

Making the most of **uncertainty**

Hugh Courtney

In extremely uncertain environments, shaping strategies may deliver higher returns, with lower risk, than they do in less uncertain times.

Shape or adapt? For years, executives have regarded the question as perhaps their most fundamental strategic choice. Is it better for a company's competitive position to try to influence, or even determine, the outcome of crucial and currently uncertain elements of an industry's structure and conduct? Or is the wiser course to scope out defensible positions within an industry's existing structure and then to move with speed and agility to recognize and capture new opportunities when the market changes?

As globalization, digitization, and unfettered capital markets raise levels of uncertainty and rewrite definitions of opportunities and risks, this basic strategic choice has morphed into a more complex and high-stakes dilemma. The right strategic bets can return far higher payoffs, far more quickly; the wrong ones carry a much higher risk of systemic failure. Betting big today may fundamentally reshape a market on a global scale to the advantage of a company or quickly produce losses that can throw it into bankruptcy. A company may avoid foolhardy mistakes by waiting for uncertainty to diminish, or it may squander the chance to lay claim to first-mover advantages.



The truth is that no dominant solution exists. You might argue that any good strategy should attempt to shape *and* adapt by specifying actions designed to increase the probability of some outcomes while simultaneously preparing for others. That approach may work in some cases. Yet the actions a company must take to shape the market are often inconsistent with those needed to adapt. Consider Qualcomm. For the past few years, it has been trying to move the wireless-telephone industry toward its CDMA (Code Division Multiple Access) technology. CDMA, a technical standard that determines how information travels and communicates through a wireless network, is competing with other technologies to become the industry standard for next-generation mobile phones.

Qualcomm realizes that if it wants to shape the industry, it must build a coalition of supporters around the CDMA technology. This approach involves cutting deals with wireless companies to get them on board and convincing consumers that CDMA is superior. To win the standards battle, Qualcomm must be totally committed to the cause or at least look as though it were. If the company tried to hedge its bets by producing chips for a competing technology as well—something an adapter might do—it would undoubtedly undermine its shaping efforts. How could Qualcomm convince its potential partners that CDMA was superior if it simultaneously invested in competing standards?

As the story of Qualcomm illustrates, under uncertainty, shaping actions are often at odds with adapting ones. Shape or adapt is therefore a real choice for most companies most of the time. But how, amid rising uncertainty and ever greater risks, can a company nail down the right strategic choice?

The different shapes of shapers and adapters

An essential starting point is understanding your alternatives. Shaping and adapting strategies may take many different forms. Shapers generally attempt to get ahead of uncertainty by driving industry change their way. Some, like Qualcomm, aim to increase the probability that a preferred technology or business process will become an industry standard. Others grapple with uncertainty by introducing fundamental product, service, or business-system innovations intended to redefine the basis of competition in an industry: think of the low-price, point-to-point air travel model of Southwest Airlines, Dell Computer's direct-sales approach, or Netscape Communications' breakthrough Internet browser, Navigator.

Other shapers try to restructure unstable industry environments by making bold mergers and acquisitions, as BP did in the oil industry, or by breaking

up integrated companies, as AT&T did in 1996 by spinning off its equipment provider, Lucent Technologies. Other companies, such as McDonald's in the 1990s, shape nascent markets by replicating business systems in new geographies. Still others focus on shaping the conduct of competitors; in the 1970s, for example, DuPont built its capacity in the titanium dioxide industry ahead of market demand, thus influencing its competitors' expansion plans.

Adapters, by contrast, take the existing and future industry structure and conduct as given. When a market is stable, adapters try to define defensible positions within the industry's existing structure. When high uncertainty prevails, they attempt to win through

speed and agility in recognizing and capturing new opportunities as the market changes. They might quickly follow a potential shaper's lead, as Compaq Computer did when it bet on Microsoft and Intel with early alliances in the 1980s. Other

adapters hedge against future market uncertainty when they can identify a limited, discrete set of paths the market may follow. In the late 1980s, for example, software companies could hedge against uncertainty about which PC operating system would emerge as the industry standard by developing products for each of the contenders, notably DOS, Macintosh, Windows, Unix, and OS/2.

When a market is stable, adapters try to define defensible positions within **the existing structure** of the industry in which they compete

Still other adapters build their strategies around constant experimentation in products, services, and business systems. In the credit card industry, Capital One Financial conducted 27,000 tests of products, prices, features, packages, marketing channels, credit policies, account-management approaches, customer service methods, and collection and retention procedures in 1998.¹ Finally, some adapters manage uncertainty by building flexible organizations designed to respond to changing market needs. Many professional-services firms, for example, focus on recruiting and developing people with general-management skills that will be valuable to clients regardless of how the market evolves.

With such a broad range of approaches, no wonder business strategists can't agree on a dominant answer to the shape-or-adapt problem. In fact, even individual companies may not consistently choose one alternative across all issues, business lines, and times. Nor do the data support a one-size-fits-all answer. McKinsey research suggests that 86 percent of the biggest business

¹Capital One Financial Corporation, *The Innovation Imperative*, 1998 annual report, p. 4.

winners from 1985 to 1995 followed predominantly market-shaping strategies.² Yet the research clearly shows that adapters too can win big.

Understanding uncertainty

Whether a company should attempt to shape or adapt depends largely on the level and nature of the uncertainty it faces. To put things simply, when it faces very high levels of uncertainty about variables it can influence, shaping makes most sense. Adapting is preferable when key sources of value creation are relatively stable or outside the company's control.

The logic is straightforward. Highly uncertain markets—in which technology standards are changing, competitors are constantly entering and exiting, and consumers have yet to lock into a limited number of preferred brands—offer the greatest headroom to implement successful shaping strategies. A series of major acquisitions, a bold technology investment, an aggressive product-bundling strategy—all may end up making order out of chaos and fundamentally reshaping a market to a company's advantage.

In practice, however, executives facing high uncertainty are often biased in favor of adapting strategies. Part of the problem is a reliance on strategic-planning tools and processes that are ill suited to highly uncertain business environments. While standard tools such as Michael Porter's five-forces framework,³ discounted cash-flow models, and core-competency diagnostics may provide deep *insight* into untapped strategic opportunities in relatively stable markets, they rarely generate deep *foresight* into the opportunities that may arise in rapidly changing ones. Without such foresight, it is no surprise that companies favor adapting strategies; after all, successful shaping strategies require executives to define the future they are trying to create.

Since foresight is the key to taking full advantage of the strategic opportunities offered by high uncertainty, companies must reinvent their strategic-planning processes to include such tools as scenario planning and game theory if they wish to be successful shapers. Companies that adopt these approaches can generate the foresight necessary to consider the full range of strategic shaping and adapting options. Nonetheless, a misguided aversion to risk may prevent even the most prescient strategists from favoring shaping strategies in the face of high uncertainty. Precisely as the possibility

²This research analyzed the 50 "stars" with the greatest sales, profit, and market capitalization growth during the sample period. The stars included not only some computer and retail giants (such as Best Buy, Microsoft, Oracle, Sun Microsystems, The Home Depot, and Wal-Mart) but also lesser-known industrial companies (M. S. Carriers), business-services firms (Omnicon), health care companies (Biomet), and financial-services firms (Advanta).

³The competitors in an industry, potential entrants, suppliers, buyers, and substitute products and services.

of shaping the market increases, the appetite—or courage—to do so typically wanes. This aversion to risk is misguided when a company's actions can indeed strongly influence, if not determine, the eventual outcome of key uncertainties.

Consider the case of Minnetonka, the successful shaper of the US liquid-soap market in the early 1980s. When the company launched its Softsoap brand, a key uncertainty was the plans of its major potential competitors: would Colgate-Palmolive, Procter & Gamble, and Unilever choose to enter the market, and, if so, when?

Minnetonka shaped this uncertain environment by aggressively locking up key suppliers of essential liquid-soap dispenser parts, thereby preventing competitors from scaling up their own businesses quickly.

At the time, only two companies

supplied the plastic pumps that dispense liquid soap. Minnetonka locked up both suppliers' total capacity by ordering 100 million pumps to support its national rollout strategy for Softsoap. This tactic not only influenced the competitors' conduct—the source of Minnetonka's uncertainty—but also dictated it in the short run: the plastic-pump shortage prevented competitors from making a full-scale entry into the market for 18 to 24 months.⁴

An aversion to risk is misguided when **a company's actions** can strongly influence, if not determine, the outcome of key uncertainties

By comparison, Circuit City failed in its shaping strategy for its Divx technology, an alternative to the established standard DVD format for digital videodisc players. An important reason was that Circuit City couldn't successfully influence a crucial uncertainty: the sales and marketing efforts that other electronics retailers would devote to Divx. Only if retailers promoted this technology could it succeed. Retailers, however, were reluctant to market Divx players because doing so meant handing royalties to Circuit City, a formidable competitor. Circuit City thus had only limited ability to increase the probability that Divx would win the standards war against DVD.

When a company can't influence important uncertainties, an adapting strategy may be preferable. Hewlett-Packard, for example, faced unpredictable ink-jet printer demand across a variety of countries in the 1980s. HP was then customizing its ink-jet printers for use in different non-US markets at the factory and shipping the printers in finished form to its warehouses, for the company had decided that it was cheaper to customize the printers at the factory than in the field. The problem was that since demand in the various

⁴See Adam M. Brandenburger and Barry J. Nalebuff, *Co-opetition*, New York: Doubleday, 1996, pp. 149–51 and 242–4.

countries rose and fell unpredictably, HP often found itself with excess printers configured for certain countries and with shortages for others.

This uncertainty created an ongoing supply-and-demand mismatch at HP's warehouses. HP had little ability to influence total demand for printers in the different countries, so it developed a strategy to adapt itself to this key uncertainty: it postponed customizing the printers until it had shipped them to the warehouses and had firm orders in hand. This approach substantially decreased the company's stock-out and inventory-carrying costs while also slightly increasing production costs, since customizing at the warehouse was more expensive. Net savings from this strategy came to about \$3 million a month, according to Corey Billington, who directed HP's strategic-planning and modeling unit.⁵

Tailoring choices to the four levels of uncertainty

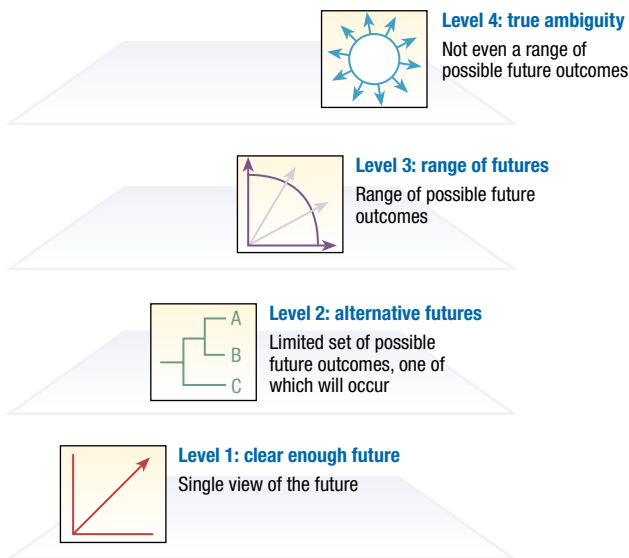
As a rule of thumb for making decisions, then, shaping makes the most sense when uncertainty is high and can be influenced by a company's

actions. To fine-tune this approach, a company must consider ways of varying how it thinks about shaping versus adapting—depending on the nature of the uncertainty it faces. Uncertainty always takes one of four general forms (exhibit).⁶ Understanding which form you face is crucial when you decide whether to shape or adapt.

When confronting a future that seems clear enough to predict, strategists have tradi-

EXHIBIT

The four levels of residual uncertainty



⁵Peter Coy, "Exploiting uncertainty: The 'real options' revolution in decision making," *Business Week*, June 7, 1999, pp. 118–24.

⁶For more information on the four levels of residual uncertainty, see Hugh Courtney, Jane Kirkland, and Patrick Viguierie, "Strategy under uncertainty," *Harvard Business Review*, November–December 1997, pp. 66–79.

tionally favored adapting strategies geared to the existing market. In such stable markets, shaping opportunities often are not readily apparent, and companies believe that locking in a business system that is successful today will most likely produce success tomorrow. Yet even the most stable business environments are susceptible to periodic bouts of upheaval, driven by shapers capable of identifying and developing innovative products, services, and business systems that displace competitors.

Even the most stable business environments can be susceptible to periodic **bouts of upheaval** that are driven by bold shapers

Shapers at this lowest level of uncertainty intentionally seek to create chaos out of order. Their efforts are risky, uncommon—and sometimes effective. *USA Today* transformed newspaper markets so greatly that even the staid *New York Times* and *Washington Post* now feature color pictures. And the original overnight-delivery strategy of Federal Express reshaped the sleepy mail-and-package-delivery industry.

However, shapers in more uncertain environments attempt to lower the level of uncertainty, thereby creating order out of chaos. When the future holds a limited set of possible outcomes, for example, shaping strategies attempt to increase the probability that one of the outcomes most favorable to the company actually occurs—as Qualcomm is trying to do with its CDMA strategy and as electric power producers are trying to do with their regulatory strategies in California. Just as a limited number of wireless-telephone technologies are competing to become the next-generation industry standard, so too a limited number of possible actions by California officials could change the nature of regulation in electric power markets. In both cases, companies are attempting to shape the market toward their desired alternatives. Since shapers at this second level of uncertainty must prepare for only a limited set of possible outcomes, hedging strategies may also make sense. PC software companies could successfully hedge their strategies in the late 1980s, for instance, precisely because only a rather limited number of operating-system standards could emerge as near-term market leaders.

By contrast, if a wide range of possible outcomes can be identified, shaping strategies focus on moving the industry toward the “right end of the range.” While companies that successfully shape markets with a limited set of possible outcomes create the scenario most favorable to them, in the third level of uncertainty success is defined by the ability to set the broad direction of the market. Internet-banking shaping strategies, for instance, are designed to increase the share of financial-services transactions taking place on-line, and a significant component of Monsanto’s life sciences strategy involves the

acquisition of seed companies in hopes that this approach will increase the rate at which farmers adopt the company's genetically engineered seeds.

At higher levels of uncertainty, hedging strategies become less desirable, since it is difficult to determine if all bases have been covered; instead, successful adapters tend to focus on continuous experimentation (Capital One in credit cards) or on building flexible organizations (professional-services firms). Finally, when an entire industry is in flux, an effective shaper can bring the market to order by setting an industry technology standard, consolidating a group of fragmented competitors, and even offering a new business model for the industry. As uncertainty grows, so too will the chance that other competitors will emulate any company willing to take a stand.



This reality implies, paradoxically, that shaping strategies in the most uncertain environments may involve higher returns and lower risk than these strategies do in situations with lower residual uncertainty. If you believe in a new industry standard, for example, and are willing to invest in its development, your creation could well serve as a “touchstone” that others react to. You would, in fact, be bringing some order to a market in chaos: if your company was a credible player in the industry, your commitment might well persuade others to commit themselves as well. Your belief in the new standard may set off a chain of events that creates a self-fulfilling prophecy. The credibility of Netscape’s management team, for example, was a key factor in its successful attempt to set new standards for Internet browsers when it first launched Navigator.

Other factors

As executives face their shape-or-adapt choices, they must weigh factors beyond the level of residual uncertainty—factors such as the external market environment and the company’s capabilities and aspirations. Shaping strategies, for example, make most sense in markets that offer strong first-mover advantages. One market that may not offer them is Internet-based commerce, which by its very nature invites comparison shopping, thus perhaps undermining one of the most important potential first-mover advantages: brand and customer loyalty. As a result, it isn’t clear yet whether e-commerce shapers such as Amazon.com and eBay have established any sustainable first-mover advantages. Being an e-commerce adapter—replicating good ideas and avoiding bad ones—may offer returns similar to those won by pioneering shapers, without all the risk. Only time will tell.

Similarly, even excellent companies are not cut out to be shapers in all situations. Successful shaping usually requires a clear vision of an industry’s

future evolution (as Bill Gates had for PCs); deep pockets; a strong reputation; a leadership position in a related business; world-class technology, innovation skills, or both; and operational excellence. Not all companies have these qualities. As the former chief executive of Iridium, John Richardson, has admitted, for example, its attempt to shape the satellite telephone market was undermined by “inept” marketing and products that “didn’t work” at the time of the company’s service launch.⁷

Successful shapers share a formidable list of attributes. Managers might therefore be tempted to regard adapting as the easy or fallback strategy alternative. This idea is mistaken on two fronts. First, it leads managers to assume that adapting, unlike shaping, doesn’t require proactive strategic commitments. Nothing could be further from the truth. Following a potential shaper’s lead, hedging against possible future outcomes, experimenting continually, and even building a flexible organization require real up-front commitments—financial and human.

Second, the mistaken idea that adapting is the easy alternative leads managers to assume that passive—not active—management is required to see it through. Yet adapters in highly uncertain environments must be skilled at spotting their new opportunities and threats and at turning on a dime to reorient their companies when necessary. This is hardly passive and hardly easy for many companies. For a company that has difficulty dealing with ambiguity, a bold shaping strategy may be the only way to avoid the dangerous “do nothing” trap.

As strategists make shape-or-adapt choices, uncertainty, perceived first-mover advantages, and the company’s capabilities and aspirations play important roles. No algorithm exists to weigh each factor, nor can a one-size-fits-all answer suit all companies in all situations. One thing, however, is certain: strategists who develop a thorough understanding of the level and nature of the residual uncertainty their company faces can develop a richer set of feasible alternatives and make better-informed choices to shape or adapt. **MQ**

⁷ John Schwartz, “Iridium files for Chapter 11,” *Washington Post*, August 14, 1999, pp. E1 and E9.

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