the most value after a prolonged period of heads-down execution, when team members have not yet had the time to determine whether the results have confirmed their original assessment of the situation. Shifts in contextual factors, such as regulatory changes or unexpected moves by competitors, almost always create a gap between initial assumptions and how events actually unfold. Consequently, leaders need to design in regular occasions for people to pause and reflect on what the team has learned.

In principle, discussions to make revisions are simple: The team discusses what it expected to happen (and why) versus what actually happened, and then it explores any gaps between expectations and reality. Leaders can facilitate these discussions by explicitly framing assumptions as hypotheses and actions as experiments.[12] But even when the conversations are presented clearly as retrospective opportunities to learn, they remain tricky and delicate. People might still feel threatened by the prospect of having their actions scrutinized and criticized, and they could personalize feedback as a negative reflection on their competence, judgment or motivation. To avoid that, the discussions should maintain a tone of dispassionate analysis — think of a scientist in a lab coat objectively evaluating results from an experiment.

The fear of blame isn't the only obstacle. Psychologists have documented a depressingly long list of factors that keep people locked into the confines of their established mental models. For example, people often escalate their commitment to a failed course of action in order to avoid admitting any mistakes, or they fixate on data that confirm their expectations while ignoring or downplaying any contradictory information.

Given all the obstacles, organizations must go out of their way to incorporate frequent and rigorous opportunities for revision into their strategy loops. Venture capital firms, for example, typically stage their funding in rounds, which forces the partners and entrepreneurs to reexamine a startup's performance against its business plan and to consider shifts in the market and other changes in circumstances. In fact, many venture capitalists view their most important role as that of protecting their partners from falling in love with a bad investment. So they regularly engage in hard-hitting and skeptical evaluations of one another's deals, asking questions along the lines of, "If this company walked in the door today, would we invest?" and "Why shouldn't we cut our losses right now?" The partners of Onset Venture Services Corp., an early-stage venture capital firm based in Menlo Park, California, have gone even further by instituting a simple rule: They don't scale a startup until its business model has morphed at least once, building in the expectation that not only is it OK to adjust the model, it's required. Consequently, Onset selects entrepreneurs to fund in large part based on their ability to learn and adapt to shifting circumstances. Moreover, to inject a more objective perspective into the process, the Onset partners invite later-stage venture capitalists from the outside to help them evaluate the progress and prospects of their portfolio companies.

The fundamental leadership trait required for revision is intellectual humility, which is admittedly not the most common attribute among executives. But in an uncertain world, managers must acknowledge that their mental models are merely simplified maps of complex terrain based on provisional knowledge that is subject to revision in light of new information. That humility can help executives to actively seek out disconfirming information that exposes inaccuracies in their maps. On a related note, executives must have respect for other points of view — not just because it will smooth the road for implementation and is desirable in and of itself, but also because it will increase the likelihood that they will hear and consider alternative perspectives that might lead to a revision of past assumptions. Finally, managers should remain alert to any new information that doesn't jibe with their expectations. Many anomalies provide clues to outdated and otherwise inaccurate assumptions, and people who discover and act on that information can seize the initiative from rivals who are slower to respond. When managers observe an anomaly, they should investigate it firsthand until they're satisfied that they understand the source of the discrepancy.

SOME INDUSTRIES — HEAVILY REGULATED UTILITIES, for example — do not often produce new information that would challenge a company's strategy. In such stable contexts, the traditional linear approach to strategy might suffice. But most markets frequently generate high levels of strategically relevant information. In such industries — call them volatile, unpredictable,

Managers who master the four types of discussions will be able to spot emerging opportunities, seize them and make midcourse corrections more effectively than others who stumble through those steps.

turbulent, high-velocity, hypercompetitive, chaotic or uncertain — the complex interactions of multiple variables (geopolitics, technical innovation, capital market swings, competitive dynamics, shifting consumer preferences and so on) influence a company's best course of action and ultimate performance.[13] Each of these variables is individually uncertain, and their myriad potential interactions fundamentally defy prediction. These dynamic markets throw out a steady stream of opportunities and threats, and managers can neither predict nor control the form, magnitude or timing of future events with accuracy. In such environments, companies succeed to the extent that they can respond to shifting circumstances. Strategy loops, with their inherent ability to incorporate and translate new information into action, provide an effective framework for organizations to close the gap between strategy and execution. Managers who master the strategy loop's four types of discussions will be able to spot emerging opportunities, seize them and make midcourse corrections more effectively than others who stumble through those steps.

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2. See P. Ghemawat, "Commitment: The Dynamic of Strategy" (New York: Free Press, 1991). Ghemawat argues that strategy consists of making commitments or infrequent large changes in resources that have large and enduring effects on a company's future alternatives. The importance of these decisions implies that managers can and should clearly analyze their consequences long into the future. Ghemawat's argument hinges on the assumption that managers can identify what matters ex ante and can analyze the consequences of their actions, although he, of course, admits the presence of uncertainty.

3. See R. Amit and P.J.H. Schoemaker, "Strategic Assets and Organizational Rent," Strategic Management Journal 14, no. 1 (January 1993): 33-46. Amit and Schoemaker acknowledge that their view offers little guidance to managers. See also M.E. Raynor, "The Strategy Paradox: Why Committing to Success Leads to Failure (And What to Do About It)" (New York: Currency, 2007).

4. See A. Schlesinger Jr., "A Thousand Days: John F. Kennedy in the White House" (Boston: Houghton Mifflin, 1965); and R. Kennedy, "Thirteen Days: A Memoir of the Cuban Missile Crisis" (New York: W.W. Norton, 1969). For an excellent analysis of decision making by Kennedy's team, see M.A. Roberto, "Deciding How to Decide," chap. 2 in "Why Great Leaders Don't Take Yes For an Answer" (Upper Saddle River, New Jersey: Wharton School Publishing, 2005).

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6. See A.C. Edmondson, "Psychological Safety and Learning Behavior in Work Teams," Administrative Science Quarterly 44, no. 2 (June 1999): 350-383; and A.C. Edmondson, "Speaking Up in the Operating Room: How Team Leaders Promote Learning in Interdisciplinary Action Teams," Journal of Management Studies 40, no. 6 (September 2003): 1419-1452. Edmondson's construct of psychological safety is critical throughout the strategy cycle, but it takes a slightly different form in each step. In making sense, for example, psychological safety ensures that participants feel safe to broach alternative interpretations of what is going on, while in making things happen providers should feel secure to negotiate what they need before they can make a binding performance promise.

7. This is a slightly modified version of "Alexander's question" described in R.E. Neustadt and E.R. May, "Thinking in Time: The Uses of History for Decision Makers" (New York: Free Press, 1988): 152-153.

8. See R.E. Rubin and J. Weisberg, "In an Uncertain World: Tough Choices From Wall Street to Washington" (New York: Random House, 2003); and L. Endlich, "Goldman Sachs: The Culture of Success" (New York: Alfred A. Knopf, 1999).

9. K.M. Eisenhardt and D.N. Sull, "Strategy As Simple Rules," Harvard Business Review 79 (January 2001): 107-116.

10. See Eisenhardt, "Fast Strategic Decisions," and Eisenhardt, "Strategic Choice."

11. For an in-depth perspective on the promise-based view of the firm, see D.N. Sull and C. Spinosa, "Promise-Based Management: The Essence of Execution," Harvard Business Review 85 (April 2007): 78-86; and D.N. Sull and C. Spinosa, "Using Commitments to Manage Across Units," MIT Sloan Management Review 47, no. 1 (fall 2005): 73-81.

12. For a thoughtful and practical guide to after-action reviews based on practices within the U.S. Army, see D.A. Garvin, "Learning in Action: A Guide to Putting the Learning Organization to Work" (Boston: Harvard Business School Press, 2003): 106-116.

13. See F. Emery and E. Trist, "The Causal Texture of Organizational Environments," Human Relations 18 (1965): 21-32. In their discussion of uncertain markets, Emery and Trist emphasize complexity (that is, multiple factors that influence performance) and dynamism (that is, the rate of change of those variables) and imply the role of interactions.

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