MITSloan
Management Review

SUMMER 2022
ISSUE

Mastering Innovation's Toughest Trade-Offs

Leaders must answer eight key questions to address the hidden tensions underlying innovation strategies.

Christopher B. Bingham
Rory M. McDonald

Vol. 63, No. 4 • Reprint #63423 • sloanreview.mit.edu

Mastering Innovation's Toughest Trade-Offs

Leaders must answer eight key questions to address the hidden tensions underlying innovation strategies.

BY CHRISTOPHER B. BINGHAM AND RORY M. MCDONALD

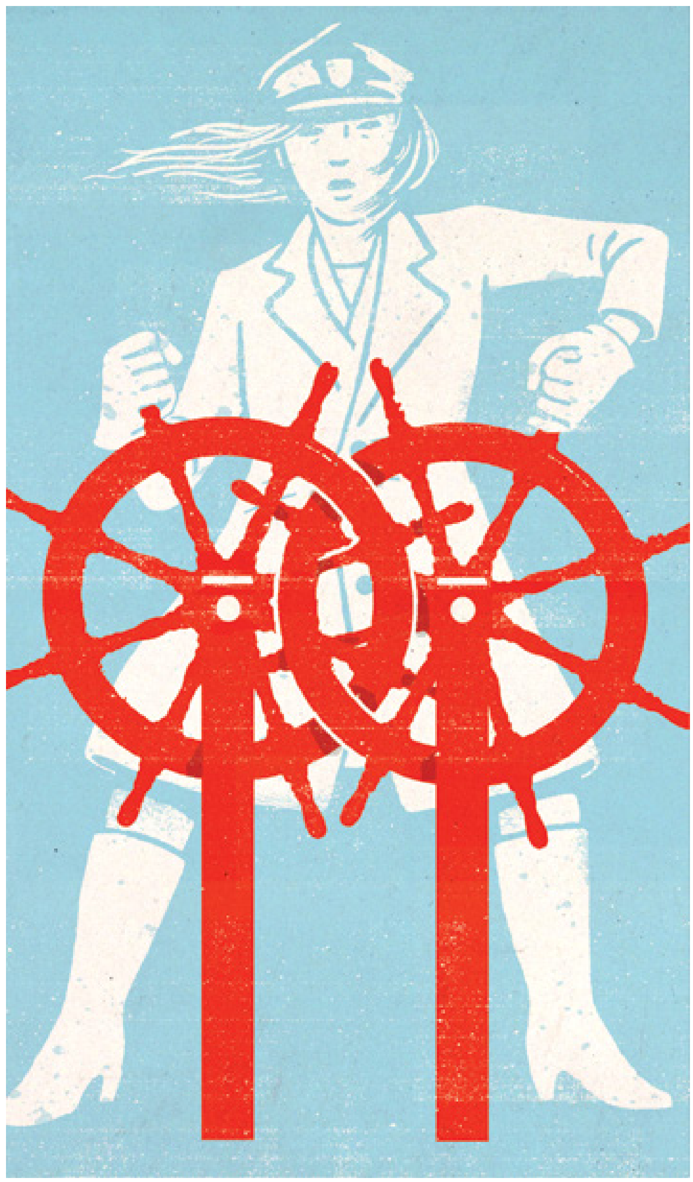
Innovation is frustratingly hit-or-miss. More than 90% of high-potential ventures fail to meet projected targets, while roughly 75% of the products released each year bomb.[1] Few established organizations remain dominant over time, as revitalization efforts fail or backfire, costing companies time and money and creating openings for competitors; even fewer generate above-average shareholder returns for more than a couple of years.

These failures are often attributed to a lack of money, talent, or luck. But we think the underlying cause is that innovation in dynamic environments — those characterized by novelty, resource constraints, and uncertainty — is rife with critical tensions. When left unaddressed or mishandled, these tensions sink teams and organizations. Until now, there has been little focus on these tensions in practice or theory, leaving leaders blind to their existence and without the rigorous approaches needed to successfully manage them.

To address this, we conducted hundreds of interviews at organizations in diverse industries on five continents and surfaced eight questions that every innovation leader must be able to answer correctly. We'll discuss each in turn and provide practical guidance for harnessing the tension that underlies each question.

1 Should you be flexible or disciplined when capturing growth opportunities?

A small, U.S.-based security software company received a call from a customer prospect in Germany. To capture the business and meet cash demands, the company chose to enter the German market. It subsequently entered additional overseas markets in a similar manner. "It was more like we were drawn in rather than made a conscious decision," a company executive told us.



DAN PAGE/THEISPOT.COM

Seizing opportunities as they arise is consistent with the conventional wisdom that companies must move quickly in dynamic markets. But there is an underlying tension here. Acting fast leaves less time for deliberation, so companies can easily end up with an incoherent portfolio of mismatched opportunities. A disciplined approach, in contrast, enables strategic alignment and sets a path for future opportunities, but it can come at the cost of some quick wins.

Our research with successful organizations shows how to resolve the tension. During the *opportunity selection* phase, it's better to be *disciplined* — spending time studying prospects and devising a plan to capture the best ones rather than those that are easiest to attain. In this way, an organization can accumulate knowledge and experience, using early opportunities to build a foundation for more strategic ones later on. During the *opportunity execution* phase, more flexibility leads to greater success. This helps organizations abandon ineffective products and practices and adopt more appropriate ones.

Increased discipline in opportunity selection creates a foundation for increased flexibility during execution. That's because more discipline in selection usually reduces the need to rationalize faulty choices later, freeing leaders to approach execution in a more open-minded way.[2] Conversely, when leaders take opportunities as they arise, they exhibit a strong tendency to defend their past choices and become more rigid in the way they execute opportunities.

A Singapore gaming company offers a good example of being disciplined first and flexible later. The company took its time conducting customer interviews and studying market adoption trends before choosing Japan as the first market to enter in its global expansion. When it executed this opportunity, however, it quickly discovered that its plan to sell digital content to Japanese wireless providers meant going head-to-head with entrenched Japanese companies. Once managers realized this, they changed their plan and instead partnered with the entrenched competitors in Japan to sell their content throughout Asia. Their flexibility yielded far greater results than the original execution plan would have.

2 Is it better to differentiate your offering or borrow ideas from competitors?

In established markets, the essence of strategy is choosing to perform activities differently from the way rivals do. In nascent markets, however, this approach makes little sense. When a market (or a business category) is still forming, leaders often don't know who their buyers, suppliers, or competitors will be, much less which points of distinctiveness are likely to matter most to customers.

The tension underlying this dilemma is rooted in the choice between developing a well-differentiated offering or borrowing ideas that work from competitors. The trade-offs are straightforward. Borrowing is faster and often cheaper and easier, but it doesn't result in a unique offering. Going for differentiation sets a new product or service apart, but it is time-consuming and resource intensive, and customer demand is uncertain.

Leaders can resolve this tension by engaging in *parallel play*, a practice inspired by preschool-age children.[3] Here's how parallel play unfolds in various stages of innovation.

Early on, put aside differentiation. Borrow ideas instead. Young children playing side by side imitate one another and borrow one another's toys, but they rarely play together or try to outdo one another. A similar dynamic occurred in the early days of the ride-sharing market: When Sidecar switched to letting drivers use their own cars and offered an app that featured electronic payments, GPS navigation, and driver ratings, Zimride (later renamed Lyft) and Uber followed suit.

Next, test relentlessly — and then commit.[4] When young children play, they usually explore various projects and then stick with the one that engages them most. Similarly, we found that high-performing organizations don't just borrow ideas — they test ideas and learn from market feedback. Then they use that learning to develop a lucrative business model for creating and capturing value and spend their scarce resources only on that strategy. Burbn is a good example. When an early version of the app, which enabled users to connect, arrange meetups, and post photos, proved too complicated for users, founder Kevin Systrom investigated what they really wanted.[5] What he

THE RESEARCH

The authors conducted hundreds of in-depth interviews with senior executives (CEOs, board chairs, executive vice presidents, and business unit heads) and innovation managers across different industries and settings.

They supplemented interview data with email correspondence, site visits, research gathered at industry events, and archival data from websites, blogs, social network profiles, and trade publications.

They then followed an inductive approach to iteratively organize and reorganize the raw data to generate theories linking actions to outcomes.

discovered led to a new business focused solely on easy photo sharing, named Instagram.

Finally, pause, observe, and refine. Often, preschoolers at play pause to reflect on their projects before continuing. Leaders we studied acted similarly by initially specifying basic elements of their business models (a product that customers will find superior to existing solutions) while leaving other elements undefined (such as distribution). Early on, Dropbox committed to providing an easy-to-use product and a free-to-paid tiered model for capturing value.[6] But it stopped short of tailoring the offer to consumers, who were Dropbox's primary users at the time, and building operations around file backup, which was the service's original and most common use. This robust but undetermined model enabled Dropbox to add additional services, such as file sharing and collaboration, and led to profitable new enterprise customers. By the time it filed to go public in 2018, almost a third of its 11 million subscribers were on a Dropbox Business team plan.[7]

3 Do you follow what data is telling you, or ignore it?

This is a golden age of data, in which new capabilities driven by data analytics promise to turbocharge companies' disruptive potential. But some innovation leaders overly defer to data and wind up with a culture in which other legitimate decision-making methods — logic, intuition, and qualitative insights — take a back seat. Other leaders appreciate that pathbreaking innovations are inherently contrarian and that evaluating them requires nuance and interpretation. These innovators sometimes ignore data altogether. Resolving this tension between making data-driven decisions and relying on intuition requires knowing when to take which approach.

Our research suggests that you should lean on data when making incremental improvements to existing innovations for current customers but view it more skeptically when transforming products and services in the face of disruption or when introducing breakthrough offerings. Netflix, renowned for its data-driven decision-making, had one of its biggest hits ever when it ignored the data showing that '80s nostalgia fared poorly, as did programs featuring kids and actress Winona Ryder, and produced the award-winning series *Stranger Things* anyway.

Leaders can protect potentially disruptive and new-to-the-world innovations by adopting a discerning orientation toward data and a healthy skepticism about insights derived from data. For instance, while Netflix executives use data to inform their decisions when green-lighting programming, they don't use it as their sole criterion. "You have to be very cautious not to get caught in the math, because you'll end up making the same thing over and over again," said Netflix chief content officer Ted Sarandos. "And the data just tells you what happened in the past. It doesn't tell you anything that will happen in the future."[8]

Such caution ensures that leaders don't rely on data drawn from existing products in established markets to evaluate unrelated innovations aimed at new markets. When Steve Jobs introduced the Macintosh computer, for instance, he leaned on his theory of technology, not numbers. (In the early 1980s, there was no data suggesting that there was an overwhelming unmet demand for desktop computers.) This also prevents innovations from withering on the vine due to unrealistic performance expectations.

4 When do you seek internal help or external help?

Innovators need other people's help. Alone, leaders are subject to information-processing

> Lean on data when making incremental improvements to existing innovations for current customers but view it more skeptically when transforming products and services in the face of disruption or when introducing breakthrough offerings.

> Using crowds — or the people around us — is an effective way to overcome the inherent limitations of individual cognitive processing, particularly in entrepreneurial settings, where leaders must make swift decisions.

limitations. Their information is incomplete, and what they know is affected by cognitive bias. Left unaddressed, these shortcomings can result in poor outcomes for individuals, teams, and organizations. Using crowds — or the people around us — is an effective way to overcome the inherent limitations of individual cognitive processing, particularly in entrepreneurial settings where leaders must make swift decisions to address the key uncertainties associated with innovation. But when should leaders seek the advice of crowds inside the organization, and when should they seek the advice of crowds outside it?

The key to resolving this tension is understanding when and how to source internal and external crowds, using a novel strategic framework we call crowd sequencing. Crowd sequencing consists of three steps.

First, use external crowds to address problem uncertainty. Leaders are constantly bombarded with issues, all of which seem to require attention and resources. But often, leaders have an incomplete or inaccurate picture of what's going on, such that it is difficult to know whether they are focusing on the right problems. They typically rely on focus groups of knowledgeable consumers to overcome this, but our research shows that an unfocused array of people better helps expose leaders' unknown unknowns. Tapping into a greater diversity of input by sourcing knowledge from a crowd consisting of many outsiders with diverse backgrounds helps leaders find the right problems.[9]

Second, use external crowds to address demand uncertainty — that is, to determine whether you've found the right solution to a problem. A good way to resolve demand uncertainty is to source knowledge from crowds consisting of extreme customers — people outside the organization who would intensely use your product or service and be most likely to recommend it to others, as well as those who would use it rarely, if at all. The heightened sensitivities of extreme users help leaders recognize and better connect with customer needs, beliefs, and desires.

Honda did this when designing its Ridgeline pickup truck. Engineers questioned two types of extreme users: pickup truck lovers, specifically, people who ran businesses out of them, such as electricians and landscapers; and occasional users, such as people who used their trucks only at weekend tailgate parties. From the truck lovers, the engineers discovered a general dislike for traditional tailgates. These customers wanted a tailgate that swung out and could detach to make cargo loading easier. From the weekend tailgaters, the engineers learned that a built-in ice cooler and an electrical outlet (to plug in a TV or mixer) would come in handy. These ideas helped transform a good pickup truck into one of the most popular midsize trucks in the U.S.

Third, use internal crowds to address *supply uncertainty*. By supply uncertainty, we mean that even after you've figured out what people want, you might not have the knowledge necessary to execute. Executing a new solution typically means solving a series of new problems that call for bits and pieces of know-how from varied sources. Though leaders often turn to their closest associates for ideas and expertise, a better approach is to source knowledge from people inside the organization whom they barely know — individuals Mark Granovetter has characterized as "weak ties."[10] Established teams are liable to revert to the same old approaches. When seeking the kinds of novel solutions that executing a new product or service tends to require, it makes more sense to look beyond your usual networks and tap people in other departments or business units.

> Rules of thumb provide efficiency in decision-making and problem-solving by restricting the scope of possible solutions. At the same time, they enable flexibility by not specifying the details of the solution.

5 How do you mature a business without making it sluggish and bureaucratic?

As organizations grow, leaders impose order and increase efficiency by adding levels of management, policies, and procedures. But over time, adding structure increases complexity, which makes organizations more bureaucratic and less flexible. How can leaders balance the tension between efficiency and flexibility?

One way to address this tension is to employ heuristics, or simple rules of thumb. Heuristics often get a bad rap. Research suggests that they might lead people to neglect or misinterpret important critical information and thus result in low performance. But our analysis found that heuristics can be a key to high performance.[11]

Rules of thumb provide efficiency in decision-making and problem-solving by restricting the scope of possible solutions. At the same time, they enable flexibility by not specifying the details of the solution. Amazon's "two-pizza teams" rule is a good example: If two pizzas aren't enough to feed a team, according to CEO Jeff Bezos, the team is too big. This simple rule is efficient because it's easy to remember and apply. It's flexible because it doesn't dictate things like who should be on the team, what team members should talk about, or for how long.

Rules of thumb come in different varieties. Selection heuristics help managers cope with an abundance of choice by constraining the range of opportunities they consider. *Procedure heuristics* can guide growth-pursuing processes, such as deciding how to enter new countries, partner, acquire, or pursue product development, thus speeding action, conserving attention, and improving the reliability of opportunity capture. Priority heuristics help leaders avoid acceptable but lower-value opportunities in favor of higher-value alternatives. Timing heuristics help specify a sequence or a pace for opportunity capture that can be advantageous.[12]

One last point: Be aware that rules that proved useful initially can become outdated. Heuristics should routinely be reviewed and pruned so they don't create a bureaucracy of their own.

6 How do you make new-to-world innovations comfortably familiar while still distinct?

Novelty sells, but if products and services are perceived as too alien, customers might reject them. Thus, there is a delicate balance between novelty and familiarity, and when to stress one or the other is a tension every innovator must master.

To manage this tension, innovators should begin by stressing the similarities to existing products and services when introducing their own. While highlighting what's novel may work in established arenas where competitors try to one-up each other, it's less effective when introducing something new to the world. When a new product or technology gains a foothold, however, leaders should shift to emphasizing novelty. Once barriers to adoption have been toppled, leaders will be ready to focus on the features that distinguish it from its predecessors and competitors.

Amazon and Barnes & Noble followed this sequence when introducing e-readers. First, they emphasized how the Kindle and Nook, respectively, were similar to traditional books, with features like next-page buttons and animations that simulated a book page being turned. Later, they highlighted how e-readers were unique, by drawing attention to features such as digital bookmarks, scrolling, and embedded dictionaries, which traditional books lack.[13]

7 Do you spend money on promoting your brand, or solving someone's problem?

Say you launch an innovation and spend lots of money following the classic marketing playbook only to have it flop in the marketplace. Should you have focused your efforts on advertising the brand's features and running sales promotions, or on how your innovation can help customers solve a particular problem perfectly?

Well-designed *purpose brands* — which we define as brands that are inextricably linked to a particular job to be done — can sell themselves, enable premium pricing, and lock out competitors.[14] But far more new brands fail than succeed, because innovators spend more time thinking about their brand than thinking about the problems that customers face and how the brand aligns with the solutions they crave.

Gojo Industries shows how a relentless focus on the job to be done can pay off. Gojo was founded during World War II, after Goldie Lippman, a rubber plant worker in Akron, Ohio, couldn't get her hands clean without chafing or burning them. Her husband, Jerry, with the help of a local professor, invented a hand cleanser to get the job done. Customers liked the product but found it too expensive, and Jerry soon figured out why: They were using more of the cleanser than necessary. So he invented (and patented) the first portion-control hand-cleaner dispenser, again focusing less on promotion or product and more on a job to be done. Decades later, when Gojo discovered that its customers needed to sanitize their hands more than remove grease and grime, it once again focused on the job to be done. The company invented Purell, which, combined with its touch-free and counter-mount dispensing systems, became ubiquitous during the COVID-19 pandemic.

8 How do you keep supporters who have bought into one vision on board when you change course?

Launching an ambitious new venture requires enormous support. Much of that support comes from selling investors, new employees, the media, and others on a visionary story and a promising strategic plan. But often, when vision and strategy meet reality, leaders find that they must pivot to a new plan. Such moves are filled with tension as leaders struggle to communicate the shift to stakeholders who bought into the initial plan. It pits consistency against change, and this is where many organizations falter.

Our research has identified a set of tactics for maintaining stakeholder support during strategic pivots.[15] Early on, leaders should avoid communicating specific solutions in favor of a compelling and visionary but general rallying cry. Successful innovation leaders communicate by means of emotional appeals that underscore a larger aim. They promise to reach a destination and resist the urge to be precise about features or functionality: Microsoft is modernizing the workspace, LinkedIn is connecting the world's professionals to make them more productive and successful, and Patagonia is in business to save the planet. Big abstract ideas encourage audiences to see what they want to see and offer more wiggle room if a pivot is needed.

If a course correction is necessary, leaders should signal continuity by explaining how the new plan ties to the original vision. People value consistency. Our analysis of media coverage and feedback from customers, partners, and investors shows that audiences view inconsistent organizations as less legitimate and ultimately less deserving of their support. But they're also less likely to register a deviation as significant if it seems aligned with previously articulated aims.

The link between the new strategic direction and the initial pitch isn't always obvious, however. To maintain credibility and avoid being penalized, leaders need to make the connection explicit. This is what Steph Korey and Jen Rubio, cofounders of the luggage startup Away, did after realizing their first suitcases wouldn't be ready for sale before Christmas as hoped. Instead, they decided to produce a coffee table travel book that came with a gift card redeemable for a bag the next year. This major departure from their plan could easily have unnerved supporters. But the founders argued that while luggage was key to reaching their higher-level goal of building a travel and lifestyle brand, the book fit, too. Investors were convinced. Media outlets ran holiday gift-buying features about a suitcase that didn't yet exist. Within a few weeks, 2,000 books — and bags — had been sold.[16]

Once the pivot has taken place, leaders should be conciliatory and empathetic to stakeholders who might feel abandoned. Employees and customers are more likely to remain loyal if leaders act like they care about their plight and offer clear guidance about how the change will affect everyone. All too often, though, leaders are afraid of showing weakness or losing stakeholders amid a reboot, so they make the change without apologizing or admitting that they were wrong. Instead of preparing audiences for a change, they spring it on them. Only when stakeholders react do they apologize. By then it's too late, and they're on the defensive.

INNOVATION IS NEVER EASY, but leaders who can thoughtfully consider the questions we've posed and manage the tensions embedded within them can tackle some of innovation's toughest trade-offs and significantly improve the odds of success for their organizations. The key to this endeavor is to transform the tensions from reductive to productive — to make them something that can help and be harnessed as leaders seek new opportunities for growth and innovation.

Our message isn't to work harder; the leaders we've met are already exceptionally hardworking. It's to work smarter by addressing innovation's inevitable tensions in the right way: by anticipating the tensions that will arise and facing them head-on, thus reducing the risk of having to halt innovation efforts, and better positioning the organization to overcome crippling complications.

Christopher B. Bingham *is the Philip Hettleman Distinguished Professor of Strategy and Entrepreneurship at Kenan-Flagler Business School at the University of North Carolina at Chapel Hill.* ***Rory M. McDonald*** *is the Thai-Hi T. Lee Associate Professor of Business Administration at Harvard Business School. They are the authors of* Productive Tensions: How Every Leader Can Tackle Innovation's Toughest Trade-Offs *(MIT Press, 2022), from which this article is adapted.*

REFERENCES

1. C. Nobel, "Why Companies Fail — and How Their Founders Can Bounce Back," Harvard Business School Working Knowledge, March 7, 2011, https://hbswk.hbs.edu; and J. Schneider and J. Hall, "Why Most Product Launches Fail," Harvard Business Review 89, no. 4 (April 2011): 21-23.

2. C.P. Bingham, "Oscillating Improvisation: How Entrepreneurial Firms Create Success in Foreign Market Entries Over Time," Strategic Entrepreneurship Journal 4, no. 4 (December 2009): 321-345.

3. R.M. McDonald and K.M. Eisenhardt, "Parallel Play: Startups, Nascent Markets, and Effective Business-Model Design," Administrative Science Quarterly 65, no. 2 (June 2020): 483-523.

4. R. McDonald and K. Eisenhardt, "The New-Market Conundrum," Harvard Business Review 98, no. 3 (May-June 2020): 74-83.

5. M. Garber, "Instagram Was First Called 'Burbn,'" The Atlantic, July 2, 2014, www.theatlantic.com.

6. V. Kumar, "Making 'Freemium' Work: Many Start-Ups Fail to Recognize the Challenges of This Popular Business Model," Harvard Business Review 92, no. 5 (May 2014): 27-29; T.R Eisenmann, M. Pao, and L. Barley, "Dropbox: 'It Just Works,'" Harvard Business School case no. 811-065 (Boston: Harvard Business Publishing, January 2011, rev. October 2014).

7. "Form S-1 Registration Statement — Dropbox, Inc.," U.S. Securities and Exchange Commission, accessed March 31, 2022, www.sec.gov.

8. J. Adalian, "Inside the Binge Factory," New York Magazine, June 11, 2018.

9. S.L. Cohen, C.B. Bingham, and B.L. Hallen, "The Role of Accelerator Designs in Mitigating Bounded Rationality in New Ventures," Administrative Science Quarterly 64, no. 4 (December 2019): 810-854.

10. M.S. Granovetter, "The Strength of Weak Ties," American Journal of Sociology 78, no. 6 (May 1973): 1360-1380.

11. C. Bingham and K. Eisenhardt, "Rational Heuristics: The 'Simple Rules' Strategists Learn From Their Process Experiences," Strategic Management Journal 32, no. 13 (December 2011): 1437-1464.

12. Ibid.

13. D. Lavrinc, "Why Flipping Through Paper-Like Pages Endures in the Digital World," Wired, May 11, 2012, www.wired.com.

14. R. McDonald, C.M. Christensen, and S. Roseman, "Purpose Brands," Harvard Business School module note 619-075 (Boston: Harvard Business Publishing, June 2019, rev. July 2020).

15. R. McDonald and C. Gao, "Pivoting Isn't Enough? Managing Strategic Reorientation in New Ventures," Organization Science 30, no. 6 (November-December 2019): 1289-1318; and R. McDonald and R. Bremner, "When It's Time to Pivot, What's Your Story? How to Sell Stakeholders on a New Strategy," Harvard Business Review 98, no. 6 (September-October 2020): 98-105.

16. G. Raz, "Away: Jen Rubio," March 18, 2019, in "How I Built This," produced by National Public Radio, podcast, 1:08:00, www.npr.org.

Reprint 63423.