Harvard Business Review

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September–October 2020

Where People Management Went Wrong

How we came to overengineer our employees

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New Studio

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Photograph by ROBERT GOETZFRIED


What emotion fits in the palm of your hand?


WE WERE CURIOUS ABOUT THAT TOO
Because you are our greatest curiosity. So we designed a steering wheel with a shape as unique as the hands that grip it. Not just at nine and three, but wherever you hold the steering wheel. Each point, purposefully formed to fit snugly in your palm, giving you greater connection, greater control and greater confidence. So what you grip with your hands, you'll feel in your soul. What amazing ideas will you inspire next? Discover the answer at lexus.com/curiosity.
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> ***"Change happens when strong leadership doesn't waver with the message."***
>
> –ANNE WOJCICKI, 23ANDME CEO

ERRATUM: *In the July–August issue, the article "What Is the Next Normal Going to Look Like?" mischaracterized Tory Burch's position at her eponymous company. She is the executive chairman and chief creative officer, not the CEO.*

Redux

Photograph by GABRIELA HASBUN

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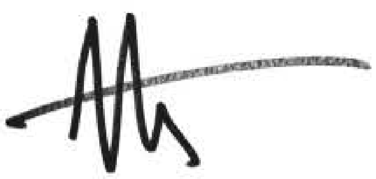
New Urgencies and an Old Question

AS I DRAFT THIS NOTE, halfway through 2020, I count three crises so far—a global pandemic, a major economic shock, and, in the United States, a painful national reckoning over systemic racism. These are problems that every institution, including ours, is engaging with. HBR has the ability, and the responsibility, to publish new thinking on these topics—and that's what we've been doing, both in this magazine and online.

Three articles in this issue tackle problems arising from the first two crises: "Adapt Your Business to the New Reality" will help you discern which changes in customers' behavior are permanent and which will fade away. "Global Supply Chains in a Post-Pandemic World" is a blueprint for reinventing operations if disruptions to international trade persist. "Joint Ventures and Partnerships in a Downturn" provides guidance on shoring up your balance sheet today—and positioning yourself for growth tomorrow. As for the third crisis, the Black Lives Matter movement has pushed U.S. institutions to look critically at their own practices. "How to Promote Racial Equity in the Workplace" presents a practical guide for moving forward.

All three crises bring new urgency to an old question: What responsibilities do corporations have other than turning a profit and obeying local laws? Our spotlight, "Making Sustainability Count," moves beyond platitudes to grapple with how complicated that question really is.

Thanks for reading—and best of luck managing whatever the rest of 2020 throws at us.



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Contributors

A decade ago, when Harvard Business School's **George Serafeim** started publishing data suggesting that firms with exceptional environmental, social, and governance (ESG) records outperformed in capital markets, he felt like a "voice in the wilderness." His work is now widely accepted by investor and corporate audiences. In this issue, he argues that integrating ESG with traditional strategy is the key to sustainable—and superior—financial returns.

38 Social-Impact Efforts That Create Real Value

In the 1990s **Robert Livingston** was completing a PhD in romance literature and linguistics at UCLA, exploring themes of colonialism and oppression, when a chance encounter with a social psychology student opened his eyes to the need for examining oppression in society. He switched fields and never looked back. Now at Harvard's Kennedy School, he has dedicated his career to advancing racial equity in industry. "That's where I found my calling," he says, "using research to combat discrimination." Here he offers guidance on how to address systemic racism in organizations.

64 How to Promote Racial Equity in the Workplace

When **Willy Shih** was overseeing Kodak's effort to develop and manufacture digital cameras in the late 1990s, he noted how reliant the U.S. had become on Japan and China. The core expertise for creating the camera, he realized, no longer existed in the United States. "We were keenly aware of those dependencies," says Shih, now a professor at Harvard Business School. That sparked a longtime interest in global supply chains and national competitiveness. His article explores how firms can redesign their supply chains to make them more resilient and strengthen corporate competitiveness.

82 Global Supply Chains in a Post-Pandemic World

Douglas Holt, who runs the Colorado-based firm Cultural Strategy Group, originally wrote about cultural branding for HBR in the 2003 article "What Becomes an Icon Most?" As he continued to develop his approach to brand strategy through research and consulting, he came to appreciate that the most impressive businesses were actually reinventing their categories, transforming the value proposition along the way—a process he calls cultural innovation, which he describes in this issue. He's currently putting the finishing touches on two books that flesh out this new paradigm.

106 Cultural Innovation

A Berlin-based illustrator and textile designer with Nigerian-Italian roots, **Diana Ejaita** is "fascinated by West African cultures" while also being steeped in Italian classicism and "German-rebellious punk." Ejaita studied fine arts in France, specializing in printing techniques, before coming to digital illustration later in her career. "It is vital for me to give myself the freedom to jump from one medium to another—it shapes and opens the possibilities," she says.

64 How to Promote Racial Equity in the Workplace

Harvard Business Review

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IdeaWatch

New Research and Emerging Insights

IN THEORY

BOOST YOUR RESISTANCE TO PHISHING ATTACKS

Simple changes to employee training can improve results.

RYAN WRIGHT AND Matthew Jensen have phished thousands of people over the past decade, and they're not planning to let up anytime soon.

The two aren't hackers angling for valuable data or funds; they're researchers working with companies, governments, and universities around the world to understand why we so often fall for phishing attacks and what organizations can do to mitigate the threat. Corporate security departments go to some lengths to educate people about phishing, which accounts for 90% of all data breaches—but an estimated 30% of fraudulent emails are opened nonetheless. With the cost of a successful attack averaging \$3.8 million, that's an uncomfortably high share. And it could grow as cybercriminals exploit the disruption caused by the pandemic

Illustrations by TIM BOWER

and the steep rise in employees working from home, where increased distractions may cause them to lower their guard.

Drawing on their research, Wright (the C. Coleman McGehee Professor of Commerce at the University of Virginia) and Jensen (the Presidential Associate Professor of Management Information Systems at the University of Oklahoma) have identified several ways to bolster the effectiveness of security training.

Add a mindfulness component. Many organizations require employees to complete off-the-shelf training modules on a regular basis—often annually or biannually. That's useful, the researchers say, for alerting people to common threats and giving them basic guidelines for evaluating incoming messages. But sheer repetition of rules-based training doesn't necessarily increase resistance to attacks, they caution. In fact, after a point it can be counterproductive, desensitizing people to the training and giving them a false sense of mastery over the lessons—which they then ignore.

Part of the problem is that rules-based training promotes what the Nobel-prize-winning psychologist Daniel Kahneman calls System 1 thinking. This type of fast, automatic processing is efficient but can result in careless decision-making and leaves employees vulnerable to attacks that depart from the rules. "Rather than ask people to memorize a laundry list of constantly changing cues," Wright says, "organizations can take a more holistic tack": adding mindfulness instruction. The goal is to encourage System 2 thinking—a more reflective, analytical approach.

In a field study involving 355 university students, faculty, and staff members, the researchers and colleagues compared three groups of participants, all of whom had gone through basic security training. The first group received additional rules-based instruction. The second group was taught to use simple mindfulness techniques: Pause if an email requests action; consider the nature, timing, purpose, and appropriateness of the request; and consult a third party about any suspicions. The third group received no additional training. Ten days later, the researchers launched a mock phishing attack. They found that 13% of those given additional rules-based training took the bait, as did 23% of those who got no additional training—but just 7% of those instructed in mindfulness techniques fell prey. Subsequent work by the researchers' colleague Christopher Nguyen obtained similar results and showed that the heightened resistance lasted several months.

Take a teamwide approach. Security measures are often thwarted by the "weakest link" problem: If just one person responds to an attack, it may succeed. To understand whether group dynamics can lessen this vulnerability, Wright and colleagues conducted a two-year field experiment in the 180-person financial unit of a large university. Mapping the employees' positions in their work groups and social networks and phishing them several times, they learned that the more central, or connected, people were in either type of group, the less likely they were to succumb to an attack. For example, employees in the top quartile of centrality in their work groups clicked on links in the phishing messages just 14% of the time, while employees in the bottom quartile did so 35% of the time. The researchers also found that the higher a team's overall computer efficacy, the more resistant each member was to phishing attacks.

These findings indicate that employees can learn valuable security lessons from teammates, formally or informally—a dynamic that managers could capitalize on. "Instead of saying, 'It's that time of year: Complete your IT training when you can' and then never talking about it," Wright says, "managers could conduct team trainings and hold each team accountable for results." Organizations could also use network analysis to identify especially susceptible employees

and could provide additional training to people who are peripheral or new to their teams.

One finding from the study took the researchers by surprise: The more that employees interacted with or even just trusted their IT help desk, the more likely they were to fall for phishes. Those people may have felt "indemnified" against threats, the researchers posit. "If a credit card is stolen, the credit-card company covers the losses, making people less concerned with protecting their cards; we theorize that something similar is happening here," Wright explains. "If people think, 'The help desk will keep me safe if I click on something wrong,' they're not owning the protection of their data or learning from their interactions." Managers could incentivize employees by making security compliance part of their annual reviews, he says—and help desks could make sure users understand the warning signs they missed rather than simply fixing the problem, as commonly occurs.

Use gamified training. Another way to leverage group dynamics is to add a competitive element to cybersecurity exercises. The researchers and colleagues conducted three experiments involving 568 participants who played the role of an intern taught to identify and report suspicious messages and then given a variety of tasks, among them managing the boss's inbox. As the subjects went about their work, they encountered five phishing emails. In the first two experiments, their reports were posted on leaderboards of varying designs. In the third experiment, leaderboards were compared with several other anti-phishing measures, singly and in combination: a training video, labels marking emails as "external" if they came from outside the organization, and labels warning that particularly suspicious emails might be phishes.

The leaderboard was highly effective at encouraging reports while keeping false positives in check; only labels explicitly warning that emails might be phishes got better results. It was especially powerful when paired with training. But some designs proved better than others. The optimal configuration made reporters' identities visible to all and both awarded points for correct reports and deducted them for false alarms. "External motivation turned out to be far and away more effective than intrinsic incentives," Jensen says.

Nobody is going to spend time hunting down phishes for the fun of it. But organizations can take these steps to emphasize the importance of detection and reporting and to make those activities more effective and rewarding. When it comes to employees' falling for fraudulent messages, "It's really hard to get to zero," Jensen says. "You have to take a layered approach."

HBR Reprint F2005A

ABOUT THE RESEARCH *"Beyond Individuals: A Group Perspective of IT Security Compliance," by Ryan T. Wright, Steven L. Johnson, and Brent Kitchen (working paper); "Building the Human Firewall: Combating Phishing Through Collective Action of Individuals Using Leaderboards," by Matthew L. Jensen et al. (working paper); "Training to Mitigate Phishing Attacks Using Mindfulness Techniques," by Matthew L. Jensen et al. (Journal of Management Information Systems, 2017)*

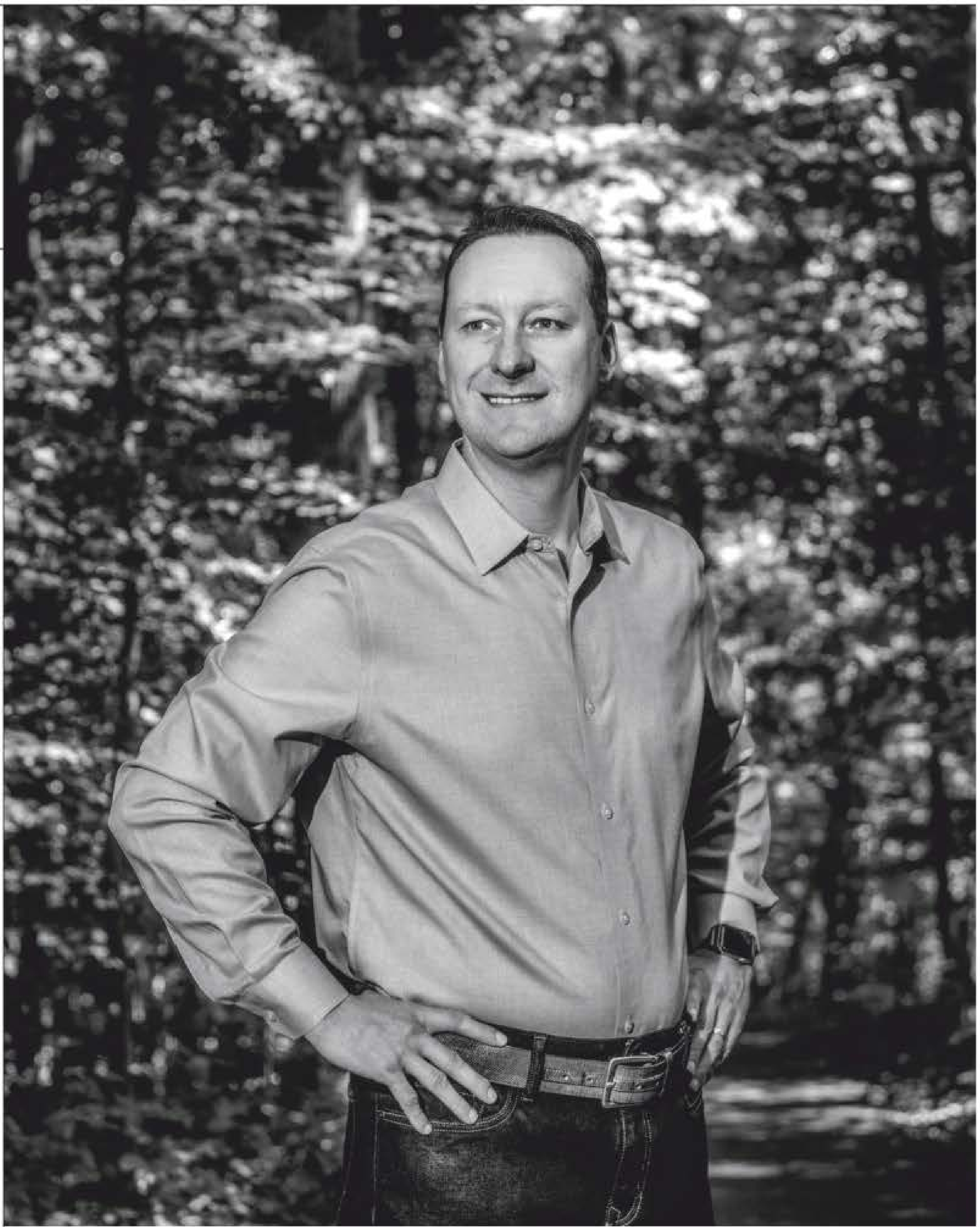
IN PRACTICE

"Making the Lessons Personal Means They're More Likely to Stick"

As the chief information security officer at Fannie Mae, ***Christopher Porter*** *oversees security training for nearly 7,500 employees along with several thousand independent contractors and consultants. He recently spoke with HBR about how the organization works to defend against phishing attacks. Edited excerpts follow.*

What kinds of phishing education do you engage in?
There's the usual broad training that's mandatory across the organization. We target other efforts toward specific units. Accounts payable and finance groups, for example, face unique attacks and need to develop special immunities. In addition, each month we conduct a mock phishing exercise around a specific theme. If people click on one of the test emails, they get immediate feedback—a short

video shows them exactly what made the message a phish. If they fail two or more tests in a 12-month period, they participate in additional group training to bring them up to speed. Finally, we've mounted a weekly security awareness campaign: Every Friday we post a blog addressing some aspect of detecting a phish and what to do when finding one—it's critical to get people to report attacks. We continually reinforce the actions employees need to take.



What do you focus on in the monthly exercises?
There are three main themes. The first is loss: An attacker threatens to take something away from people if they don't respond. The second is promises: People are told they'll get something if they click on a link. The third has to do with emotions—attempts to exploit things like curiosity. It's important to know which of these approaches our users are most susceptible to so that we can target our training accordingly. We also look at what kinds of attacks are out in the wild at a given moment. These days Covid-19 is providing a huge lure.

Research has found that simple mindfulness exercises can boost people's resistance. Have you utilized that approach?
We try to get people to use the "stop, think, act" process. For instance, we encourage them to pause if they see a banner identifying a message as external to the organization and, before they continue reading it or take any action, to ask themselves whether they were expecting the email, whether they know the sender, whether anything feels funny. That has improved our resistance over time.

How do you keep people from clicking through the training without actually absorbing it?
First, we try to make it fun. We incorporate professionally created cartoon videos that focus on specific security lessons, sometimes with voiceovers by stars—the comedian Jon Lovett did one. Second, we've drawn on research showing that if you teach employees to protect their information at home, they'll take those lessons back to the office and apply them to company information. To that end, we've shown people how to set up multifactor authentication to keep their personal financial information safe. During tax season we remind them that they may get fraudulent messages supposedly from the IRS. And we do a lot to help people protect their families. For example, we had a woman come in and talk about her experience as a child being abducted by an online predator and how parents can protect their own kids online. The research shows—and we have found—that making the lessons personal means they're more likely to stick.

Photograph by JARED SOARES

IdeaWatch

WILL SOCIAL DISTANCING CURTAIL INNOVATION?

After the enactment of Prohibition and the closing of saloons, previously wet counties produced 8% to 18% fewer patents a year than already dry ones, owing to the disruption of social networks. As people gradually formed new networks, patents rebounded.

"Bar Talk: Informal Social Interactions, Alcohol Prohibition, and Invention," by Michael Andrews

NEGOTIATION

How to Push Past an Ultimatum

During negotiations, one party sometimes declares that the offer on the table is "the best I can do." And although that may not be the case, very often the other party stops pushing and either agrees to the terms or walks away. New research shows that the right frame of mind can inspire people to continue negotiating in the face of an ultimatum—and they get better deals as a result.

Across six studies, people primed to have a "choice mindset" (by recalling choices they made the previous day, say, or by thinking about options they and their negotiating counterpart have) were more likely than others to ignore an ultimatum and press on. This held true when subjects acted as job candidates discussing salary and benefits with a hiring manager, as potential buyers trying to secure the best price and service contract for a mobile phone, and as customers looking to buy a used car. In the third scenario, for example, participants who had been instructed to think about the car seller's choices paid $614 less than those told to consider the seller's constraints.

"Negotiators...may want to think about their own choices as well as their counterpart's choices before going to the bargaining table and during the negotiation," the researchers write. "Organizations can also improve business performance by systematically promoting a choice mindset among negotiators."

ABOUT THE RESEARCH *"Take It or Leave It!: A Choice Mindset Leads to Greater Persistence and Better Outcomes in Negotiations," by Anyi Ma, Yu Yang, and Krishna Savani* (Organizational Behavior and Human Decision Processes, *2019)*

ROBOTICS

When the Servers Are Robots

The robot "Pepper" has been helping customers in restaurants, banks, and airports in recent years, and it's likely to be joined by others as businesses seek ways to minimize person-to-person contact. Creating robots that closely resemble people is often seen as the gold standard in such endeavors—but a new study finds that sometimes the resemblance is too close for comfort, and customers may change their behavior as a result.

In one experiment, subjects watched a video depicting either a human medical assistant or a humanoid robot meant to help them during an appointment; they were then given the chance to buy a premium or a generic bottle of water. Those viewing the robot video were four times as likely as the others to choose the premium brand. In other experiments, participants imagining they were at an "all you can eat" restaurant and shown pictures of a human or a robotic server chose more food when the server was a robot, and subjects given a snack ate more if they saw it prepared by a robot.

These things happened, the researchers say, because of a phenomenon known as the *uncanny valley:* Although we find robots more appealing as they become more like people, after a point the resemblance becomes eerie and threatening to our identity. We then seek ways to escape our discomfort, such as by acquiring symbols of power or overindulging in food. Subsequent experiments showed that those compensatory

IdeaWatch

A (DUBIOUS) ADVANTAGE FOR WOMEN

Incoming female CEOs negotiate larger severance agreements than their male counterparts, on average, presumably because they have greater concerns about termination. The effect is especially pronounced if the organization's performance is declining, the prior CEO was dismissed early, or no women sit on the board.

"CEO Gender-Based Termination Concerns: Evidence from Initial Severance Agreements," by Felice B. Klein, Pierre Chaigneau, and Cynthia E. Devers

responses were attenuated in situations in which people felt a high sense of social belonging, when the food in question was perceived as healthful, and when the robot was less anthropomorphized—not given a name or referred to with personal pronouns, say.

"As marketers venture into the realm of service robots, they need to...consider contextual facets that drive or mitigate consumer responses," the researchers write. For example, highly humanized robots might excel at upselling; but they might also undermine efforts to help people control negative behavior, such as including caloric data on restaurant menus to discourage poor food choices. More broadly, given the discomfort the robots can trigger, "firms should avoid forcing consumers to interact with [humanized robots] but allow consumers to self-select into being served by [one]," the researchers say.

ABOUT THE RESEARCH *"Service Robots Rising: How Humanoid Robots Influence Service Experiences and Elicit Compensatory Consumer Responses," by Martin Mende et al.* (Journal of Marketing Research, *2019)*

WORD OF MOUTH

Make Hay from That Unfair Review

When consumers slam companies in ways that are obviously undeserved ("More like 'Mediocre Canyon,'" complained one unhappy visitor to Grand Canyon National Park), brand managers may try to suppress the review, publicly shame the reviewer, or even sue. A series of new studies suggests that by taking a different tack, they can turn such broadsides to their advantage.

In one experiment, the researchers randomly assigned 223 graduate students to read one of three reviews of a reusable-water-bottle company before indicating their purchase intent. In the positive review, a customer described getting an answer to a customer service query within 24 hours. In the fair negative review, the customer described having to wait two weeks. In the unfair negative review, the customer complained about not getting through on Christmas Eve. Subjects who read the unfair negative review were just as likely to say they would buy from the company as were subjects who read the positive review. Subsequent experiments found that at very high levels of unfairness, negative reviews actually generated greater purchase intent than did positive reviews.

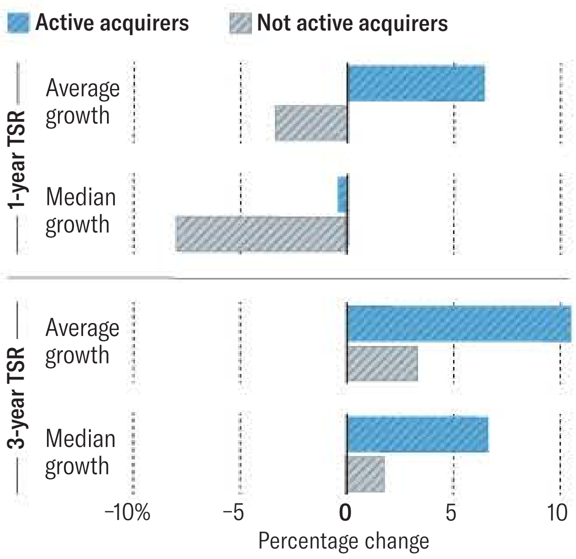
Surveys of participants showed that these dynamics were driven by empathy. According to the "just world" theory, people often try to restore fairness when they observe someone being treated in a manifestly unfair way. Consequently, "firms may want to highlight unfair negative reviews and strategically leverage their positive downstream consequences," the researchers write—and indeed, organizations including the Snowbird ski resort and the Vienna Tourist Board have used such material in ad campaigns. Brand managers can apply the findings even when critical reviews are justified, the researchers note: "Creating employee-focused narratives as a form of firm communication...or even responding to reviews in a way that is more personal...enhances empathetic responding on the part of consumers and protects the firm against the potentially adverse impacts of negative reviews."

ABOUT THE RESEARCH *"Negative Reviews, Positive Impact: Consumer Empathetic Responding to Unfair Word of Mouth," by Thomas Allard, Lea H. Dunn, and Katherine White* (Journal of Marketing, *2020)*

M&A

The Case for Acquiring During a Downturn

If bargains become available, should companies bite? An analysis of total shareholder returns among *Fortune* 1000 companies during the 2008 financial crisis shows that companies making acquisitions totaling at least 10% of their market cap ("active acquirers") outperformed those that took a "wait and see" approach.



Note: One-year TSR covers January 2007 to January 2008; three-year TSR covers January 2007 to January 2010.
Source: EY analysis, Capital IQ, *Fortune*

PSYCHOLOGY

Feeling Unsure of Yourself? Spend Time with a Hubristic Teammate

Confidence levels are often consistent within groups and populations: Contrast the humility and self-deprecation widespread among !Kung hunter-gatherers, for example, with the "culture of arrogance" that led the Enron corporation to bankruptcy (and many of its executives to jail). A research team wondered why overconfidence in particular manifests in social clusters. One reason, documented in six experiments, is that it appears to be contagious.

In the first experiment, 104 undergraduate students were randomly partnered up after individually completing a computer task and rating their confidence in their performance. Each pair collaborated on an extension of the task, after which participants revised their assessment of their individual performance. The researchers found that working with partners who were overconfident (their self-assessments were not borne out by their actual scores) caused subjects to become more overconfident themselves. Subsequent experiments showed that the effect persisted over time and across varying tasks; it also occurred across indirect social ties and when subjects knew their partner's confidence was unjustified. There was an exception: When expressed by members of an out-group (subjects attending the University of Illinois were told that their partner was from football archrival Ohio State), overconfidence did not spread.

"Future work should explore the practical implications of the social transmission of over- and under-confidence," the researchers write. "Strategies and principles for designing the structure of organizations, building effective teams, and selecting and cultivating aspiring leaders and decision makers ought to consider the potentially profound and extensive social influence of an initially small pool of overconfident individuals."

ABOUT THE RESEARCH *"The Social Transmission of Overconfidence," by Joey T. Cheng et al.* (Journal of Experimental Psychology: General, *forthcoming)*

TALENT

A Vote for Generalists

It's a perennial question: Should companies seek workers with broad knowledge or deep expertise for their R&D efforts? A recent study finds that diversified researchers explore and integrate new information from outside their domains of expertise more successfully than their narrowly focused peers do.

The authors examined use of the technology underlying the gaming accessory Microsoft Kinect. Released in 2010, Kinect broke ground with its ability to track whole-body motion—a capability with relevance to fields including artificial intelligence, cinematography, health care, and more. To determine the researchers who best capitalized on that capability, the authors studied 14 years' worth of academic papers in electrical and electronics engineering, using keywords to identify researchers with no prior experience in motion sensing and to measure their levels of research diversity as reflected in their pre-Kinect publications. Then, searching for the keyword "Kinect," they determined which ones drew on the new technology in the four years after Kinect's release.

Researchers ranking in the top 25% in terms of diversity were 3.1 times as likely to make use of the new technology as similarly skilled researchers ranking in the bottom 25%. What's more, their papers were of higher quality: They were 3.8 times as likely as those by low-diversity researchers to appear in the top 10% of papers cited by others. "Although institutional norms in both firms and research organizations frequently demonstrate preference for specialization," the researchers conclude, "our results show that individuals with high levels of knowledge diversity play an important role in pushing the knowledge frontier forward."

ABOUT THE RESEARCH *"Jack of All Trades and Master of Knowledge: The Role of Diversification in New Distant Knowledge Integration," by Frank Nagle and Florenta Teodoridis* (Strategic Management Journal, *2019)*

TECHNOLOGY

Another Consequence of Our Love Affair with Our Phones

As consumers increasingly create content on their smartphones rather than their personal computers, a team of researchers wondered: Is the shift altering not just how but also what people share? Their investigation suggests that the answer is yes.

In the first of several studies, the researchers examined 293,039 original tweets posted from smartphones or PCs. Using an automated analysis of linguistic markers, they found that the tweets composed on smartphones contained higher proportions of first-person pronouns, references to family, and negative emotional words (which previous research has linked to high self-disclosure) and displayed a less-analytical writing style (also a signifier of high self-disclosure). Human judges assessed those tweets as conveying more-intimate information. Subsequent studies in the series found that in other contexts—including writing about upsetting experiences, answering questions about potentially embarrassing products, and providing sensitive personal information requested in online ads—people likewise disclosed more freely on their smartphones than on their PCs. And the greater depth of disclosure in smartphone-generated restaurant reviews meant that outside readers found the reviews to be more persuasive than ones composed on a PC.

Two mechanisms drove the heightened disclosure: People associate their smartphones with psychological comfort, and the relative difficulty of typing on the devices narrows attention to the disclosure task at hand and away from peripheral thoughts. "Smartphone-generated content may offer more diagnostic or accurate insights into consumer preferences," the researchers write. If companies want to obtain sensitive information, they say, they could query consumers via smartphone. And marketers could identify which reviews are most likely to sway other consumers simply by identifying their originating device. For their part, consumers wanting to avoid excessive self-disclosure might put down their phones and turn to their laptops instead.

ABOUT THE RESEARCH *"Full Disclosure: How Smartphones Enhance Consumer Self-Disclosure," by Shiri Melumad and Robert Meyer* (Journal of Marketing, *2020)*

DO THE WRONG THING

Nearly one in four U.S. workers surveyed say they "sometimes," "often," or "almost always" feel pressured to act unethically while on the job.

Emotions in the Workplace initiative of the Yale Center for Emotional Intelligence

TIME MANAGEMENT

Procrastinators, Take Heart

Procrastination is generally regarded as a dysfunctional behavior, detrimental to productivity and linked to anxiety, guilt, and shame. New research finds an upside: In moderate amounts, it can lead people to more-creative results.

In two experiments among U.S. graduate and undergraduate students, the researcher team tempted participants to engage in low, moderate, or high degrees of procrastination by making varying numbers of funny YouTube videos available while they were supposed to be solving a business problem. Those who indulged in a moderate amount of procrastination (they had easy access to four videos) generated significantly more-creative ideas, as rated by independent evaluators, than those who procrastinated a little (one video) or a lot (eight videos). A subsequent field study at a South Korean furniture company found similar results. As long as people are intrinsically motivated or are engaged in a task requiring creativity, the researchers explain, having a little distance from a problem means it can "incubate" while they are doing other things, helping them see it with fresh eyes and explore new solutions—but if they wait *too* long before returning to the task, their creativity is constrained by the looming deadline.

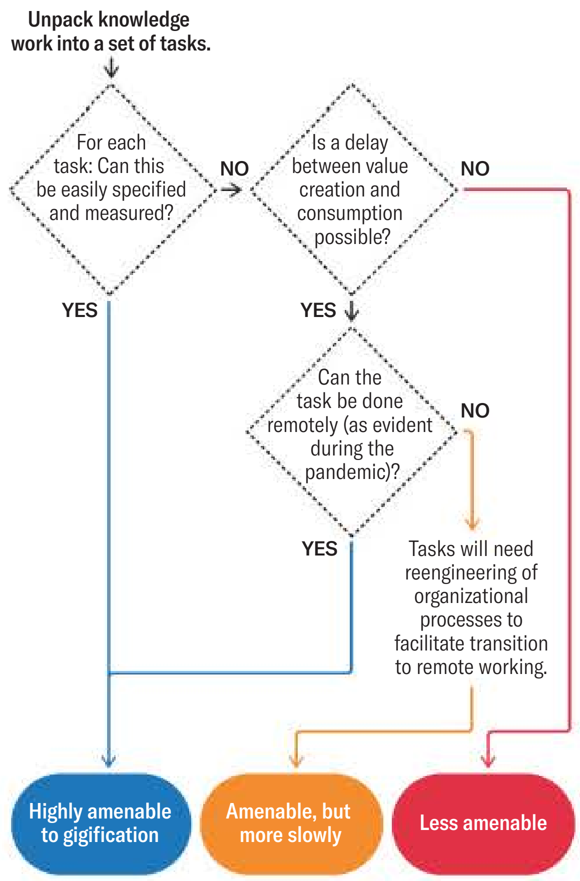
"When novel and useful ideas are needed...employees may find value in moderately delaying the start, progression, or completion of the task," the researchers write. "In addition, leaders and managers may find ways to encourage creative procrastination, such as starting the innovation process by describing a problem without immediately asking for solutions or proposals. However, it would be important to ensure that procrastination does not preclude the doing of actual work."

ABOUT THE RESEARCH *"When Putting Work Off Pays Off: The Curvilinear Relationship Between Procrastination and Creativity," by Jihae Shin and Adam M. Grant (Academy of Management Journal, forthcoming)*

OPERATIONS

Can Knowledge Work Be "Gigified"?

The increase in remote work during the pandemic has yielded new insights about how knowledge work can be performed off-site—including by contract employees. To understand what sorts of tasks can be successfully outsourced, ask three questions.



Source: Sameer Hasija, V. "Paddy" Padmanabhan, and Prashant Rampal

IdeaWatch

Emily Ho of Northwestern University and two coresearchers asked more than 2,300 survey participants whether they would like to get various kinds of information that could be useful to them, including how their retirement accounts stacked up against their peers', what listeners thought of a speech they'd recently given, and how coworkers rated their strengths and weaknesses. The team found that the respondents opted out 32% of the time, on average. **The conclusion:**

We Actively Avoid Information That Can Help Us

Professor Ho, Defend Your Research

HO: The conventional wisdom is that people should be eager to get information that can benefit them. That's the idea behind marketing and public health messaging. But across several scenarios we saw that from 15% to more than 50% of people declined the information we were offering. This is the first study to examine how prevalent this phenomenon is in many contexts. We've shown that this is a serious issue. It's not just one or two people keeping their heads in the sand.

HBR: Exactly what types of information are we talking about? My coauthors—David Hagmann of Harvard University and George Loewenstein of Carnegie Mellon University—and I chose three domains: health, finances, and interpersonal issues. We asked whether people wanted to know how long they'd live, how much time they spent slacking off at work, how their retirement savings compared with others', feedback on their strengths and weaknesses, and more. We wanted to run a big, comprehensive survey about the decisions that people are grappling with every day. Most people go to the doctor. Everyone thinks about money. We wanted to better understand the situations in which people want information and those in which they really shy away from it.

So your findings are more about the amount and type of information that people avoid than about the number and type of people who avoid information? Right. Information avoidance is pervasive, but it also seems to depend on context. Some of the same people who didn't want to know their life expectancy did want to know how their retirement portfolio was doing, and vice versa.

In which situations were people most likely to decline info that could help them? One factor that may have been at play was perceived actionability. In earlier research we found that if people felt they wouldn't be able to act on the information being offered, they were less likely to want it. However, technically, any piece of information could be useful, and you can't know whether it is if you immediately shut it out. A lot of people think, "Oh, if I get a bad diagnosis, I can't do anything about it." They'd rather not know. And maybe you can't do anything about being sick. But with a health diagnosis you can do something about future life planning.

One question for leaders is, How useful are these 360-degree assessments if 20% of your direct reports won't read them?

And there was no guarantee that this information would be bad—there was just that possibility, right? That's right. The outcome was ambiguous and basically up to the person's interpretation. That way the results weren't skewed by people's loss aversion. But we did find that people who were more accepting of risk were more likely to obtain information, as were those who didn't focus on the present far more than on the future.

Were you able to discern anything else about who was more likely to ask for information and who was likely to avoid it? Surprisingly, we found very few demographic differences. In our last study we found that men were slightly more information seeking than women, but it was a very small correlation. Personality does seem to play a role, though. We found that people who were more curious and more receptive to opposing views tended to want information more frequently. So did people who had a higher need for intellectual engagement. But, again, these relationships were small, which suggests that information avoidance is not just a part of any of those traits. It's still its own construct.

You surveyed only Americans for this. Do you think you'd generate the same findings in other countries and cultures? I'd say that information avoidance is probably generalizable—I don't think there's anything uniquely American about those preferences. It's possible that you'd find a difference between individualistic cultures and collectivist ones, though. In the latter, if people felt that obtaining information would also help others around them, they might be more inclined to get it.

What advice do you have for managers reading this and realizing that their employees are probably avoiding useful information a lot of the time? First, recognize that willful ignorance is all around, including in you. For example, when we asked the question about time spent slacking off at work, scrolling through Facebook or whatever, two out of five—40% of people—didn't want to know about it. One in five didn't want to know how their coworkers would rate their strengths and weaknesses. That's problematic! Especially for firms that rely on teamwork. One question for leaders is, How useful are these 360-degree assessments if 20% of your direct reports won't read them? Just because you have certain feedback mechanisms in place, that doesn't mean the job is done. You might want to think about other ways of communicating constructive criticism.

Were there areas where most people did want information at work? We looked at automation by asking, "Do you want to know how replaceable you are?" Only 15% of people said they didn't. What I take from that is, people avoid information when it might hurt their self-image: I don't want to know how much time I'm wasting at work or what my colleagues really think of me. But when it comes to really consequential things, such as how likely they are to lose their jobs in the next several years, people tend to want to know so that they can prepare. There's a tipping point, but we don't know exactly where it is.

Doesn't it sometimes make sense to avoid information that could be beneficial but will make you feel bad—because the help gets outweighed by the hurt? That's what academics call *subjective well-being*—which is affected by your "hedonic cost," or the degree to which knowing information makes something less pleasurable. Let's put a very concrete number on it: Will finding out that you're underpaid weigh on your mind so much or be so unpleasant that you'd be willing to forgo the $800 a month that you might have secured by using that information to negotiate a better salary or get a different job? Most people probably aren't thinking about it like that, but maybe they should be.

Has knowing all this changed the way you collect information? It definitely made me more aware of when I was reflexively not reading something because I wanted to protect my beliefs or my ego. It made me realize that there's a trade-off between doing that and maybe making a better decision later on.

Here's an example from my own work: I write a lot, but for a long time I resisted word counters. I just didn't want an index of what I'd done every day. I realized that I was afraid of the data staring back at me and telling me I should write more. So I thought, "Well, if that's the only thing holding me back and having the information could help me write 500 extra words a day, I should stop avoiding it." Information is freedom!

Interview by **Thomas Stackpole**

HBR Reprint F2005B

Redux

HOW I DID IT 23ANDME'S CEO ON THE STRUGGLE TO GET OVER REGULATORY HURDLES

by Anne Wojcicki

Late on a Friday in November 2013 I was at a strategy offsite when my executive assistant texted that we had received a package by courier from the U.S. Food and Drug Administration. At the time, 23andMe had been in a years-long back-and-forth with the FDA over how we should be regulated, so this news made me anxious. Hoping to gain as much time as possible, I texted back, "Don't sign for it!" She replied, "It's too late, I already did." As it turned out, that package contained a warning letter that would forever change the course of 23andMe.

On Monday morning the FDA released the letter to the press—something it rarely does with such short notice. Reporters began calling. Then David Kessler, the former FDA commissioner who'd been unofficially advising 23andMe since we launched, called. "Anne," he said, "I know you're probably not very worried about this letter, but let me tell you—you should be. The FDA is *really* angry."

23andMe was then six years old and provided the only direct-to-consumer genetic test with health-risk information. We'd been in discussions with regulators since the beginning but had usually been able to resolve any issues. This was clearly different. We were ordered to immediately stop offering health-risk reports. We suggested some changes in

Photograph by GABRIELA HASBUN

Clockwise from top: 23andMe headquarters, in Sunnyvale, California; a model of partially unwound DNA; the tube customers use to collect and mail their saliva for testing

how we marketed the tests and offered to have them ordered by physicians, but the FDA said no, that wasn't enough.

I've usually been good at navigating challenges, but this time I was stumped. I spent the next week calling lawyers, lobbyists, and scientific experts, and heard a variety of opinions. My initial reaction was to challenge the letter, but I soon realized that wasn't the right move. I had one transformative meeting with the regulatory team at a large pharmaceutical company, whose members asked, "Do you want a short-term solution so that you can sell the company and be done, or do you want to stick with it for the next decade?" My answer was "I'm with 23andMe for the next decade and more." "Well, then," they said, "do the hard work and show the agency that this is a high-quality test that consumers can understand. That will have a far greater impact on the industry. But it will take you years."

It was a painful transition and a significant cultural shift for the company. Our health-screening product stayed off the market for two years while we worked on FDA clearance and changed the core infrastructure of the company to be compliant. We hired new people and trained employees to operate within a regulated environment. We couldn't take the traditional Silicon Valley approach of iterating quickly and launching; instead we implemented a compliance system with checkpoints to make sure we met all the necessary requirements.

Culture change is hard for any company, and we were unusual in that everyone eventually bought in. People often ask how we made it happen. There was no magic. I credit our chief legal and regulatory officer, Kathy Hibbs, and her team for leading that transformation and sticking with it. Change happens when strong leadership doesn't waver with the message and gets employees to rally around the vision.

A PASSION FOR HEALTH

I grew up on the campus of Stanford University. My mother teaches journalism at Palo Alto High School, and my father is a particle physicist at Stanford. Together they taught me and my sisters to be passionate about what we do in life. That drove us to pursue jobs we love and to work hard at them. My sister Susan is now the CEO of YouTube, and my sister Janet is an associate adjunct professor of pediatrics at UCSF.

From an early age I have been interested in health, wellness, and the human body. I was very close to my pediatrician, Alan Bernstein, and used to love seeing him and peppering him with questions. My family had a copy of the *Merck Manual,* and I spent hours reading about diseases. By middle school I'd become fascinated with twin studies, which examine how environment and heredity combine to influence a person's physiology and behaviors.

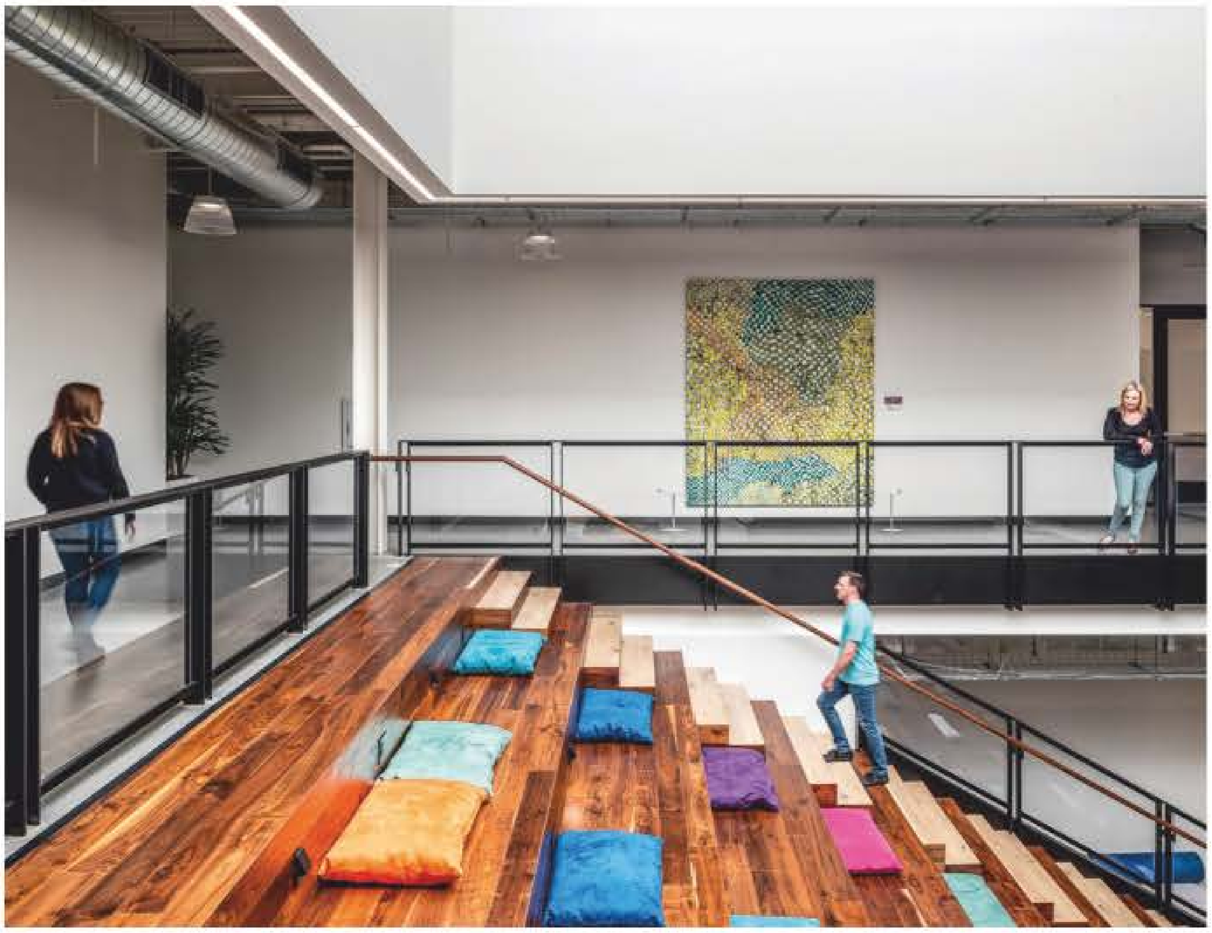
After high school I attended Yale, where I majored in biology. I loved molecular biology and considered pursuing an MD/PhD. But physicians I spoke with felt that the industry was changing for the worse, and there were more-interesting careers to pursue. I did a lot of lab research and enjoyed it, but I didn't believe the PhD route was right for me. After graduation I worked on Wall Street as a health care analyst for a few years and then quit to travel, volunteer at a hospital, and prepare to take the entrance exam for medical school.

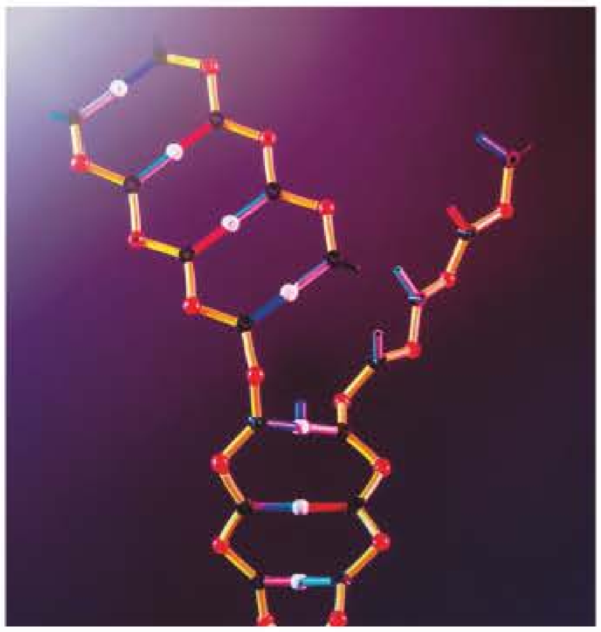
As I considered whether to apply, I got an opportunity to go back to finance at a hedge fund, where I invested broadly in health care: biotech, pharmaceuticals, medical devices, hospitals, nursing homes, and pharmacy-benefit managers. Investing was a great way for me to understand the health care sector while I figured out my next move. The longer I spent getting to know health care companies, the more I realized that the industry did not represent my true interests. I met all kinds of fabulous people who genuinely wanted to change health care, but the financial incentives of the overall system did not work to keep individuals healthy. It seemed wrong that no one made money if I stayed healthy but lots of companies would make money if I got sick.

Janet studies the obesity epidemic and can talk about the associated costs and the impact on lives. From a Wall Street perspective, I would talk about the opportunities to monetize all the comorbidities that come from obesity—and why the growing global diabetes epidemic was a reason to invest in the health care sector.

I knew I needed to do something different. I spent my days thinking about how I could change the system, and I ultimately concluded that I don't believe the system *can* change. If you want to change health care, you have to build from entirely outside the system.

I had always been intrigued by genetics while I was investing. Scientists





Robert P. Calderwood (office); Jason Madara (tube, DNA model)

had only recently mapped the human genome, and there was tremendous enthusiasm about what could come of it. I was doing research on a company called Affymetrix that had pioneered the first whole genome array—a low-cost way to look at a number of the known variations among humans.

I remember a conversation in late 2005 with a postdoctoral student at the Broad Institute, a genomic research center in Cambridge, Massachusetts, who said, “Anne, we’re on the brink of a revolution. We are about to solve everything.”

Later I had dinner with another genetics expert who was studying diabetes on a small island in the Pacific. Almost 100% of the island’s people were obese, but only 80% were diabetic. What was protecting the other 20%? The answer was most likely genetics. He told me, “I have so much data it’s chaos, but not enough data to make sense of it all.” If we had more data—the world’s health data—we could solve everything.

By then I was 32, living in San Francisco, and had just begun dating Sergey Brin, a cofounder of Google. I was surrounded by people who were starting up or working at companies that used data in interesting ways. Some of our friends were employed by social networking companies, and they schooled me in Web 2.0 and the power of social networks. That power in combination with low-cost genetic information suggested an opportunity to do something radical in research.

Around this time I met Linda Avey and Paul Cusenza. They had been talking about starting a company that would offer direct-to-consumer genetic testing. I joined them as a cofounder. After years of feeling frustrated with the health care system and powerless to do anything about it, I believed I was on a path to try something different and potentially revolutionary. We called the company 23andMe, after the 23 pairs of chromosomes that make up DNA.

A “MEDICAL DEVICE”?

We spent the first year traveling around, meeting with scientists, and assembling our advisory committee. We worked with a lot of experts on ethics, privacy, and legal issues. We felt a responsibility to get it right the first time, because we knew people would be fearful: What is more personal than your DNA? We built relationships with regulators.

The key question was whether our test should be considered a medical device—a category regulated by the FDA. A medical device is “intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, We have enabled millions of people to learn about their DNA and to opt in to research, making 23andMe the largest genetics community in the world for study.

treatment, or prevention of disease, in man or other animals." It was unclear whether we met the definition. A wooden stick used in a popsicle is not a medical device. But used as a tongue depressor, it becomes one. Our genetic test told people about medical risks, but we didn't intend it to diagnose or cure disease. So was it a medical device?

We discussed whether the container our customers use to collect and mail their saliva was a medical device, whether the test system was, and whether the information we report was subject to FDA regulation. We had several face-to-face meetings with FDA officials, and we aimed to be transparent and open to input. This was new territory for them as well, and Andrew von Eschenbach, then the FDA commissioner, indicated that the agency did not necessarily think our test was subject to regulation. We came away from those early discussions with the understanding that what we proposed did not require FDA premarket review.

Only years later did I realize how heavily politics influences the way an industry is regulated. During the George W. Bush administration the FDA had a mandate not to overregulate. Under President Obama the agency shifted toward more oversight. By 2010, after a competing company began selling DNA test kits at Walgreens, the Senate started holding hearings.

The new FDA commissioner made it clear that we would be subject to regulation. At a public meeting with the FDA in 2010 we said we would comply with the agency and would engage in figuring out how to be regulated. Regulators need input from companies to understand the nuances in the work they are doing. We helped the FDA craft standards and regulations that made sense. We believed we were making progress. But in retrospect it's clear that we were far more out of alignment with the agency than we realized.

By 2013, 23andMe was doing well. We'd sold half a million DNA-testing kits and had received more than $126 million in venture funding. After years of slow growth, the market was taking off. Then, very suddenly, came that warning letter.

A SAVVIER APPROACH

Even now, I'm not sure what made the FDA change its view of 23andMe so dramatically and quickly. We had been promoting our product more aggressively with TV ads, at-home mailers, and some magazine covers. I don't believe it was any one of those but rather the sum of all of them. Whatever the cause, the agency had lost its patience by the time we got the letter.

We were lucky that our product was used for two purposes: to help people learn about their ancestry and ethnic origins, and to understand what their genes might predict about their health. The FDA was forcing us to stop selling the health product, but we could continue to sell the ancestry product, and our customers could continue to get access to their uninterpreted DNA.

Our TV campaign had helped drive an unusually high number of orders—more than 200,000—in just a few months before the warning letter arrived. Our lab was backlogged with those samples. The FDA could have prohibited us from processing them and insisted that we offer refunds, which would have been disastrous for the company and forced us into bankruptcy. But it didn't; we were allowed to return the health results to customers who had purchased prior to November 22, 2013. I took that as a sign that the agency wanted to work with us and believed our product had potential.

We learned from people with connections to the FDA that some officials felt very strongly that 23andMe should be reined in. We reached out to industry advisers who knew and understood the agency and had strong working relationships with some of its people. I wanted to start a conversation, but some folks did not even want to speak with us. The first time I emailed one adviser, she wrote back, "I am not a fan of 23andMe." I kept emailing and listening to reasons that she (and others) had for disliking what we had done. Starting that dialogue with adversaries was important for me to understand just what expectations we would need to meet. It also demonstrated that our desire to be responsible and find a path forward was genuine.

Kathy Hibbs, whom we'd hired as chief legal counsel a few months after receiving the FDA letter, took the lead on working with the agency. Kathy had spent more than 10 years as general counsel with two other genetics companies and had also worked in the medical device industry. She was an ideal candidate. More important, she saw the potential for what we were trying to do with the direct-to-consumer approach and the research. She believed we could prove to the FDA that this was an accurate test that consumers could understand without the help of a physician or a genetics counselor. When she joined, it was a big shift for the company. Although the core mission was unchanged, we learned that we had to take a different approach to prove to the FDA that this was a safe product for consumers.

The FDA approach originally didn't seem logical to me, but Kathy was able to break it down so that it made sense. With her in charge, I attended meetings on it only as needed. It was important for me to give her unwavering support but not to be the one leading the transition.

To get FDA authorization, we had to first agree on what the requirements would be. Ultimately we focused on proving two things: that the test was valid, and that customers were capable of understanding the results we sent them.

Proving the validity of our test and data was generally straightforward and based on what other genetic products had submitted in their premarket reviews. The greater challenge was finding a way to demonstrate that the average U.S. consumer could clearly understand our results and how they should be interpreted. We conducted user-comprehension studies, surveying hundreds of people, of all ages, ethnicities, and educational backgrounds, and asking standardized questions to see whether they understood the information—not just that having a variant might put them at higher risk for a condition, but also that *not* having a variant didn't mean they were risk-free. We have demonstrated repeatedly that our reports achieve at least 90% comprehension.

In February 2015, about 15 months after that warning letter, 23andMe received the first-ever FDA authorization for a direct-to-consumer genetic test to report carrier status, which informs people of variants that may not affect their health but could affect the health of their families in the future. Two years later we received the first-ever FDA authorization to issue genetic health-risk reports, which inform consumers of their personal risk for certain health conditions. Since then we've added conditions such as late-onset Alzheimer's disease, Parkinson's, and, following yet another FDA authorization, variants in the BRCA1/BRCA2 genes that signal increased risk for breast, ovarian, or prostate cancer. In the fall of 2018 the FDA granted us the only authorization to offer direct-to-consumer information on pharmacogenetics—how customers' genes may influence the way they metabolize certain medications.

A LONG-TERM VISION

I tend to see a silver lining in everything. I definitely feel that way about our experience with the Food and Drug Administration. It made us a stronger company and created a better product that meets higher standards. The team that made it happen stepped up, learned what they didn't know, and executed on the plan. I am most proud of our legacy of advocating for individuals to have direct access to the test. I believe that people of all education levels are capable of being in charge of their own health.

By being direct-to-consumer and affordable, we have enabled millions of people to learn about their DNA and their health risks, which has helped them take actions to prevent disease. We have also allowed millions of them to opt in to research, making 23andMe the largest genetics community in the world for study. We have published more than 150 papers and started a therapeutics team to create novel therapies based on genetic insights.

For instance, when the Covid-19 pandemic emerged, in early 2020, we quickly launched a study to determine whether any genetic factors are associated in those cases in which the virus is particularly severe. Within five weeks we'd enrolled almost half a million people, including several thousand with confirmed cases of the coronavirus. We aren't studying only current 23andMe customers; we also sought out 10,000 other people who'd been hospitalized with Covid-19. It's possible that we won't find strong genetic associations for differences in the severity of symptoms. But we know from past research that genetics plays a role in both susceptibility to and severity of other infectious diseases, including malaria and norovirus. And depending on what we learn, our results could aid in assessing differences in risk among individuals and in ways of treating the disease in different patients.

It's been 13 years since we started the company. Thousands of customers have reached out to tell us how 23andMe has changed their lives and, in some cases, saved them. Our mission—to help people understand and benefit from the human genome—continues to be our guiding light. I feel that we're just getting started.

HBR Reprint R2005A

Spotlight

MAKING SUSTAINABILITY COUNT

How to improve **environmental, social, and governance** performance

Photographs by MARLIES PLANK

AUTHOR
George Serafeim
Professor, Harvard Business School

SOCIAL-IMPACT EFFORTS THAT CREATE REAL VALUE

They must be woven into your strategy and differentiate your company.

UNTIL THE MID-2010S few investors paid attention to environmental, social, and governance (ESG) data—information about companies' carbon footprints, labor policies, board makeup, and so forth. Today the data is widely used by investors. Some screen out poor ESG performers, assuming that the factors that cause companies to receive low ESG ratings will result in weak financial results. Some seek out high ESG performers, expecting exemplary ESG behaviors to drive superior financial results, or wishing, for ethical reasons, to invest only in "green funds." Other investors incorporate ESG data into fundamental analysis. And some use the data as activists, investing and then urging companies to clean up their acts.

It's an open question whether ESG issues will remain as salient to investors during a global pandemic and the associated economic downturn—but my bet is that they will. That's because companies are likely to be more resilient in the face of unexpected shocks and hardships if they are managed for the long term and in line with societal megatrends, such as inclusion and climate change. Indeed, in the opening weeks of global

bear markets following the spread of Covid-19, most ESG funds outperformed their benchmarks. And when colleagues and I looked at data for more than 3,000 firms between late February and late March 2020—when global financial markets were collapsing—we found that the ones the public perceived as behaving more responsibly had less-negative stock returns than their competitors. I believe that longer term, the crisis is likely to increase awareness that companies must consider societal needs, not just short-term profits. The recent prominence of the Black Lives Matter movement, too, is creating a groundswell of support for strong diversity policies and fair employment practices. It seems clear that companies will be under growing pressure to improve their performance on ESG dimensions in the future.

The challenge for many corporate leaders is that they aren't sure how to do that. They lack understanding of exactly where they should be focusing their attention and how they should be communicating their ESG efforts. Many executives incorrectly believe that simple actions will suffice: improving ESG disclosures, releasing a sustainability report, or holding a sustainability-focused investor relations event. Some companies take those actions, fail to see a benefit, and grow disappointed or frustrated. In some cases they face criticism and negative reactions from investors.

It's easy to see why this has happened. Too many companies have embraced a "box-ticking" culture that encourages the adoption of increasingly standardized ESG activities, many of them created by analysts and consultants who rely on industry benchmarks and best practices. Those activities may well be good for society and the bottom line. Firms reap clear benefits in the form of operational efficiencies: After all, ESG measures such as reducing waste, strengthening relationships with external stakeholders, and improving risk management and compliance are good business hygiene. In many industries such efforts are now table stakes for enterprises wishing to remain competitive.

But they're not enough. Companies must move beyond box checking and window dressing. In a world that increasingly judges them on their ESG performance, they must look to more-fundamental drivers—particularly strategy—to achieve real results and be rewarded for them. Over the past two decades various colleagues and I have analyzed more than 10,000 companies, conducting 30 field studies and publishing more than 15 empirical papers. Our collective research points to the need for a new management paradigm for corporate leaders—one in which ESG considerations are embedded in both strategy and operations.

In this article I describe a five-pronged approach to help companies achieve superior performance through attention to environmental sustainability, social responsibility, and good governance. Pursuing this work isn't about ESG ratings per se—it's about using ESG integration to create new forms of competitive advantage. And since it involves fundamental strategic and operational choices, it can't be left entirely to the investor relations team or the sustainability department. Instead it must be a priority for the CEO and top executives and become central to the firm's culture.

IDEA IN BRIEF

THE SITUATION

Many CEOs feel as if they're doing everything that's asked of them in terms of improving environmental, social, and governance (ESG) practices. Yet their firms aren't being rewarded by capital markets.

THE INSIGHT

Following the crowd on ESG activities is not the answer. To gain a competitive advantage, firms should instead focus on the ESG issues that are financially material for them and pursue those in distinctive ways.

THE ACTIONS

Management should take five steps: Adopt strategic ESG practices; create accountability structures for ESG integration; identify a corporate purpose and build a culture around it; make operational changes to ensure that the ESG strategy is successfully executed; and commit to transparency and relationship building with investors.

> Too many companies have embraced a “box-ticking” culture that encourages the adoption of increasingly standardized ESG activities.

Why ESG Issues Matter

The most fundamental reason to try to raise your company’s ESG performance is that all human beings—in and out of corporate settings—have an obligation to behave in prosocial ways. But apart from the moral case, there are very real payoffs for focusing on ESG issues. And those extend beyond the benefits companies might enjoy because of productivity increases due to higher employee engagement, or sales increases due to more loyal and satisfied customers.

First, an ESG focus can help management reduce capital costs and improve the firm’s valuation. That’s because as more investors look to put money into companies with stronger ESG performance, larger pools of capital will be available to those companies. My research colleagues and I have found this happening not only in equity markets but also in loan markets, where some banks are linking interest rates on loans to ESG performance. ING, for example, did just that in 2017 when it made a $1.2 billion loan to Philips, an innovator in health technology and consumer products.

Second, positive action and transparency on ESG matters can help companies protect their valuations as more global regulators and governments mandate ESG disclosures. My research with Jody Grewal of the University of Toronto and Edward Riedl of Boston University showed that after the European Union announced broader disclosure requirements, the stock market reacted positively to firms with strong ESG disclosure and negatively to those with weak disclosure. And it’s not only developed countries that are adopting and enforcing disclosure regulations; so are many emerging markets, including South Africa, Brazil, India, and China.

Third, efforts to ensure sustainable practices will help maintain shareholder satisfaction with board leadership. As more investors with more assets under management commit to ESG investing, they will have more voting power to effect changes. Shareholders in a growing number of companies have already put forward proposals to improve gender diversity on the boards, garnering a level of support that was unimaginable even 10 years ago. For example, nearly 63% of voting shareholders at Cognex, a maker of machine vision products, approved a proposal to diversify the board, while a similar measure at the real estate company Hudson Pacific Properties received 85% support. To avoid votes against directors, challenges to executive-pay initiatives, and the like, management needs to be proactive about addressing ESG issues.

Finally, and perhaps most importantly, ESG practices are part of long-term strategy, and every company needs investors who support management’s vision and plans for the future. When Paul Polman became the CEO of Unilever, then an underperforming consumer goods giant, he immediately ended quarterly earnings guidance and was explicit about his commitment to long-term strategy rather than short-term profits. That led to an exodus of short-term-focused investors, thereby attracting more-patient capital.

So how can companies get ahead of the trends and realize tangible financial benefits from their ESG programs? In my experience studying and advising companies with strong programs, I have identified five actions that management can take: Adopt strategic ESG practices; create accountability structures for ESG integration; identify a corporate purpose and build a culture around it; make operational changes to ensure that the ESG strategy is successfully executed; and commit to transparency and relationship building with investors.

A Strategic ESG Program

To date, most companies have been treating ESG efforts like a cell phone case—something added for protection (in this case, protection of the firm’s reputation). Corporate leaders need to replace this mentality with an ambitious and differentiated ESG strategy if they want to see real financial dividends.

In his seminal article “What Is Strategy?” (HBR, November–December 1996), Michael Porter draws a distinction between operational effectiveness and strategy. The former, he writes, “means performing similar activities better than rivals”; the latter “is about being different.” Following Porter’s distinction, an ESG program may deliver efficiencies and other operational improvements—maybe even some that are necessary for corporate survival—but it will boost long-term financial performance only if it provides strategic differentiation from competitors.

For example, some companies implement environmental-, water-, or waste-management systems in order to operate more efficiently. Although such systems would be included in ESG ratings, few if any companies would expect to establish a competitive advantage simply by adopting them. Typically, competitors can quickly follow suit and acquire similar systems. My research with Ioannis Ioannou of London Business School suggests that this is indeed what has happened. Analyzing data from close to 4,000 companies globally, we found that within most industries, ESG practices converged over the eight years from 2012 through 2019. In other words, firms are increasingly engaging in the same sorts of sustainability and governance activities—and thus failing to differentiate themselves strategically.

To outperform their competitors, companies need to find approaches that are more difficult to imitate. In our study we identified the ESG activities in each industry that have become widespread, which we termed *common* practices, and those that have not, which we termed *strategic*. As an example of the latter, think of Airbnb's creation of a peer-to-peer network and a "circular economy" business model (one involving the reuse of existing assets), or Google's unconventional approach to employee recruitment, engagement, and retention. Those distinctive practices have helped Airbnb and Google occupy competitive positions that cannot be easily replicated—and the companies have been rewarded by capital markets as a result. Indeed, our research confirms that the adoption of strategic ESG practices is significantly and positively associated with both return on capital and market valuation multiples, even after accounting for a firm's past financial performance.

So how can companies identify strategic ESG initiatives? As with any strategy, the way to start is by determining where to play and how to win. The

ABOUT THE ART

Marlies Plank is fascinated by the surreal effect of large soap bubbles floating through landscapes. She has photographed around the world, in locations such as Austria, Morocco, Spain, Italy, and Slovenia.

former is particularly vital because not all ESG issues are created equal—some matter more, depending on the industry. In the energy and transportation sectors, for instance, investing to make the transition to a low-carbon economy is becoming increasingly important, affecting companies' costs and margins. In the technology sector, however, carbon-footprint reduction is not as relevant as building a diverse organization, which can bolster a brand's reputation and lead to increased revenue.

My research with Aaron Yoon of Northwestern University and Mozaffar Khan, a former colleague at HBS, has shown that targeting the right issues brings financial benefits: In analyzing the performance of more than 2,000 U.S. companies over 21 years, we found that those firms that improved on *material* ESG issues significantly outperformed their competitors. (Materiality was identified by the Sustainability Accounting Standards Board, or SASB, which offers a list of salient issues for 77 industries. I served as an unpaid member of SASB's Standards Council from 2012 to 2014.) Interestingly, companies that outperformed on *immaterial* ESG issues slightly underperformed their competitors. This suggests that investors are becoming sophisticated enough to tell the difference between greenwashing and value creation.

Of course, materiality is not a static concept. The strategic challenge for corporate leaders is to be foresighted about the ESG themes that are emerging as important industry drivers—to identify them before their competitors do (and in some cases ahead of SASB too). This requires leaders to conceptualize the various actors in the system, their incentives, and the interventions that could drive change. Although that may sound straightforward, it is not. But my research with Jean Rogers, the founder and former CEO of SASB, revealed that an ESG issue is likely to become financially material under certain conditions:

- when it becomes easier for management and external stakeholders to gain insight into a company's environmental or social impact (consider how technological advances now make it possible to trace the raw materials in electronic products and discern those that have been unsustainably mined)
- when the media and NGOs have more power and politicians are more responsive to it (such scenarios have prompted the creation and enforcement of anticorruption laws and other new regulations)
- when companies lack the ability to effectively self-regulate (for instance, this is the case in the palm oil industry, where a misalignment of incentives for farmers leads to deforestation)
- when a company develops a differentiated service or product that replaces a "dirty" or unsustainable way of doing business (think of Tesla, with its potential to disrupt the market for gasoline-powered cars)

IKEA is one company that has mapped out a strategic ESG program, transforming itself in response to accelerating environmental degradation. It has introduced various product, service, and process innovations to move away from its traditional retailing of inexpensive furniture that customers often discard quickly. It recently entered the home solar and energy-storage business, which grew by 29% in 2019. And while most competitors are focusing on using materials more efficiently or trying to find ways to recycle products *after* they have been designed, IKEA has launched an effort to completely rethink product design. The aim is to create products that can be reused, refurbished, remanufactured, or recycled, thereby extending their lifespan. Moreover, IKEA products will be modularized to make them easy to dismantle and reuse as raw materials when they're no longer functional. Although this process will take years, the firm will most likely emerge as a circular-economy leader as more regulatory, consumer, and brand pressures force companies to compete on products with better environmental credentials.

While IKEA's strategy involves moving away from wasteful practices, other firms have found that strategic reviews can identify ways to differentiate by leaning in to positive impact. When senior leaders at Vaseline interviewed medical professionals at the Centers for Disease Control, Doctors Without Borders, and the UN Refugee Agency, they learned that Vaseline jelly was an indispensable part of emergency first-aid kits, particularly in developing countries. They also learned that preventable skin conditions, such as deeply cracked hands and burns from cooking on gas stoves or using kerosene lamps, were keeping people from working, going to school, and engaging in other basic activities—a situation that Vaseline could help alleviate. That insight led to a new social-impact strategy to help heal the skin of 5 million people living in crisis or conflict. The strategy connected business goals with societal needs and

A top-down approach to sustainability and good governance is not effective if it is not supported from the bottom up.

differentiated the brand from competitors while increasing revenue.

Accountability Mechanisms

The implementation of an ESG strategy involves large operational and strategic changes. It must start at the top with the board and be diffused through the entire organization. (See "The Board's Role in Sustainability" in this issue.) Yet my research shows that in most companies the board of directors is far removed from the firm's ESG efforts. This is a mistake. The board should be the entity that ensures that ESG metrics are properly considered in executive compensation and are adequately measured and disclosed as part of the audit committee's work. Indeed, my colleagues and I have found that one of the characteristics of organizations with high ESG performance is a process that deeply embeds ESG issues in the board's work and in executive pay.

Although most large global companies say that their boards oversee sustainability, that generally happens in a piecemeal fashion. There are exceptions. BNP Paribas is a global financial company taking a systematic approach to sustainability governance. The company has directors who are active participants in sustainable-finance forums, including a chair who was formerly the president of the European Bank for Reconstruction and Development. Large polluters, such as BHP, Royal Dutch Shell, and Eskom, have linked executive incentives to their carbon emissions, motivating management to act as it faces increased risk of regulation and competition from new technologies. Microsoft and other technology firms have tied executive compensation to workforce diversity targets, an ESG issue that's critical for an industry in which competitiveness requires innovation, fresh ideas, and creative thinking.

The Power of Purpose

A top-down approach to sustainability and good governance is not effective if it is not supported from the bottom up by a culture that rallies around ESG initiatives. Many strategic efforts fail because people further down in the organizational hierarchy don't believe there is a true commitment to ESG goals or they lack clear direction for achieving them. Skepticism, even cynicism, leads such efforts to be sidelined or inconsistently implemented across functions, divisions, and business lines.

To remedy this problem, organizations must identify a corporate purpose and build a culture around it. When Claudine Gartenberg of the Wharton School, Andrea Prat of Columbia University, and I analyzed data from more than 1,000 U.S. companies and 1.5 million employees, we found that clarity about a sense of purpose declines from senior management to middle management and then to lower-level employees. We also found that firms able to flatten the hierarchy and diffuse a sense of purpose through the ranks outperformed their competitors.

In recent years a lot has been written about purpose, but not much consensus exists about what the term actually means. The most high-profile articulation of the concept came from Larry Fink, the CEO of BlackRock, the largest asset management firm in the world. He wrote that "a company cannot achieve long-term profits without embracing purpose" because "a strong sense of purpose and a commitment to stakeholders helps a company connect more deeply to its customers and adjust to the changing demands of society." In August 2019, CEOs from 181 of the world's largest companies—as part of the lobbying group Business Roundtable (BRT)—modified a position that the group had held since 1977 by declaring that the purpose of a corporation is not just to serve shareholders but to create value for all stakeholders.

Neither Fink's nor BRT's assertion explains exactly what purpose is, of course. But we definitely know what it is not: words you see on a wall when you enter company headquarters, mission statements posted on websites, or grandiose speeches by CEOs in town halls. Research has shown those to be "cheap talk" that is unrelated to real outcomes in the organization.

My colleagues and I have defined purpose as how employees—the people who know the organization best—perceive the meaning and impact of their work. To measure employees' sense of purpose in three of our recent studies, we used questions from surveys by the Great Place to Work Institute, asking participants to rate their level of agreement with statements such as "My work has special meaning; it's not just a job," "I feel proud of the ways that we contribute to the community," and "Management has a clear view of where the organization is going and how to get there."

Investors seem to be paying increasing attention to companies that are effective at linking strategy to purpose. The Strategic Investor Initiative, an outgrowth of the Chief Executives for Corporate Purpose coalition, recently collaborated with KKS Advisors (which I cofounded) to analyze 20 CEO presentations on long-term strategic plans. We found that when CEOs did well at communicating corporate purpose, stock prices and trade volume rose in the following days. The implication is that investors find value in information about purpose. In one of the presentations we studied, Kenneth Frazier, the CEO of Merck, told shareholders: "Our purpose is very clear to us and all of our people, and that is to discover and develop lifesaving medicines for society." He added, "That's what makes our people come to work every day. It's what makes them make the tremendous commitment that gives them the willingness to make the discretionary effort."

For some companies, defining their purpose means leaving money on the table, at least in the short term. This is the case with automakers that are transitioning away from carbon-emitting gas-powered cars and moving toward electric vehicles, which are more eco-friendly but less profitable. The good news, though, is that we're seeing more examples proving that a long-term trade-off between profits and sustainability is not necessary, given that companies can redesign how they generate revenue. Consider Philips Lighting, which has shifted from selling light bulb products with limited lifespans to selling lighting as a sustainable service. Customers pay for the light they use rather than investing in the physical assets, while Philips retains ownership of all lighting equipment and takes it back when it's suitable for recycling or upgrading.

Commitment to a purpose will also push companies to sometimes undertake initiatives that might not pencil out in P&L terms. Frazier described such an initiative when he spoke about Merck's effort to develop an Ebola vaccine: "It would have been impossible to say…'We won't go there, because we don't see a robust commercial market.' And I think that's part of what [we are] talking about in terms of having a purpose-driven organization."

As more companies work to articulate their purpose and build a culture that fully embraces it, we will learn more about what ensures success. However, my research with Gartenberg already points to three key conditions: an intentional strategy to grow leaders within the organization, resulting in the promotion of internal candidates to the CEO role; fair compensation structures (in which the ratio of CEO pay to median worker pay is not extreme for the industry); and careful execution of mergers and acquisitions to avoid culture clashes. Though the reasons aren't fully understood, the research suggests that externally hired CEOs and companies with more acquisitions need to work harder to create a sense of purpose.

Operational Changes

In studying firms that have successfully implemented an ESG strategy, I've noticed that they tend to pass through three phases: efforts to reduce risk and ensure compliance with environmental regulations and other laws; efforts to improve operating efficiency; and efforts to innovate and grow. To achieve this evolution, exemplary firms usually start by centralizing ESG activities, which is helpful for moving from a focus on risk and compliance to a focus on operating efficiency. But to reach the innovation and growth stage, companies need to decentralize ESG activities and empower corporate functions to take responsibility for them. This is true in terms of distributing power from the C-suite to middle management, but it's also true at the board level. Initially a board needs to set up a separate sustainability committee. But at the third stage it will typically reallocate responsibilities to preexisting board committees (audit, nomination, and so forth).

Of course, decentralization requires appropriate support mechanisms. For example, the chemicals company Solvay developed a tool to assess the environmental impact of each of its product applications. This has enabled decision-makers in separate functions to take environmental considerations into account when discharging their respective responsibilities—for apportioning the R&D budget, underwriting risks during the due diligence phase of acquisitions, or optimizing plant manufacturing operations as regulations change. From 2016 to 2018 Solvay saw 4% annual growth in sales of products that have low environmental impact, while sales of more-damaging products declined by 5%.

As the ESG field continues to mature, investors will be looking at how organizations are structured to deliver on their stated purpose. To increase the odds of success, winning companies will make sure that the people who manage the

Companies need to see ESG disclosure as an opportunity for continual reputation and relationship building.

most important determinants of ESG performance have the capabilities and resources needed to get the job done.

A first step is to ensure that the chief sustainability officer, or the senior executive charged with ESG responsibilities, is the person closest to the company's most material ESG issues. If brands are critical assets (as they are for consumer goods companies), this individual might be the chief marketing or chief brand officer. If risk management is a central concern for the enterprise (as is the case for financial institutions), this person could be the chief risk or chief investment officer. If human capital issues matter most, the responsibility for ESG activities might fall to the head of human resources. At Tyson Foods, the former chief sustainability officer also served as the executive vice president of corporate strategy and led continuous-improvement efforts. Additionally, he managed Tyson's venture fund, which is investing in plant-based protein and cultured meat as more-sustainable alternatives to traditional meat products.

Goal setting can be useful in helping companies progress from centralization to decentralization of ESG activities. Although top leaders should set ESG targets, unit heads and middle management should be empowered to figure out how to hit them. Paradoxically, audacious targets are more likely to be met than modest ones are. That was the finding that emerged when Ioannou and I, along with Shelley Xin Li of the University of Southern California, analyzed more than 800 corporate targets related to climate change. And a separate study—one I did with Grewal and my Harvard Business School colleague David Freiberg—confirmed the benefits of aiming high: We looked at more than 1,000 firms and discovered that those with relatively ambitious targets relating to climate change invested more than their peers, made significant operating changes, and, in the process, drove innovation.

Communicate with the (Right) Investors

Companies must avoid slavishly focusing on improving their ESG ratings, but communication with the investor community is nevertheless important. Often, however, decisions about what to measure and how to keep investors informed are clouded by misconceptions.

The first is the belief among many corporate leaders that a firm's investor base is not subject to influence or control by management. In reality, a company *can* influence who buys its stock and, if necessary, change the base of shareholders. It's not as easy as shaping one's customer or employee base, but it's possible. For example, before Shire was acquired by Takeda Pharmaceuticals, it significantly altered its investor base from 2006 to 2012 by committing to integrating financially material ESG issues into its strategy and reporting on them to its shareholders. Dedicated long-term investors (including Aviva Investors, Scottish Widows, and the Norwegian sovereign wealth fund) initially owned a small fraction of Shire's stock, but their holdings increased steadily and eventually became greater than those of transient investors—a highly uncommon phenomenon for a publicly listed company.

The second misconception is that the demands of sell-side analysts employed by big brokerage houses should determine what must be communicated. Most companies still emphasize mostly short-term information in their investor communications. That's because they view the sell side as the traditional "customer" of investor relations. That needs to change; the focus should be on communicating directly with the buy side—the large institutional asset managers that hold the company's stock.

The third misconception is that ESG metrics are sufficient for investors to integrate ESG considerations into their business analysis, valuation, and modeling. In fact, investors struggle to embed those metrics in financial models because it's not clear what they mean or how they can affect the financials. One solution might be the creation of a system of impact-weighted accounting that could measure a firm's environmental and social impacts (both positive and negative), convert them to monetary terms, and then reflect them in financial statements. Though the science to do this has yet to be perfected, such a system holds great promise for three reasons: It would translate impacts into units of measurement that business managers and investors understand; it would allow for the use of financial and business analysis tools to consider those impacts; and it would enable an aggregation and comparison of analyses across types of impact that would not be possible without standardized units of measurement.

At the Impact-Weighted Accounts Initiative (a Harvard Business School project that I lead), we are collaborating with

the Global Steering Group for Impact Investing and the Impact Management Project on a simple approach: adjusting traditional accounting measures to consider the various types of impact that ESG actions might have. These include *product* impact, which affects revenue numbers; *employment* impact, which affects employee expenditures on the income statement; and *environmental* impact, which affects the cost of goods sold. For example, positive product impact could mean more revenue for a company and potentially higher growth. Positive employment impact (measured by, say, resources spent on employee training) would send investors a strong signal that management views employee expenditures as investments that lead to future profitability and not merely as expenses. Negative environmental impact might raise the cost of goods sold, by triggering new and restrictive regulations.

Valuing a company's effects on people and the planet—and integrating that into traditional financial analysis—will offer a more comprehensive picture of actual corporate performance. Some companies, such as the science-oriented DSM and the pharmaceutical giant Novartis, are already experimenting with impact-weighted accounting. Novartis estimated its employment impact for 2017—including benefits derived from employee development, occupational safety efforts, and payment of a living wage—at $7 billion. Its environmental impact, as measured by carbon emissions and water and waste impacts, was calculated at $4.7 billion. Positive product impact, something that has been largely missing from most ESG investment frameworks, was estimated at $72 billion.

A final, fundamental misconception about investor relations is the idea that ESG disclosure is transaction-based and can happen intermittently. Companies need to instead see it as an opportunity for continual reputation and relationship building. It used to be that most communication with investors (the buy side) was happening through Wall Street analysts (the sell side). Increasingly, investors want a direct line of communication, and they appreciate proactive information sharing, which has the added benefit of extending investor patience. Performance declines may occur. But if CEOs come to investors with an excuse after the fact, without having built trust, they are unlikely to be given the leeway or the time they need to reverse the decline.

The Path Forward

Many companies have failed to recognize that the functional role of ESG data has changed over time. Initially such data was used to judge a company's willingness to avoid harm and do good. As a result, it was primarily an input to help form policies that signaled a firm's commitment to achieving positive outcomes for the environment and society.

However, investors are increasingly asking a different question: not whether a company has good intentions but whether it has the strategic vision and capabilities to achieve and maintain strong ESG performance. That means companies need to start measuring and reporting the results of their initiatives. Instead of communicating their *policies* for improving data privacy, water management, climate change mitigation, diversity, and other issues, they must communicate *outcome metrics* such as the number of customer accounts hacked, liters of water consumed per unit of product produced, carbon emissions saved, and percentage of women and people of color promoted internally to management positions.

Moving from intention to results is the next evolution that investors are looking for. The only way to outperform in this new era will be for companies to make material ESG issues central to their strategy and operations, to go above and beyond their competitors, and then to measure and communicate their superior performance. Global society faces enormous challenges. But if companies are bold and strategic with their ESG activities, they will be rewarded.

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THE BOARD'S ROLE IN SUSTAINABILITY

A new framework for getting directors behind ESG efforts

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SUSTAINABILITY HAS GONE mainstream in the corporate world. Investors increasingly understand that a corporation's performance on pertinent environmental, social, and governance (ESG) factors directly affects long-term profitability—a recognition that is transforming "sustainable investing" into, more simply, "investing." Most CEOs also now recognize that ESG issues should inform their corporate strategy. But one important constituency remains a stubborn holdout in the sustainability revolution: corporate boards. It is an unfortunate truth that directors tasked with securing their company's future are often holding the enterprise back with an outdated emphasis on short-term value maximization.

A 2019 PwC survey of more than 700 public-company directors found that 56% thought boards were spending *too much* time on sustainability. Some of the myopia can be traced to a lack of diversity on boards. Most directors are male, white, and from a similar background, and many are retired executives who came of age professionally at a time when the link between ESG factors and corporate performance was not clearly understood. But a large part of the problem is that until recently, boards didn't have a mandate to grapple with sustainability; instead, their time was consumed by compliance tasks driven by the corporate secretary and by inside and outside counsel.

The concept of "corporate purpose" provides the impetus that boards need to increase their focus on ESG concerns and manage their firms for long-term success. A clear and compelling mission should be at the heart of every company's efforts to enhance its positive impacts on the environment and society. Without such a purpose, a company cannot have a sustainable corporate strategy, and investors cannot earn sustainable returns. And the ultimate responsibility for defining that purpose must rest with the board, because it has a duty to take an intergenerational perspective that extends beyond the tenure of any management team.

Our research on injecting purpose into corporate governance draws on extensive conversations with board chairs, executives, and owners of more than 100 corporations operating across a wide range of industries in more than 20 countries. We've undertaken that research as part of the Enacting Purpose Initiative, a multigroup project led by the University of Oxford in conjunction with the University of California, Berkeley; the investment management firm Federated Hermes; the corporate law firm Wachtell, Lipton, Rosen & Katz; and the British Academy. The initiative brings together leaders from academia and practice in the United States and Europe to provide research and guidance on linking corporate purpose to strategy and performance.

A major output of this effort is a framework to help boards deliver on purpose. Called SCORE, it was initially devised by Rupert Younger, the director of the Oxford University Centre for Corporate Reputation and the chair of the Enacting Purpose Initiative. SCORE outlines five actions—simplify, connect, own, reward, and exemplify—that can help boards articulate and foster a firm's durable value proposition and its drivers.

Simplify

Enacting purpose begins with knowing what it is. For that reason, purpose needs to be simple and clear—straightforward enough to be understood by the entire corporate workforce, the wider supply chain, and other stakeholders.

How should purpose be communicated? A good place for boards to start is with a statement of purpose signed and issued by all the directors. The board chair and the governance committee should take the lead in drafting it. The statement should define how the company aims to create value by fulfilling unmet needs in society. It should acknowledge the negative impacts the company must mitigate if it is to retain public support and its license to operate. And it should present a distinctive message—not something so generic that the name of any major competitor could be substituted. If those criteria are met, the statement can be a powerful tool for sharing a company's vision for long-term value creation, even in industries with negative externalities.

EQT, a global private-equity firm, describes its purpose this way: "to future-proof companies and make a positive impact." EQT defines *future-proofing* as anticipating what companies need to do to stay relevant amid increasing social and environmental pressures. Its one-page purpose statement, which was first published in its 2019 annual report, explains the firm's commitment to "being more than capital." EQT requires that any investment meet clear financial objectives but also contribute to the United Nations Sustainable Development Goals. The company's founder, Conni Jonsson, told us that writing the statement was fairly easy and that publishing it unites executives, directors, and investors on the company's priorities. "For us," he said, "aligning on the statement of purpose was merely manifesting what has been our mindset since inception."

Connect

Once corporate purpose has been articulated, it must be connected to strategy and capital allocation decisions. Strategy is about making certain choices and consciously rejecting others after serious deliberation. Capital allocation decisions naturally follow. Sometimes the process might lead a firm to sacrifice short-term profits by abandoning a lucrative but socially harmful product, such as when Dick's Sporting Goods decided to stop selling assault weapons. Other times a company might undertake a project that will certainly *lose* money, such as when Medtronic publicly shared the design specifications for its ventilators early in the Covid-19 pandemic to speed up manufacturing of the lifesaving devices.

Connecting purpose to strategy gives a CEO the necessary foundation to prioritize long-term goals and resist pressure from activist investors and others who care only about short-term returns. "We have made some specific investments that we might not have made without our purpose being so clearly articulated," Mark Preston, the executive trustee and group CEO of the property behemoth Grosvenor Estate, told us. "More importantly, there are probably some investments that we have *not* made, as a result of our purpose."

Own

Ownership of purpose starts with the board, which must put in place appropriate structures, control systems, and processes for enacting purpose. This goes beyond delegation to the risk, compliance, and ethics committees. Senior management should take responsibility for ensuring that the company's mission is embraced by everyone in the organization, right down to workers on the shop floor. It does this through its own actions, particularly when making tough trade-off decisions. Effective ownership requires that employees be fully consulted and engaged in delivering on the company's stated purpose. Although management is responsible for direct communications with staffers, the board can create and oversee internal communication strategies to ensure that the company's purpose is being effectively diffused throughout the organization.

At firms where a controlling family owns large blocks of shares or votes—as is the case in many of the largest companies around the world—the family's representatives on the board can be especially forceful in helping the company find and execute its purpose. That has certainly been true at Ford Motor Company. "Our drive for environmental sustainability has come from our executive chairman, Bill Ford," says Henry Ford III, a corporate strategist and the great-great-grandson of the company's founder. "He was the one who really pushed us to do annual sustainability reports where we are transparent about the progress we are making in terms of reaching our environmental goals."

Reward

Primarily through its compensation committee, the board is responsible for establishing the metrics that will be used to determine promotion and remuneration throughout the organization. Purpose, not simply profits, needs to be rewarded. Today compensation is largely based on short-term financial metrics. That has to change: A broader set of financial and nonfinancial metrics should be used to evaluate performance over longer time frames. And the place to start is with the board's structuring of compensation for senior executives. For example, after British taxpayers bailed out Royal Bank of Scotland during the financial crisis of 2008, the bank's board of directors linked 25% of executives' variable pay to key performance indicators in the areas of "customer and stakeholder" and "people and culture."

When choosing the right metrics to tie to rewards, performance should be evaluated in terms of both the company's ESG activities and the external impact of its products and services. Materiality needs to be a cornerstone—the board and management must be aligned on which ESG issues are relevant to the company's financial performance and should therefore be baked into executive compensation. For example, carbon emissions are not material for an insurance company, but for a coal-fired utility company they certainly are.

Ideally, the measures used to assess performance and drive rewards will eventually be based on a set of independent, rigorous global standards for evaluating ESG impacts, similar to the standards that have long been used to gauge financial performance. The foundation for this has already been laid by the work of the Global Reporting Initiative, the Impact Management Project (IMP), and the Sustainability Accounting Standards

Board (SASB). (Disclosure: One of us, Eccles, was the founding chairman of SASB and is an unpaid adviser to the IMP.) When this work is complete, standardized ESG reporting will enable peer comparisons of how each company is positioned to handle the risks and opportunities presented by nonfinancial issues. Boards can then more easily link a company's performance on these metrics to executive compensation.

Exemplify

Purpose and how it is being achieved must be exemplified in both quantitative and qualitative terms. Quantitatively, a company should integrate its reporting on financial performance with its reporting on sustainability performance, showing how results in the two areas are related. Qualitatively, it is important to have a consistent narrative that includes stories about what the company and its people are doing to fulfill its purpose.

Patagonia, the outdoor-clothing retailer, gets this better than most. Its stated purpose—"We're in business to save our home planet"—drives all its activities. The company not only makes eco-friendly apparel but also engages aggressively in environmental advocacy and promotes an appreciation of sustainable practices and the natural world with beautifully crafted, visually appealing stories on its website and social media.

At the U.S. food manufacturer J.M. Smucker, purpose involves "feeding connections that help us thrive." The firm aims to create "meaningful connections...for those we love and the communities in which we live," and that's exemplified in the way it treats its employees. As the executive chairman, Richard Smucker, told us, "You demonstrate your purpose when you take action. Sometimes you're put in tough ethical situations and it's about how you respond. For example, when closing plants, we have always given plenty of notice to make time for transition. You get respect because you've given respect." He added, "To communicate our commitment, every year we print a small handbook for all employees with our purpose, our commitment to each other, and our strategy. You can carry in your pocket why we do things, how we do them, and what we do."

A New Duty

When we promote the SCORE framework to directors, they often respond with a common fallacy: They cannot elevate corporate purpose because they have a fiduciary duty to put shareholders' interests above all others. Setting aside the growing evidence that superior performance on material ESG issues leads to superior financial performance, it is simply not true that shareholders must come first. Shareholders are obviously important, but other stakeholders—such as employees, customers, and suppliers—are also crucial to a company's long-term prospects.

To dispel directors' misconceptions, we recently gathered legal memos on fiduciary duty from all G20 countries and 14 others. None offered an endorsement of shareholder primacy. This was true even in the United States. For example, a memo issued by Wachtell, Lipton, Rosen & Katz stated: "A corporation ignores environmental and social challenges at its own peril. Corporate boards are obligated to identify and address these risks as part of their essential fiduciary duty to protect the long-term value of the corporation itself."

The key to putting the SCORE framework into practice is finding people and organizations willing to be among the first to act. A natural place to look for them is among the members of Business Roundtable (BRT), the lobbying group that declared in 2019 that the purpose of a corporation is to create value for all stakeholders. Nearly 200 CEOs, including the heads of some of the world's largest companies, endorsed that idea. Each of those leaders' boards should now walk the talk by publishing a firm-specific statement of purpose and implementing the SCORE framework. If the directors at the BRT companies fail to act, their behavior will not only breed cynicism but leave them vulnerable to ongoing attack by investors demanding more-concrete action on ESG issues.

If investors are to better identify a corporation's role in society and its prospects for long-term financial returns, board members need to articulate and disclose their company's durable value proposition and its drivers. The SCORE framework provides a tool to do that. We hope more boards will use it to promote long-term value creation and a more just and sustainable economy.

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THE CHALLENGE OF RATING ESG PERFORMANCE

WHEN I BEGAN working at Sustainalytics in 2008, after completing an MBA in finance and sustainability, the business of rating companies on their environmental, social, and governance (ESG) performance was very much a niche field. Our company had only 20 people in a single office in Toronto, where we produced reports on 300 companies, most of them Canadian firms traded on the Toronto Stock Exchange. Today we have 650 people based in North America, Europe, Asia, and Australia providing ESG research, ratings, and data on tens of thousands of companies. And we're not alone: A handful of other big rating firms, along with dozens more smaller organizations, distribute some sustainability data.

What has changed even more than the size of our team and the volume of research we produce is the way ratings like ours are used. We've seen a dramatic increase in the use of ESG information in the investment process. A decade ago this information was of interest to a relatively small segment of the investment community. Today nearly all large institutional investors utilize ESG research to some degree. That's because recognition is growing that this data has real value and can drive better investment outcomes—not in every case, but in enough cases to make a material difference to investors. Furthermore, while ESG factors can affect a company's bottom line directly, they also affect a company's reputation, and business leaders and investors are recognizing the potential costs of *not* managing firms' ESG risks.

Creating the ratings is challenging work. There are no uniform requirements for reporting ESG information, and many environmental and social impacts are hard to measure. So the data inputs that we start with are fundamentally less structured, less complete, and of lower quality than financial data, which companies are required to present in standardized form and have audited by accountants. The lack of rules and robust metrics makes our job more difficult—but also more valuable. Because we're compiling data and generating insights that many investors have not used in the past and don't have easy access to, very often this information is not priced into stocks.

It is important to us that the companies we assess understand how we arrive at our ratings. We consider two elements: what risks the businesses are exposed to and how well they're managing them. We classify each company into one of 138 industries, and we have a list of relevant risks for each. For instance, a mining enterprise will typically face risks related to carbon and noncarbon emissions, environmental management systems, water use, occupational health and safety, and corporate governance, among other matters. To ascertain its risk exposure, we look at the specifics of its business. Suppose the company operates in jurisdictions where complicity in bribery and corruption is common or where managing community and labor relations is especially challenging. It faces more risks than do competitors that avoid such jurisdictions, so we'd adjust its risk exposure upward. A big part of our work is calibrating the degree of ESG risk that firms face.

The next step in rating a company is to assess how well it is managing its risk exposure. This involves looking at the types of programs, policies, and management practices the company uses and its preparedness to avoid or mitigate certain risks. If we don't have evidence that the company is adequately prepared, it gets a lower score. Firms that do have appropriate risk-handling measures

> Today nearly all large institutional investors utilize ESG research to some degree, because this data can drive better outcomes.

in place should disclose what they are doing, to ensure that those measures are taken into account. Levels of disclosure have increased tremendously in recent years, but they're still not as high as we'd like them to be.

The way companies engage with us throughout the rating process varies quite a bit. A decade ago only 10% of firms responded to our requests and talked with us about our analysis. Today more than 60% of large companies share information with us, and that number has been growing each year. In general, businesses that take special pride in their reputation and those that have an ESG-minded investor base are willing to spend more time communicating with us. In other cases, companies that fare poorly in our ratings or are facing criticism of their sustainability or governance practices are encouraged by their investors to interact with us.

Sometimes business leaders complain about "survey fatigue" and say they are hearing from too many ratings firms that request too much information. I empathize with that. Various international organizations are working to standardize ESG reporting, which will make it less onerous for company managers. Regardless, I believe it's worth their time to engage more deeply with the firms that, like ours, have the biggest presence in the market.

Once we have completed our ratings process, we send the profile to the company for feedback. During those conversations, we're looking for any additional information or clarification that can enhance our analysis. New information doesn't always lead to a change in our rating, but we do listen. As ESG rating outcomes become more important, we certainly hear from people inside firms who forcefully argue for their point of view.

Companies often see their ratings move if they begin addressing sustainability issues in new ways or if a significant ESG controversy arises, which can indicate a management gap. However, some of the more dramatic improvements result from changes to risk exposure when companies embark on a strategic shift in their operations or business model. For instance, the Danish power company Ørsted (formerly known as Danske Olie og Naturgas) used to be involved in oil and gas exploration and production. In 2017, however, it sold its oil and gas assets and invested heavily in renewables; it's now one of the world's largest players in the offshore wind sector. The company still has some coal-fired power plants, but it has announced aggressive plans to phase them out. From 2018 to 2019 its risk rating score improved markedly.

Companies' ESG risk exposure can also move in a negative direction. For example, Facebook's ESG ratings have fallen because of increased public alarm about the company's handling of data privacy and security. Similarly, Amazon has seen its ESG scores decline in the wake of growing antitrust scrutiny and concern over workplace conditions for its employees. Peugeot, the French carmaker, has experienced a decline in its ESG ratings since its 2017 acquisition of Opel and Vauxhall, which make less-fuel-efficient vehicles. As a result of the acquisition, Peugeot will most likely miss the European Union's 2021 target for CO_2 emissions, potentially exposing it to fines of several hundred million euros.

For companies that want to put their best foot forward, good disclosure of their most material ESG challenges—and how they're addressing them—goes far. The best way to improve disclosure is to issue a sustainability report that has been prepared in accordance with the Global Reporting Initiative's Sustainability Reporting Standards. When companies invest the time to produce a thorough report, our analysis is easier and the amount of time it takes to talk with us and the other ESG ratings firms goes down quite a bit. But the most important part of the process happens when companies scrutinize their business and their business model to understand which issues are most material in terms of ESG risk. Reducing their risk exposure or finding a better way to manage the risk typically results in the greatest benefits for the company and its investors, as well as for the environment and society.

The amount of analytical rigor that goes into ESG ratings has increased substantially, and that's a good thing. These ratings are more relevant and more high-profile than ever before, and investors are paying closer attention. A poor rating draws more scrutiny to a company, and a strong rating can increase investment flows. That's part of what makes this work so interesting.

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COVID as a Catalyst: The Rise of the Remote Workforce

They said it couldn't be done, and yet it's become a way of life. Here's why it's worked.

Just a few months ago, the interplay between work, workforce, and workplace was well established: Workers generally came together as a workforce in the workplace to get their work done. Then they went home. Most systems—IT, management, HR—were set up to function in that paradigm. Remote work arrangements were often short-term or "exceptions," and often discouraged.

And then the catalyst called COVID hit, and, often within hours, workers were sent home to carve out workspaces in their attics and living rooms, struggling to remain tethered, to form a workforce, to get the work done.

An Excellent Experience

The surprising result, confirmed in a new survey conducted this past spring by Lawless Research on behalf of Cherwell Software, is that remote working has worked—not only to keep workers safe but also as a way to benefit their companies. The vast majority of now-remote workers said their experience has been positive, and nearly half reported an increase in their productivity.

The key to the success? The evidence is in the data. The executives whose companies were further along the road to digital transformation were three times as likely to report "excellent" remote working experiences as those in the early or developing stages. And gains in productivity were more evident the more mature these companies were.

As one respondent put it, "We saw a rise in productivity and an increase in actual hours worked."

These gains represent an enormous change from the results Lawless reported in a similar study it conducted for Cherwell last year in which most workers described systems that weren't integrated and work that wasn't automated, all of which created a drag on productivity.

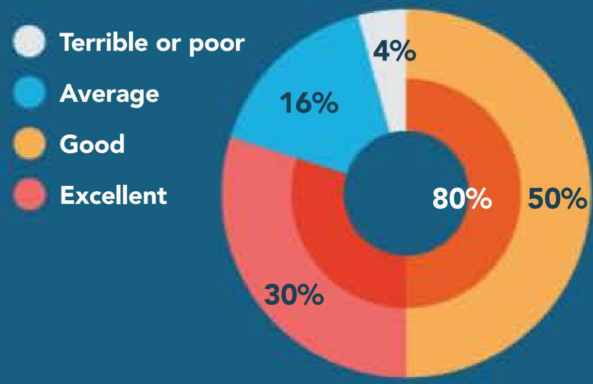
The Human Element

What's made the difference? It's a combination, Cherwell CEO Sam Gilliland says, of technology *and* management. Integrated, automated software, along with the ability to work on a low-code/no-code platform, has made adapting workflows faster and easier. So has "keeping the human element in mind. It's not just how people get their work done. It's how we connect with them."

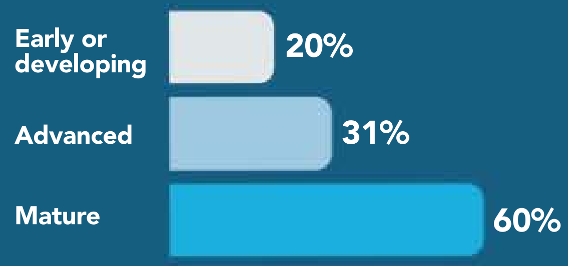
It's no surprise then, adds Kim Osoba, Cherwell's director of talent and organizational effectiveness, that Cherwell has seen a fivefold increase in RFPs for its digital transformation offerings—many of them for HR service management—since the pandemic began. "HRSM has become a lead step," she says, "simply because these tools allow us to engage with a workforce that is now everywhere and needing information."

It's likely, says Gilliland, that the workforce will continue to be everywhere. While respondents guessed that only 43% of their workforces will remain remote post pandemic (compared to 61% these past several months), Gilliland notes that the survey was conducted before it became clear that remote working would be necessary—and feasible—for so long. In industries such as technology, he predicts, the percentage working remotely will be closer to 70%, with companies—and employees—reaping benefits that include not only productivity but also cost savings and increased employee and customer satisfaction.

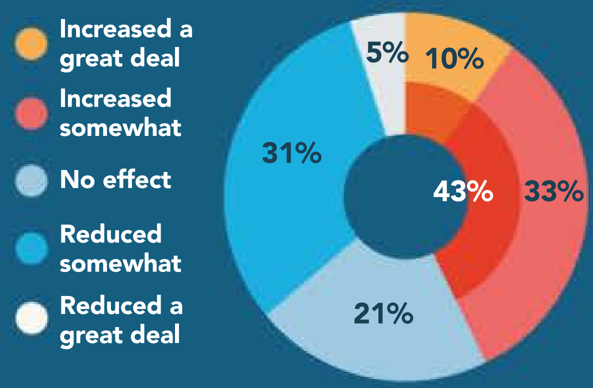
Most respondents were pleased with their remote working experiences, rating them:



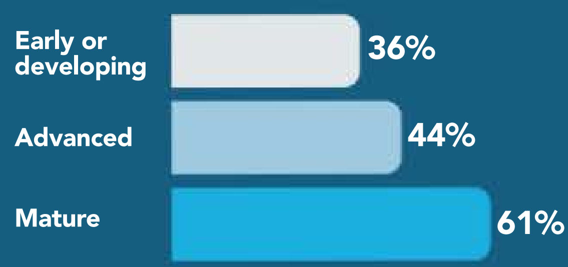
And digitally mature organizations were more likely to have found the experience excellent.



Working remotely has had a generally positive impact on productivity.



Increases in productivity were highest among digitally mature organizations.



SOURCE: LAWLESS RESEARCH, 2020

Cherwell empowers organizations to improve service experiences and automate workflows using data that stretches across contexts and business units. For more information, visit **www.cherwell.com**.

MANAGING PEOPLE

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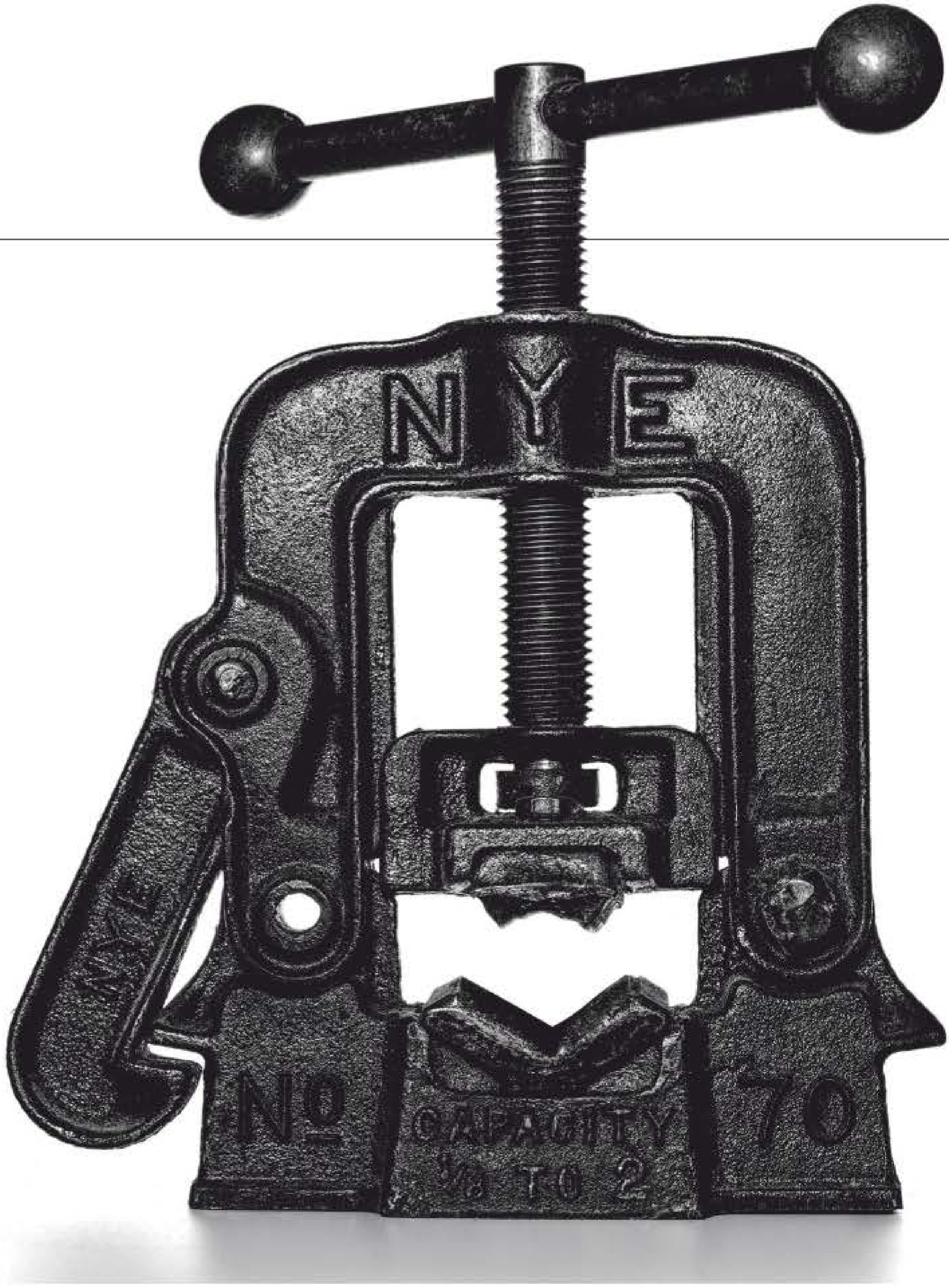
Stop Overengineering People Management

The trend toward optimization is disempowering employees.

PHOTOGRAPHER
BRUCE PETERSON



IDEA IN BRIEF

THE TREND
For four decades the belief in worker empowerment has been ascendant. But in recent years a movement to optimize labor has been gaining strength. It treats labor as a commodity and strives to cut it to a minimum by using automation and software, tightly controlling how people do their jobs, and replacing employees with contract and gig workers.

CAUSES FOR CONCERN
There is no evidence that this new form of "scientific management" is an improvement. By taking responsibility away from workers, companies demotivate them, undermining their productivity and innovative contributions.

THE BETTER ALTERNATIVE
Don't choose optimization over empowerment. Instead, make an effort to find the right mix of the two, as the highly successful "lean production" approach has. The notion that you can treat people like machines is dangerous.

The long march toward enlightened management is typically seen as beginning in the 1930s, when researchers and, more important, **corporate leaders began to abandon the assumption that workers should be treated like machines** and required to perform tasks according to precisely engineered specifications.

> Labor is treated as a commodity, and the goal is to cut it to a minimum by replacing employees with contractors, gig workers, and software.

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They started to embrace the belief that business performance would improve if employees were actually involved in work decisions. For decades the camp that favored empowering employees grew. But now there are strong signs that the pendulum is swinging the other way—that the old engineering model is reasserting itself with gusto. And that's cause for deep concern.

While many organizations—especially ones that are flatter or have adopted agile methods—still claim to believe that engaged employees matter, a significant and rising number seem to be following an optimization approach, wherein decision-making and control are pushed back to experts and algorithms. Labor is treated as a commodity, and the goal is to cut it to a minimum by replacing employees with contract and gig workers and by using automation and software to reduce the need for human judgment. Ideal behaviors are dictated to the remaining employees, who are closely monitored for compliance. So far, this change has not been backed up by evidence that it's an improvement.

Optimization appeals to most executives because they've been taught how to do it and understand it. History suggests, though, that knock-on problems caused by seeing worker productivity solely as an engineering challenge have been enormous and persistent. So we should know better this time around. Generations of evidence about the benefits of employee empowerment and the costs of taking it away are being ignored. It is possible to strike a balance between the two models and get benefits from both, but that requires backing away from the idea that worker performance is fundamentally an engineering issue.

The popularity of the engineering approach has increased during economic downturns—when workers don't quit even though they hate being treated like machines—and has fallen in upturns, when workers do jump ship or protest. The coronavirus recession will most likely further entrench it. Without resistance from the labor market and any careful internal measurement of the effects, optimization will easily carry the day. That would be a terrible mistake.

The Rise of Opposing Approaches

"Scientific management" and its goal of operating organizations efficiently began with Frederick Taylor in the early 1900s. His view was that there was one best way to perform work tasks. Engineers could figure it out, and the role of workers was only to execute it. These arguments soon extended from production work into white-collar jobs, shaping everything from pay systems to the design of offices and buildings.

In the 1930s, Western Electric and other employers saw problems with this approach—in particular, evidence that employees were holding back effort—and began experimenting with programs in which workers were given more say. Piece rates (paying individual workers for the amount they produced) and performance targets were relaxed. The changes led to sizable improvements. Elton Mayo and his colleagues at Harvard Business School documented these results and put together lessons about how to get them, launching the human relations movement. It centered on paying attention to the psychological and social needs of employees: They wanted to have relationships with other employees, to feel as though their work mattered, and to be involved in decisions. When those conditions were met, workers' performance skyrocketed; when they weren't, it plummeted.

In 1957 the renowned management scholar Douglas McGregor observed in *Harvard Business Review* that management views on how to get the most out of workers were deeply divided: One camp subscribed to the view that workers had to be tightly controlled and directed; the other believed that workers contributed much more when they had the freedom to express their ideas and take initiative. In his seminal 1960 book *The Human Side of Enterprise,* McGregor labeled the first approach Theory X and the second Theory Y.

In the past four decades the Theory Y model has been on the rise. Joint employer-employee health and safety committees, quality circles, and empowered factory teams have proliferated. The big push toward Theory Y began in the late 1970s, when there was overwhelming evidence of the poor quality of work being done in U.S. manufacturing and the rest of the world to which Taylor's ideas had spread. At least part of the problem was that automation had made jobs so boring that workers were disengaged from their tasks. When management responded to their lack of effort by monitoring them more closely and punishing them more severely, performance and quality declined further. The antidote was arrangements whereby employees doing the work, not quality inspectors at the end of the production line, found problems and took

Bruce Peterson/Gallery Stock

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charge of fixing them. Japanese companies were early adherents. Toyota's lean production method, for example, had several components, but its core idea was granting frontline employees the authority to improve quality and productivity—to the point of giving them the power to stop production lines. The clear superiority of cars and other products made at such factories soon caught managers' attention.

By the 2000s lean production (also known as the Toyota Production System) had spread from automobiles to health care to government and every industry in between. Quality and productivity and worker outcomes, such as reduced turnover, were better. But it was often a struggle to introduce lean production, most famously in unionized U.S. auto factories, where work rules were extensive, distrust between managers and workers ran deep, and a "not-invented-here" attitude prevailed. In recent years, however, the trend toward agile project management helped spread Theory Y ideas further.

The Pushback

One could argue that the popularity of the behavioral model started to wane with the Great Recession, whose effects lingered so long that many younger managers came of age knowing nothing else. But other factors were at work as well.

The liquid workforce. One big concern of companies was always that while market demand fluctuated a lot, their workforces were pretty fixed. They were hard to cut when business was down and hard to bring back quickly if things suddenly picked up. The gig economy suggested a different approach.

Runaway-growth stories like Uber, whose drivers were paid only when there was something to do right at that moment, made a big impression on other employers, which opted to cut full-time staff and add contractors who didn't get benefits or need to be paid when business fell. Shifting to a workforce that was like a faucet—turn it on when you need it, turn it off as soon as you don't—and squeezing fixed costs in the process became an explicit goal. Staffing firms and recruitment process outsourcing (RPO) companies stepped in to enable the transition. They introduced terms like "liquid workforce" and "talent on demand" to describe systems in which contractors were paid by the task and vendors provided just-in-time staffing. Now RPO firms offer "full cycle" engagement, managing the balance of hiring, layoffs, and contracting for employers to secure the minimum level of staffing required to get the work done each day.

The talent-on-demand model is now widespread. Studies show that about a third of the individuals working in U.S. corporations are not employees of those companies. Google has more contractors and temp workers than full-time employees (130,000-plus versus 123,000, according to a 2020 story by Daisuke Wakabayashi in the *New York Times*), a phenomenon not uncommon among tech firms. Contract work is at the core of virtually all the car service companies and of delivery businesses such as Amazon Flex and Deliveroo. They push the legal boundary between employees and contractors by effectively supervising much of what contractors do: monitoring exactly where drivers are and plotting out turn-by-turn routes for them. According to a *New York Times* story by Patricia Callahan, Amazon Flex even requires an eye-popping 999/1,000 standard for on-time delivery. (Amazon didn't respond to a request for a comment about its practices.)

And there's no proof that shrinking the workforce actually improves business results. On average, cutting employees early and hard in recessions is not associated with better financial performance, and according to studies, including one by Wayne Cascio, Arjun Chatrath, and Rohan Christie-David, companies that hold off on layoffs do better. Moreover, every contract requires someone to manage it, and that counts against any cost savings—something that Lauren Weber of the *Wall Street Journal* found in the computer games industry.

In addition, my research and that of others has shown that using agency workers alongside employees has negative effects on the permanent staff, weakening loyalty and relationships with peers, and lowers operational performance. We don't know much yet about how the productivity of individual contractors compares with that of employees, but we do know that, unlike employees, they have no legal or psychological obligation to look after the company's interests. So while there are certainly plenty of engaged contractors, companies shouldn't expect discretionary efforts from them—it might actually violate their contracts to jump in and do something companies didn't ask for. Nor should they be expected to go out of their way to pass along good ideas to companies (as employees often do) when they can sell them to those clients or their competitors.

A final reason that the assumptions behind the liquid workforce don't hold is that contractors do not actually seem to go away when business heads south. (The pandemic-related shutdowns that caused Great Depression–level unemployment for both regular employees and contractors is an obvious exception.) Research shows that contractors often stay with clients just as long as regular employees do because they start to take on more-vital roles. If they leave, When we take away all decisions from employees, they no longer feel accountable. With AI-based algorithms calling all the shots, it isn't clear how they could help.

their knowledge and information go with them. Consulting engineer Tim Near, for example, finds that he is pretty valuable as the only person who knows the original specifications and design for an aircraft component, now back in demand, that he began work on as a contractor 15 years ago.

Negotiating pay. A simple but important practice from optimization theory—price differentiation—is now being applied to starting salaries. It's easy to forget that employers used to have fixed starting salaries, especially for entry-level jobs; now negotiating them is in vogue. Fifty-two percent of employers responding to a 2017 survey conducted by CareerBuilder reported that they offered prospective hires salaries lower than what they were willing to pay, undoubtedly hoping that some people wouldn't try or be able to bargain them up. They were right. Most employees didn't.

Workplace experts know that in the long run few issues cause more difficulties, including legal problems, than paying people with similar skills different amounts for doing the same job. But the up-front savings generated by minimizing starting pay—which we can easily measure—seem to have enticed companies to take that chance.

AI and optimization. The most powerful force pushing companies toward Theory X is artificial intelligence. At present, AI tools are virtually all algorithms derived from machine-learning programs: sets of equations that optimize staffing requirements, the fit of job candidates, marketing moves, and so on. Algorithms take decision-making away from employees and move it to experts—the data scientists who build them. This is exactly the shift that Taylor advocated: finding the one best way using engineering principles.

Consider a job that used to be a bastion of individualism and autonomy: long-haul trucking. Once upon a time, truckers could drive how and when they wanted as long as they got to the destination on time. Now algorithms dictate routes and schedules, driving practices, and everything else. Truck cabs are outfitted with equipment that monitors drivers and collects information, both to enforce the requirements and to improve the algorithms. Cameras record whether drivers take their hands off the wheel, allowing companies to dock their pay if they do; speed and driving time are watched minute by minute; and drivers are given turn-by-turn instructions for getting to each destination (which, say, reduce left-hand turns because they account for more accidents and take more time).

A good example of where this can lead comes from Amazon and its more than 125,000 warehouse employees, who are given targets, created by algorithms, for how long they should take to pick each item in an order. Failure to meet a target leads to a warning, also issued by the algorithm, and three warnings are grounds for dismissal, according to a 2019 *New York Times* article by Scott Shane. The supervisor still has the final call on firing the employee, but how long that will last isn't clear.

When we take away all decisions from employees, they no longer feel accountable, and their interest in contributing extra falls. With AI-based algorithms calling all the shots, it isn't even clear how they could help. Suppose a truck driver discovers a better way to get in and out of loading docks: Whom does the driver tell? Yes, the algorithms save gas and money, on average, but worker-generated innovations won't happen if we pull away from empowerment and institute the planning and controls associated with optimization.

Transferring decisions from line managers and workers to experts and software has significant costs that are harder to track. One is that it undermines supervisors and line managers whose responsibility for hiring, scheduling, assessing performance, and the like was the source of their authority. What does a supervisor say to an unhappy employee who has been slotted to work three Saturdays in a row by scheduling software? How can that supervisor later ask the employee for extra help when the supervisor can't do anything for her? The exchange of favors that builds relationships and gives employees the sense that the organization supports them disappears in this environment.

Then we come to monitoring white-collar work, something that used to be extremely difficult to do, keeping optimization in that realm at bay. No longer. New performance-management software that counts keystrokes and captures and analyzes screenshots to track goof-offs is just the tip of the data collection iceberg. Vendors such as Teramind and InterGuard sell off-the-shelf systems that provide all these functions and more. Popular software such as Microsoft Outlook Calendar and Slack already identifies whom we meet with and how much time we spend with them; that information then goes into models of how long it should take to get given projects done.

Just by measuring how long motion-detector lights stay on, software can already tell us how much time people are spending in their offices. The time clock is back in the form of badges that swipe us in and out of buildings, tracking when we arrive and leave as well as which areas we enter to see other people. Indoor-mapping software goes much further, identifying where individual employees are in facilities in real time. Vendors now offer software that purportedly identifies employees by how they walk when their faces can't be observed. Sensors measure who is meeting with whom, how long we sit at our desks, and so forth. As Sarah Krause of the *Wall Street Journal* found, employers are listening in on conference rooms and analyzing the conversations to better organize and manage teams. The fitness company Life Time, for instance, analyzes conversations from team meetings as a development exercise for new managers.

A revealing moment came with the Covid-19 shutdowns, when vast numbers of organizations sent people home to work. Would companies trust employees to be productive—or try to monitor them? The answer appears to be the latter: Drew Harwell of the *Washington Post* reported a rise in the use of "tattleware" software that literally watches everything that employees working at home do on their computers. One vendor quoted in Harwell's article said its clients feel "completely entitled to know what employees are doing" at home.

Konrad Putzier and Chip Cutter of the *Wall Street Journal* reported that as companies prepared to bring employees back to their workplaces following the shutdowns, some were setting up indoor-mapping software to monitor whether employees were complying with new social-distancing requirements. Observers noted that there would be no good reason to take it down after the pandemic passes.

All this information can be used for constructive purposes, such as designing better office layouts. But it could also identify which employees duck out of the building for extended periods of time, who is organizing March Madness betting pools, and so forth. Ethan Bernstein and Ben Waber note that top-down efforts to design workspaces to produce desired effects often backfire—for instance, reducing collaboration rather than increasing it. They recommend firms experiment to see what practices get the outcomes that matter. (See "The Truth About Open Offices," HBR, November–December 2019.)

Employees have never liked being monitored. The wave of strikes that created industrial unions in the 1930s was motivated as much by a desire to push back on management control and Taylorist job requirements, such as the demeaning timing of bathroom breaks, as by dissatisfaction with wages. What's more, monitoring rarely works as intended, because employees find ways to get around it. More than a quarter of employees admit to covering their work computers' webcams, and almost one-third switch from their company phones to their personal cell phones when talking to coworkers to prevent their employers from listening in, according to a survey by SimplyHired, an online provider of job services.

Moving toward AI-based optimization isn't free, either. Just as Taylor's scientific management required firms to hire a slew of experts from the then-emerging field of industrial engineering, today's optimization efforts are feeding demand for data scientists. Jobs for the folks who build algorithms are rapidly increasing, and the average base salary for them is $113,309, according to Glassdoor.

Strike a Balance

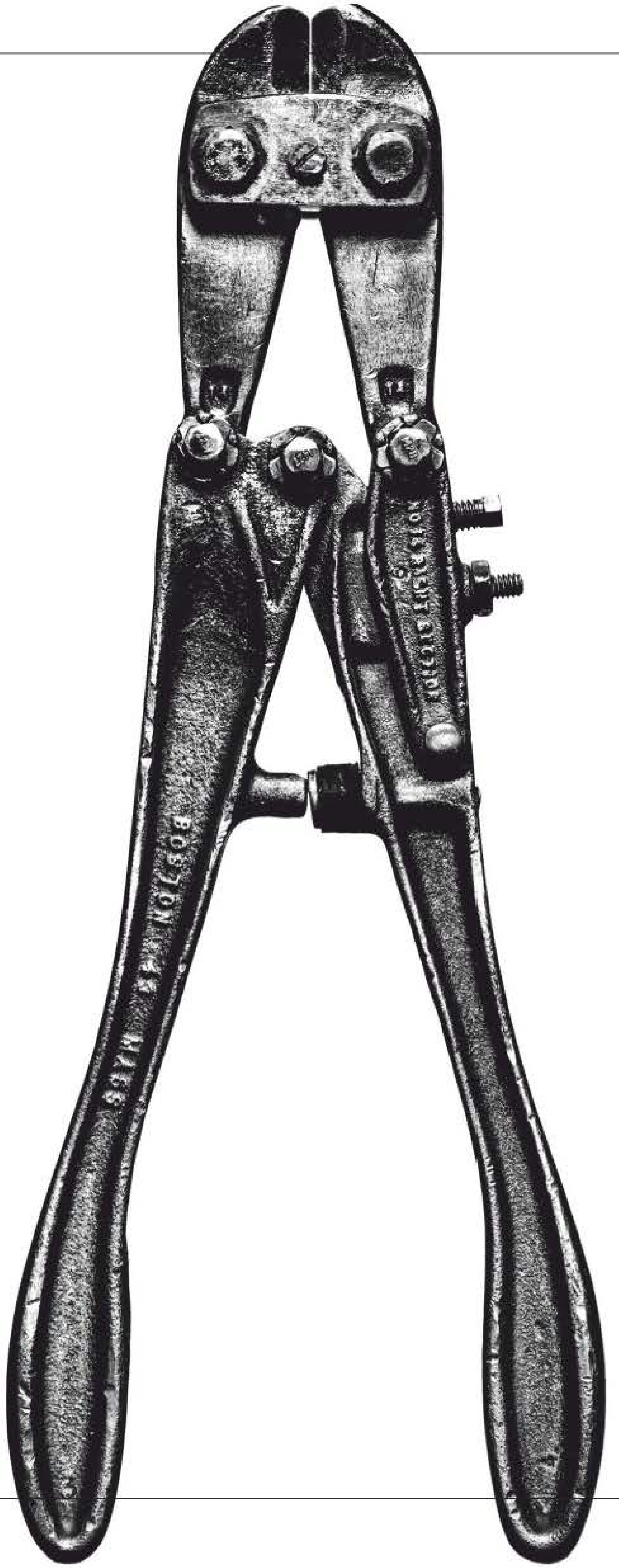
One could argue that the deck is stacked against Theory Y. Executives with engineering and computer science degrees represent as many as one-third of CEOs of all major corporations, by some estimates. Forty-seven percent of CEOs have a background in finance, a field where cost minimization, formulas, and numerical targets—not empowerment—hold sway. Behavioral approaches associated with Theory Y appear in only a modest way in business schools' curricula, and they're bookended by microeconomics, accounting, finance, and operations courses—all of which rely on optimization processes. Meanwhile, corporate management-training programs that teach behavioral ideas have largely disappeared.

Finally, Theory Y approaches require a lot of leaders' and managers' time and energy and are squishy. In contrast, optimization approaches can be stipulated by rules, delegated, and aligned with hard priorities, like maximizing efficiency and lowering costs, that make CFOs and Wall Street happy.

A sad example of the disdain for Theory Y management that prevails in C-suites can be found in Alec MacGillis's *New Yorker* story about Boeing's restructuring and how that contributed to its travails with the 737 Max jetliner. The company's lean-production-like program, in which engineers sought process improvements, once was a hallmark of quality and cost-effectiveness. When a top executive announced that Boeing was cutting funding for it, an engineer involved in it objected at a labor-management breakfast, pointing out how much money the program had saved. The executive responded, "The decisions I make have more influence over outcomes than all the decisions you make."

The grand challenge for managers isn't to choose between Theory X and Theory Y. Rather, it's to find the mix of

The grand challenge for managers isn't to choose between Theory X and Theory Y. Rather, it's to find the mix of practices that actually works.



practices that actually, not theoretically, works. When scientific management was first introduced, it was spectacularly more effective than the chaos in manufacturing that had preceded it, and it was a key factor in helping U.S. corporations dominate global markets. Many business practices still are done poorly and could be far more effective and even more fair if optimized. Hiring comes to mind: At most companies, managers with little if any training in how to hire still make choices based on their gut and biases.

Incorporating optimization and employee empowerment in tandem works far better, though. One of the strengths of lean production is that it captures both by turning over the task of improving productivity and quality to frontline workers, teaching them how to design jobs better. It's therefore dispiriting to see companies replacing that approach with software. A similar phenomenon is happening with scheduling and flextime. Workers as a group once figured out the best way to get the work done while accommodating employee needs. Now software is available that promises to "optimize" work schedules for business needs. As companies juggle staffing schedules to achieve social distancing in offices, it will be revealing to see whether they use the employee-driven approach or go with algorithms.

The biggest constraint at play seems to be the same one it has always been: the intellectual appeal of optimization and its promise of one simple, best way to manage that you can put in place and then be done with. Managers can then avoid the hard work of engaging employees in solving workplace problems and move on to the more exciting tasks of strategy. As Kurt Vonnegut put it in his novel *Player Piano,* "If it weren't for the people, the god-damn people always getting tangled up in the machinery...the world would be an engineer's paradise." It may be easier to ignore people, but we're still here. It matters greatly to consider our needs and interests, and effective leaders have to take that into account.

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DIVERSITY

How to Promote Racial Equity in the Workplace

A five-step plan

ILLUSTRATOR **DIANA EJAITA**

IDEA IN BRIEF

THE PROBLEM
Racial discrimination—defined as differential evaluation or treatment based solely on race, regardless of intent—remains prevalent in organizations and occurs far more frequently than most White people suspect.

THE OPPORTUNITY
Intractable as it seems, racism in the workplace can be effectively addressed. Because organizations are autonomous entities that afford leaders a high level of control over norms and policies, they are ideal places to promote racial equity.

THE WAY FORWARD
Effective interventions move through stages, from understanding the underlying condition, to developing genuine concern, to focusing on correction.

Intractable as it seems, the problem of racism in the workplace can be effectively addressed with the right information, incentives, and investment. Corporate leaders may not be able to change the world, but they can certainly change *their* world.

If your employees don't believe that racism exists in the company, then diversity initiatives will be perceived as the problem, not the solution.

DIVERSITY

Organizations are relatively small, autonomous entities that afford leaders a high level of control over cultural norms and procedural rules, making them ideal places to develop policies and practices that promote racial equity. In this article, I'll offer a practical road map for making profound and sustainable progress toward that goal.

I've devoted much of my academic career to the study of diversity, leadership, and social justice, and over the years I've consulted on these topics with scores of *Fortune* 500 companies, federal agencies, nonprofits, and municipalities. Often, these organizations have called me in because they are in crisis and suffering—they just want a quick fix to stop the pain. But that's akin to asking a physician to write a prescription without first understanding the patient's underlying health condition. Enduring, long-term solutions usually require more than just a pill. Organizations and societies alike must resist the impulse to seek immediate relief for the symptoms, and instead focus on the disease. Otherwise they run the risk of a recurring ailment.

To effectively address racism in your organization, it's important to first build consensus around whether there is a problem (most likely, there is) and, if so, what it is and where it comes from. If many of your employees do not believe that racism against people of color exists in the organization, or if feedback is rising through various communication channels showing that Whites feel that they are the real victims of discrimination, then diversity initiatives will be perceived as the problem, not the solution. This is one of the reasons such initiatives are frequently met with resentment and resistance, often by mid-level managers. Beliefs, not reality, are what determine how employees respond to efforts taken to increase equity. So, the first step is getting everyone on the same page as to what the reality is and why it is a problem for the organization.

But there's much more to the job than just raising awareness. Effective interventions involve many stages, which I've incorporated into a model I call PRESS. The stages, which organizations must move through sequentially, are: (1) Problem awareness, (2) Root-cause analysis, (3) Empathy, or level of concern about the problem and the people it afflicts, (4) Strategies for addressing the problem, and (5) Sacrifice, or willingness to invest the time, energy, and resources necessary for strategy implementation. Organizations going through these stages move from understanding the underlying condition, to developing genuine concern, to focusing on correction.

Let's now have a closer look at these stages and examine how each informs, at a practical level, the process of working toward racial equity.

Problem Awareness

To a lot of people, it may seem obvious that racism continues to oppress people of color. Yet research consistently reveals that many Whites don't see it that way. For example, a 2011 study by Michael Norton and Sam Sommers found that on the whole, Whites in the United States believe that systemic anti-Black racism has steadily decreased over the past 50 years—and that systemic anti-White racism (an implausibility in the United States) has steadily increased over the same time frame. The result: As a group, Whites believe that there is more racism against them than against Blacks. Other recent surveys echo Sommers and Norton's findings, one revealing, for example, that 57% of all Whites and 66% of working-class Whites consider discrimination against Whites to be as big a problem as discrimination against Blacks and other people of color. These beliefs are important, because they can undermine an organization's efforts to address racism by weakening support for diversity policies. (Interestingly, surveys taken since the George Floyd murder indicate an increase in perceptions of systemic racism among Whites. But it's too soon to tell whether those surveys reflect a permanent shift or a temporary uptick in awareness.)

Even managers who recognize racism in society often fail to see it in their own organizations. For example, one senior executive told me, "We don't have any discriminatory policies in our company." However, it is important to recognize that even seemingly "race neutral" policies can enable discrimination. Other executives point to their organizations' commitment to diversity as evidence for the absence of racial discrimination. "Our firm really values diversity and making this a welcoming and inclusive place for everybody to work," another leader remarked.

Despite these beliefs, many studies in the 21st century have documented that racial discrimination is prevalent in the workplace, and that organizations with strong commitments to diversity are no less likely to discriminate. In fact, research by Cheryl Kaiser and colleagues has demonstrated that the presence of diversity values and structures can actually make matters worse, by lulling an organization into complacency and making Blacks and ethnic minorities more likely to be ignored or harshly treated when they raise valid concerns about racism.

Many White people deny the existence of racism against people of color because they assume that racism is defined by deliberate actions motivated by malice and hatred. However, racism can occur without conscious awareness or intent. When defined simply as differential evaluation or treatment based solely on race, regardless of intent, racism occurs far more frequently than most White people suspect. Let's look at a few examples.

In a well-publicized résumé study by the economists Marianne Bertrand and Sendhil Mullainathan, applicants with White-sounding names (such as Emily Walsh) received, on average, 50% more callbacks for interviews than equally qualified applicants with Black-sounding names (such as Lakisha Washington). The researchers estimated that just being White conferred the same benefit as an additional eight years of work experience—a dramatic head start over equally qualified Black candidates.

Research shows that people of color are well-aware of these discriminatory tendencies and sometimes try to counteract them by masking their race. A 2016 study by Sonia Kang and colleagues found that 31% of the Black professionals and 40% of the Asian professionals they interviewed admitted to "Whitening" their résumés, either by adopting a less "ethnic" name or omitting extracurricular experiences (a college club membership, for instance) that might reveal their racial identities.

These findings raise another question: Does Whitening a résumé actually benefit Black and Asian applicants, or does it disadvantage them when applying to organizations seeking to increase diversity? In a follow-up experiment, Kang and her colleagues sent Whitened and non-Whitened résumés of Black or Asian applicants to 1,600 real-world job postings across various industries and geographical areas in the United States. Half of these job postings were from companies that expressed a strong desire to seek diverse candidates. They found that Whitening résumés by altering names and extracurricular experiences increased the callback rate from 10% to nearly 26% for Blacks, and from about 12% to 21% for Asians. What's particularly unsettling is that a company's stated commitment to diversity failed to diminish this preference for Whitened résumés.

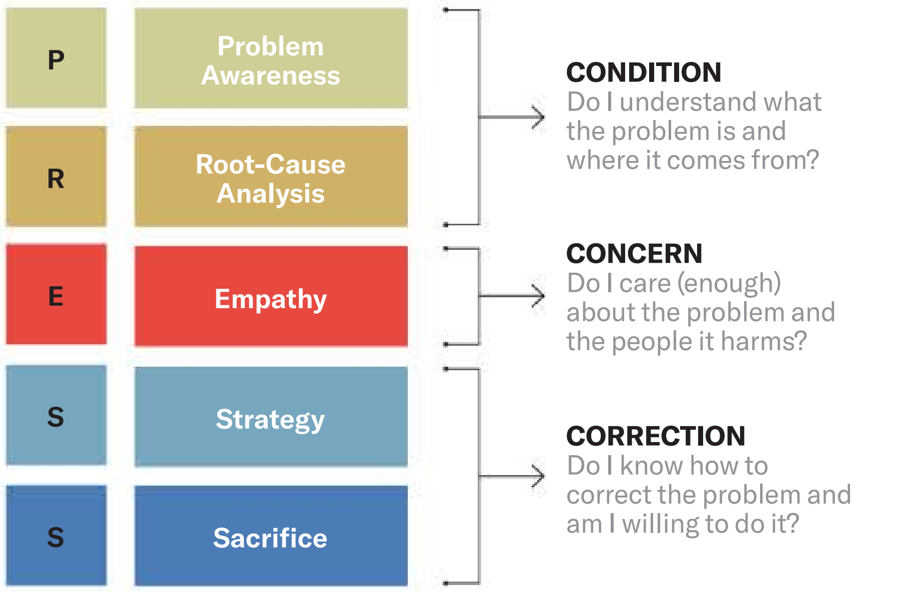
This is a very small sample of the many studies that have confirmed the prevalence of racism in the workplace, all of which underscore the fact that people's beliefs and biases must be recognized and addressed as the first step toward progress. Although some leaders acknowledge systemic racism in their organizations and can skip step one, many may need to be convinced that racism persists, despite their "race neutral" policies or pro-diversity statements.

Root-Cause Analysis

Understanding an ailment's roots is critical to choosing the best remedy. Racism can have many psychological sources—cognitive biases, personality characteristics, ideological

A Road Map for Racial Equity

Organizations move through these stages sequentially, first establishing an understanding of the underlying condition, then developing genuine concern, and finally focusing on correcting the problem.



> The real challenge for organizations is not figuring out "What can we do?" but rather "Are we willing to do it?"

worldviews, psychological insecurity, perceived threat, or a need for power and ego enhancement. But most racism is the result of structural factors—established laws, institutional practices, and cultural norms. Many of these causes do not involve malicious intent. Nonetheless, managers often misattribute workplace discrimination to the character of individual actors—the so-called bad apples—rather than to broader structural factors. As a result, they roll out trainings to "fix" employees while dedicating relatively little attention to what may be a toxic organizational culture, for example. It is much easier to pinpoint and blame individuals when problems arise. When police departments face crises related to racism, the knee-jerk response is to fire the officers involved or replace the police chief, rather than examining how the culture licenses, or even encourages, discriminatory behavior.

Appealing to circumstances beyond one's control is another way to exonerate deeply embedded cultural or institutional practices that are responsible for racial disparities. For example, an oceanographic organization I worked with attributed its lack of racial diversity to an insurmountable pipeline problem. "There just aren't any Black people out there studying the migration patterns of the humpback whale," one leader commented. Most leaders were unaware of the National Association of Black Scuba Divers, an organization boasting thousands of members, or of Hampton University, a historically Black college on the Chesapeake Bay, which awards bachelor's degrees in marine and environmental science. Both were entities that could source Black candidates for the job, especially given that the organization only needed to fill dozens, not thousands, of openings.

A *Fortune* 500 company I worked with cited similar pipeline problems. Closer examination revealed, however, that the real culprit was the culture-based practice of promoting leaders from within the organization—which already had low diversity—rather than conducting a broader industry-wide search when leadership positions became available. The larger lesson here is that an organization's lack of diversity is often tied to inadequate recruitment efforts rather than an empty pipeline. Progress requires a deeper diagnosis of the routine practices that drive the outcomes leaders wish to change.

To help managers and employees understand how being embedded within a biased system can unwittingly influence outcomes and behaviors, I like to ask them to imagine being fish in a stream. In that stream, a current exerts force on everything in the water, moving it downstream. That current is analogous to systemic racism. If you do nothing—just float—the current will carry you along with it, whether you're aware of it or not. If you actively discriminate by swimming with the current, you will be propelled faster. In both cases, the current takes you in the same direction. From this perspective, racism has less to do with what's in your heart or mind and more to do with how your actions or inactions amplify or enable the systemic dynamics already in place.

Workplace discrimination often comes from well-educated, well-intentioned, open-minded, kindhearted people who are just floating along, severely underestimating the tug of the prevailing current on their actions, positions, and outcomes. Anti-racism requires swimming against that current, like a salmon making its way upstream. It demands much more effort, courage, and determination than simply going with the flow.

In short, organizations must be mindful of the "current," or the structural dynamics that permeate the system, not just the "fish," or individual actors that operate within it.

Empathy

Once people are aware of the problem and its underlying causes, the next question is whether they care enough to do something about it. There is a difference between sympathy and empathy. Many White people experience sympathy, or pity, when they witness racism. But what's more likely to lead to action in confronting the problem is empathy—experiencing the same hurt and anger that people of color are feeling. People of color want solidarity—and social justice—not sympathy, which simply quiets the symptoms while perpetuating the disease.

One way to increase empathy is through exposure and education. The video of George Floyd's murder exposed people to the ugly reality of racism in a visceral, protracted, and undeniable way. Similarly, in the 1960s, northern Whites witnessed innocent Black protesters being beaten with batons and blasted with fire hoses on television. What best prompts people in an organization to register concern about racism in their midst, I've found, are the moments when

their non-White coworkers share vivid, detailed accounts of the negative impact that racism has on their lives. Managers can raise awareness and empathy through psychologically safe listening sessions—for employees who want to share their experiences, without feeling obligated to do so—supplemented by education and experiences that provide historical and scientific evidence of the persistence of racism.

For example, I spoke with Mike Kaufmann, CEO of Cardinal Health—the 16th largest corporation in America—who credited a visit to the Equal Justice Initiative's National Memorial for Peace and Justice, in Montgomery, Alabama as a pivotal moment for the company. While diversity and inclusion initiatives have been a priority for Mike and his leadership team for well over a decade, their focus and conversations related to racial inclusion increased significantly during 2019. As he expressed to me, "Some Americans think when slavery ended in the 1860s that African Americans have had an equal opportunity ever since. That's just not true. Institutional systemic racism is still very much alive today; it's never gone away." Kaufmann is planning a comprehensive education program, which will include a trip for executives and other employees to visit the museum, because he is convinced that the experience will change hearts, open eyes, and drive action and behavioral change.

Empathy is critical for making progress toward racial equity because it affects whether individuals or organizations take any action and if so, what kind of action they take. There are at least four ways to respond to racism: join in and add to the injury, ignore it and mind your own business, experience sympathy and bake cookies for the victim, or experience empathic outrage and take measures to promote equal justice. The personal values of individual employees and the core values of the organization are two factors that affect which actions are undertaken.

Strategy

After the foundation has been laid, it's finally time for the "what do we do about it" stage. Most actionable strategies for change address three distinct but interconnected categories: personal attitudes, informal cultural norms, and formal institutional policies.

To most effectively combat discrimination in the workplace, leaders should consider how they can run interventions on all three of these fronts simultaneously. Focusing only on one is likely to be ineffective and could even backfire. For example, implementing institutional diversity policies without any attempt to create buy-in from employees is likely to produce a backlash. Likewise, focusing just on changing attitudes without also establishing institutional policies that hold people accountable for their decisions and actions may generate little behavioral change among those who don't agree with the policies. Establishing an anti-racist organizational culture, tied to core values and modeled by behavior from the CEO and other top leaders at the company, can influence both individual attitudes and institutional policies.

Just as there is no shortage of effective strategies for losing weight or promoting environmental sustainability, there are ample strategies for reducing racial bias at the individual, cultural, and institutional levels. The hard part is getting people to actually adopt them. Even the best strategies are worthless without implementation.

I'll discuss how to increase commitment to execution in the final section. But before I do, I want to give a specific example of an institutional strategy that works. It comes from Massport, a public organization that owns Boston Logan International Airport and commercial lots worth billions of dollars. When its leaders decided they wanted to increase diversity and inclusion in real estate development in Boston's booming Seaport District, they decided to leverage their land to do it. Massport's leaders made formal changes to the selection criteria determining who is awarded lucrative contracts to build and operate hotels and other large commercial buildings on their parcels. In addition to evaluating three traditional criteria—the developer's experience and financial capital, Massport's revenue potential, and the project's architectural design—they added a fourth criterion called "comprehensive diversity and inclusion," which accounted for 25% of the proposal's overall score, the same as the other three. This forced developers not only to think more deeply about how to create diversity but also to go out and do it. Similarly, organizations can integrate diversity and inclusion into managers' scorecards for raises and promotions—if they

> Fairness requires treating people equitably—which may entail treating people differently, but in a way that makes sense.

think it's important enough. I've found that the real barrier to diversity is not figuring out "What can we do?" but rather "Are we willing to do it?"

Sacrifice

Many organizations that desire greater diversity, equity, and inclusion may not be willing to invest the time, energy, resources, and commitment necessary to make it happen. Actions are often inhibited by the assumption that achieving one desired goal requires sacrificing another desired goal. But that's not always the case. Although nothing worth having is completely free, racial equity often costs less than people may assume. Seemingly conflicting goals or competing commitments are often relatively easy to reconcile—once the underlying assumptions have been identified.

As a society, are we sacrificing public safety and social order when police routinely treat people of color with compassion and respect? No. In fact, it's possible that kinder policing will actually increase public safety. Famously, the city of Camden, New Jersey, witnessed a 40% drop in violent crime after it reformed its police department, in 2012, and put a much greater emphasis on community policing.

The assumptions of sacrifice have enormous implications for the hiring and promotion of diverse talent, for at least two reasons. First, people often assume that increasing diversity means sacrificing principles of fairness and merit, because it requires giving "special" favors to people of color rather than treating everyone the same. But take a look at the scene below. Which of the two scenarios appears more "fair," the one on the left or the one on the right?

People often assume that fairness means treating everyone *equally*, or exactly the same—in this case, giving each person one crate of the same size. In reality, fairness requires treating people *equitably*—which may entail treating people differently, but in a way that makes sense. If you chose the scenario on the right, then you subscribe to the notion that fairness can require treating people differently in a sensible way.

Of course, what is "sensible" depends on the context and the perceiver. Does it make sense for someone with a physical disability to have a parking space closer to a building? Is it fair for new parents to have six weeks of paid leave to be able to care for their baby? Is it right to allow active-duty military personnel to board an airplane early to express gratitude for their service? My answer is yes to all three questions, but not everyone will agree. For this reason, equity presents a greater challenge to gaining consensus than equality. In the first panel of the fence scenario, everybody gets the same number of crates. That's a simple solution. But is it fair?

In thinking about fairness in the context of American society, leaders must consider the unlevel playing fields and other barriers that exist—provided they are aware of systemic racism. They must also have the courage to make difficult or controversial calls. For example, it might make sense to have an employee resource group for Black employees but not White employees. Fair outcomes may require a process of treating people differently. To be clear, different treatment is not the same as "special" treatment—the latter is tied to favoritism, not equity.

One leader who understands the difference is Maria Klawe, the president of Harvey Mudd College. She concluded that the only way to increase the representation of women in computer science was to treat men and women differently. Men and women tended to have different levels of computing experience prior to entering college—different levels of *experience*, not intelligence or potential. Society treats boys and girls differently throughout secondary school—encouraging STEM subjects for boys but liberal arts subjects for girls, creating gaps in experience. To compensate for this gap created by bias in society, the college designed two introductory computer-science tracks—one for students with no computing experience and one for students with some computing experience in high school. The no-experience course tended to be 50% women whereas the some-experience course was

DIVERSITY

There is no test or interview that can invariably identify the "best candidate." Instead, hire good people and invest in their potential.

predominantly men. By the end of the semester, the students in both courses were on par with one another. Through this and other equity-based interventions, Klawe and her team were able to dramatically increase the representation of women and minority computer-science majors and graduates.

The second assumption many people have is that increasing diversity requires sacrificing high quality and standards. Consider again the fence scenario. All three people have the same height or "potential." What varies is the level of the field and the fence—apt metaphors for privilege and discrimination, respectively. Because the person on the far left has lower barriers to access, does it make sense to treat the other two people differently to compensate? Do we have an obligation to do so when differences in outcomes are caused by the field and the fence, not someone's height? Maria Klawe sure thought so. How much human potential is left unrealized within organizations because we do not recognize the barriers that exist?

Finally, it's important to understand that quality is difficult to measure with precision. There is no test, instrument, survey, or interviewing technique that will enable you to invariably predict who the "best candidate" will be. The NFL draft illustrates the difficulty in predicting future job performance: Despite large scouting departments, plentiful video of prior performance, and extensive tryouts, almost half of first round picks turn out to be busts. This may be true for organizations as well. Research by Sheldon Zedeck and colleagues on corporate hiring processes has found that even the best screening or aptitude tests predict only 25% of intended outcomes, and that candidate quality is better reflected by "statistical bands" rather than a strict rank ordering. This means that there may be absolutely no difference in quality between the candidate who scored first out of 50 people and the candidate who scored eighth.

The big takeaway here is that "sacrifice" may actually involve giving up very little. If we look at people within a band of potential and choose the diverse candidate (for example, number eight) over the top scorer, we haven't sacrificed quality at all—statistically speaking—even if people's intuitions lead them to conclude otherwise.

Managers should abandon the notion that a "best candidate" must be found. That kind of search amounts to chasing unicorns. Instead, they should focus on hiring well-qualified people who show good promise, and then should invest time, effort, and resources into helping them reach their potential.

THE TRAGEDIES AND protests we have witnessed this year across the United States have increased public awareness and concern about racism as a persistent problem in our society. The question we now must confront is whether, as a nation, we are willing to do the hard work necessary to change widespread attitudes, assumptions, policies, and practices. Unlike society at large, the workplace very often requires contact and cooperation among people from different racial, ethnic, and cultural backgrounds. Therefore, leaders should host open and candid conversations about how their organizations are doing at each of the five stages of the model—and use their power to *press* for profound and perennial progress.

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ROBERT LIVINGSTON *is the author of* The Conversation: How Seeking and Speaking the Truth About Racism Can Radically Transform Individuals and Organizations *(soon to be released by Penguin Random House/Currency). He also serves on the faculty of the Harvard Kennedy School.*

FURTHER READING

"U.S. Businesses Must Take Meaningful Action Against Racism"
Laura Morgan Roberts and Ella F. Washington
HBR.org, June 1, 2020

"How the Best Bosses Interrupt Bias on Their Teams"
Joan C. Williams and Sky Mihaylo
HBR, November–December 2019

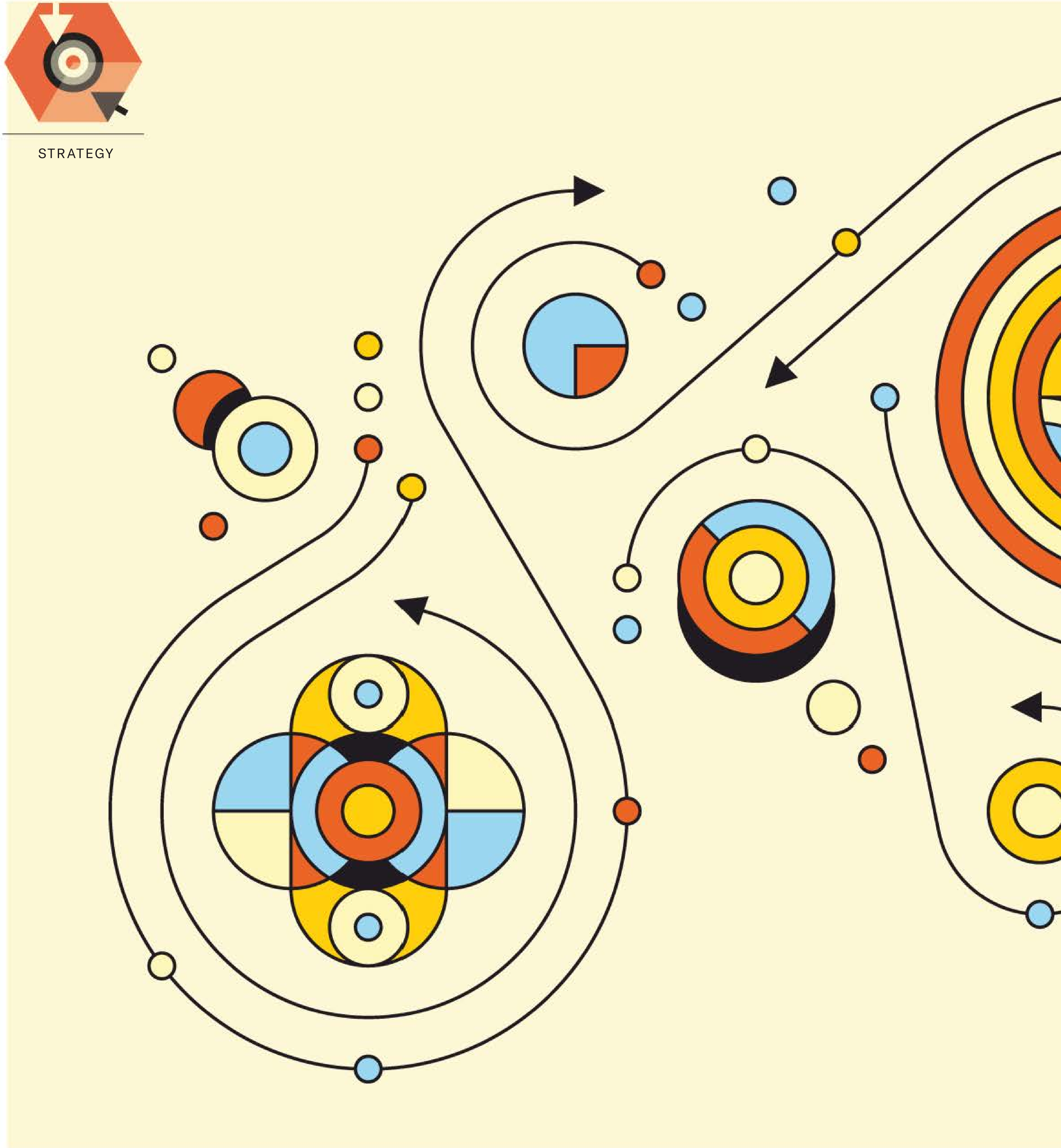
"Toward a Racially Just Workplace"
Laura Morgan Roberts and Anthony J. Mayo
HBR.org, November 2019

"Numbers Take Us Only So Far"
Maxine Williams
HBR, November–December 2017

"Why Diversity Programs Fail"
Frank Dobbin and Alexandra Kalev
HBR, July–August 2016

"Dear White Boss…"
Keith A. Caver and Ancella B. Livers
HBR, November 2002

STRATEGY



Adapt Your Business to the New Reality

Start by understanding how habits have changed.

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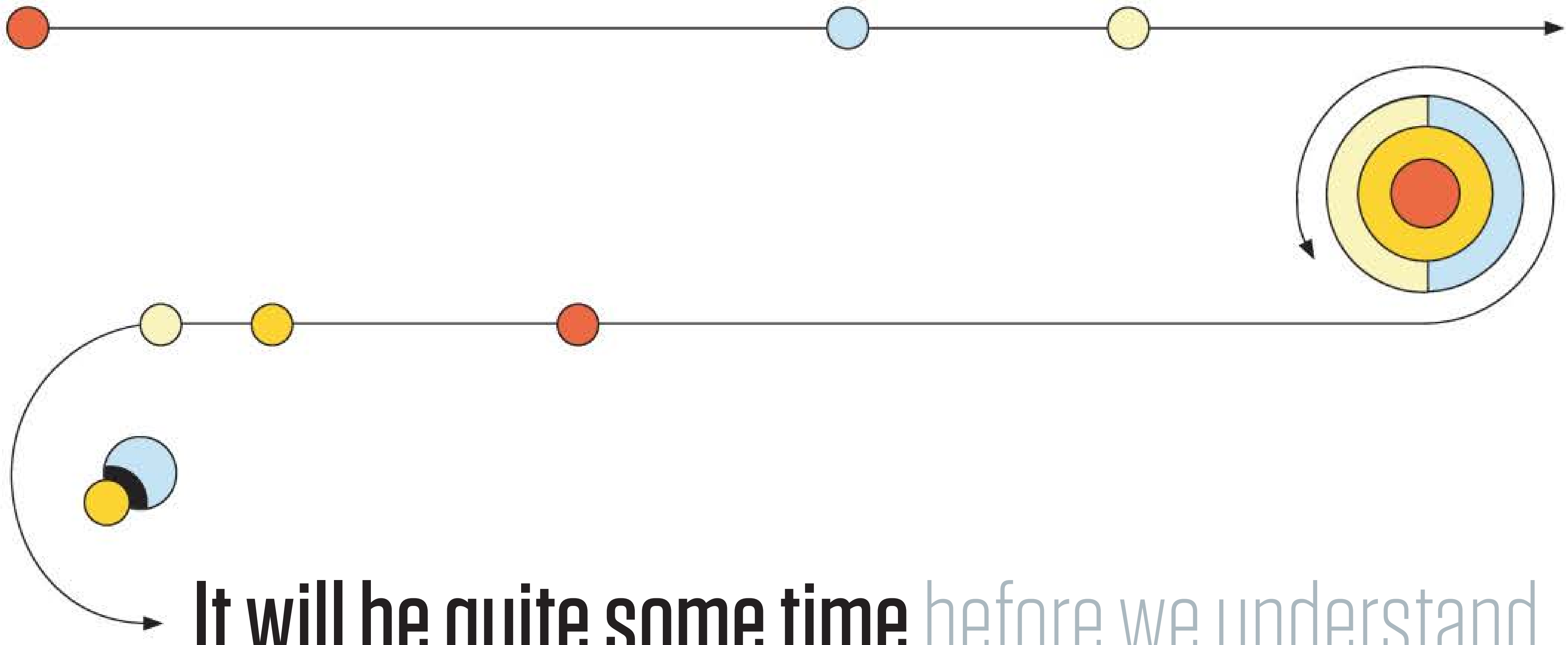


It will be quite some time before we understand the full impact of the Covid-19 pandemic. But the history of such shocks tells us two things. First, even in severe economic downturns and recessions, some companies are able to gain advantage. Among large firms doing business during the past four downturns, 14% increased both sales growth rate and EBIT margin.

Second, crises produce not just a plethora of temporary changes (mainly short-term shifts in demand) but also some lasting ones. For example, the 9/11 terrorist attacks caused only a temporary decline in air travel, but they brought about a lasting shift in societal attitudes about the trade-off between privacy and security, resulting in permanently higher levels of screening and surveillance. Similarly, the 2003 SARS outbreak in China is often credited with accelerating a structural shift to e-commerce, paving the way for the rise of Alibaba and other digital giants.

In the following pages we'll discuss how companies can reassess their growth opportunities in the new normal, reconfigure their business models to better realize those opportunities, and reallocate their capital more effectively.

REASSESS GROWTH OPPORTUNITIES

The Covid-19 pandemic has severely disrupted global consumption, forcing (and permitting) people to unlearn old habits and adopt new ones. A study on habit formation suggests that the average time for a new habit to form is 66 days, with a minimum of 21 days. As of this writing, the lockdown has already lasted long enough in many countries to significantly change habits that had been the foundation of demand and supply.

Companies seeking to emerge from the crisis in a stronger position must develop a systematic understanding of changing habits. For many firms, that will require a new process for detecting and assessing shifts before they become obvious to all. The first step is to map the potential ramifications of behavioral trends to identify specific products or business opportunities that will most likely grow or contract as a result. (See the exhibit "How to Identify Growth Opportunities.") Consider how the pandemic has caused people to stay at home more. Implications include an increase in home office refurbishment, driving greater demand for products ranging from paint to printers. Unless we sensitize ourselves to new habits and their cascading indirect effects, we will fail to spot weak signals and miss opportunities to shape markets.

The next step is to categorize demand shifts using a simple 2x2 matrix, on the basis of whether they are likely to be short-term or long-term and whether they were existing trends before the crisis or have emerged since it began. The four quadrants distinguish among boosts (temporary departures from existing trends), displacements (temporary new trends), catalysts (accelerations of existing trends), and innovations (new lasting trends). Consider again the behavioral shift of "stay at home more," which has had a serious impact on retail shopping. The question is, Will the shift away from retail stores to online be temporary, or will it be a structural change with permanent knock-on effects in other areas, such as commercial real estate?

We would place shopping in the catalyst quadrant. The pandemic has amplified and accelerated an existing trend rather than created a new one; people were shifting to e-shopping before the lockdown. But the shift is structural rather than temporary, because the scale and duration of the enforced switch, coupled with the generally positive performance of the channel, suggests that in many shopping categories customers will see no need to switch back. So retailers must shape their strategies to the new normal. Indeed, before the lockdown many retailers were responding to the digital challenge by redefining the purpose of the physical store, often by reimagining shopping as not a chore but an attractive social experience.

This framework can therefore be used to highlight which trends to follow and which to shape more aggressively. Companies cannot pursue all possibilities and should not try to. To get an idea of which ones to back, ask yourself whether any shift in demand is temporary or permanent. Many of the immediately observed shifts in response to Covid-19 were driven by fear of infection or compliance with official directives, and therefore were most likely temporary. But others were accompanied by greater convenience or better economics, so they are more likely to stick.

Any analysis of growth opportunities must go well beyond a simple categorization of what you already know. You need to challenge your ideas about what's happening in your traditional business domains by taking a fresh, careful look at the data. This requires that you actively seek out anomalies and surprises.

Dive deep into the data. Anomalies usually emerge from data that is both granular (revealing patterns hidden by top-line averages) and high-frequency (allowing emerging patterns to be identified rapidly). As behavior changed with the outbreak of Covid-19, for example, rich sources included data on foot traffic and credit card spending. An analysis showed that the recent drop-off in cinema attendance occurred before theaters were shut down in the United States. This, combined with an existing trend of declining attendance, suggested that the shift was consumer-driven and perhaps likely to persist in the absence of innovation. Live sports attendance, in contrast, declined only when events were officially canceled, suggesting a stronger possibility of a behavioral rebound.

Take multiple perspectives. In the military, a technique for discovering what you don't know is to use the "eyes

IDEA IN BRIEF

THE CHALLENGE

Even in severe economic downturns and recessions, some companies are able to gain advantage. In the past four downturns, 14% of companies increased both their sales growth rate and their EBIT margin.

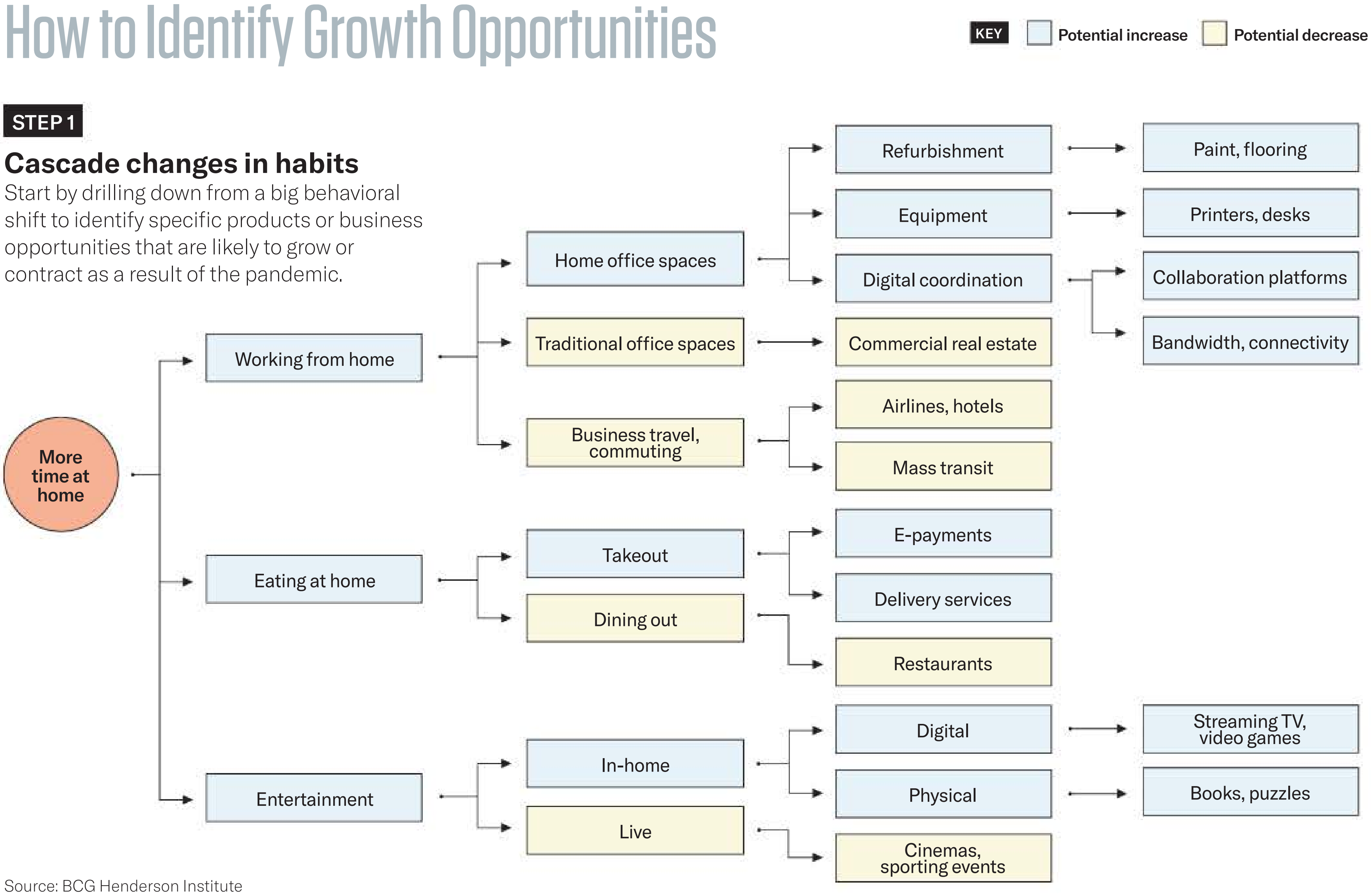
THE WINNERS

A shock like the Covid-19 pandemic can produce lasting changes in behavior, and those firms quickly spot the changes, adjust their business models to reflect them, and are not afraid to make investments.

THE APPROACH

Examine the changes in the ways that people spend their time and money and the effects on the businesses involved. Then look at what the changes might mean for how you create and deliver value, who you need to partner with, and who your customers should be. Finally, be ready to put your money where your analysis takes you.

How to Identify Growth Opportunities



Source: BCG Henderson Institute

of the enemy." Military leaders ask themselves, What is the enemy paying attention to? and then shift their own attention accordingly to illuminate potential blind spots and alternative perspectives. The same can be applied to industry mavericks and competitors: Who is doing well? What market segments are your rivals focused on? What products or services are they launching? The same principle can be extended to customers: Which ones are exhibiting new behaviors? Which have stayed loyal? What new crisis-induced needs do customers have, and what are they paying attention to? It can even be applied to countries: What patterns emerged in China, where both the outbreak and the recovery came ahead of those in Western nations? In your own organization, ask: Which workplace innovations are taking hold in leading firms? What new needs are employees responding to? What opportunities do they represent that could potentially be developed and rolled out more broadly?

Armed with an understanding of where your opportunities lie, you can now move to the next step: shaping your business model to capture them.

RECONFIGURE YOUR BUSINESS MODEL

Your new business model will be shaped by the demand and supply shifts relevant to your industry. Many manufacturing companies, for example, will be profoundly affected by the structural and likely permanent shocks to globalization brought on by the pandemic. With big markets such as the United States raising trade barriers, for example, many companies will need to reshore critical components in their supply chains—from R&D down to assembly.

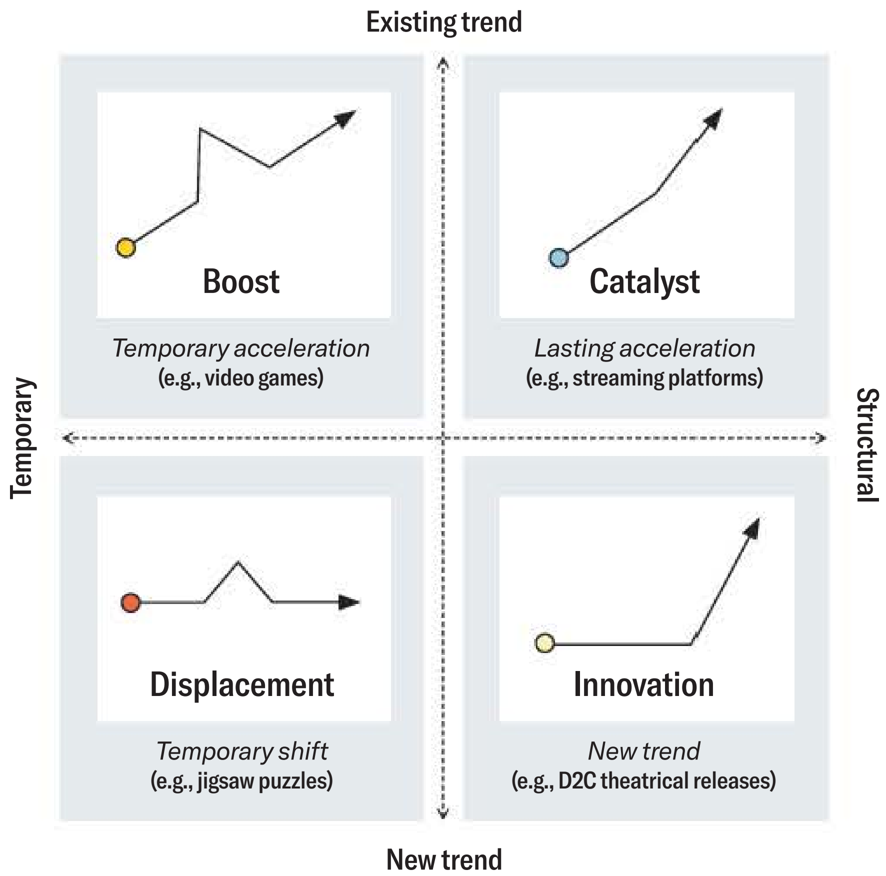
To figure out what business model the new normal requires, you need to ask basic questions about how you create and deliver value, who you'll partner with, and who your customers will be. As an example, let's look at how retail shopping businesses should be adjusting to the demand shift to digital.

Can you take the value you offer online? The value that many retailers provide to customers traditionally has come from the quality of their in-store service. Consider the Chinese cosmetics company Lin Qingxuan. It suffered

STEP 2

Identify type and duration of new trends

Categorize behavioral shifts according to whether they are likely to be short- or long-term and whether they existed before the pandemic or are new since it began. Entertainment, for instance, shows opportunities in each of the four quadrants.



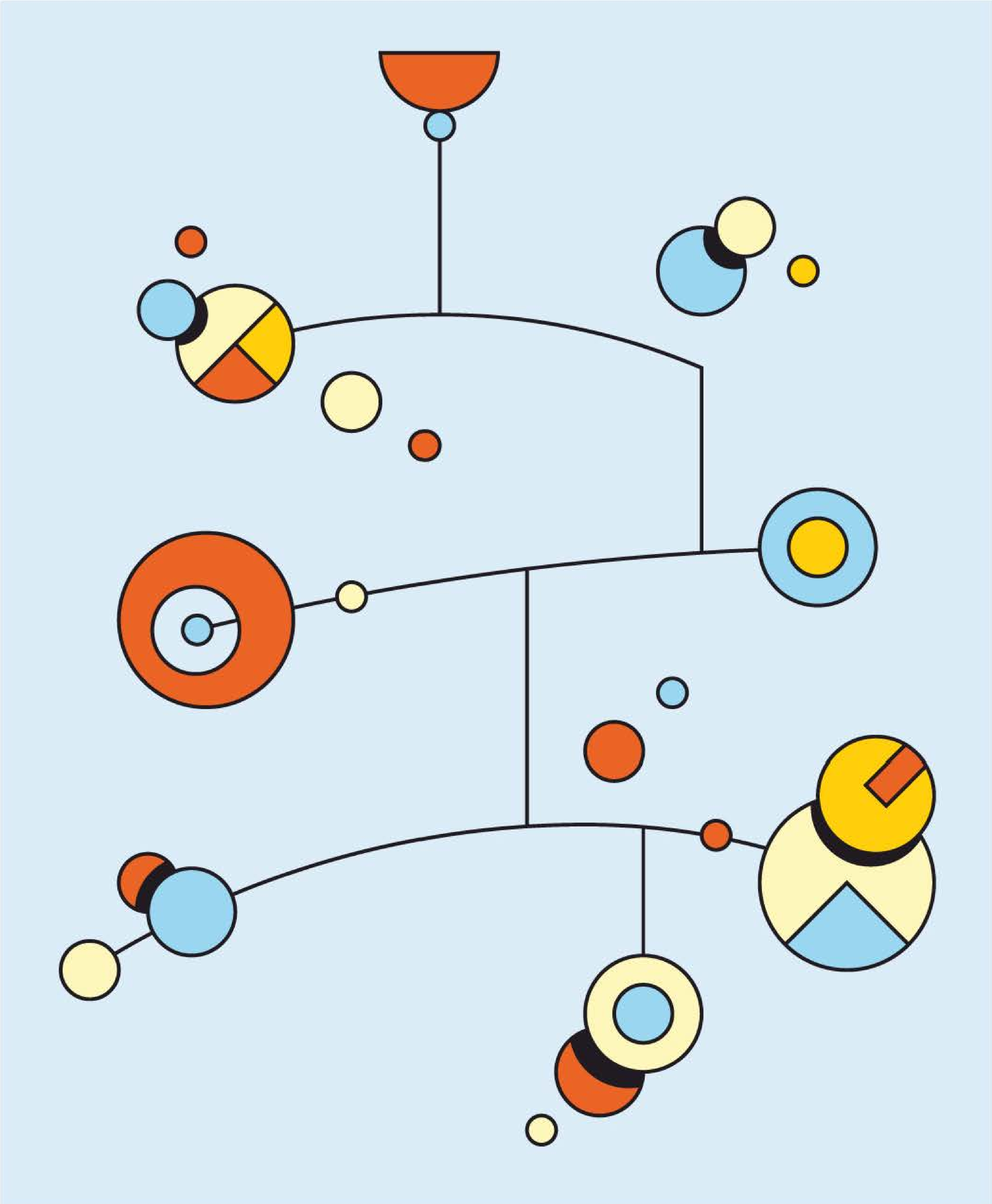
a 90% collapse in store sales after the outbreak, when many locations were forced to close and others saw foot traffic plummet. In response, the company developed a strategy for digital engagement with customers that would replace the store experience: It turned the company's in-store beauty advisers into online influencers. The success of this move has prompted more investment in digital channels. Thanks to that and similar changes, Lin Qingxuan's increased online sales have more than made up for the fall in store sales during the crisis, notably in hard-hit Wuhan.

Which platforms should you work with? The pandemic-induced shift to digital shopping has made customers and firms more dependent on big digital platforms, including Google, Amazon, and Apple in the West and Alibaba and Tencent in Asia, along with a newer group of aggressive rivals such as China's Meituan, Russia's Yandex, and Singapore's Grab. Increasingly, a firm's competitive space will be determined by the platform it works with. As retailers seek to carve out a distinctive position for themselves, they will have to learn to work with such platforms to innovate and shape their value propositions. For example, Lin Qingxuan's conversion of shop assistants into online influencers involved working in close partnership with Alibaba. The choice of platform to partner with should be driven by its ability to help you develop the strategic digital capabilities and resources you need to provide value online.

Can you expand your customer niche? Digitization provides scope for niche businesses to expand their markets, perhaps across borders or into adjacencies not currently well served. Take the case of VIPKid, one of China's unicorns, which links teachers in English-speaking countries with Chinese children who want to learn English. With teaching switching from physical to online, the company has seen an opportunity to expand and deepen its links both with students in China and with teachers in the United States, Canada, and the UK. Niche companies in other industries may find potential for online offerings in segments already being served by strong digital providers, because of a selective wariness toward Big Tech that has become more apparent during the crisis. The distribution platform Bookshop.org, for example, links up independent bookstores that are worried about being exploited or ignored by Amazon. My Local Token also taps into a desire for alternatives to Big Tech, providing a cryptocurrency that enables local merchants to lower transaction fees, build customer loyalty, and reinvigorate small businesses. Ventures like these, whose value proposition is rooted in opposition to the network-maximizing ethos of Big Tech firms, could be described as Alt-Tech.

For the vast majority of companies, responding to demand shifts will involve at least some digital transformation—and probably a significant level of it. Microsoft CEO Satya Nadella observed at the end of April, "We have seen two years' worth of digital transformation in two months" among enterprise customers—and the result of those investments will persist long after the crisis. Employees at companies across the board have adjusted to working remotely and collaborating via video conferences. Many of those habits and patterns will stick.

Together, these factors explain why, in a survey of *Fortune* 500 CEOs, 63% said the Covid-19 crisis would accelerate their technological investment despite financial pressures. Only 6% said it would slow it down. But to make a difference,



Rather than hoard cash and agonize about what will befall a particular sector, CEOs need to engage in more-aggressive capital investment.

STRATEGY

those IT investments should focus on specific business-model innovations to address new opportunities, rather than increase the use of digital technologies in general.

REALLOCATE YOUR CAPITAL

It may be psychologically hard to do during a crisis, when cash flows are stressed, but now is precisely the time to take a few well-considered risks. Research shows that the most successful companies not only invest more than their peers in new opportunities but also put their eggs in fewer baskets, devoting more than 90% of net spending to segments with higher growth and returns. These companies recognize that a crisis offers an opportunity to carve out a new competitive position.

Unfortunately, many companies are still defaulting to traditional habits of "peanut-buttering" new funding across the business and, when necessary, making horizontal cuts rather than targeted ones. According to BCG's survey of leading firms, as of May 2020 only 39% of companies had modified their investment and capital allocation plans to target new growth drivers, and of that minority, only half had made investments in new business models.

To avoid that trap, evaluate your capital investment projects along two dimensions: their estimated value tomorrow, after taking into account the impact of demand shifts, and the amount of money needed to keep them alive today in light of often constrained operational cash flows. You can do this at the business unit level, but ideally you should dive deeper to examine specific operations or initiatives. Once you've completed this exercise, you'll most likely realize that you need to radically reallocate your capital investment.

In the current environment, larger corporations that are willing to entertain some risks are likely to benefit the most. Financial markets and institutions will be less ready or able to provide capital to smaller firms and start-ups right now. This means that large, established firms with relatively strong cash flows, and more access to capital as a result, will be well-placed to take advantage of the opportunities afforded by shifts in demand.

But large companies need to be prepared to take on those risks. Rather than hoard cash and agonize about what might befall a particular sector or geographic region, CEOs should engage in more-aggressive, dynamic capital investment. Heightened uncertainty means that organizations cannot accurately predict which businesses will be most successful tomorrow, so they need to take an experimental approach and take steps to diversify their portfolios to include a range of potential bets. The rapid pace of change means that they should frequently update their portfolios, reallocating funding as needed while making sure that they are balanced over time and fit the companies' long-term strategic priorities.

American Express has set the standard in this regard. During the 2008 global financial crisis, Amex was severely threatened by increasing defaults, decreasing consumer spending, and limited access to funding. The company launched a restructuring program to streamline the organization and reduce cash drain, and it entered into the deposit-gathering business in order to raise more capital. Those moves freed up or generated cash that Amex then directed toward longer-term investments in new partnerships and technology, which reimagined the company as not just a card provider but a platform-supported services company. As then-CEO Ken Chenault noted, "Even as we've cut operating expenses, we have continued to fund major growth initiatives." As a result, Amex's market capitalization grew more than 10-fold after the crisis.

IN TIMES OF CRISIS, it's easy for organizations to default to old habits—but those are often the times in which new approaches are most valuable. As companies position themselves for the new normal, they cannot afford to be constrained by traditional information sources, business models, and capital allocation behaviors. Instead they must highlight anomalies and challenge mental models, revamp their business models, and invest their capital dynamically to not only survive the crisis but also thrive in the post-crisis world.

HBR Reprint R2005E

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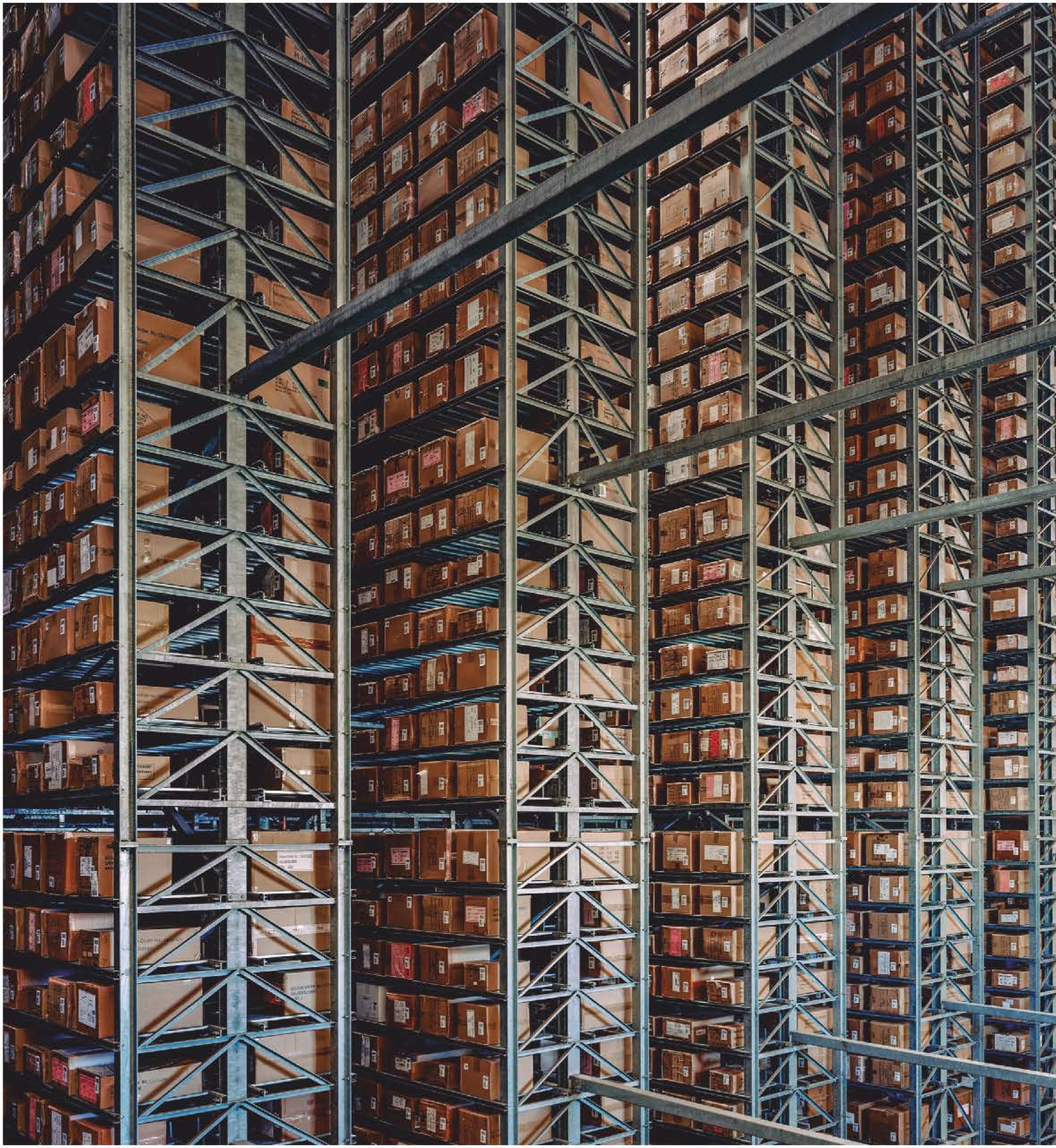

OPERATIONS

Global Supply Chains in a Post-Pandemic World

Companies need to make their **networks more resilient**. Here's how.

AUTHOR
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PHOTOGRAPHER
CHRISTOPH MORLINGHAUS

ABOUT THE ART

Christoph Morlinghaus is a photographer based in Hamburg whose work explores space and architecture. These photos were taken in various fulfillment centers and manufacturing plants in California and Germany.

When the Covid-19 pandemic subsides, the world is going to look markedly different. The supply shock that started in China in February and the demand shock that followed as the global economy shut down exposed vulnerabilities in the production strategies and supply chains of firms just about everywhere. Temporary trade restrictions and shortages of pharmaceuticals, critical medical supplies, and other products highlighted their weaknesses. Those developments, combined with the U.S.-China trade war, have triggered a rise in economic nationalism. As a consequence of all this, manufacturers worldwide are going to be under greater political and competitive pressures to increase their domestic production, grow employment in their home countries, reduce or even eliminate their dependence on sources that are perceived as risky, and rethink their use of lean manufacturing strategies that involve minimizing the amount of inventory held in their global supply chains.

Yet many things are *not* going to change. Consumers will continue to want low prices (especially in a recession), and firms won't be able to charge more just because they manufacture in higher-cost home markets. Competition will ensure that. In addition, the pressure to operate efficiently and use capital and manufacturing capacity frugally will remain unrelenting.

The challenge for companies will be to make their supply chains more resilient without weakening their competitiveness. To meet that challenge, managers should first understand their vulnerabilities and then consider a number of steps—some of which they should have taken long before the pandemic struck.

Uncover and Address the Hidden Risks

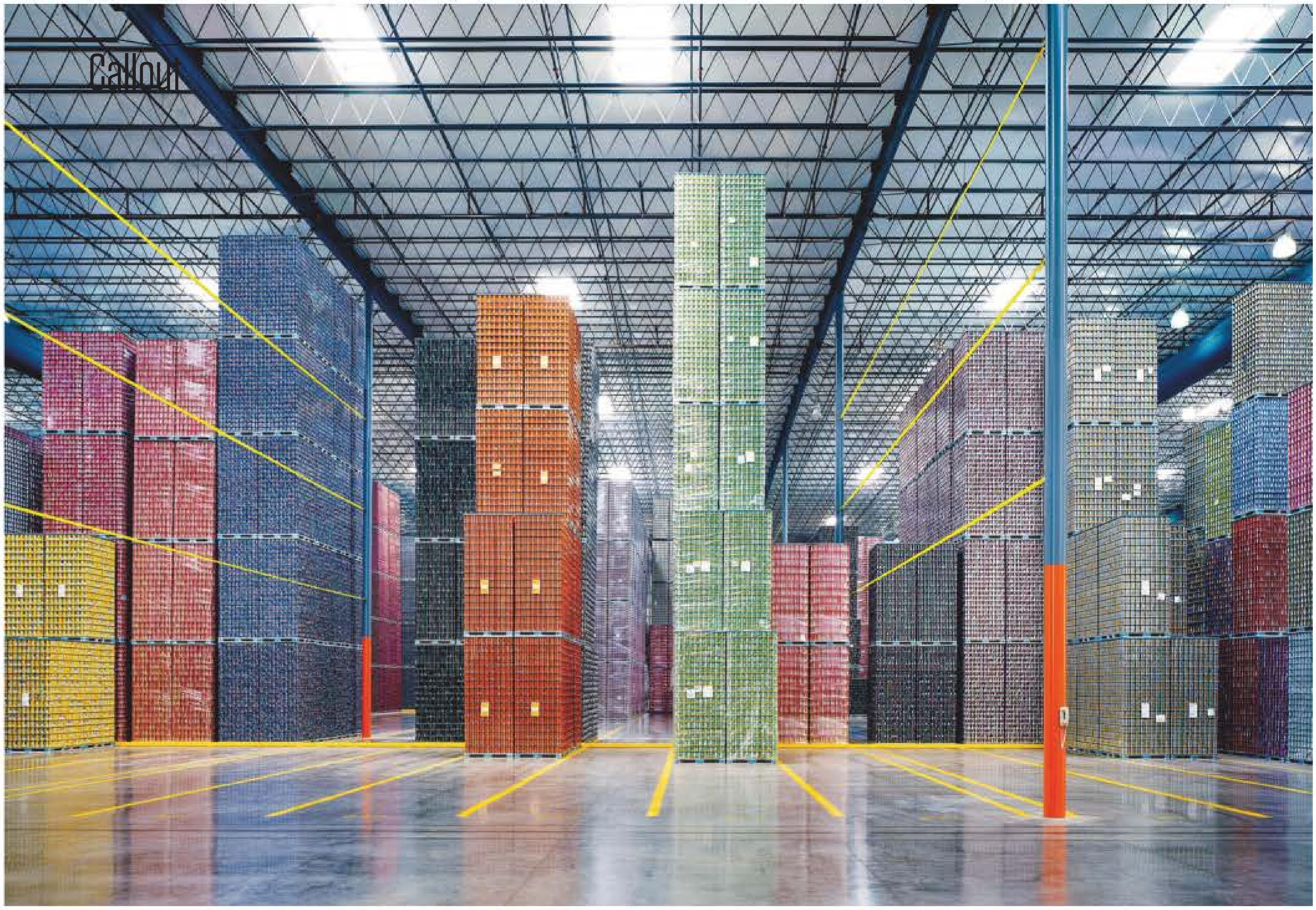
Modern products often incorporate critical components or sophisticated materials that require specialized technological skills to make. It is very difficult for a single firm to possess the breadth of capabilities necessary to produce everything by itself. Consider the growing electronics content in modern vehicles. Automakers aren't equipped to create the touchscreen displays in the entertainment and navigation systems or the countless microprocessors that control the engine, steering, and functions such as power windows and lighting. Another more arcane example is a group of chemicals known as nucleoside phosphoramidites and the associated reagents that are used for creating DNA and RNA sequences. These are essential for all companies developing DNA- or mRNA-based Covid-19 vaccines and DNA-based drug therapies, but many of the key precursor materials come from South Korea and China.

IDEA IN BRIEF

THE PROBLEM
Disruptions and shortages during the Covid-19 pandemic exposed weaknesses in global supply chains, which already faced threats from trade wars.

THE CAUSE
Many companies hadn't rigorously identified and addressed hidden vulnerabilities.

THE SOLUTION
Thoroughly map your supply chain to uncover risks. To mitigate them, line up alternative supply sources in diverse locations or increase stocks of critical materials. Revisit your product strategies. And explore new manufacturing technologies that could increase flexibility and resilience.



Manufacturers in most industries have turned to suppliers and subcontractors who narrowly focus on just one area, and those specialists, in turn, usually have to rely on many others. Such an arrangement offers benefits: You have a lot of flexibility in what goes into your product, and you're able to incorporate the latest technology. But you are left vulnerable when you depend on a single supplier somewhere deep in your network for a crucial component or material. If that supplier produces the item in only one plant or one country, your disruption risks are even higher.

Identify your vulnerabilities. Understanding where the risks lie so that your company can protect itself may require a lot of digging. It entails going far beyond the first and second tiers and mapping your full supply chain, including distribution facilities and transportation hubs. This is time-consuming and expensive, which explains why most major firms have focused their attention only on strategic direct suppliers that account for large amounts of their expenditures. But a surprise disruption that brings your business to a halt can be much more costly than a deep look into your supply chain is.

The goal of the mapping process should be to categorize suppliers as low-, medium-, or high-risk. To do that, Tom Linton, who served as a supply chain executive at several major companies, and MIT's David Simchi-Levi suggest applying metrics such as the impact on revenues if a certain source is lost, the time it would take a particular supplier's factory to recover from a disruption, and the availability of alternate sources. (Disclosure: I am on the boards of directors of Flex, a large manufacturing and supply-chain services provider where Linton is a senior adviser, and Veo Robotics, a company that has developed an advanced vision and 3D sensing system for industrial robots.) It's vital to ascertain how long your company could ride out a supply shock without shutting down, and how quickly an incapacitated node could recover or be replaced by alternate sites when an entire industry faces a disruption-related shortage.

The answers to those questions depend, in part, on whether your manufacturing capacity is flexible and can be reconfigured and redeployed as needs evolve (as is the case for many manual or semiautomated assembly operations) or whether it consists of highly specialized and difficult-to-replicate operations. Examples of the latter include production of the most advanced smartphone chips, which is concentrated in three facilities in Taiwan owned by the Taiwan Semiconductor Manufacturing Company; fabrication of exotic sensors and components, which happens largely in highly specialized facilities in a handful of countries, including Japan, Germany, and the United States; and refining of neodymium for the magnets in AirPods and electric-vehicle motors, almost all of which is done in China.

Once you've identified the risks in your supply chain, you can use that information to address them by either diversifying your sources or stockpiling key materials or items.

Diversify your supply base. The obvious way to address heavy dependence on one medium- or high-risk source (a single factory, supplier, or region) is to add more sources in locations not vulnerable to the same risks. The U.S.-China trade war has motivated some firms to shift to a "China plus one" strategy of spreading production between China and a Southeast Asian country such as Vietnam, Indonesia, or Thailand. But regionwide problems like the 1997 Asian financial crisis or the 2004 tsunami argue for broader geographic diversification.

Managers should consider a regional strategy of producing a substantial proportion of key goods within the region where they are consumed. North America might be served by shifting labor-intensive work from China to Mexico and Central America. To supply Western Europe with items used there, companies could increase their reliance on eastern EU countries, Turkey, and Ukraine. Chinese firms that want to protect their global market share are already looking to Egypt, Ethiopia, Kenya, Myanmar, and Sri Lanka for low-tech, labor-intensive production.

Reducing dependency on China will be easier for some products than others. Things like furniture, clothing, and household goods will be relatively easy to obtain elsewhere because the inputs—lumber, fabrics, plastics, and so forth—are basic materials. It will be harder to find alternative sources for sophisticated machinery, electronics, and other goods that incorporate components such as high-density interconnect circuit boards, electronic displays, and precision castings.

Building a new supplier infrastructure in a different country or region will take considerable time and money, as China's experience illustrates. When China first opened its special economic zones in the 1980s, it had almost no indigenous suppliers and had to rely on far-flung global supply chains and on logistics specialists who procured materials from around the world and kitted them for assembly in Chinese factories. Even with the support of government incentives, it took 20 years for the country to build a local base capable of supplying the vast majority of electronic components, auto parts, chemicals, and drug ingredients needed for domestic manufacturing.

Shifting production from China to Southeast Asian countries will necessitate different logistics strategies as well. Unlike China, those locations often do not have the efficient, high-capacity ports that can handle the largest container ships or the direct marine liner services to major markets. That will mean more transshipment through Singapore, Hong Kong, or other hubs and longer transit times to reach markets.

In the long run, though, it would be a mistake to cut China completely out of your supply picture. The country's deep supplier networks, its flexible and able workforce, and its large and efficient ports and transportation infrastructure mean that it will remain a highly competitive source for years to come. And because China has the second-largest economy in the world, it is important that firms maintain a presence to sell in its markets and obtain competitive intelligence.

Hold intermediate inventory or safety stock. If alternate suppliers are not immediately available, a company should determine how much extra stock to hold in the interim, in what form, and where along the value chain. Of course, safety stock, like any inventory, carries with it the risk of obsolescence and also ties up cash. It runs counter to the popular practice of just-in-time replenishment and lean inventories. But the savings from those practices have to be weighed against all the costs of a disruption, including lost revenues, the higher prices that would have to be paid for materials that are suddenly in short supply, and the time and effort that would be required to secure them.

Take Advantage of Process Innovations

As firms relocate parts of their supply chain, some might ask their suppliers to move with them, or they might bring some production back in-house. Either course—transplanting a production line or setting up a new one—is an opportunity to make major process improvements. This is because as part of the change, you can unfreeze your organizational routines and revisit design assumptions underpinning the original process. (One challenge for companies with existing production lines is that when those assets are fully depreciated, executives may be tempted to retain them rather than invest in newer, more competitive plants and equipment:

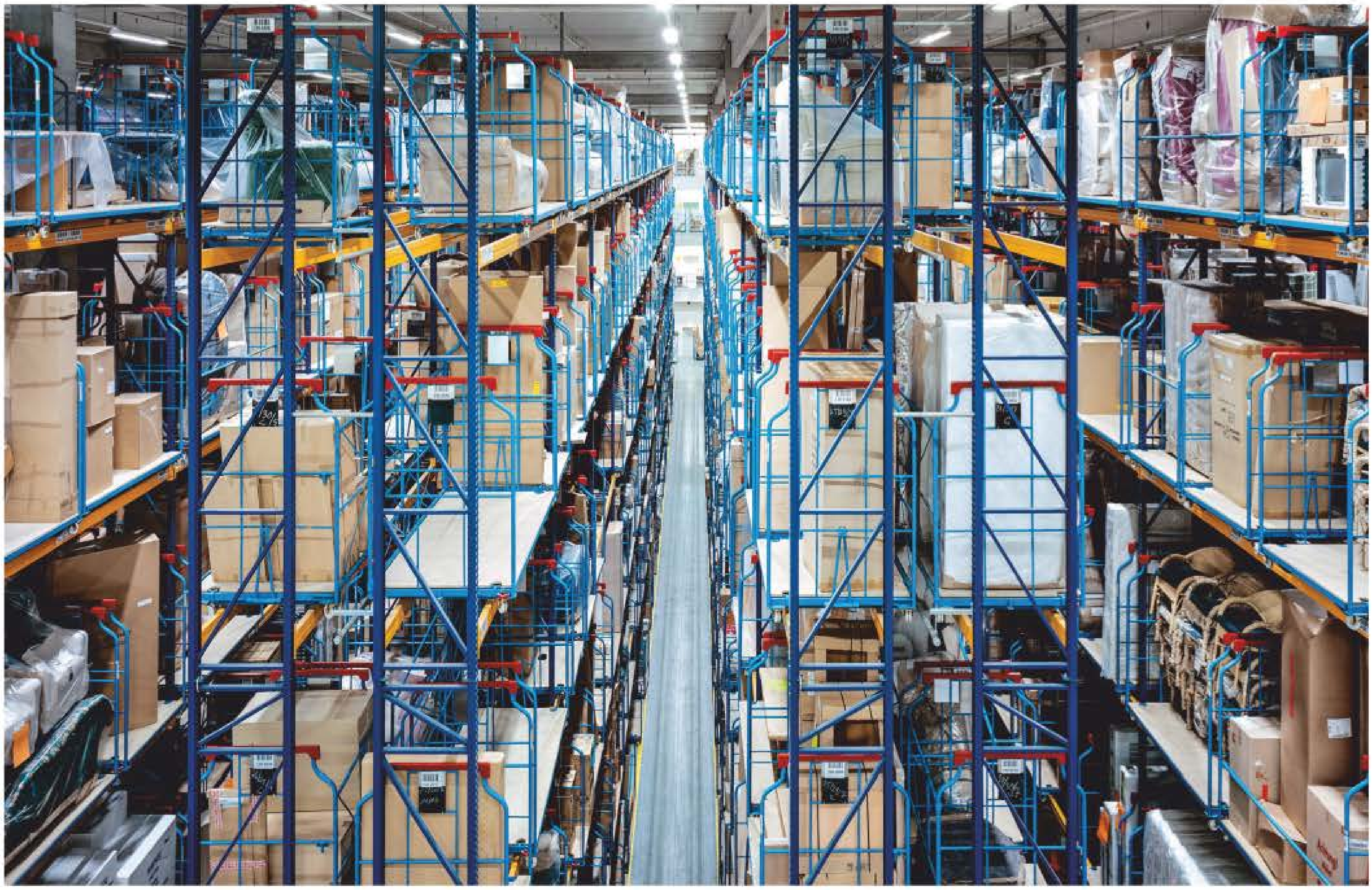
OPERATIONS

FURTHER READING

"Bringing Manufacturing Back to the U.S. Is Easier Said Than Done"
Willy C. Shih
HBR.org, April 15, 2020

"It's Up to Manufacturers to Keep Their Suppliers Afloat"
Tom Linton and Bindiya Vakil
HBR.org, April 14, 2020

"Coronavirus Is a Wake-Up Call for Supply Chain Management"
Thomas Y. Choi, Dale Rogers, and Bindiya Vakil
HBR.org, March 27, 2020



Since the depreciation expense is no longer factored into the calculated cost of production, the marginal cost of boosting production at a plant with idle capacity is lower.)

Several years ago I spent a week at a new Chinese factory of a major American industrial-equipment company. When creating it, the company had started with the designs of its U.S. and Japanese factories and then improved on them by introducing newer equipment and ways of working. The result was a streamlined operation that was much more efficient than those in the United States and Japan. When the company built its next new factory—in the United States—it repeated the process, using the Chinese factory as the starting point. Another example is the Flex factory complex in Guadalajara, Mexico. When increases in productivity plateaued, the company often moved smaller assembly lines to another building (or part of the same building). During each move, workers redesigned steps to use less space and less labor, boosting productivity.

New technologies already or soon will allow companies to lower their costs or switch more flexibly among the products they manufacture, rendering obsolete the installed bases of incumbent competitors or suppliers. Many of these advances also present an opportunity to make factories more environmentally sustainable. Examples include the following:

→ ***Automation:*** As the cost of automation declines and people see that robots can operate safely alongside humans, more kinds of work are being automated. The pandemic has made automation even more attractive, because social

"Coronavirus Is Proving We Need More Resilient Supply Chains" Tom Linton and Bindiya Vakil HBR.org, March 5, 2020	**"The 3-D Printing Playbook"** Richard A. D'Aveni HBR, July–August 2018	**"Find the Weak Link in Your Supply Chain"** David Simchi-Levi HBR.org, June 9, 2015	**"From Superstorms to Factory Fires: Managing Unpredictable Supply-Chain Disruptions"** David Simchi-Levi, William Schmidt, and Yehua Wei HBR, January–February 2014	**"Innovation Killers: How Financial Tools Destroy Your Capacity to Do New Things"** Clayton M. Christensen, Stephen P. Kaufman, and Willy C. Shih HBR, January 2008	**"Does America Really Need Manufacturing?"** Gary P. Pisano and Willy C. Shih HBR, March 2012	**"Restoring American Competitiveness"** Gary P. Pisano and Willy C. Shih HBR, July–August 2009

distancing in factories is now a necessity. As a result of these developments, it's becoming more practical to return off-shored production to higher-cost countries. Robotic palletizers, which can sharply reduce the need for labor in preparing products for shipping, will pay for themselves quickly, as will automated optical inspection systems for quality control.

→ ***New processing technologies:*** The latest chemical manufacturing equipment uses less energy and solvents, produces less waste, is less capital-intensive, and is less expensive to operate. Similarly, a new generation of compact bioreactors could allow makers of biopharmaceuticals and vaccines to produce smaller batch sizes economically.

→ ***Continuous-flow manufacturing:*** This innovation could significantly increase the resilience of the supply chain for small-molecule generic drugs by making producers less dependent on imported active pharmaceutical ingredients (APIs). The U.S. Defense Advanced Research Projects Agency (DARPA) has funded one initiative in this area: the development of flexible miniaturized manufacturing platforms and methods for producing multiple APIs from shelf-stable precursors as specific medical needs arise.

→ ***Additive manufacturing:*** This production method, also known as 3D printing, can dramatically reduce the number of steps required to make complex metal shapes; it can also lessen dependence on distant suppliers of the machinery and tools needed for, say, the injection molding of plastics. Rapid advances in 3D printing are making it possible to economically produce an ever-expanding array of items in much higher quantities.

In many industries, technologies such as these promise to upend the traditional strategy of seeking economies of scale by concentrating production in a few large facilities. They will allow companies to replace large plants that serve global markets with a network of smaller, geographically distributed factories that is more resistant to disruption.

Revisit the Trade-Off Between Product Variety and Capacity Flexibility

During the pandemic, when demand surged in many product categories, manufacturers struggled to shift from supplying one market segment to supplying another, or from making one kind of product to making another. A case in point is the U.S. groceries market, where companies had difficulty adjusting to the plunge in demand from restaurants and cafeterias and the rise in consumer demand. SKU proliferation—the addition of different forms of the same product to serve different market segments—was partly responsible. For example, one obstacle to meeting heightened demand for toilet paper at supermarkets was that manufacturers had to change over their production lines, because consumers prefer soft multi-ply rolls rather than the thinner toilet paper that many hotels and offices purchased in much larger rolls. Adding to the complexity, different retail chains wanted their own packaging and assortments.

Researchers such as Barry Schwartz of Swarthmore College and Patrick Spenner, a consultant who was formerly at CEB (now part of Gartner), have long argued that more choice isn't always better. Separating demand into many different SKUs makes forecasting more difficult, and trying to fill needs by substituting products during periods of shortage causes a real scramble. The lesson: Companies should reconsider the pros and cons of producing numerous product variations.

THE ECONOMIC TURMOIL caused by the pandemic has exposed many vulnerabilities in supply chains and raised doubts about globalization. Managers everywhere should use this crisis to take a fresh look at their supply networks, take steps to understand their vulnerabilities, and then take actions to improve robustness. They can't and shouldn't totally back away from globalization; doing so will leave a void that others—companies that *don't* abandon globalization—will gladly and quickly fill. Instead, leaders should find ways to make their businesses work better and give themselves an advantage. It's time to adopt a new vision suitable to the realities of the new era—one that still leverages the capabilities that reside around the world but also improves resilience and reduces the risks from future disruptions that are certain to occur.

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LEADERSHIP

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TED + CHELSEA CAVANAUGH

A New Model for Ethical Leadership

Create more value for society.

IDEA IN BRIEF

THE CHALLENGE
Systematic cognitive barriers can blind us to our own unethical behaviors and decisions, hampering our ability to maximize the value we create in the world.

THE SOLUTION
We have both an intuitive system for ethical decision-making and a more deliberative one; relying on the former leads to less-ethical choices. We need to consciously engage the latter.

IN PRACTICE
To make more-ethical decisions, compare options rather than evaluate them singly; disregard how decisions would affect you personally; make trade-offs that create more value for all parties in negotiations; and allocate time wisely.

autonomous vehicles will soon take over the road. This new technology will save lives by reducing driver error, yet accidents will still happen. The cars' computers will have to make difficult decisions: When a crash is unavoidable, should the car save its single occupant or five pedestrians? Should the car prioritize saving older people or younger people? What about a pregnant woman—should she count as two people? Automobile manufacturers need to reckon with such difficult questions in advance and program their cars to respond accordingly.

In my view, leaders answering ethical questions like these should be guided by the goal of creating the most value for society. Moving beyond a set of simple ethical rules ("Don't lie," "Don't cheat"), this perspective—rooted in the work of the philosophers Jeremy Bentham, John

Executives will unconsciously overlook serious wrongdoing in their company if it benefits them or the organization.

LEADERSHIP

Stuart Mill, and Peter Singer—provides the clarity needed to make a wide variety of important managerial decisions.

For centuries philosophers have argued over what constitutes moral action, theorizing about what people *should* do. More recently behavioral ethicists in the social sciences have offered research-based accounts of what people *actually* do when confronted with ethical dilemmas. These scientists have shown that environment and psychological processes can lead us to engage in ethically questionable behavior even if it violates our own values. If we behave unethically out of self-interest, we're often unaware that we're doing so—a phenomenon known as *motivated blindness.* For instance, we may claim that we contribute more to group tasks than we actually do. And my colleagues and I have shown that executives will unconsciously overlook serious wrongdoing in their company if it benefits them or the organization.

Maximizing Value

My approach to improving ethical decision-making blends philosophical thought with business-school pragmatism. I generally subscribe to the tenets of utilitarianism, a philosophy initially offered by Bentham, which argues that ethical behavior is behavior that maximizes "utility" in the world—what I'll call *value* here. This includes maximizing aggregate well-being and minimizing aggregate pain, goals that are helped by pursuing efficiency in decision-making, reaching moral decisions without regard for self-interest, and avoiding tribal behavior (such as nationalism or in-group favoritism). I'm guessing that you largely agree with these goals, even if you hew to philosophies that focus on individual rights, freedom, liberty, and autonomy. Even if you are committed to another philosophical perspective, try to appreciate the goal of creating as much value as possible within the limits of that perspective.

In general, the decisions endorsed by utilitarianism align with most other philosophies most of the time and so provide a useful gauge for examining leadership ethics. But like other philosophies, strict utilitarianism doesn't always serve up easy answers. Its logic and limits can be seen, for example, in the choices facing manufacturers of those self-driving cars. If the goal is simply to maximize value, the automobiles should be programmed to limit collective suffering and loss, and the people in the car shouldn't be accorded special status. By that calculus, if the car must choose between sparing the life of its single occupant and sparing the lives of five people in its path, it should sacrifice the passenger.

Clearly this presents a host of issues—What if the passenger is pregnant? What if she's younger than the pedestrians?—and no simple utilitarian answer for how best to program the car exists.

Furthermore, manufacturers could reasonably argue that people would be less likely to buy a car that doesn't prioritize their lives. So car companies that didn't prioritize the passenger would be in a weaker competitive position than those that did—and car buyers might well opt for less-safe cars that are driven by humans. Nevertheless, utilitarian values can be usefully applied in considering what sort of regulation could help create the greatest benefit for all.

Although the autonomous-vehicle case represents a tougher ethical decision than most managers will ever face, it highlights the importance of thinking through how your decisions, large and small, and the decisions of those you manage, can create the most value for society. Often people think of ethical leaders as those who adhere to the simple rules I've mentioned. But when leaders make fair personnel decisions, devise trade-offs that benefit both sides in a negotiation, or allocate their own and others' time wisely, they are maximizing "utility"—creating value in the world and thereby acting ethically and making their organizations more ethical as a whole.

Overcoming Barriers

Consider two questions posed by the psychologist Daniel Kahneman and colleagues:

1. How much would you pay to save 2,000 migrating birds from drowning in uncovered oil ponds?

2. How much would you pay to save 200,000 migrating birds from drowning in uncovered oil ponds?

Their research shows that people who are asked the first question offer about the same amount as do people who are asked the second question. Of course, if our goal is to create as much value as possible, a difference in the number of birds should affect how much we choose to pay. This illustrates the limitations of our ethical thinking and suggests that improving ethical decision-making requires deliberately making rational decisions that maximize value rather than going with one's gut.

The concept of *bounded rationality,* which is core to the field of behavioral economics, sees managers as wanting to be rational but influenced by biases and other cognitive limitations that get in the way. Scholars of decision-making don't expect people to be fully rational, but they argue that we should aspire to be so in order to better align our behavior with our goals. In the ethics domain we struggle with *bounded ethicality*—systematic cognitive barriers that prevent us from being as ethical as we wish to be. By adjusting our personal goals from maximizing benefit for ourselves (and our organizations) to behaving as ethically as possible, we can establish a sort of North Star to guide us. We'll never reach it, but it can inspire us to create more good, increasing well-being for everyone. Aiming in that direction can move us toward increasing what I call *maximum sustainable goodness*: the level of value creation that we can realistically achieve.

Trying to create more value requires that we confront our cognitive limitations. As readers of Kahneman's book *Thinking, Fast and Slow* know, we have two very different modes of decision-making. System 1 is our intuitive system, which is fast, automatic, effortless, and emotional. We make most decisions using System 1. System 2 is our more deliberative thinking, which is slower, conscious, effortful, and logical. We come much closer to rationality when we use System 2. The philosopher and psychologist Joshua Greene has developed a parallel two-system view of ethical decision-making: an intuitive system and a more deliberative one. The deliberative system leads to more-ethical behaviors. Here are two examples of strategies for engaging it:

First, make more of your decisions by comparing options rather than assessing each individually. One reason that intuition and emotions tend to dominate decision-making is that we typically think about our options one at a time. When evaluating one option (such as a single job offer or a single potential charitable contribution), we lean on System 1 processing. But when we compare multiple options, our decisions are more carefully considered and less biased, and they create more value. We donate on the basis of emotional tugs when we consider charities in isolation; but when we make comparisons across charities, we tend to think more about where our contribution will do the most good. Similarly, in research with the economists Iris Bohnet and Alexandra van Geen, I found that when people evaluate job candidates one at a time, System 1 thinking kicks in, and they tend to fall back on gender stereotypes. For example, they are more likely to hire men for mathematical tasks. But when they compare two or more applicants at a time, they focus more on job-relevant criteria, are more ethical (less sexist), hire better candidates, and obtain better results for the organization.

The second strategy involves adapting what the philosopher John Rawls called the *veil of ignorance.* Rawls argued that if you thought about how society should be structured without knowing your status in it (rich or poor, man or woman, Black or white)—that is, behind a veil of ignorance—you would make fairer, more-ethical decisions. Indeed, my recent empirical research with Karen Huang and Joshua Greene shows that those who make ethical decisions behind a veil of ignorance do create more value. They are more likely, for instance, to save more lives with scarce resources (say, medical supplies), because they allocate them in less self-interested ways. Participants in our study were asked whether it was morally acceptable for oxygen to be taken away from a single hospital patient to enable surgeries on nine incoming earthquake victims. They were more likely to agree that it was when the "veil" obscured which of the 10 people they might be. Not knowing how we would benefit (or be harmed) by a decision keeps us from being biased by our position in the world.

A related strategy involves obscuring the social identity of those we judge. Today more and more companies eliminate names and pictures from applications in an initial hiring review to reduce biased decision-making and increase the odds of hiring the most-qualified candidates.

Creating Value Through Trade-offs

Which is more important to you: your salary or the nature of your work? The wine or the food at dinner? The location of your home or its size? Strangely, people are willing to answer these questions even without knowing how much salary they'd need to forgo to have more-interesting work, or how much more space they could have if they lived five miles farther from work or school, and so forth. The field of decision analysis argues that we need to know how much of one attribute will be traded for how much of the other to make wise decisions. Selecting the right job, house, To the extent that you care about others and society at large, your decisions in negotiation should tilt toward trying to create value for all parties.

vacation, or company policy requires thinking clearly about the trade-offs.

The easiest trade-offs to analyze involve our own decisions. Once two or more people are engaged in a decision and their preferences differ, it's a negotiation. Typically, negotiation analysis focuses on what is best for a specific negotiator. But to the extent that you care about others and society at large, your decisions in negotiation should tilt toward trying to create value for all parties.

This is easy to see in a common family negotiation—one in which I've been involved hundreds of times. Imagine that you and your partner decide one evening to go out to dinner and then watch a movie. Your partner suggests dinner at an upscale Northern Italian restaurant that has recently reopened. You counterpropose your favorite pizza joint. The two of you compromise on a third establishment, which has good Italian food and pizza that's a bit fancier than what your preferred pizza place offers. During dinner your partner proposes that you watch a documentary; you counterpropose a comedy; and you compromise on a drama. After a good (but not great) evening, you both realize that because your partner cared more about dinner and you cared more about the movie, choosing the upscale Northern Italian restaurant and the comedy would have made for a better evening.

This comparatively trivial example illustrates how to create value by looking for trade-offs. Negotiation scholars have offered very specific advice on ways to find more sources of value. These strategies include building trust, sharing information, asking questions, giving away value-creating information, negotiating multiple issues simultaneously, and making multiple offers simultaneously.

If you're familiar with negotiation strategy, you appreciate that most important negotiations involve a tension between *claiming* value for yourself (or your organization) and *creating* value for both parties—enlarging the pie. Even when they know that the size of the pie isn't fixed, many negotiators worry that if they share the information needed to create value for all, the other party may be able to claim more of the value created—and they don't want to be suckers. All the leading books on managerial negotiations highlight the need to create value while managing the risk of losing out.

Whereas many experts would define negotiation ethics in terms of not cheating or lying, I define it as putting the focus on creating the most value (which is of course helped by being honest). You don't ignore value claiming but, rather, consciously prevent it from getting in the way of making the biggest pie possible. Even if your counterpart claims a bit of extra value as a result, a focus on value creation is still likely to work for you in the long run. Your losses to the occasional opportunistic opponent will be more than compensated for by all the excellent relationships you develop as an ethical negotiator who is making the world a bit better.

Using Time to Create Value

People tend not to think of allocating time as an ethical choice, but they should. Time is a scarce resource, and squandering it—your own or others'—only compromises value creation. Conversely, using it wisely to increase collective value or utility is the very definition of ethical action.

Consider the experience of my friend Linda Babcock, a professor at Carnegie Mellon University, who noticed that her email was overflowing with requests for her to perform tasks that would help others but provide her with little direct benefit. She was happy to be a good citizen and do some of them, but she didn't have time to take on all of them. Suspecting that women were being asked more often than men to perform tasks like these, Linda asked four of her female colleagues to meet with her to discuss her theory. At that gathering the I Just Can't Say No club was born. These female professors met socially, published research, and helped one another think more carefully about where their time would create the most value.

Their concept has implications for all of us who claim we're short on time: You can consider a request for your time as a request for a limited resource. Rather than making intuitive decisions out of a desire to be nice, you can analyze how your time, and that of others, will create the most value in the world. That may free you to say no, not out of laziness but out of a belief that you can create more value by agreeing to different requests.

Allocating tasks among employees offers managers other opportunities to create value. One helpful concept is the notion of *comparative advantage,* introduced by the British political economist David Ricardo in 1817. Many view it as

As a leader, think about how you can influence your colleagues with the norms you set and the decision-making environment you create.

an economic idea; I think of it as a guide to ethical behavior. Assessing comparative advantage involves determining how to allow each person or organization to use time where it can create the most value. Organizations have a comparative advantage when they can produce and sell goods and services at a lower cost than competitors do. Individuals have a comparative advantage when they can perform a task at a lower opportunity cost than others can. Everyone has a source of comparative advantage; allocating time accordingly creates the most value.

Ricardo's concept can be seen in many organizations where one individual is truly amazing at lots of things. Picture a tech start-up where the founder has the greatest technical ability but it's only a bit greater than that of the next-most-talented technical person. Yet the founder is dramatically more effective than all other employees at pitching the company to investors. She has an absolute advantage on technical issues, but her comparative advantage is in dealing with external constituencies, and more value will be created when she focuses her attention there. Many managers instinctively leverage their and their employees' absolute advantage rather than favoring their comparative advantage. The result can be a suboptimal allocation of resources and less value creation.

Integrating Your Ethical Self

Whatever your organization, I'm guessing it's quite socially responsible in some ways but less so in others, and you may be uncomfortable with the latter. Most organizations get higher ethical marks on some dimensions than on others. I know companies whose products make the world worse, but they have good diversity and inclusion policies. I know others whose products make the world better, but they engage in unfair competition that destroys value in their business ecosystem. Most of us are ethically inconsistent as well. Otherwise honest people may view deception in negotiation with a client or a colleague as completely acceptable. If we care about the value or harm we create, remembering that we're likely to be ethical in some domains and unethical in others can help us identify where change might be most useful.

Andrew Carnegie gave away 90% of his wealth—about $350 million—to endow an array of institutions, including Carnegie Hall, the Carnegie Foundation, and more than 2,500 libraries. But he also engaged in miserly, ineffective, and probably criminal behavior as a business leader, such as destroying the union at his steel mill in Homestead, Pennsylvania. More recently, this divide between good and bad is evident in the behavior of the Sackler family. The Sacklers have made large donations to art galleries, research institutes, and universities, including Harvard, with money earned through the family business, Purdue Pharma, which made billions by marketing—and, most experts argue, overmarketing—the prescription painkiller OxyContin. By 2018 OxyContin and other opioids were responsible for the deaths of more than 100 Americans a day.

All of us should think about the multiple dimensions where we might create or destroy value, taking credit when we do well but also noticing opportunities for improvement. We tend to spend too little time on the latter task. When I evaluate various aspects of my life, I can identify many ways in which I have created value for the world. Yet I can also see where I might have done far better. My plan is to do better next year than last year. I hope you will find similar opportunities in your own life.

Increasing Your Impact as a Leader

Leaders can do far more than just make their own behavior more ethical. Because they are responsible for the decisions of others as well as their own, they can dramatically multiply the amount of good they do by encouraging others to be better. As a leader, think about how you can influence your colleagues with the norms you set and the decision-making environment you create.

People follow the behavior of others, particularly those in positions of power and prestige. Employees in organizations with ethical leaders can be expected to behave more ethically themselves. One of my clients, a corporation that gets rave reviews for its social-responsibility efforts, created an internal video featuring four high-level executives, each telling a story about going above the boss's head at a time when the boss wasn't observing the ethical standards espoused by the corporation. The video suggested that questioning authority

LEADERSHIP

is the right thing to do when that authority is destroying societal value. By establishing norms for ethical behavior—and clearly empowering employees to help enforce it—leaders can affect hundreds or even thousands of other people, motivating and enabling them to act more ethically themselves.

Leaders can also create more value by shaping the environment in which others make decisions. In their book *Nudge,* Richard Thaler and Cass Sunstein describe how we can design the "architecture" surrounding choices to prompt people to make value-creating decisions. Perhaps the most common type of nudge involves changing the default choice that decision-makers face. A famous nudge encourages organ donation in some European nations by enrolling citizens in the system automatically, letting them opt out if they wish. The program increased the proportion of people agreeing to be donors from less than 30% to more than 80%.

Leaders can develop new, profitable products and make the world a better place through effective nudging. After publishing a paper on ethical behavior, for example, I received an email from a start-up insurance executive named Stuart Baserman. His company, Slice, sells short-term insurance to people who run home-based businesses. He was looking for ways to get policyholders to be more honest in the claims process, and we worked together to develop some nudges.

We created a process whereby claimants use a short video taken with a phone to describe a claim. This nudge works because most people are far less likely to lie in a video than in writing. Claimants are also asked verifiable questions about a loss, such as "What did you pay for the object?" or "What would it cost to replace it on Amazon.com?"—not "What was it worth?" Specific questions nudge people to greater honesty than ambiguous questions do. And claimants are asked who else knows about the loss, because people are less likely to be deceptive when others might learn about their corruption. These nudges not only reduce fraud and make the insurance business more efficient but also allow Slice to benefit by helping people to be ethical.

NEW ETHICAL CHALLENGES confront us daily, from what algorithm to create for self-driving cars to how to allocate scarce medical supplies during a pandemic. As technology creates amazing ways to improve our lives, our environmental footprint becomes a bigger concern. Many countries struggle with how to act when their leaders reject System 2 thinking and even truth itself. And in too many countries, finding collective value is no longer a national goal. Yet we all crave direction from our leaders. I hope that the North Star I've described influences you as a leader. Together we can do our best to be *better.*

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WHEN IT'S TIME TO PIVOT,

How to sell stakeholders on a new strategy

ENTREPRENEURSHIP

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WHAT'S YOUR STORY?

PHOTOGRAPHER ROBERT GOETZFRIED

IDEA IN BRIEF

THE DILEMMA

Entrepreneurs need a good story to rally stakeholders behind their ventures. But at some point many founders realize that they need to pivot and alter their strategy and business model. How can they avoid losing support?

THE MESSAGE

Early on, effective entrepreneurs act like politicians. They craft broad narratives—umbrella ambitions rather than narrow solutions—that leave them room to maneuver. When they change course, they can signal that their new model still honors their original ambition.

THE AFTERMATH

Pivoting entrepreneurs should explain shifts with humility—and express empathy about the inconvenience they will cause existing customers, employees, and partners.

IN 1908

Roald Amundsen of Norway planned an expedition to the North Pole. He got scientists to share their time and equipment, won a grant from the Norwegian Parliament, and persuaded other backers to pour huge amounts of money into the project. He borrowed a 400-ton three-masted schooner called *Fram* and recruited men willing to risk their lives on a journey through the icy Bering Strait. Ordinary Norwegians cheered Amundsen on, imagining he would plant their flag in a land where no one had ever been. But just before setting sail, Amundsen got word that the Americans Robert Peary and Frederick Cook had beaten him to the North Pole. Now what?

Amundsen's quandary is all too familiar to entrepreneurs. Launching an ambitious endeavor requires enormous support. You need to attract funding and staff. You

The more specific a start-up's narrative is, the more likely it is to turn out to be wrong. Savvy entrepreneurs craft broad narratives instead.

ENTREPRENEURSHIP

need media coverage to build credibility. To get all those things, you need a good story. The story usually focuses on a problem and a solution, on a plan and a goal, and highlights the talents of the leadership team. It's told with passion and conviction. With any luck, enthusiasm builds around the story, and investors pile in, along with employees and other partners and, eventually, customers. But often innovators realize they've made a mistake—that the plan was wrong, that they've gotten lots of people to give time and money and effort to something that won't work. They need to pivot.

Changing direction is, in theory, a good thing for a business. The path to enduring success is rarely a straight line. Cornelius Vanderbilt switched from steamships to railroads, William Wrigley from baking powder to gum. Twitter launched as a podcast directory, Yelp began as an automated email service, and YouTube was once a dating site. Research shows that new ventures that reinvent their businesses—even multiple times—cut their chances of failure by conserving resources while continuing to learn more about customers, business partners, and new technologies.

But pivots can incur a penalty if they're not correctly managed. A reorientation is an implicit admission that the plan to which the founders were once deeply committed was flawed. This deviation can be jarring and can suggest a lack of consistency and competence. Investors, employees, journalists, and customers require a coherent explanation of why things went wrong and what happens next. They need to be persuaded to stick around.

Like scientists, entrepreneurs generate and test hypotheses to find viable solutions to offer; that's the basis of the lean start-up approach to launching companies. But entrepreneurs must also resemble adept politicians by convincingly justifying shifts from initial positions and managing diverse audiences along the way. This blend of skills is likely to become even more important during the upheaval caused by Covid-19. Many businesses that were experiencing high growth until the pandemic have seen revenue fall and are scrambling to devise new business models and reformulate their strategies. Start-ups may find tremendous opportunity in the early phases of the crisis—for instance, by servicing the "stay at home" economy—only to see it disappear when social distancing eases. The long-term impact on consumer behavior is anyone's guess. The companies that are likely to endure will be those that nimbly adapt—and can effectively get stakeholders on board with change.

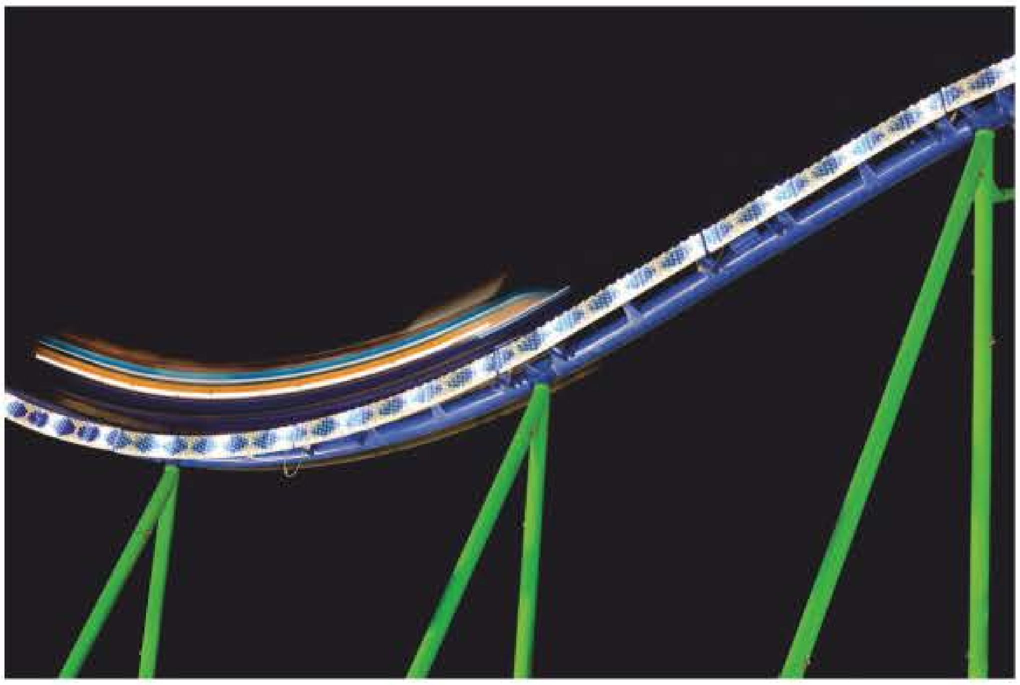
So how can entrepreneurs do this? In recent years we've interviewed hundreds of founders, corporate innovation chiefs, market analysts, and financial journalists, and reviewed dozens of press releases, analyst reports, and media stories of both high- and low-performing companies, many in new technology sectors. From this research we've identified a sequence of stratagems that are critical to establishing and maintaining stakeholder support during major reboots.

THE PITCH

FOCUS ON THE BIG PICTURE

To build early credibility—particularly with investors—entrepreneurs must have a unique, concrete plan that meets a specific market need or solves a specific problem. It should include a well-formed product concept and a path to growth and profitability. Yet in their eagerness to gain initial support for their solutions, entrepreneurs often box themselves into a corner: The more specific a start-up's narrative is, the more likely it is to turn out to be wrong. To avoid this trap, our research shows, savvy entrepreneurs craft broad narratives—umbrella ambitions rather than narrow solutions—that leave room to maneuver along the way.

That requires resisting the urge to be too precise about product features or functionality—particularly early on. Like good political campaigns, the most effective pitches have emotional appeal and underscore a larger aim. They don't lay out a road map; they promise to reach a destination. That doesn't mean that entrepreneurs give up credibility or are seen as undisciplined, however. In fact, the use of big, abstract ideas encourages audiences to see what they want to see—in much the same way, political science research has shown, that voters respond positively to candidates who take ambiguous positions on issues, leaving their stance open to different interpretations (which can also help them later avoid charges of "flip-flopping"). Our research indicates that entrepreneurs who follow a similar approach with stakeholders generate more enthusiasm and support and, ultimately, get higher valuations.



Our business-school colleagues often scold companies for having vision statements that are vague or filled with platitudes. But for early-stage start-ups, emphasizing widely accepted principles (particularly populist ones) can be useful when seeking to sell stakeholders on a pivot. Consider the early days of Netflix. Founder Reed Hastings, anticipating a later switch to streaming video, started with the stated purpose of offering the best home video viewing for everyone—not DVDs by mail, which was the company's actual product. As the business pivoted to digital distribution, the original sweeping ambition still made sense. Even the company name supported its future course. Hastings said he wanted to be ready for video on demand when technology permitted, and that's why he called the company Netflix.

Yet, to satisfy backers' demand for unique pitches, entrepreneurs may too explicitly spell out who they are and what they do before those things are entirely clear. When they change course, they can run into image problems by looking inconsistent, confusing, or overly opportunistic. Magic Leap, a pioneer in augmented reality, is a good example. Pitching its nascent product as a high-quality gaming headset for consumers, the company carefully crafted a whimsical image with slogans like "Free Your Mind" and "Enter the Magicverse." But when the uptake of augmented reality by both game developers and consumers was slower than expected, the firm's executives began looking to other markets, bidding on a government contract to sell AR headsets to the army. Magic Leap didn't win the contract, and in a column published by *Quartz,* it was ridiculed for trying to pivot from "delightful consumer tech" to "lethal military gear." (The company announced a full-scale pivot to enterprise applications in April 2020 and hired a top executive from Microsoft as its new CEO in July.)

THE PIVOT

SIGNAL CONTINUITY

The human mind values consistency. Our research shows that audiences are thrown by a confusing plot; they view inconsistent organizations as less legitimate and ultimately less deserving of their support. But they're less likely to register deviations as significant if they seem to be in line with larger aims. The link between the new strategic direction and the initial pitch isn't always obvious, however; to maintain credibility and avoid penalty, founders need to make the connection clear.

When Steph Korey and Jen Rubio, the cofounders of the luggage start-up Away, realized that their first suitcases would never be ready for Christmas (as they'd promised investors, customers, journalists, and other stakeholders), they threw themselves into making a coffee-table book about travel instead. Though it came with a gift card redeemable for a bag the next year, the move seemed like a radical departure from their plan and could have easily unnerved supporters and led them to abandon the young venture. Yet the founders maintained credibility and support by spelling out how the move fit with their higher-level goal: building a travel and lifestyle brand. While luggage was a key part of that brand, a book worked, too. Investors were convinced. And so were journalists. A number of media outlets ran holiday gift-buying stories about a suitcase that didn't yet exist. Within a few weeks 2,000 books had been sold (meaning 2,000 bags had been preordered), and the founders requested a second production run. (Korey stepped down as co-CEO in July.)

The linking tactic works even better if the overriding aim matches a larger societal objective. In fact, research suggests that people engaged in significant missions are less bothered

by course corrections along the way. Two companies we studied in depth illustrate this point. Both started by offering a niche service in which members of an online community could mirror the financial transactions of skilled investors. The idea was to attract investors to the sites, identify the most talented of them, and then make money from their strategies. The companies started within six months of each other and had similar amounts of funding and teams with roughly the same education and experience levels. Eventually both pivoted to become direct-to-consumer investing services with the potential to displace human financial advisers with an automated, software-based service. Yet one became the leader in the automated investment-advisory sector, with more than $1 billion under management, while the other was forced to sell off its assets and shut down. After conducting an in-depth comparative analysis, we concluded that a key reason for their divergent trajectories boiled down to the way the two companies handled their stakeholders. The successful company never wavered from its overriding mission to "democratize finance," even as it shifted strategies. The CEO positioned the change in business plans as just another way to meet the same goal to which stakeholders were committed.

The unsuccessful company, on the other hand, reframed each new business iteration with a new goal, going from "Bring transparency to investing information" to "Make investing social" to "Trusted investment advisory." Worse, unlike his counterpart at his competitor, who warned stakeholders of impending changes, the CEO and his management team barely communicated with the affected stakeholders, which further sowed doubt that these transitions were indeed wise. Speaking to us after his company's demise, the CEO pointed to messaging whiplash as a key reason for the organization's inability to keep stakeholders on board. "After you pivot, your new positioning can be confusing to customers and partners who paid attention to your original PR," he explained.

Confusion among key stakeholders is ultimately what also doomed Anki, a toy robotics company that closed its doors in 2019 after a round of follow-on financing suddenly fell through. Founded in 2010 by three graduates of the Robotics Institute at Carnegie Mellon, Anki raised nearly $200 million from high-profile investors like Andreessen Horowitz. Initially, the cofounders sought to "bring artificial intelligence and robotics into [consumers'] daily lives." The three crafted a compelling narrative about how AI technology was focused on enterprise applications, leaving consumer applications wide open. They laid out a clear road map for investors that started with toys and expanded to other fun consumer products, several of which launched to critical acclaim and became staples at major toy retailers. By 2018, however, it was clear that Anki's technology didn't provide enough value to kids. The cofounders needed to pivot away from making consumer products altogether, so they discarded the vision of Anki as a new breed of toy company. It wasn't long before stakeholders turned on them: Employees began complaining that management lacked vision, and investors became skeptical of the company's long-term viability. Having failed to link the pivot to the original aims of the company, the management team couldn't win over investors. A major financing deal fell through, and Anki was forced to shut down.

While pivoting away from an overly specific initial pitch is difficult, it's not impossible to save face and retain stakeholder confidence. The key is to revisit and broaden—not change—the original pitch. Consider 3D Robotics (3DR). In the early 2010s, it was a rapidly growing consumer drone start-up with more than 350 employees and nearly $100 million in funding from Qualcomm Ventures, Richard Branson,

and others. But by 2015, 3DR was getting hammered by competitors that offered better, cheaper drones. Worse, because of unforeseen manufacturing issues, the company was forced to delay the launch of a flagship drone, which was plagued by technical issues when it finally arrived. Holiday sales suffered, money was running out, and employees started leaving. Everyone was rattled—especially investors.

In a last-ditch effort to keep the company alive, CEO Chris Anderson, a former editor in chief of *Wired,* orchestrated a major pivot to drone software and services for enterprises. Initially, this sudden change in narrative was disconcerting. Some media outlets deemed the company a total failure. Anderson himself acknowledged that he'd grossly underestimated the competition—especially the industry leader, DJI. Nonetheless, Anderson managed to assuage investors' concerns by skillfully communicating a sense of continuity during a significant strategic shift. How? In essence, he argued that enterprise software was consistent with the vision for 3DR all along. It was just that the vision, as previously understood by stakeholders, wasn't quite accurate: 3DR was never about drones—it was about extending the internet to the sky. Whether it was for consumers or businesses, using drones or some other method, was beside the point. Some investors bought the revised pitch. In spite of 3DR's rocky past, the company managed to secure another $80 million in funding to support the new direction.

THE AFTERMATH

MOVE QUICKLY BUT WITH HUMILITY

New ventures must move fast to capture fleeting opportunities. Resource and time constraints often preclude more-measured approaches, such as a phased withdrawal from a legacy product or market. But swift retreats don't always sit well with existing customers and other stakeholders who may feel abandoned after a major reboot.

Empathy and remorse are a balm when informing people of changes they may not welcome. Stakeholders (especially employees and early customers, who are most at risk of alienation) are far more willing to remain loyal if they're given

Too often entrepreneurs think empathy is a sign of weakness or that stakeholders will lose faith if they apologize for a pivot.

guidance about how they'll be affected by a change and if leaders seem to genuinely care about their situation. While "Act with common decency" may seem like advice that should go without saying, many company leaders need reminding.

Too often entrepreneurs think empathy is a sign of weakness or that stakeholders will lose faith if they apologize for a pivot. Terrified of losing support—and committed to the uncompromising efficiency of lean start-ups—some simply make the change and never admit they were wrong. Instead of preparing audiences for a change, they spring it on them. Only when stakeholders react—sometimes harshly—do they apologize. By then it's too late, and they're on the defensive.

Another company in the drone industry offers a good example, although this time of what *not* to do. Founded in 2011, Airware raised more than $100 million from investors such as Kleiner Perkins, Andreessen Horowitz, and GV to build an autopilot platform for aerial data collection. But when the start-up's leaders discovered that the bottleneck to enterprise adoption was processing and delivering the data at scale, they shifted their focus to developing cloud software. Jolted by the sudden and unexpected strategy shift, the firm's enterprise partners, customers, and employees criticized the leadership team for its indifference and called for more transparency and open communication. Airware's CEO stepped down the following year, and the start-up reached the end of its financial runway in 2018 and was forced to close.

Compare that with the handling of Glitch's transformation into Slack. In 2012, Glitch was a struggling online video game that centered on collaboration. But its founders soon realized that the messaging technology developed so that gamers could communicate with one another would make a terrific tool for companies, so they transitioned to the more promising business. Unlike the Airware leadership team, Glitch's creators showed humility and remorse for how others would be affected. In plain (though somewhat sappy) language, the company issued a public apology, saying that the game had failed to attract enough players. Executives empathized with those who had signed up and thanked them for their support. They gave them useful information about the shutdown, such as refund details. They mentioned the new messaging product the company would be developing but said the real concern rested squarely with employees who would lose their jobs. The message to stakeholders was honest, helpful, and sensitive to their needs. In short, it was kind. The company announced the decision and moved on. In the end, Glitch's transformation didn't provoke a serious backlash—a big risk especially when tech users feel spurned—and the new business launched with roughly $17 million in funding from Accel Partners and Andreessen Horowitz, both original Glitch investors.

WHILE OUR RESEARCH has focused on start-ups, the same principles should apply when big companies pivot to new business models. Think of how much easier it has been for Marc Benioff at Salesforce to move into new business lines given his firm's broad aim of "democratizing digital transformation." Or the plaudits given Microsoft after its leaders justified its shift to cloud-based services in 2013 by linking the change in strategy to the company's broad vision of "modernizing the workspace." Netflix, too, has continued to benefit from these tactics. Conciliatory rhetoric was central to maintaining customer loyalty and shareholders' faith in the company after its transition from DVD by mail to a streaming service.

Throughout history, great leaders have understood that stories and sensemaking are especially important during periods of uncertainty. As the Covid-19 pandemic upends industries and changes consumer habits and behavior, businesses of all sizes will increasingly face the need for strategic reorientation. How they explain and justify their reinventions will play an outsize role in their ability to endure. Explorer Roald Amundsen recognized this. Upon hearing that others had beaten him to the North Pole, he decided to change course—literally. It wasn't the route or the destination that mattered, he told his fellow Norwegians. From the beginning, his was a mission of scientific discovery. And he had stayed true to that aim. Amundsen went on to become a hero, the first person ever to reach the *South* Pole.

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INNOVATION

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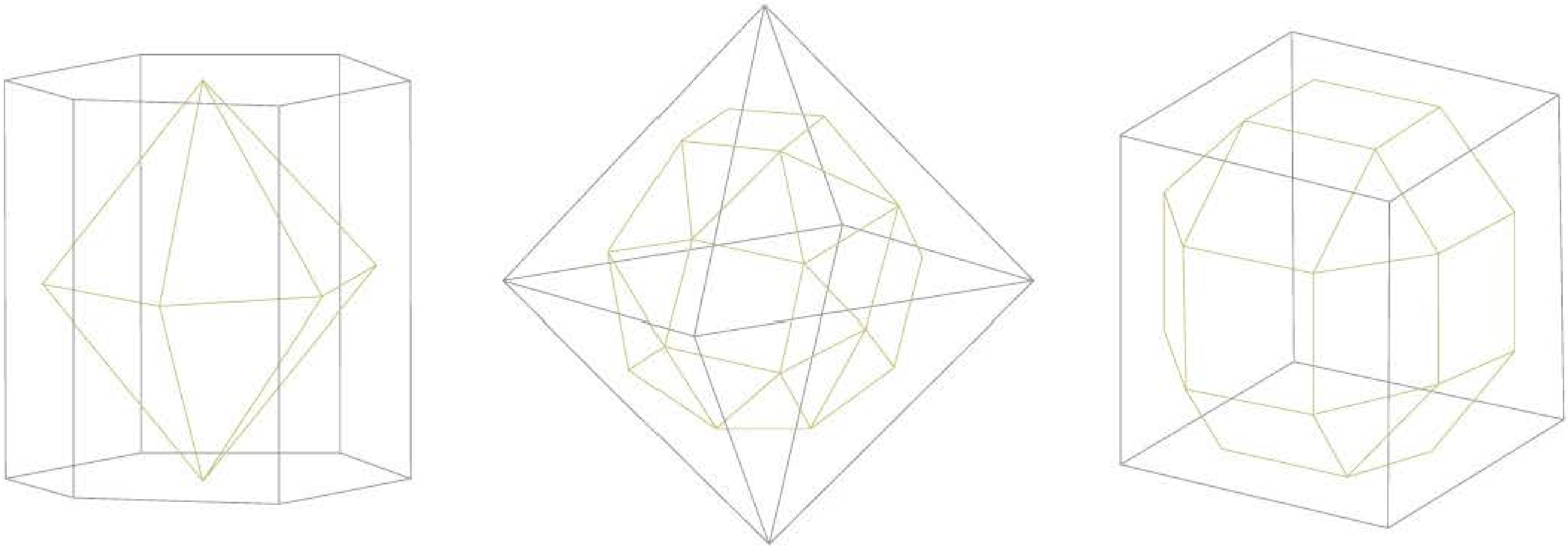
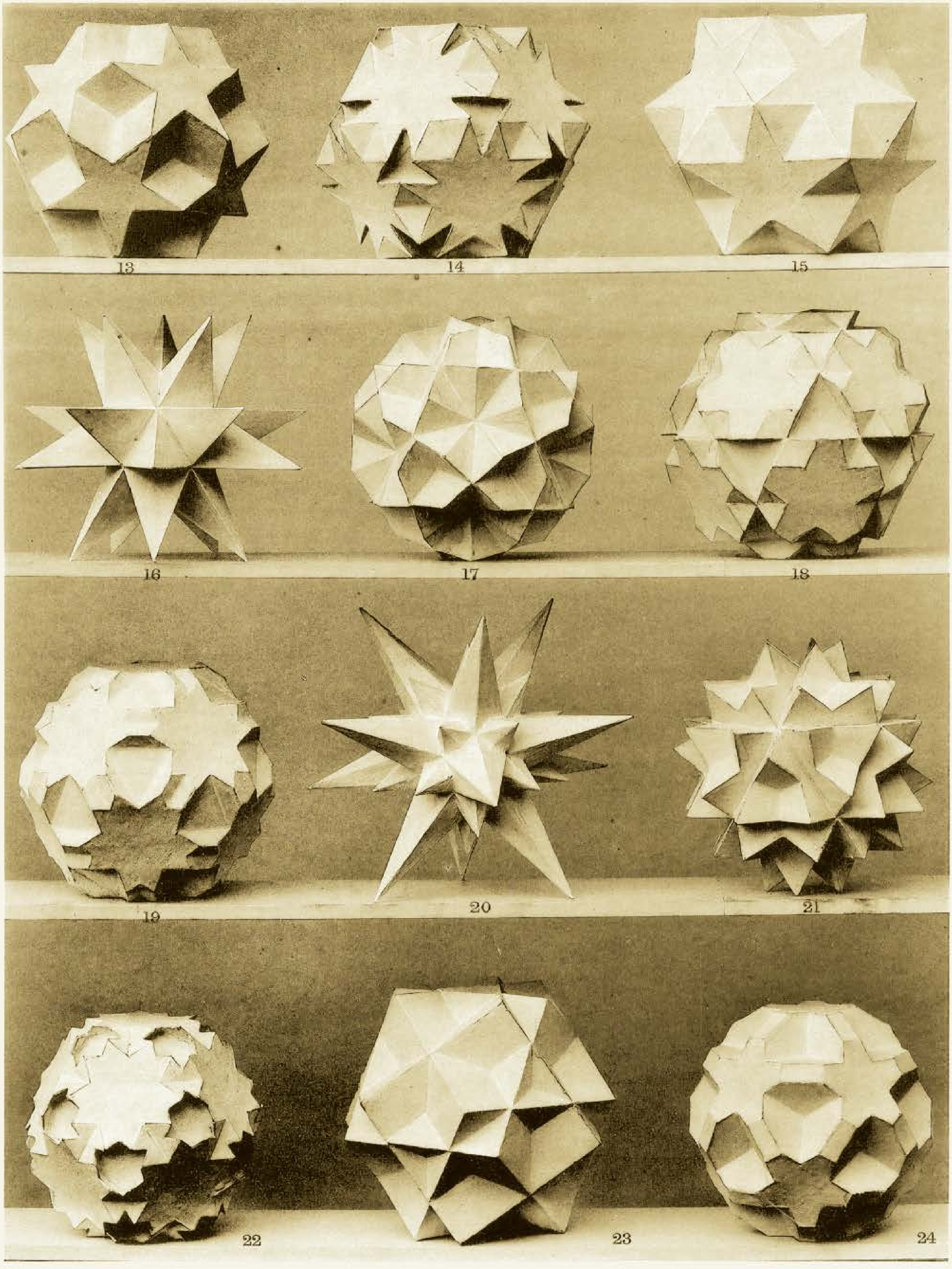
Cultural Innovation



The secret to building breakthrough businesses



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INNOVATION

BUILDING THE NEXT billion-dollar innovation is an irresistible goal. To get a leg up, many companies now emulate the innovation model perfected in the tech sector. Procter & Gamble, for example, pursues what it calls *constructive disruption.* The company has designed its innovation process like a start-up's, with a venture lab that pulls in tech entrepreneurs and a lean probe-and-learn prototyping process.

That approach is not working. The reality is that in most consumer markets, innovation is a slow, incremental grind—extending master brands, adding a new bell or whistle, tweaking a formula. P&G's star innovations—such as a smart Pampers diaper that signals when a change is needed—aren't exactly threatening to become the next billion-dollar product.

And when companies do swing for the fences, they rarely achieve good results. Take Coca-Cola, which has long prioritized building a business in coffee. After years of research and testing, the company bet big on two innovations—Far Coast Coffee (a retail chain premised on sustainability) and Coca-Cola BlãK (Coke mixed with coffee). Both ideas failed badly, so the company eventually bought Costa Coffee, a British coffeehouse chain, at a steep price: $5 billion.

This problem is not an organizational one. Companies struggle because they put all their chips on one innovation paradigm—what I call *better mousetraps.* As Ralph Waldo Emerson noted long ago, "Build a better mousetrap, and the world will beat a path to your door." This is innovation as conceived by engineers and economists—a race to create the killer value proposition. It wins on functionality, convenience, reliability, price, or user experience. Better-mousetraps innovation is often the right bet if you're a tech company. Thousands of experts, seminars, and boot camps provide advice to help you on your way. But what about companies that operate in markets where new technology is less consequential or impossible to defend? For many of them, confronted with a pattern of poor return on investment, chasing better mousetraps seems like an exhausting and expensive matter of running in place.

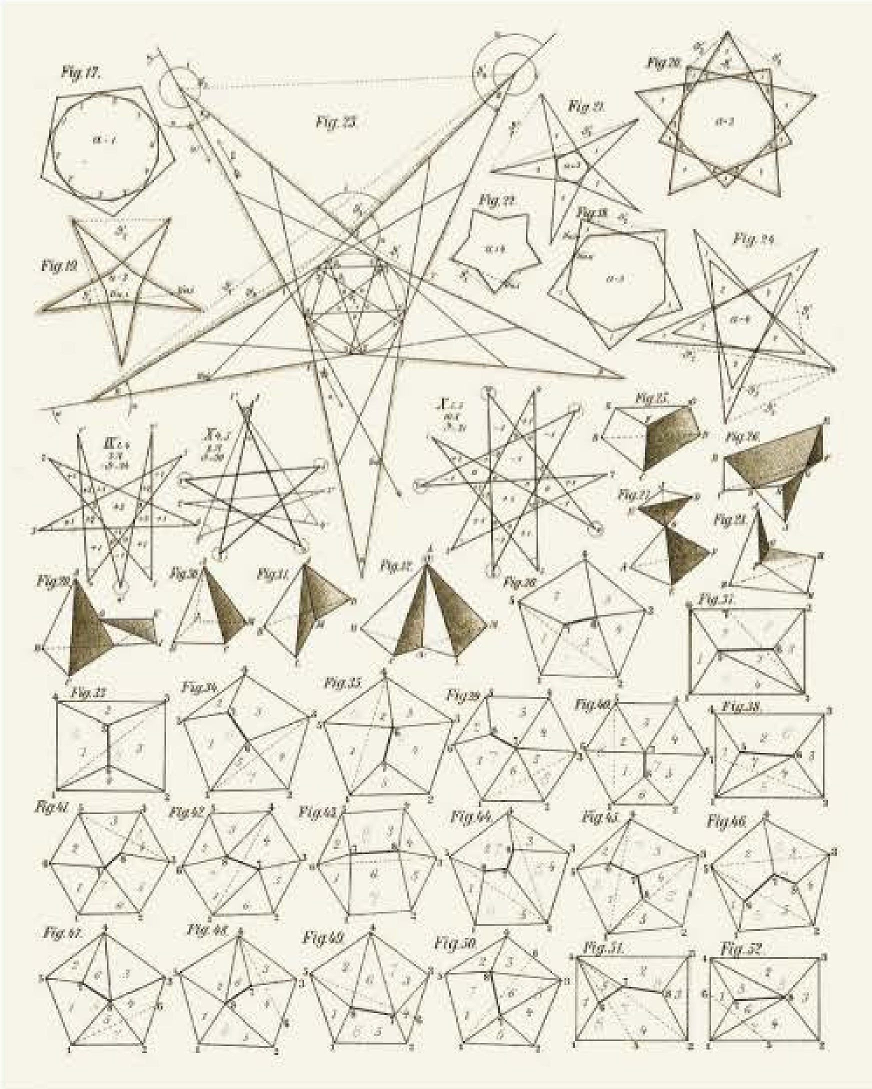
Fortunately, building better mousetraps is not the only way to innovate. In consumer markets, innovation often proceeds according to a logic I call *cultural innovation.* Think of Starbucks, Patagonia, Jack Daniel's, Ben & Jerry's, and Vitaminwater. Remember, innovation is in the eye of the

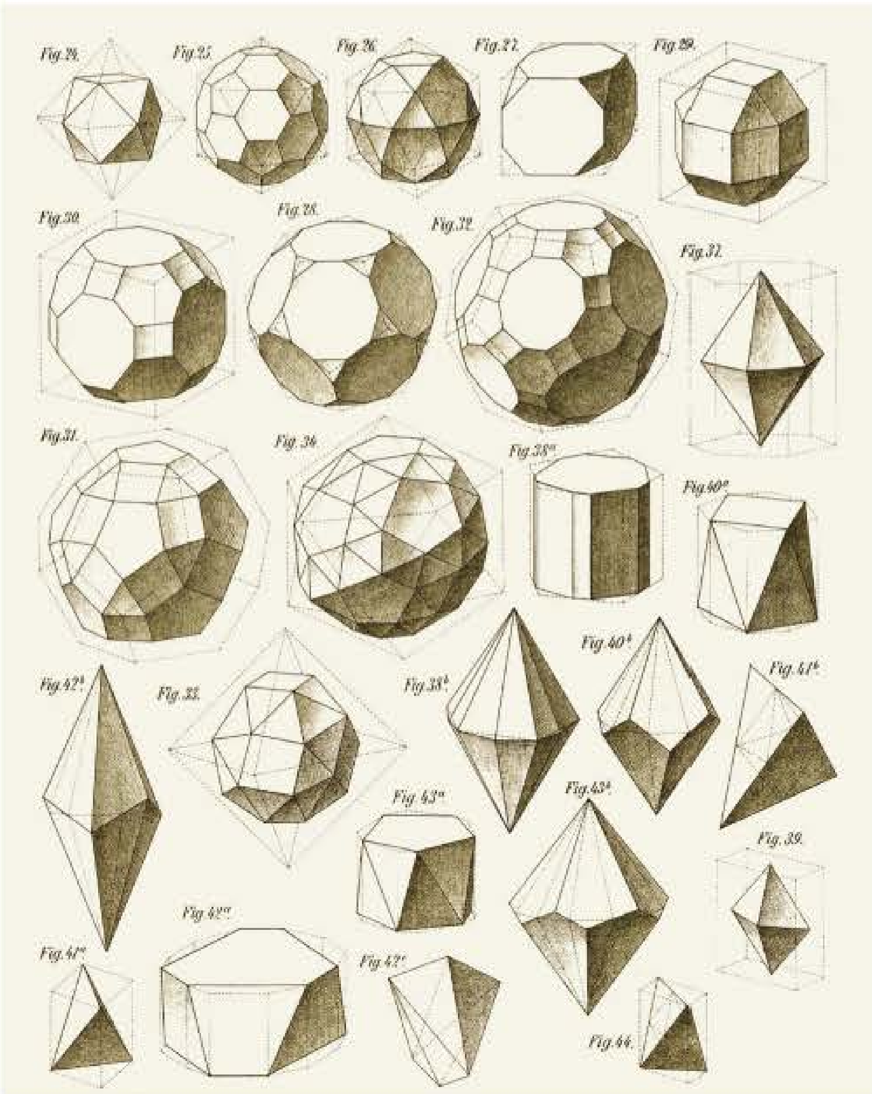
IDEA IN BRIEF

THE CONTEXT
Most companies take a "better mousetraps" approach to innovation, improving a product's functionality—with only average results.

A DIFFERENT APPROACH
A few take a cultural innovation approach instead, first identifying a weakness in the existing category and then reinventing the category's ideology and symbolism.

THE RESULTS
The Ford Explorer, for example, replaced the boring "mom mobile" minivan as America's favorite family car with a promise of excitement, adventure, and glamour—even though the SUV wasn't a technically superior vehicle.





ABOUT THE ART

Johannes Max Brückner, a German geometer, created and collected polyhedral models. His research, published in 1900, has inspired researchers and artists, including M.C. Escher.

beholder. When those brands broke through, consumers viewed them as major innovations, although a better-mousetraps perspective would reject that assessment. In each case people responded to the brand's ideology—a reimagining of the category that transformed the value proposition. Cultural innovations are embodied in distinctive products or services, to be sure, but also in founders' speeches, packaging, ingredients, retail design, media coverage, and even philanthropy.

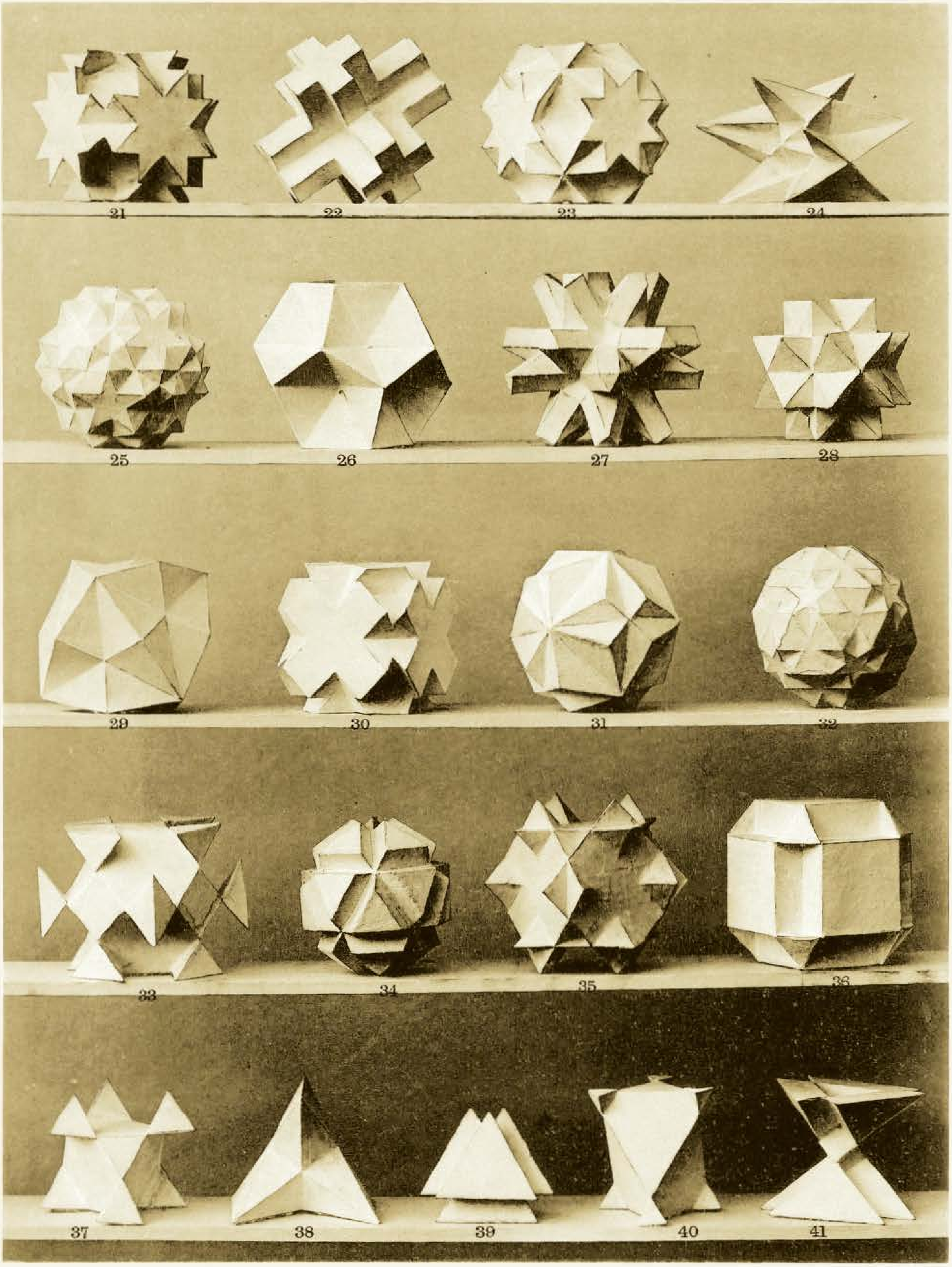
The result? Those brands don't compete in the value-proposition race, trying to lead the category as it's currently defined; they play a different game. Better-mousetraps innovation is guided by quantitative ambitions: Outdo your competitors on existing notions of value. Cultural innovation operates according to qualitative ambitions: Change the understanding of what is considered valuable.

I've spent the past 20 years researching and advising organizations on numerous cultural innovations. My work reveals the strategic principles that allow companies to pursue them—principles completely different from those used to build better mousetraps.

FORD REINVENTS THE FAMILY CAR

Buying a sport utility vehicle would have been an oddball idea for American middle-class families as late as 1989, but by 1995 the SUV was their unquestionable favorite, thanks largely to the Explorer—the pioneering vehicle that earned Ford roughly $30 billion in operating profit over its first decade. A spartan enclosed truck, the Explorer was yanked from its traditional role as functional transport on farms and ranches to become the aspirational choice of suburban families for commuting, delivering youngsters to school, and heading out to the mall. It succeeded wildly despite violating the rules of better mousetraps at every turn. It was a classic cultural innovation, targeting a fatal flaw in the family car culture of that era.

The modern station wagon was a staple of the postwar nuclear-family ideal. All the major makes and models competed within this culture of suburban functionality. In the 1980s minivans rapidly replaced station wagons, winning on important benefits—plenty of seats, great storage, easy entrance and egress—that allowed families to haul kids and their friends around town and on summer trips.



Lichtdruck von Römmler & Jonas, Dresden.

The Reagan-era revival of America's frontier ideology inspired people to reimagine the family car as a swashbuckling vehicle.

INNOVATION

The minivan's pragmatic design and ubiquity created a big symbolic problem. Vehicles are judged as much for the identity they project as for function: Status, sophistication, and masculinity all play a role in creating "premium" cars, which at the time were predominantly imports. Minivans came to represent the quotidian life of suburban parents, mocked as the centerpiece of a boring existence organized by "mom mobile" routines. Parents began to yearn for a car that would replace this stigma with an aspirational identity.

In the 1980s the Reagan-era revival of America's frontier ideology, which championed rugged individualists taming wild nature, inspired a critical mass of urban and suburban residents to reimagine the family car as a swashbuckling vehicle for off-road adventures. The offerings at the time were a poor fit for families: The Jeep Cherokee (XJ) and Chevy's massive Suburban were rough-driving trucks that lacked the amentities of passenger cars. The Ford Bronco and the Chevy S-10 Blazer offered only two doors. Nonetheless, many families were willing to forgo the minivan's creature comforts for the symbolic value that trucks bestowed. It took the incumbent automakers the better part of a decade to engage with this opportunity. They were lucky to be in an industry with very high barriers to entry; otherwise they would no doubt have been beaten to market by a challenger brand.

Eventually the big three domestic truck players—Ford, General Motors, and Chrysler Jeep—raced to bring a comfortable, luxuriously equipped four-door SUV to market. The winner would be the brand that managed to seduce parents into thinking about family cars in a new way. Jeep had the initial advantage, given its potent off-road pedigree, and its new Grand Cherokee, launched soon after the Explorer, won many plaudits. However, Jeep's idea of a family SUV was a straight take on the frontier-adventure myth, showcasing performance on wilderness outings—a myth better aimed at young single men than at upscale families.

The Explorer was launched with advertisements that dramatized a new ideal of family life, rejecting the dull suburban minivan. Ford made two crucial changes to the frontier-adventure myth, both of which connected powerfully with parents. Instead of Jeep's macho excursions, the company offered a vision of families communing in the wilderness. Ads showed them whisking off to remote places in an Explorer to make memories while gathering under the stars, kids happily trading in their tech for spiritual contentment. And parents who owned an Explorer got to have a life too. Ads showed them escaping on urban adventures—eating at boutique restaurants or attending the theater. They might live in the suburbs, but they could still enjoy a cosmopolitan life.

Families flocked to the Explorer. Sure, most of the time they were still hauling groceries and dropping kids off at soccer practice, just as they would have done with a minivan. But they were buying into a myth. Driving an Explorer allowed them to feel they'd finally escaped the world of mom mobiles for a more adventurous life.

In the postwar era, safety was a modest concern, despite Ralph Nader's best efforts. Even getting people to use seat belts was a challenge. By the early 1990s, though, car safety had captured the public's imagination owing to two big better-mousetraps innovations—airbags and antilock brakes—that were promoted heavily in auto advertising and the media.

Ford discovered early on that people believed that the huge size and weight of SUVs made them uniquely safe and that their off-road capabilities meant they were especially skid-resistant in bad weather. So the company crafted a sales pitch to reinforce that perception. The car's elevated seats conferred a feeling of power and invincibility, particularly for women. When couples came to a dealership, the salesperson would ask the woman to test-drive the Explorer so that she could appreciate the feeling of safety from the high perch. Ford was able to persuade customers that they were buying the safest car on the road.

The Explorer was a great success, comparable to celebrated Silicon Valley innovations in terms of its market impact and profitability. Yet its breakthrough is incomprehensible when viewed through the lens of better mousetraps. The vehicle was not an engineering advance—quite the opposite. It relied on dated technology. Explorers accelerated lethargically. They were top-heavy and cornered poorly. They cost a lot and were far more expensive to maintain than minivans. And they were gas-guzzlers that generated enormous increases in CO_2. But families were willing to pay near-luxury prices because the SUV perfectly addressed the symbolic problem in the market's status quo.

THE CULTURAL INNOVATION MODEL

Let's look at a second case—Blue Buffalo dog food—to recognize the key steps in cultural innovation and to explain why incumbents often fail at it.

For decades Nestlé Purina, Mars, and Procter & Gamble dominated the profitable U.S. dog food category with powerful brands, distribution muscle, strong R&D, and big marketing budgets. Yet all three were beaten badly by Blue Buffalo, a tiny start-up, which was so successful that General Mills eventually bought it for $8 billion, while Procter & Gamble threw in the towel and sold its entire pet food division to Mars for less than $3 billion. Blue Buffalo bested the established brands by reinventing dog food culture. Here's how.

Step 1. Deconstruct the category's culture. Markets are belief systems embraced by those who participate in a category: companies, consumers, and the media. To understand your category's culture, think like a sociologist. Step back and make the familiar strange. What are the category's taken-for-granted organizing principles? What is the dominant ideology?

Before Purina launched the modern industrial dog food category, in the 1920s, most American families fed their dogs table scraps. Purina's standardized extruded kibble made inroads with consumers, and by the postwar era the company had adopted the mass-marketing techniques pioneered by food manufacturers such as Kraft and General Mills. Its ads featured heart-tugging images of cute dogs and their loving owners. The implicit message was "Purina is the biggest, best-known dog food company, so of course you can trust us to make food that will keep your dog healthy and energetic." Ingredients were rarely mentioned.

The category's first cultural innovation came in the 1970s, on the heels of media hype about scientific findings that certain vitamins and superfoods could keep people healthy. (Fiber and antioxidants were hot topics.) Cultural innovators, led by Hill's Science Diet and Iams, championed a new, scientific dog food ideology. The companies produced separate products for the various stages of a dog's life. Marketing featured veterinarians announcing cutting-edge formulas based on the best nutritional science. These products were sold in vets' offices—the ultimate sign of medical credibility. Purina launched a fast-follower grocery brand, Purina ONE, with ads featuring scientists in lab coats and packaging full of medical terminology.

These new brands taught owners to value dog food primarily for its nutritional benefits and offered them a scientific lexicon that "proved" quality nutrition. They encouraged owners to view the making of pet food as a complex scientific endeavor. The ingredients, however, remained hidden in small print.

Step 2. Identify the Achilles' heel. Categories' cultures eventually develop a fatal flaw, and cultural innovators pinpoint the emerging vulnerabilities. Throughout the early 2000s America's industrial-scientific food culture was subject to damning critiques in the media and by dozens of insurgent anti-industrial food movements. Dog owners began to feel similar concerns; they questioned whether those bags of kibble made by big companies were actually good for their pets. Then, in 2007, thousands of dogs and cats died after eating contaminated pet food. The media reported that one ingredient, wheat gluten contaminated with melamine, was bulk-sourced from China. Owners had had no idea that they were feeding their dogs wheat gluten or that it was imported from China. They began to take far more interest in the actual ingredients of dog food.

Step 3. Mine the cultural vanguard. Category transformations are usually prefigured by ideas and practices worked out at the margins. When cracks form in a category's culture, a *cultural vanguard* often appears before big companies show up. Innovators study the vanguard closely, and even participate in it, to find a strategic direction for their challenger ideology and the symbols required to bring it to life.

A small "natural" dog food subculture, separate from the national brands, had developed in prior decades. Alternative-health companies and their avid customers believed that healthful dog food should emulate what dogs ate before they became domesticated. The subculture's brands, which were sold in boutiques and natural-foods stores, were very expensive and marketed to niche customers. They made little effort to win converts from the big industrial-scientific brands.

The brands lionized whole ingredients and transparent supply chains. They were all about real meat, poultry, and fish, along with whole-food carbohydrates (sweet potatoes, rice), and they fastidiously avoided anything artificial. The subculture encouraged customers to beware of "fillers"

A Cultural Innovation Framework

Blue Buffalo upended industry giants like Purina and P&G by reconfiguring the category's ideology, using potent symbols. As a result, it transformed the value proposition for dog food.

Conventional dog food culture

IDEOLOGY

- → Industrial-scientific nutrition
- → Trust corporate scientific expertise to formulate nutritious food; don't worry about ingredients

SYMBOLS

- → Ads showing happy dogs with their owners
- → Nutrition jargon
- → "Scientific" claims
- → Big national brands

THE VALUE PROPOSITION

Health: The most nutritious dog food is made by big corporations with scientific expertise

Identity: I'm a caring owner who buys the best food for my dog's health

CULTURAL DISRUPTION

Achilles' heel emerges

- → Industrial ingredients exposed as a health risk; melamine scare
- → Am I feeding my dog unhealthful food?

CULTURAL VANGUARD

- → Natural-foods subculture

Challenger dog food culture

IDEOLOGY

- → Preindustrial ancestral diet
- → Feed your pet the same foods that keep your family healthy

SYMBOLS

- → Ads revealing inferior industrial ingredients
- → Plain package (no owner + pet)
- → Number one ingredient: real meat
- → No fillers, no meat by-products, no artificial ingredients
- → LifeSource Bits
- → Small family company

THE VALUE PROPOSITION

Health: Nutritious dog food is like human food but in a convenient, nonperishable form

Identity: To be a credibly caring owner, I need to upgrade to ingredients that I'd feed my family

(processed starches such as corn, wheat, and soy) and meat by-products. Their packaging highlighted ingredients rather than happy dogs and loving owners.

Step 4. Create an ideology that challenges the Achilles' heel. Cultural innovators source materials from the vanguard to build a new brand concept. The natural-foods subculture's ideology was hidden: Alternative-health zealots talked to one another and used rhetoric aimed at the already converted. Blue Buffalo, which was founded in 2002 by a Connecticut family that had become obsessed with the link between pet diet and health after their Airedale terrier (named Blue) died of cancer, acted as the subculture's proselytizer. The brand challenged the weak assumption that anchored the industrial-scientific ideology—that kibble was surely nutritious, even though owners had no idea what the compressed brown pellets were made from. In doing so, it created a litmus test for responsible dog ownership.

Blue Buffalo pushed owners to evaluate dog food as *food*. Those other kibble brands were full of industrial products that pet owners would never eat. People needed to take control and make sure their dog food contained healthful ingredients, no different from what they'd feed their families. Blue Buffalo's pet food was made with the same ingredients as a good human diet, so by switching brands, owners could ditch their newfound guilt and claim an enlightened identity—they really did feed their dogs nutritious food.

Step 5. Showcase symbols that dramatize the ideology. Cultural innovations are brought to life by a combination of symbols that dramatize them in the most compelling manner. They select symbols from the marketing mix that work together, attack the Achilles' heel, and draw a clear contrast with the category's dominant culture.

Blue Buffalo leveraged the leading symbols of the natural-foods subculture and created additional symbols to illustrate the notion that Blue Buffalo was, in effect, the same healthful food that owners themselves ate, converted into a compact, convenient, nonperishable form. The company repurposed the subculture's four foundational claims—real meat is the number one ingredient, no meat by-products, no fillers, nothing artificial—and used them in dozens of low-budget ads, produced to look like documentaries: Owners gathered in a living room, comparing notes on their preferred dog foods. Some were taken aback to read that their favorite brand contained "chicken by-product," while Blue

> Blue Buffalo convinced millions of dog owners that a product once viewed as a fussy extravagance was actually a necessity for people who truly loved their dogs.

Buffalo users proudly proclaimed that the first ingredient in theirs was deboned chicken. The company taught owners to read the label the next time they considered buying a bag of kibble.

And Blue Buffalo developed its own mini-kibble: LifeSource Bits—small, dark-purple (rather than brown) balls made with superfoods such as blueberries, flaxseed, cranberries, and kelp. The company pushed owners to draw a connection between what their families ate to avoid chronic disease and what would give their dogs the same kind of protection.

As Blue Buffalo's challenge worked its magic, millions of owners decided to spend far more on dog food to avoid guilt. They bought into an entirely new value proposition: a new nutritional benefit (healthful dog food contains the same ingredients that healthful human food does) and a new identity benefit (switching to Blue Buffalo proved that they were truly caring owners).

WHY INCUMBENT COUNTERATTACKS FAILED

Despite the company's strategic brilliance, Blue Buffalo should never have been able to build a business that was worth $8 billion. The three incumbents completely dominated the market and should have prevailed over the upstart. All three invested heavily in new brands and line extensions, but they struck out because, working with a better-mousetraps mindset, they misunderstood the nature of Blue Buffalo's cultural innovation.

Iams: cultural incoherence. P&G believed that Blue Buffalo was gaining ground by making a big deal of a simple "new and improved" ingredients claim. The company assumed that if it matched those ingredients with a line extension, owners would choose the trusted brand over Blue Buffalo. So P&G launched Iams Healthy Naturals, featuring two of Blue Buffalo's ingredients claims (no fillers, no artificial ingredients), with a big ad campaign and promotions. When that attempt failed, the company tried a more expensive iteration, Iams Naturals, which had meat as the number one ingredient. But to no avail.

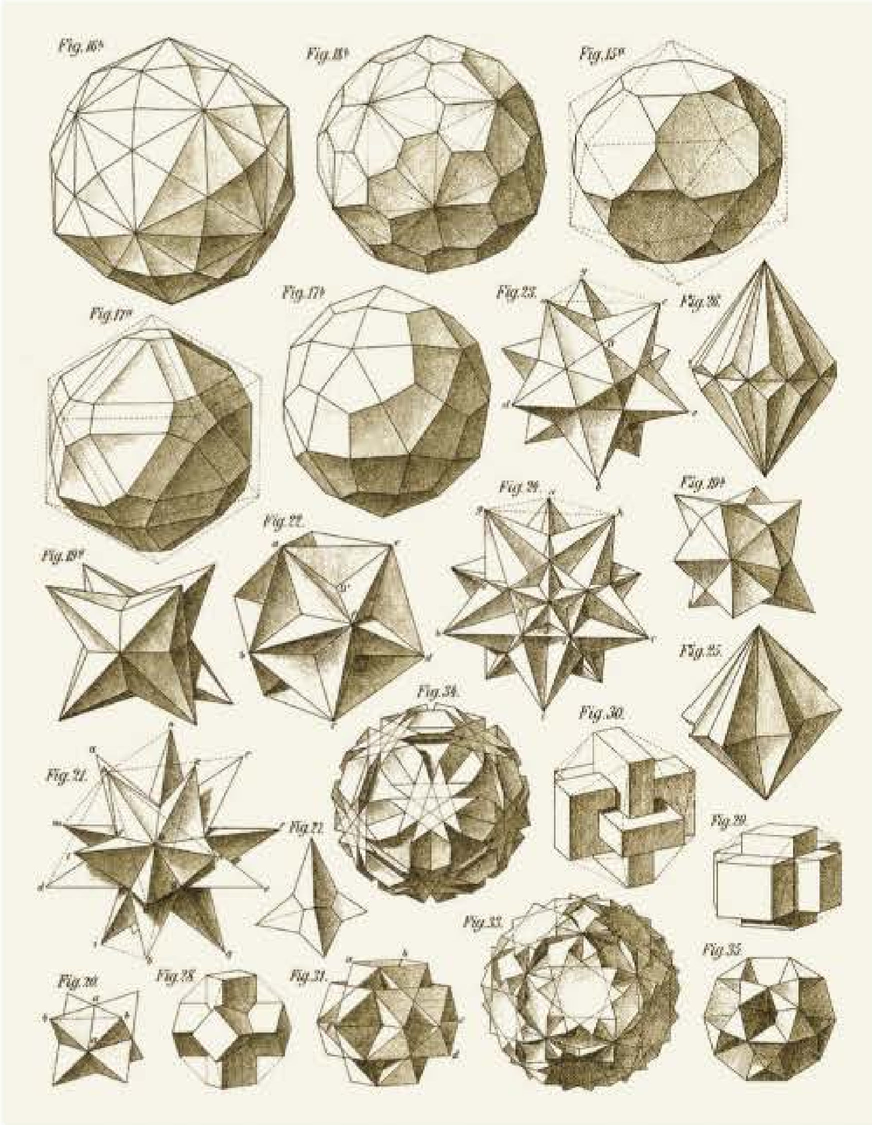
What went wrong? Both products relied on brand names that tried to knit together the dominant industrial-scientific ideology (which Iams had championed for decades) with the natural dog food subculture—and the result was culturally incoherent. Iams came off as an impostor. It didn't help that the company's advertising campaigns used exactly the same trope (loving owner playing with energetic pet) that industrial-scientific brands had relied on for 40 years instead of showcasing ingredients, a key concern in the natural pet food subculture. P&G unwittingly sabotaged its rebuttal with its confused symbolism.

Purina: purpose gone awry. Purina, too, launched a line extension—Purina ONE Beyond—to defend against Blue Buffalo. The effort led with not one but two industrial-scientific brand names (Purina and ONE), inadvertently signaling to consumers that this was not a credible natural dog food.

In addition, the company (which fancied purpose-driven branding at the time) decided to tie Beyond to a purpose. It knew from trends research that upscale owners favored green products, so it decided that Beyond would be the dog food that helped save the planet. An anthemic launch ad, depicting a glowing field, proclaimed, "We believe together we can make the world a better place one pet at a time." The problem was that environmental sustainability had nothing to do with Blue Buffalo's challenge, which centered on nutrition and health. Dog owners simply ignored Beyond.

Mars: a mismanaged acquisition. Incumbents' standard response when threatened by cultural innovation is to buy the threatening company or a close competitor. In 2007 Mars did just that by acquiring Nutro, a strong brand in the natural pet food subculture and a credible challenger to Blue Buffalo. That was a promising move. To make it work, though, Mars would have had to shift Nutro marketing to attack industrial dog food, copying Blue Buffalo. It's unlikely that Mars ever considered that move, which would have meant attacking its biggest brand, Pedigree. Instead managers did just the opposite: They converted Nutro to a mass-marketing approach using ads little different from those of Iams.

P&G, Purina, and Mars never understood that they were fighting an existential battle to sustain their brands' authority as experts on healthful, nutritious dog food—not just racing to clean up their ingredients panels. As a result, Blue Buffalo convinced millions of dog owners that a product once viewed as a fussy extravagance was actually a necessity for people who truly loved their dogs.



STUCK IN THE BETTER-MOUSETRAPS MINDSET

Cultural innovation has often been an entrepreneur's gambit. Even when incumbents happen upon extraordinary cultural opportunities that should be easy to spot and straightforward to execute on, they fail time and again. If companies are to succeed at cultural innovation, they need to avoid three pitfalls.

Working eternally in the present. Even if they don't think in such terms, companies are masters of their category's existing culture. They have to be to excel at their current business. Their metrics and planning focus on it. As a result, managers come to perceive the category as an immutable reality, even though it's actually built on a fragile consensus. If you're trapped in the present tense, it is extremely difficult to examine the category from the outside and identify its emerging flaws. These ideological blinders explain why hundreds of highly trained professionals at the biggest pet food companies responded inadequately when Blue Buffalo attacked their billion-dollar businesses.

Being wedded to a product's features. The better-mousetraps paradigm assumes that a product's features are objective characteristics that consumers value. As a result, products are construed in building-block terms—as stacks of features that together create a value proposition. Innovation, then, requires improvements to particular features that consumers value. But features aren't just building blocks—they can be malleable cultural symbols of an ideology. The incumbent dog food companies assumed that Blue Buffalo was simply offering trendy new ingredients claims. But in fact those claims became "evidence" in Blue Buffalo's whistleblower project, revealing that owners had been hoodwinked by the industrial-scientific brands.

Ignoring the value of identity. The better-mousetraps paradigm views innovations as great functional achievements, but that overlooks a critical component of many innovations: bolstering aspects of consumers' identity. Ford, as we have seen, persuaded customers that they could trade in the dreary suburban minivan lifestyle for outdoor adventure and sophisticated city excursions. Blue Buffalo consumers traded up to garner status as enlightened dog owners.

IN 1995 CLAY Christensen introduced one of the most influential ideas in business: disruptive innovation. He famously asked why great companies fail when they're doing everything right. Christensen's answer: Incumbents focus on serving the most-demanding customers with the best products because margins are high. So entrants provide simple, cheap, "underperforming" solutions to low-end niches. Incumbents tend to ignore segments with poor margins and "inferior" products until it's too late. If one were to turn Christensen's advice into a mantra, it might be "Think like a cheapskate."

But that's not the only innovator's dilemma. Great companies are also disrupted by innovations that don't involve new technologies; a cheap, low-performance product; or a price-sensitive target. Incumbents are so intent on winning the category as it's currently defined that they fail to identify cracks in its foundation. Cultural innovators outmaneuver them because they look for opportunities to blow up the dominant ideology in favor of a new regime. So for incumbents to innovate, they'll need to adopt a second mantra: "Think like a cultural entrepreneur."

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STRATEGY

Joint Ventures and Partnerships in a Downturn

How to think about your existing collaborations—and the new ones you should seek out

PHOTOGRAPHER SUSANA RAAB

STRATEGY

Companies will need every tool they've got to survive the downturn and rev up their businesses as the economy rights itself. They'll have to rewire operations, reallocate resources, and in some cases reinvent business models.

At many firms, joint ventures and partnerships will play an outsize role in those efforts, both as a vehicle for sharing costs and reducing capital needs during the crisis and as a way to position themselves for growth once it ends. After all, in industries experiencing great pressure—like automotive, retail, and upstream oil and gas—joint ventures are quite common. GM and Volkswagen, for example, each have several dozen, and JVs account for almost 80% of the upstream production of the largest international oil and gas companies. At these and other energy businesses, joint ventures are also key to managing the transition from fossil fuels to renewables. More than 50% of the largest assets in offshore wind and solar are structured as joint ventures—and such investments are a critical way for companies like Royal Dutch Shell, BP, Total, and Equinor to share risks, build capabilities, and meet ambitious targets to reduce greenhouse gas emissions.

In health care and life sciences, joint ventures and partnerships are crucial to innovation: More than two-thirds of new health insurance products in the United States are built on cobranded or JV offerings, while life sciences companies depend on such ventures to accelerate time to market and broaden distribution of lifesaving products. In March 2020, for instance, Pfizer and BioNTech announced they were teaming up to bring out a Covid-19 vaccine. Other partnerships aimed at developing Covid vaccines have been announced by Sanofi and GSK, and by Hoth Therapeutics, Voltron Therapeutics, and Mass General Hospital.

JVs now drive a material share of companies' profits as well. In 2019 Airbus, Celanese, Engie, Vodafone, and Volkswagen relied on noncontrolled JVs for more than 20% of their earnings, while at Coca-Cola, GM, and many others that figure was above 10%.

Moving forward, we expect the impact of JVs and partnerships to remain significant and, in some sectors and geographies, to increase. We recently analyzed trends related to joint ventures across the past 35 years. Our analysis showed that in most industries, terminations of them didn't always increase during downturns—and often fell. Use of JVs also tended to rise on the eve of a recovery. (See the exhibit "Joint Venture Terminations by Year.") This may be partly due to the time it takes to negotiate a restructuring or an exit, as well as corporate management's tendency to look first to wholly owned operations when cutting costs. In addition, JVs' returns on assets have been climbing recently—and are higher than those of wholly owned companies in the same industries. (See "Average Return on Assets, Select Industries.") That means the number of terminations during this economic dip is likely to be even lower. Meanwhile, our analysis also showed that new joint venture and partnership transactions tend to increase during a downturn and to accelerate during a recovery, because they allow companies to get off to a much quicker start than organic growth does and are less risky than M&A.

In this article we'll look at how during this period of retrenchment firms might stabilize their existing joint ventures by raising cash, cutting operating costs, reducing capital spending, managing risk, and restructuring. These are commonsense moves for the most part, but they require sustained focus; JVs are hard to restructure even in the best of times, owing to differing owner-company agendas, politicized processes, and general inertia. However, a crisis can serve as a catalyst for change. In addition, we'll look at how companies might enter into new, "counterdownturn" JVs and partnerships, both to manage the challenging economic environment and to tap into growth opportunities in capital-light ways.

Joint ventures can use restructuring tools that aren't available to wholly owned businesses, in ways that benefit a venture, its parents, or both.

SHORING UP EXISTING JVs

Joint ventures are facing many of the same financial challenges—severe revenue shortfalls from fractured supply chains, curtailed operations, evaporating market demand, and frozen credit markets—as their owners and wholly owned peers. These new economic realities require both short- and long-term responses.

Efforts to reduce working capital, cut costs, tap additional credit lines, and take advantage of government subsidies and relief programs are already well under way in most joint ventures. To help pull off these near-term interventions, their boards will need to get far more involved than usual. Under normal conditions, joint ventures' board directors spend an average of 5% to 10% of their time on governance. But during economic storms, an effective board can be the factor that determines whether a JV thrives, stagnates, or dies an untimely death. Working with managers, directors are convening special board and committee meetings and fast-tracking decisions.

JV partners, boards, and management teams will also need to evaluate opportunities to more fundamentally reset their businesses. Because of their shared ownership, joint ventures can use restructuring tools that aren't available to wholly owned businesses. These approaches may benefit a venture, its parents, or both. They come in various forms.

Raising capital in unconventional ways. Some joint ventures will have opportunities to secure low- or interest-free loans or capital from their cash-rich owners—such as state-owned companies, sovereign wealth funds, private equity firms, and multinationals with strong balance sheets. In exchange, those owners might get additional interest in the venture, preferred returns, or increased control. In 2015, when Russian automobile sales collapsed amid wider economic problems, Ford Sollers, a 50:50 joint venture between Ford and Sollers PJSC, received additional funding from Ford, which in return got preferred shares that gave it majority voting rights.

To free up cash, improve future liquidity, or open up new markets, joint ventures may also want to bring in new owners, such as PE firms, pension funds, other financial institutions, or strategic industry partners. Earnouts for the current owners could be pegged to the future performance of the business to make adding more owners attractive. Many investors, like PE firms, can bring in capabilities that give ventures a boost, including a better understanding of value creation, a sharp focus on cost reduction and talent management, governance discipline, M&A experience, and a portfolio that can double as an ecosystem of customers, suppliers, or partners.

Structuring creative commercial arrangements with suppliers, customers, lenders, and other business partners is another option for JV owners. In the past we've seen an ownership interest or option sold to a major supplier or customer in exchange for better commercial terms, including cash advances. If one of the owners is a major supplier to the JV, the parties might renegotiate their agreement (to, say, narrow the band of prices). Similarly, a joint venture might negotiate with a lender to convert debt to equity, making the creditor a direct owner.

Reducing costs through synergies and new operating models. While JVs can cut costs on their own, much greater

IDEA IN BRIEF

THE CONTEXT
Joint ventures and partnerships will play an outsize role in corporations' response to the recession and their plans for growth during the recovery that follows.

THE RATIONALE
JVs and partnerships are ubiquitous in sectors that are under the most pressure (like energy and health care) and in innovative industries (like life sciences and tech). In addition, joint ventures and minority-equity investments are now outperforming wholly owned businesses and acquisitions.

THE BENEFITS
Corporations can use existing ventures—and form new ones—to raise cash, reduce capital intensity, and cut operating expenses, and more important, as a cost-effective way to pursue promising new opportunities.

savings may come from consolidating or otherwise optimizing activities and assets with their owners. Ventures and owners might make joint purchases, integrate their supply chains, or combine some infrastructure, logistics, warehouses, or other operating assets. In 2003, Vodafone entered an agreement with SFR, its French mobile-telecommunications JV with Vivendi, to collaborate to improve economies of scale in operational areas like the development and rollout of new offerings and procurement, especially of technology.

Joint ventures might also save money by insourcing certain functions (such as legal, HR, IT, or finance) currently being provided by an owner. Our analysis has shown that although owner companies rarely profit from providing administrative services to joint ventures, their cost structures are often 10% to 30% higher than those of the JVs or of third-party providers they might contract with. Conversely, a joint venture that lacks scale might benefit from outsourcing certain functions to an owner or a third party.

In some cases cost cutting may lead to more-fundamental changes to the operating model. Those that reduce operating expenses or increase strategic and financial flexibility are especially popular during downturns. A lower-cost partner in a joint venture or a third party might become the controlling partner or operator, which can open up synergies with that organization. In our view many joint ventures should aggressively pursue this option, which allows greater nimbleness and offers more potential for performance improvement than do JV models in which control is shared by the partners and the joint venture's management doesn't have much authority.

In response to the Asian financial crisis in the late 1990s, BASF and Mitsubishi creatively restructured their equally owned and controlled joint venture in Japan, Mitsubishi Chemical BASF. It was split into two joint ventures, one focused on dispersants and the other on foam products—the business's two core segments. Each was placed under the operational leadership of the parent best positioned to strengthen it—with BASF responsible for the dispersants venture, and Mitsubishi responsible for the foam products one.

Regearing financial ratios. Joint venture boards might also consider authorizing or compelling management

Susana Raab/INSTITUTE

ABOUT THE ART

The annual Twinsburg Festival, in Twinsburg, Ohio, has celebrated more than 77,000 sets of twins and multiples since it began, in 1976. Photographer Susana Raab describes attending as "a bit like living in stereo or stepping into a latter chapter of the magical Wizard of Oz.*"*

to increase external borrowing, especially if the entity is underleveraged, as JVs tend to be. Conversely, if a venture has excess cash, the board might seek to repatriate it to fund other, pressing corporate needs. During the 2008 financial crisis, the board of a large liquefied-natural-gas JV found that it had almost $500 million in cash on hand—enough to cover six months of operating costs. The board immediately approved a $300 million dividend, giving the owners cash to weather the storm elsewhere in their businesses.

Assisting owners through buyouts and other means. Downturns tend to expose strategy and performance differences among partners. While the data doesn't suggest they cause buyouts to spike, inevitably there will be some buyouts and sellouts, and some JVs will be terminated or liquidated.

In the current environment, routine decisions about budgets and capital expenditures may become deadlocked, triggering buy-sell options in about a third of joint venture contracts. In other cases the potential synergies will be greater if a single partner has full ownership, and the one for whom the JV is more core—or already more integrated—will buy out the other partners. Or one owner might acquire and integrate parts of the joint venture or sell out to a third party. After the 2008–2009 financial crisis forced the Canadian company Nortel to file for bankruptcy protection, for example, it sold its controlling stake in a high-performing Korean joint venture with LG to Ericsson. Alternatively, all the owners might sell the venture to a consortium of financial investors.

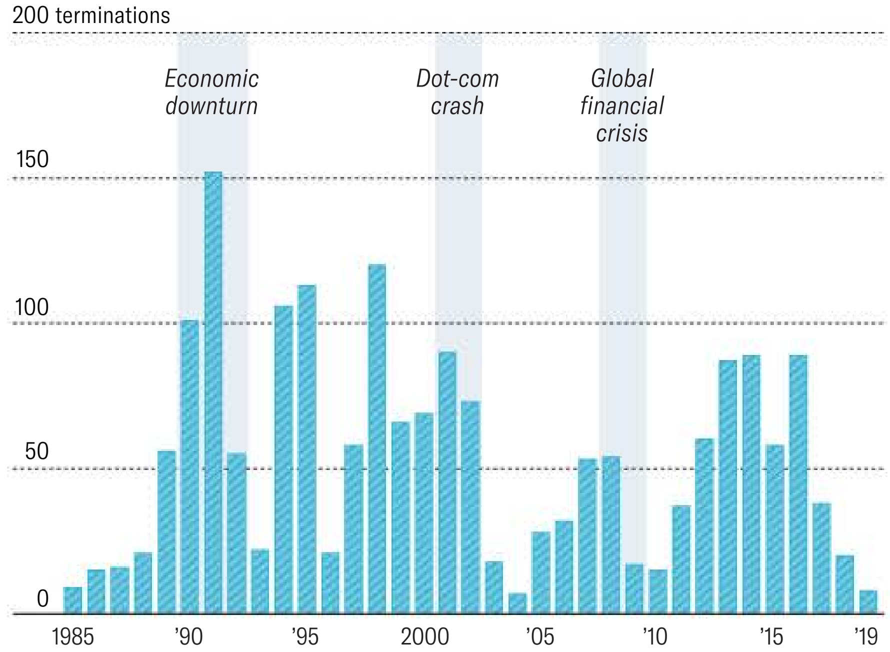
CREATING NEW JOINT VENTURES AND PARTNERSHIPS

New JVs and partnerships can also help companies navigate the economic crisis. They can be used to raise cash, secure cost synergies, or pursue lower-risk and more-capital-efficient growth. When funding is tight, such benefits make joint ventures and partnerships a popular alternative to mergers and acquisitions or organic investments. Our analysis shows that JVs and partnerships tend to increase in the late stages of a downturn, signaling a recovery and outpacing M&A. Right after the 1990–1992 and 2001–2002 downturns, for instance, the number of new joint ventures and partnership transactions was 20% above normal levels.

Partial divestments. For companies that need more liquidity, a joint venture can be a good alternative to a full

Joint Venture Terminations by Year

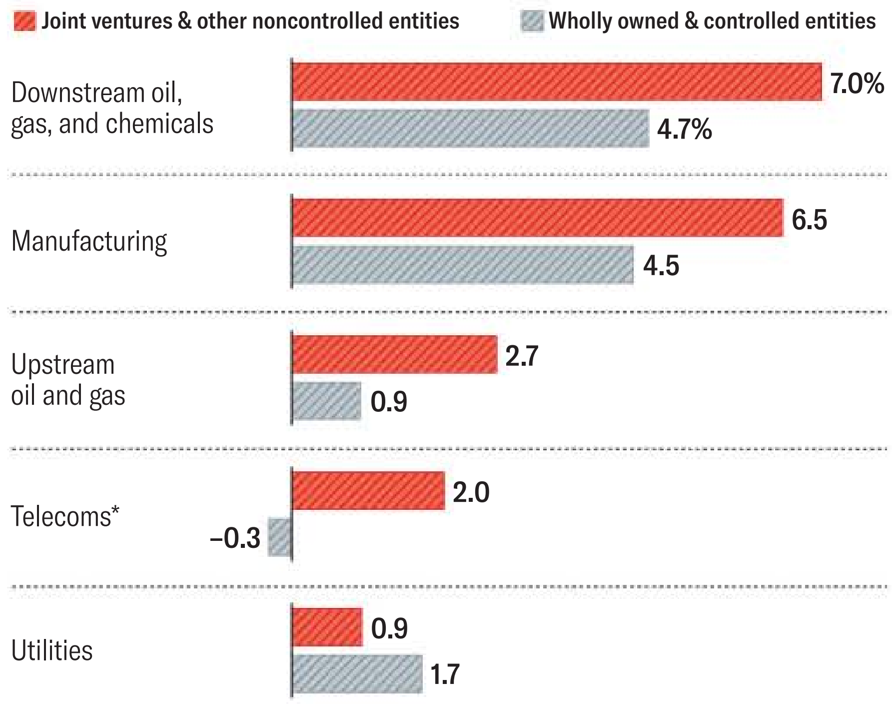
Terminations don't always increase during recessions and decline quickly afterward.



Note: Chart plots 1,873 JV terminations; non-JV partnerships excluded.
Source: SDC Platinum, public announcements; analysis by Water Street Partners

Average Return on Assets, Select Industries

Joint ventures' ROA is higher than the ROA of alternative investments.



*Excludes 2016
Note: Based on an analysis of 20,000-plus investments, 2014 to 2017. Investments include JVs, mergers and acquisitions, and organic growth.
Source: Department of Commerce; analysis by Water Street Partners

divestiture. One approach is to use it as the first step in a planned exit: A seller puts a noncore business into a joint venture with a potential buyer and negotiates to sell the full business over time, typically within three to five years. This kind of deal is especially worthwhile for sellers when prospective buyers don’t recognize the full potential of the business or its assets or may not be able to buy or operate the business on day one. IBM used this staged-exit structure when it sold its personal computer business to Lenovo, and so did Lanxess when it folded its specialty plastics business into a joint venture with Ineos, in 2007. In that case, Lanxess received one payment when the joint venture was set up and a second after two years, when it fully exited the JV. The second payment was based on the performance of the business—a useful method when it’s difficult to arrive at a valuation.

Another approach is to sell a partial interest in a business unit to a third party, effectively converting the business into a joint venture. Dow Chemical famously pursued such a game-changing structure in 2008, when it tried to sell key elements of its commodity-chemical business to Kuwait’s state-owned Petrochemicals Industry Company to raise cash and reduce exposure to the cyclical commodity-chemical business. But it was left at the altar when the Kuwaiti parliament rejected the deal at the last minute. During the Asian financial crisis, Doosan agreed to sell a 50% interest in its Oriental Brewery unit to the global player Interbrew to raise cash. The deal gave Oriental Brewery access to new technologies, marketing networks, and cost management capabilities that lifted its performance. In a similar move, from 2008 to 2010, Chesapeake Energy raised more than $8 billion by selling a partial interest in its U.S. shale gas assets to BP, Equinor, Total, and others.

A creative third alternative is an asset sale with a leaseback. Through such deals, companies typically divest certain (noncore) assets but tie them to a joint venture. For instance, as part of an aggressive corporate restructuring program it ran from 2005 to 2007, Sony sold its chip-manufacturing facilities to Toshiba for more than $800 million; those assets were then leased back to a new joint venture between the companies, which produced chips for the PlayStation and other Sony consumer electronics.

Business consolidations. Synergies from this kind of joint venture can be substantial. There is a range of options here. At the narrower end of the spectrum, companies (especially those in the natural resources sector) consolidate a set of adjacent assets into a single joint venture to align all the parties’ incentives better and save money on infrastructure. Extending that logic more broadly to an entire region, country, or business unit, companies can consolidate similar operations with those of an industry peer or competitor to capture additional scale or cost synergies. In 2009 Morgan Stanley and Citibank consolidated their retail brokerage and wealth management businesses into a 51:49 joint venture in which Citibank also received an up-front cash payment of $2.7 billion. In a similar vein, in 2013 Bertelsmann and Pearson combined their tradebook publishing businesses, which were facing headwinds, into a 53:47 joint venture, Penguin Random House.

Companies might also team up with industry peers to consolidate back-office, sales, or purchasing functions into joint ventures and realize greater economies of scale. The big three U.S. automakers have done this in forming global purchasing joint ventures. Oil and gas companies have also pursued purchasing cooperatives, logistics pooling, shared maintenance and inventory management ventures, and other collaborative structures. So have telecom companies. For instance, Deutsche Telekom and France Télécom-Orange formed BuyIn, a purchasing joint venture in which the companies pooled procurement activities in an effort to save more than a billion dollars annually.

Partnerships for capital-light growth. Companies looking for growth but seeking lower investment risk can consider a range of transaction structures. Some firms may enter global strategic partnerships with cash-rich players—including state-owned companies, sovereign wealth funds, or PE firms—to identify and develop a portfolio of opportunities within a sector or a market. The global oil corporation BP, the European chemicals maker Borealis, the Brazilian state-owned oil company Petrobras, and the French automaker Renault are among the dozens of companies that have pursued such arrangements over the years.

Alternatively, companies might acquire a partial stake in troubled business units of their peers operating in attractive markets. In 2003 the French oil giant Total took a 50% position in Samsung Chemicals through its chemicals unit Atofina, creating Samsung Atofina, to which it transferred technology, operating capabilities, and marketing expertise that jump-started the business’s growth. In some cases firms might jointly acquire third parties, as competitors Votorantim and Suzano did when they bought majority voting control in the Brazilian pulp and paper maker Ripasa during a market downturn. That transaction was structured to maintain the market independence of the two owners, converting Ripasa into a jointly controlled production unit. The agreement also provided the purchasers with the option to acquire additional preferred and common stock of Ripasa within six years.

STRATEGY

A similar strategy is to invest in or partner with innovative suppliers and technology companies. Toyota's investments and deep partnerships with core parts suppliers in the 1990s were credited with compressing the time necessary to go from concept to production, reducing manufacturing costs, and lowering defects. Similarly, in the 1990s, Samsung Electronics developed a program that nurtured suppliers with financial support and help building their technical capabilities, which led to technology improvements, savings on materials, and shorter order lead times.

Today power, chemical, mining, and petroleum companies could set up similar deals, making minority investments in clean-tech, renewable energy, recycling, or autonomous vehicle firms and agreeing to pilot those firms' technologies in their operations. Such arrangements would allow large incumbents with lower PE ratios to participate in firms with much higher growth prospects and valuations and to speed up their transition to a carbonless future.

Yet another approach is to team up with industry peers and adjacent players to create and commercialize new products. Within the chemical sector, companies have been forming consortia and small partnerships to establish standards for, develop, and sell new sustainable technologies. Similar patterns will play out in other sectors; partnerships are especially valuable in disruptive markets and on technology frontiers. Many of these will start as simple nonequity collaborations with an option to convert to a full-scale joint venture once certain technology or financial milestones are passed, as a way to hedge bets and reduce up-front investments.

AS AN EPIGRAM often attributed to Vladimir Lenin goes, "There are decades where nothing happens, and there are weeks where decades happen." In 2020 we have lived through a ridiculous number of those weeks. Yet periods of disruption can be rich in opportunity. A strategic examination of your current joint ventures and partnerships and the thoughtful creation of new ones can strengthen your position as you come out of the crisis and help you tap opportunities for growth during the coming rebound.

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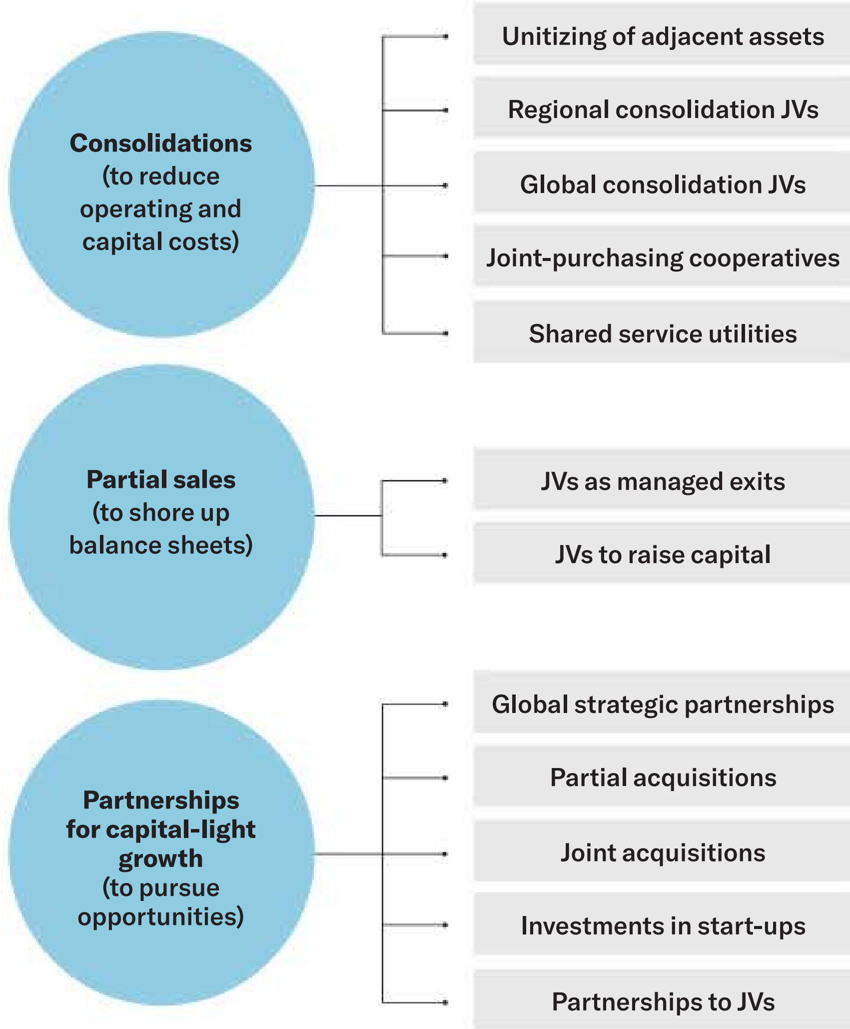
Forming New JVs and Partnerships

A variety of collaborative ventures can help companies raise capital, lower costs, and position themselves for future growth.



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BRIGHTENING THE FUTURE TOGETHER

By Ye Wint Aung and Kaung Htet Aung, Executive Directors, SLG Holdings

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And how to catch up if you're lagging behind

TECHNOLOGY

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THE PAST DECADE HAS BROUGHT tremendous advances in an exciting dimension of artificial intelligence—machine learning. This technique for taking data inputs and turning them into predictions has enabled tech giants such as Amazon, Apple, Facebook, and Google to dramatically improve their products. It has also spurred start-ups to launch new products and platforms, sometimes even in competition with Big Tech.

Consider BenchSci, a Toronto-based company that seeks to speed the drug development process. It aims to make it easier for scientists to find needles in haystacks—to zero in on the most crucial information embedded in pharma companies' internal databases and in the vast wealth of published scientific research. To get a new drug candidate into clinical trials, scientists must run costly and time-consuming experiments. BenchSci realized that scientists could conduct fewer of these—and achieve greater success—if they applied better insights from the huge number of experiments that had already been run.

Indeed, BenchSci found that if scientists took advantage of machine learning that read, classified, and then presented insights from scientific research, they could halve the number of experiments normally required to advance a drug to clinical trials. More specifically, they could use the technology to find the right biological reagents—essential substances for influencing and measuring protein expression. Identifying those by combing through the published literature rather than rediscovering them from scratch helps significantly cut the time it takes to produce new drug candidates. That adds up to potential savings of over $17 billion annually, which, in an industry where the returns to R&D have become razor-thin, could transform the market. In addition, many lives could be saved by bringing new drugs to market more quickly.

What is remarkable here is that BenchSci, in its specialized domain, is doing something akin to what Google has been doing for the whole of the internet: using machine learning to lead in search. Just as Google can help you figure out how to fix your dishwasher and save you a long trip to the library or a costly repair service, BenchSci helps scientists identify a suitable reagent without incurring the trouble or expense of excessive research and experimentation. Previously, scientists would often use Google or PubMed to search the literature (a process that took days), then read the literature (again spending days), and then order and test three to six reagents before choosing one (over a period of weeks). Now

IDEA IN BRIEF

THE CHALLENGE

As more companies deploy machine learning for AI-enabled products and services, they face the challenge of carving out a defensible market position, especially if they are latecomers.

HOW TO GET AHEAD

The most successful AI users capture a good pool of training data early and then exploit feedback data to open up a value gap—in terms of prediction quality—between themselves and later movers.

HOW TO CATCH UP

Latecomers can still secure a foothold if they can find sources of superior training data or feedback data, or if they tailor their predictions to a specific niche.

they search BenchSci in minutes and then order and test one to three reagents before choosing one (conducting fewer tests over fewer weeks).

Many companies are already working with AI and are aware of the practical steps for integrating it into their operations and leveraging its power. But as that proficiency grows, companies will need to consider a broader issue: How do you take advantage of machine learning to create a defensible moat around the business—to create something that competitors can't easily imitate? In BenchSci's case, for instance, will its initial success attract competition from Google—and if so, how does BenchSci retain its lead?

In the following pages, we explain how companies entering industries with an AI-enabled product or service can build a sustainable competitive advantage and raise entry barriers against latecomers. We note that moving early can often be a big plus, but it's not the whole story. As we discuss, late adopters of the new technology can still advance—or at least recover some lost ground—by finding a niche.

MAKING PREDICTIONS WITH AI

Businesses use machine learning to recognize patterns and then make predictions—about what will appeal to customers, improve operations, or help make a product better. Before you can build a strategy around such predictions, however, you must understand the inputs necessary for the prediction process, the challenges involved in getting those inputs, and the role of feedback in enabling an algorithm to make better predictions over time.

A prediction, in the context of machine learning, is an information output that comes from entering some data and running an algorithm. For example, when your mobile navigation app serves up a prediction about the best route between two points, it uses input data on traffic conditions, speed limits, road size, and other factors. An algorithm is then employed to predict the fastest way to go and the time that will take.

The key challenge with any prediction process is that training data—the inputs you need in order to start getting reasonable outcomes—has to be either created (by, say, hiring experts to classify things) or procured from existing sources (say, health records). Some kinds of data are easy to acquire from public sources (think of weather and map information). Consumers may also willingly supply personal data if they perceive a benefit from doing so. Fitbit and Apple Watch users, for example, allow the companies to gather metrics about their exercise level, calorie intake, and so forth through devices that users wear to manage their health and fitness.

Obtaining training data to enable predictions can be difficult, however, if it requires the cooperation of a large number of individuals who do not directly benefit from providing it. For instance, a navigation app can collect data about traffic conditions by tracking users and getting reports from them. This allows the app to identify likely locations for traffic jams and to alert other drivers who are heading toward them. But drivers already caught in the snarls get little direct payoff from participating, and they may be troubled by the idea that the app knows where they are at any moment (and is potentially recording their movements). If people in traffic jams decline to share their data or actually switch off their geolocators, the app's ability to warn users of traffic problems will be compromised.

Another challenge may be the need to periodically update training data. This isn't always an issue; it won't apply if the basic context in which the prediction was made stays constant. Radiology, for example, analyzes human physiology, which is generally consistent from person to person and over time. Thus, after a certain point, the marginal value of an extra record in the training database is almost zero. However, in other cases algorithms may need to be frequently updated with completely new data reflecting changes in the underlying environment. With navigational apps, for instance, new roads or traffic circles, renamed streets, and similar changes will render the app's predictions less accurate over time unless the maps that form part of the initial training data are updated.

In many situations, algorithms can be continuously improved through the use of feedback data, which is obtained by mapping actual outcomes to the input data that generated predictions of those outcomes. This tool is particularly helpful in situations where there can be considerable variation within clearly defined boundaries. For instance, when your phone uses an image of you for security, you will have initially trained the phone to recognize you. But your face can change significantly. You may or may not

> One barrier to entry is the amount of time and effort involved in creating or accessing sufficient training data to make good-enough predictions.

be wearing glasses. You may have gotten a new hairstyle, put on makeup, or gained or lost weight. Thus the prediction that you are you may become less reliable if the phone relies solely on the initial training data. But what actually happens is that the phone updates its algorithm using all the images you provide each time you unlock it.

Creating these kinds of feedback loops is far from straightforward in dynamic contexts and where feedback cannot be easily categorized and sourced. Feedback data for the smartphone face-recognition app, for example, creates better predictions only if the sole person inputting facial data is the phone's owner. If other people look similar enough to get into the phone and continue using it, the phone's prediction that the user is the owner becomes unreliable.

It can also be dangerously easy to introduce biases into machine learning, especially if multiple factors are in play. Suppose a lender uses an AI-enabled process to assess the credit risk of loan applicants, considering their income level, employment history, demographic characteristics, and so forth. If the training data for the algorithm discriminates against a certain group—say, people of color—the feedback loop will perpetuate or even accentuate that bias, making it increasingly likely that applicants of color are rejected. Feedback is almost impossible to incorporate safely into an algorithm without carefully defined parameters and reliable, unbiased sources.

BUILDING COMPETITIVE ADVANTAGE IN PREDICTION

In many ways, building a sustainable business in machine learning is much like building a sustainable business in any industry. You have to come in with a sellable product, carve out a defensible early position, and make it harder for anyone to come in behind you. Whether you can do that depends on your answers to three questions:

1 **Do you have enough training data?** At the get-go, a prediction machine needs to generate predictions that are good enough to be commercially viable. The definition of "good enough" might be set by regulation (for example, an AI for making medical diagnoses must meet government standards), usability (a chatbot has to work smoothly enough for callers to respond to the machine rather than wait to speak to a human in the call center), or competition (a company seeking to enter the internet search market needs a certain level of predictive accuracy to compete with Google). One barrier to entry, therefore, is the amount of time and effort involved in creating or accessing sufficient training data to make good-enough predictions.

This barrier can be high. Take the case of radiology, where a prediction machine needs to be measurably better than highly skilled humans in order to be trusted with people's lives. That suggests that the first company to build a generally applicable AI for radiology (one that can read any scanned image) will have little competition at first because so much data is needed for success. But the initial advantage may be short-lived if the market is growing rapidly, because in a fast-growing market the payoff from having access to the training data will probably be large enough to attract multiple big companies with deep pockets.

This, of course, means that training-data entry requirements are subject to the economics of scale, like so much else. High-growth markets attract investments, and over time this raises the threshold for the next new entrant (and forces everyone already in the sector to spend more on developing or marketing their products). Thus the more data you can train your machines on, the bigger the hurdle for anyone coming after you, which brings us to the second question.

2 **How fast are your feedback loops?** Prediction machines exploit what has traditionally been the human advantage—they learn. If they can incorporate feedback data, then they can learn from outcomes and improve the quality of the next prediction.

The extent of this advantage, however, depends on the time it takes to get feedback. With a radiology scan, if an autopsy is required to assess whether a machine-learning algorithm correctly predicted cancer, then feedback will be slow, and although a company may have an early lead in collecting and reading scans, it will be limited in its ability to learn and thus sustain its lead. By contrast, if feedback data can be generated quickly after obtaining the prediction, then an early lead will translate into a sustained competitive

The tech giants have a head start, but if you can differentiate the contexts and purposes of your predictions even a little, you can create a defensible space for your product.

advantage, because the minimum efficient scale will soon be out of the reach of even the biggest companies.

When Microsoft launched the Bing search engine in 2009, it had the company's full backing. Microsoft invested billions of dollars in it. Yet more than a decade later, Bing's market share remains far below Google's, in both search volume and search advertising revenue. One reason Bing found it hard to catch up was the feedback loop. In search, the time between the prediction (offering up a page with several suggested links in response to a query) and the feedback (the user's clicking on one of the links) is short—usually seconds. In other words, the feedback loop is fast and powerful.

By the time Bing entered the market, Google had already been operating an AI-based search engine for a decade or more, helping millions of users and performing billions of searches daily. Every time a user made a query, Google provided its prediction of the most relevant links, and then the user selected the best of those links, enabling Google to update its prediction model. That allowed for constant learning in light of a constantly expanding search space. With so much training data based on so many users, Google could identify new events and new trends more quickly than Bing could. In the end, the fast feedback loop, combined with other factors—Google's continued investment in massive data-processing facilities, and the real or perceived costs to customers of switching to another engine—meant that Bing always lagged. Other search engines that tried to compete with Google and Bing never even got started.

3 **How good are your predictions?** The success of any product ultimately depends on what you get for what you pay. If consumers are offered two similar products at the same price, they will generally choose the one they perceive to be of higher quality.

Prediction quality, as we've already noted, is often easy to assess. In radiology, search, advertising, and many other contexts, companies can design AIs with a clear, single metric for quality: accuracy. As in other industries, the highest-quality products benefit from higher demand. AI-based products are different from others, however, because for most other products, better quality costs more, and sellers of inferior goods survive by using cheaper materials or less-expensive manufacturing processes and then charging lower prices. This strategy isn't as feasible in the context of AI. Because AI is software-based, a low-quality prediction is as expensive to produce as a high-quality one, making discount pricing unrealistic. And if the better prediction is priced the same as the worse one, there is no reason to purchase the lower-quality one.

For Google, this is another factor explaining why its lead in search may be unassailable. Competitors' predictions often look pretty similar to Google's. Enter the word "weather" into Google or Bing, and the results will be much the same—forecasts will pop up first. But if you enter a less common term, differences may emerge. If you type in, say, "disruption," Bing's first page will usually show dictionary definitions, while Google provides both definitions and links to research papers on the topic of disruptive innovation. Although Bing can perform as well as Google for some text queries, for others it's less accurate in predicting what consumers are looking for. And there are few if any other search categories where Bing is widely seen as superior.

CATCHING UP

The bottom line is that in AI, an early mover can build a scale-based competitive advantage if feedback loops are fast and performance quality is clear. So what does this mean for late movers? Buried in the three questions are clues to two ways in which a late entrant can carve out its own space in the market. Would-be contenders needn't choose between these approaches; they can try both.

Identify and secure alternative data sources. In some markets for prediction tools, there may be reservoirs of potential training data that incumbents have not already captured. Going back to the example of radiology, tens of thousands of doctors are each reading thousands of scans a year, meaning that hundreds of millions (or even billions) of new data points are available.

Early entrants will have training data from a few hundred radiologists. Of course, once their software is running in the field, the number of scans and the amount of feedback in their database will increase substantially, but the billions of scans previously analyzed and verified represent an opportunity for laggards to catch up, assuming they are able to pool the scans and analyze them in the aggregate. If that's the case, they might be able to develop an AI that makes good-enough predictions to go to market, after which they too can benefit from feedback.

Latecomers could also consider training an AI using pathology or autopsy data rather than human diagnoses. That strategy would enable them to reach the quality threshold sooner (because biopsies and autopsies are more definitive than body scans), though the subsequent feedback loop would be slower.

Alternatively, instead of trying to find untapped sources of training data, latecomers could look for new sources of feedback data that enable faster learning than what incumbents are using. (BenchSci is an example of a company that has succeeded in doing this.) By being first with a novel supply of faster feedback data, the newcomer can then learn from the actions and choices of its users to make its product better. But in markets where feedback loops are already fairly rapid and where incumbents are operating at scale, the opportunities for pulling off this approach will be relatively limited. And significantly faster feedback would likely trigger a disruption of current practices, meaning that the new entrants would not really be competing with established companies but instead displacing them.

Differentiate the prediction. Another tactic that can help late entrants become competitive is to redefine what makes a prediction "better," even if only for some customers. In radiology, for example, such a strategy could be possible if there is market demand for different types of predictions. Early entrants most likely trained their algorithms with data from one hospital system, one type of hardware, or one country. By using training data (and then feedback data) from another system or another country, the newcomer could customize its AI for that user segment if it is sufficiently distinct. If, say, urban Americans and people in rural China tend to experience different health conditions, then a prediction machine built to diagnose one of those groups might not be as accurate for diagnosing patients in the other group.

Creating predictions that rely on data coming from a particular type of hardware could also provide a market opportunity, if that business model results in lower costs or increases accessibility for customers. Many of today's AIs for radiology draw upon data from the most widely used X-ray machines, scanners, and ultrasound devices made by GE, Siemens, and other established manufacturers. However, if the algorithms are applied to data from other machines, the resulting predictions may be less accurate. Thus a late entrant could find a niche by offering a product tailored to that other equipment—which might be attractive for medical facilities to use if it is cheaper to purchase or operate or is specialized to meet the needs of particular customers.

THE POTENTIAL OF prediction machines is immense, and there is no doubt that the tech giants have a head start. But it's worth remembering that predictions are like precisely engineered products, highly adapted for specific purposes and contexts. If you can differentiate the purposes and contexts even a little, you can create a defensible space for your own product. Although the devil is in the details of how you collect and use data, your salvation rests there as well.

Nonetheless, the real key to competing successfully with Big Tech in industries powered by intelligent machines lies in a question that only a human can answer: What is it that you want to predict? Of course, figuring out the answer is not easy. Doing so necessitates a deep understanding of market dynamics and thoughtful analysis of the potential worth of specific predictions and the products and services in which they are embedded. It is therefore perhaps not surprising that the lead investor in BenchSci's Series A2 financing was not one of the many local Canadian tech investors but rather an AI-focused venture capital firm called Gradient Ventures—owned by Google.

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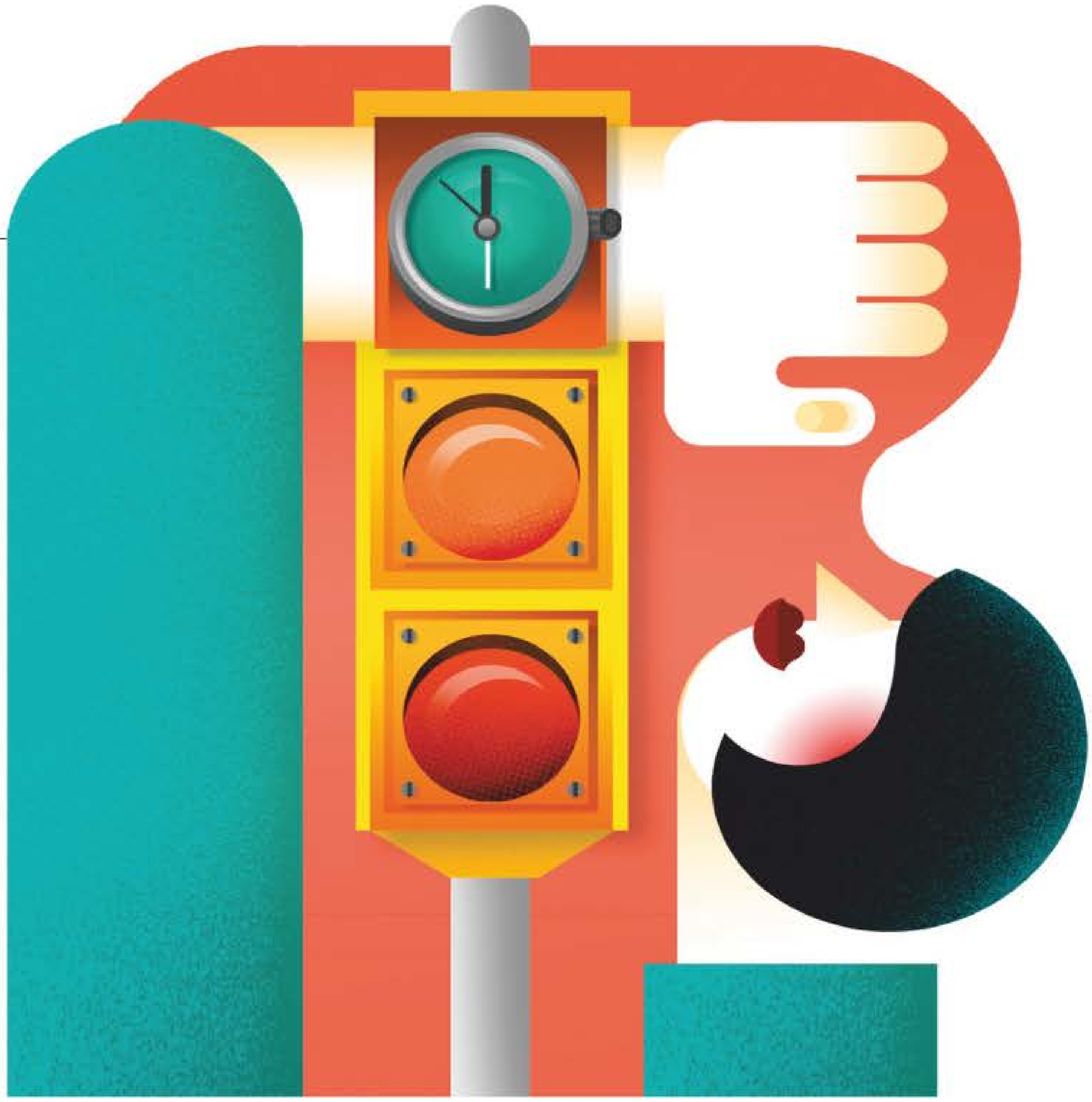
LEARN WHEN TO SAY NO… and how to say yes

by Bruce Tulgan

EVER SINCE COMPANIES STARTED working more cross-functionally and collaboratively, exchanging top-down management for dotted-line reporting with fuzzy accountability, work has gotten more complicated. All day every day, most of us are fielding requests. The asks are formal and informal, large and small. They're not just from direct bosses and teammates but also from "internal

Illustrations by MARIA CORTE



customers" all over the organizational chart. Add to this the demands of external stakeholders, of family, friends, and acquaintances, and sometimes even of complete strangers. The requests keep coming—across tables and through Zoom screens, by phone, e-mail, and instant message.

The inflow is daunting. And now more than ever, your professional success and personal well-being depend on how you manage it. You can't say yes to everyone and everything and do all of it well. When you take on too many or the wrong things, you waste time, energy, and money and distract yourself from what's really important. Still, no one wants to anger or disappoint colleagues or other contacts—or, worse, turn down key career and life opportunities.

You must therefore learn when and how to say both no and yes. A considered no protects you. The right yes allows you to serve others, make a difference, collaborate successfully, and increase your influence. You want to gain a reputation for saying no at the right times for the right reasons and make every single yes really count.

How do you do it? Through decades of research into what makes people the most highly valued, indispensable employees at hundreds of organizations, I have uncovered a framework that I believe works. It has three parts: assess the ask, deliver a well-reasoned no, and give a yes that sets you up for success.

ASSESS THE ASK

When making a financial investment, most of us do some due diligence—seeking out more information so that we can make a sound judgment. When you say yes or no to a request, you're deciding where to invest your personal resources, so give the choice the same careful consideration.

That starts with insisting on a well-defined ask. Sometimes the ask is sloppy, so you misunderstand: It sounds like more or less than it is, or it sends you off in the wrong direction. That's why you ought to help yourself and the asker by getting critical details about the request. You can develop a reputation for being highly responsive if you engage in this way. It doesn't mean you're agreeing to the ask. It simply signals that you're taking your counterparts' needs seriously, whether you can help or not.

You should ask questions and take notes, clarifying every aspect of the request, including the costs and benefits. Think of the intake memos that lawyers, accountants, and doctors write—documents created for their own reference to capture the particulars of each client's need. Essentially, you're helping the asker fine-tune the request into a proposal. The memo should cover the following questions:

1. What is today's date and time? (This will help you track how the project evolves.)
2. Who is the asker?
3. What is the deliverable being requested? Be specific.
4. By when does it need to be accomplished?

> Most requests deserve some investigation. You'll find that small asks can balloon into big ones or that what at first sounds impossible turns out to be easier than you assumed.

5. What resources will be required?
6. Who is the source of authority on this issue, and do you have that person or group's approval?
7. What are the possible benefits?
8. What are the obvious and hidden costs?

The bigger or more complicated the ask, the more information you should gather. Sometimes honoring the request is out of the question. Or an ask appears so insignificant that an intake memo seems unnecessary—or would take longer to draft than simply completing the request. Indeed, if you tried to drill down into every microask, people might accuse you of creating ridiculous bureaucracy. And they'd have a point. But the vast majority of requests will deserve at least some further investigation before you make a call on them. You'll find that small asks can balloon into big ones or that what at first sounds impossible turns out to be much easier than you assumed. You might see that a seemingly silly ask is actually smart, or vice versa. That's why the intake memo should become a rock-solid habit for everything except the most minor and urgent requests.

Be sure you share your list with the asker to confirm that you're on the same page. Imagine the confidence your counterparts will gain in your promises if they see you're creating a mutually approved record of what they need—and how much more readily they'll accept your judgment of yes or no.

Zane (whose name has been changed to protect confidentiality) is an extremely capable business analyst in a large consumer-electronics company. Until recently, he had a hard time saying no at work, especially to his boss and other senior leaders, because he was so determined to prove his value.

Inundated by requests, he often found himself terribly overcommitted, working harder and harder, juggling competing priorities as fast as he could. He never intended to overpromise, but he was often doubling back to renegotiate delivery dates even as he accepted new requests. Soon he started dropping balls, making mistakes, and irritating colleagues. Every incoming request felt like an attack to fend off, so at least for a while, no seemed like the only answer.

Finally, Zane's manager, Aiko, intervened and asked that all requests for his time go through her. Although he temporarily lost his power to say yes or no, he learned a lot from his boss's process, and eventually, Zane took it over himself.

"We had an intake form," Zane explains. "Who is making and authorizing this request? Is this data we have or data we need to get or start capturing going forward? Do you need analysis, and is that something we can do? And what is the business objective?"

Even after answering those questions, prioritizing competing requests could often be tricky. In one instance, Zane's boss's boss tasked him with setting up a new data-capture system "as fast as possible," just as he was pulling together a report for Aiko. The latter was a two-day project. Building the new system would take about two weeks. Should he immediately focus on the biggest big shot or first get the quick win?

Another challenge for Zane was ranking competing requests from his peers against those from his two direct reports and from people elsewhere in the organization and outside it. But using the disciplined intake-memo process, Zane got better and better at comparing how urgent or important each project really was, making smart decisions, and demonstrating to everyone his true service mindset without overextending himself.

A WELL-REASONED NO

A thoughtful no, delivered at the right time, can be a huge boon, saving time and trouble for everybody down the road.

A bad no, hastily decided, causes problems for everybody, especially you. Bad nos happen when you haven't properly assessed the ask; when you let decisions be driven by personal biases, including dislike of the asker or dismissals of people who don't seem important enough; or when you decline simply because you've said yes to too many other things and don't have any capacity left. Bad nos often cause you to miss out on meaningful experiences and are also more likely to get overruled, leaving hard feelings on both sides.

A good no is all about timing and logic. You should say no to things that *are not allowed, cannot be done,* or that, on balance, *should not be done.* I call these the "no gates," a concept I borrowed from a project management technique called stage-gate reviews, which divide initiatives into distinct phases and then subject each to a "go, no go" decision.

The first gate is the easiest to understand. If there are procedures, guidelines, or regulations that prohibit you from doing something—or someone has already made it clear that this category of work is off-limits to you, at least for now—then you simply give a straight no. (If you think it's against the rules for everybody, please also consider talking the requester out of pursuing the idea.)

What do you say? "I don't have discretion here. This request violates policy/rules/law. So you really shouldn't make it at all. Perhaps I can help you reframe your request within the rules so that it can then be considered."

Turning people down at the second gate is also straightforward (at least sometimes). If the request isn't feasible, you say, "I simply can't do it." If you just don't have the ability to deliver on it, then you say, "Sorry, that's outside my skill set. I'm not even close."

What if you don't currently have the experience and skills to handle the request quickly and confidently—but you could acquire them? The answer still might be no. But the answer could also be "This is not my specialty. That said, if you accept that I'd need extra time to climb a learning curve, then I'll take a crack at it." It could be a development opportunity for you and, in the end, give the requester a new go-to person (you) on this sort of project.

The most common reason for "I cannot," however, is overcommitment. In those instances, people tend to say things like "With all the other priorities I'm balancing, I don't have the availability to do it anytime soon." That's a forced no. If you can't avoid it, try to preserve the opportunity to fulfill the request later or else help out down the road when you are available.

What's the best way to respond? "I'm already committed to other responsibilities and projects. I'd love to do this for you at a later time. If that's not possible, I'd love to be of service somehow in the future."

The third gate is the trickiest because whether something merits doing isn't always clear at first. You need to make a judgment on the likelihood of your success, on the potential return on investment, and on fit with your and your organization's priorities. And sometimes the answer to the request is "maybe" or "not yet."

What do you say in those cases? "I need to know more. Let me ask you the following questions...." Essentially, you're getting the person in need of help to make a more thorough or convincing proposal.

What if you do understand the ask and you don't think it's a worthwhile goal for you right now? You might say, "That's not something I should say yes

> Make sure you agree on the details, including what the requester needs from you, what you will do together, how and when the work will be done, and who has oversight.

to at this time because the likelihood of success is low," "...the necessary resources are too great," "...it's not in alignment with the current priorities," or "...the likely outcome is [otherwise somehow not desirable]."

When it comes to timing, the most important thing is to thoroughly engage with the request. Then answer quickly. Don't give a precipitous no, or you'll risk seeming dismissive. But don't string your counterpart along, either. If your no really means "not at the moment but soon," then let the person know that. If the answer is "No, but I know somebody who can" or "No, but I can provide you with aid that will help somebody else do it," then say that as soon as possible. If the answer is "I may not, cannot, or should not do it, and it is a bad idea, so you shouldn't do it either," have that conversation before the asker presses you or someone else further.

Once Zane routinely began tuning in to every ask and doing his due diligence, he found it much easier to see when he should decline a request and became far more confident delivering a well-reasoned no—or a "not yet." For example, around the time that he was balancing that report for Aiko with setting up the new system for her boss, Zane had to decline or delay filling several other requests. As usual, he gave many standard "That data is simply not in the system" responses. But he also said no to a request for a wild-goose chase from a peer of his boss who had a history of wasting his time. "I wasn't building a correlation model *again* to once again *not* find the pattern he was looking for," Zane explains, noting that he also gave Aiko a heads-up to make sure nobody would be surprised. He also delayed completing a request from another executive peer of Aiko's, saying something along the lines of "We've never collected that particular data before. Maybe we can start, but I wouldn't be free to work on that for a few weeks."

Because of Zane's increasingly thorough, businesslike approach, his colleagues came to deeply value his assessments and responses and—over time—his judgment.

AN EFFECTIVE YES

Every good no makes room for a better yes—one that adds value, builds relationships, and enhances your reputation.

What is a better yes?

It's aligned with the mission, values, priorities, ground rules, and marching orders from above. It's for something that you can do, ideally well, fast, and with confidence. In other words, it involves one of your specialties—or an opportunity to build a new one. It allows you to make an investment of time, energy, and resources in something that has a high likelihood of success and offers significant potential benefits.

The key to a great yes is clear communication and a focused plan for execution. First, explain exactly why you're saying yes: You can enrich the project, you want to collaborate, you see the benefits. Then pin down your plan of action, especially for a deliverable of any scope.

Make sure you agree on the details, including what the requester needs from you, what you will do together, how and when the work will be done, who has oversight, and when you'll discuss the issue next. If this is a multistep process, you might need to have several of those conversations as you go along.

As his reputation for professionalism and good judgment grew, Zane was in greater demand but also had more and more discretion to choose among competing responsibilities and projects. As the company moved toward a more sophisticated approach to business intelligence (data collection, analysis, reporting, and modeling for prediction), his input was sought by a number of executives he had worked with, and his opinion was given a lot of weight. As a result, Zane was made the lead analyst on the new enterprise-resource-management system implementation, which he describes as "the greatest professional development experience" of his career.

MOST PEOPLE HAVE too much to do and too little time. Saying yes to requests from bosses, teammates, and others can make you feel important but can be a prescription for burnout.

The only way to be sustainably successful is to get really good at saying no in a way that makes people feel respected and to say yes only when your reasoning is sound and you have a clear plan of attack.

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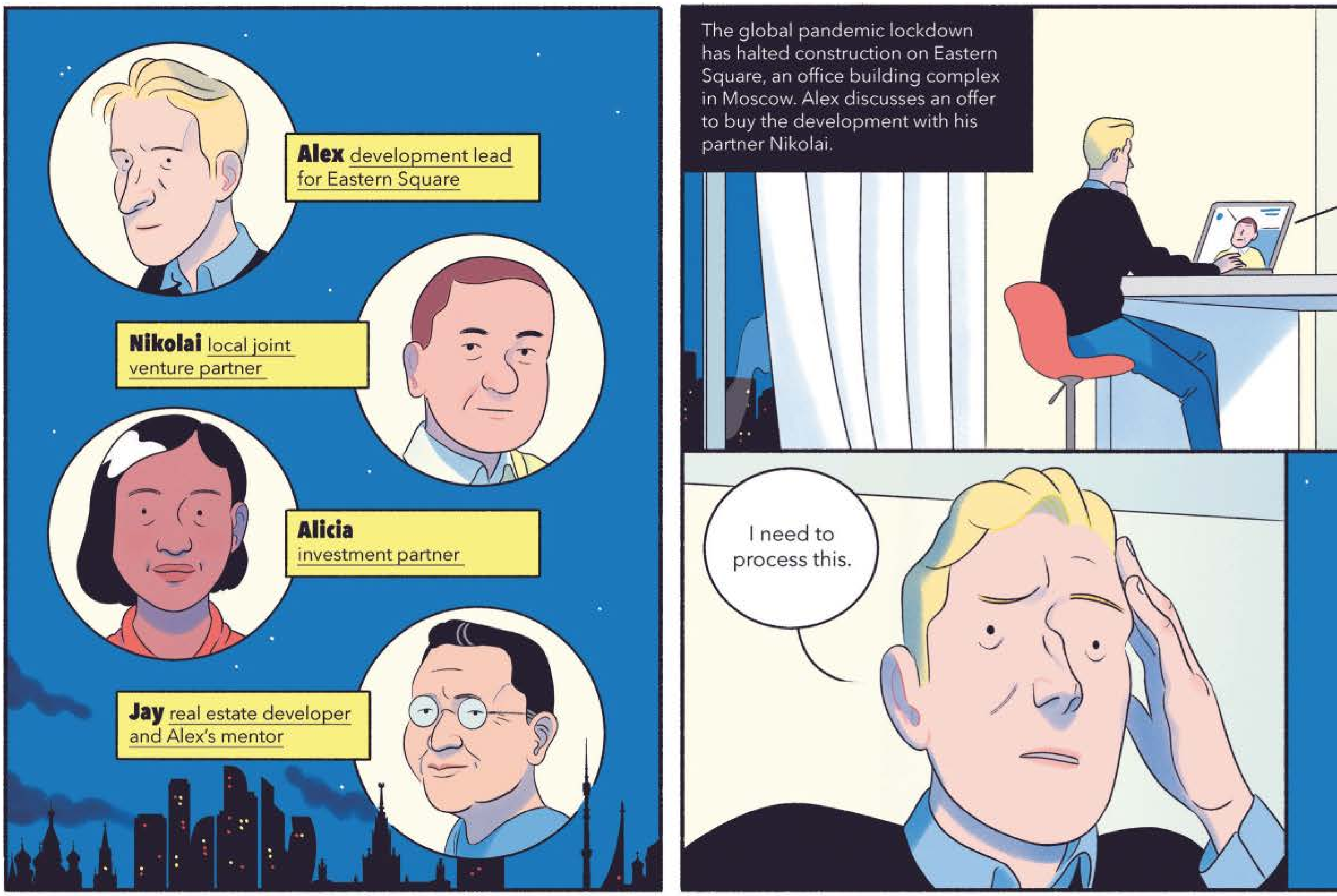

CASE STUDY
Pull the Plug on a Project with an Uncertain Future?

by Cody Evans and Chris Mahowald

HBR's fictionalized case studies present problems faced by leaders in real companies and offer solutions from experts. This one is based on the Stanford GSB Case Study "White Square: A Perfect Storm in Moscow" (case no. RE140-PDF-ENG), by Cody Evans, Brian Patterson, and Chris Mahowald, which is available at ***HBR.org****.*

ALEX KOZAK WAS sitting in his Moscow apartment waiting for his colleague, Nikolai Krylov, to join their Zoom call. When his video window popped up, Nikolai announced with a smile, "I have good news!"

It had been a while since Alex had gotten any of that. In fact, he'd spent the past several weeks holed up in his apartment because of the global pandemic lockdown, and it had begun to feel as if the world was unraveling around him.

"I've got a potential buyer," Nikolai said. He and Alex had been working together for the past six years on the development of a 700,000-square-foot commercial office building in Moscow, which they'd dubbed Eastern Square. Alex was leading the project for his company, the New York–based property firm EPM, and Nikolai represented its local joint venture partner, Krasny Invest, which had traded a prime parcel of land close to the Presnensky district and its expertise in navigating Russian bureaucracy for one-third ownership of the project.[1] In late March they'd had to pause work, and Alex had thought they'd be using this virtual meeting to discuss restarting. Selling the development was not on his radar.

Illustrations by BIANCA BAGNARELLI

"It's an investment firm based in Kazakhstan, and they're eager," Nikolai continued, either ignoring or not noticing Alex's shocked look. Alex knew that Krasny Invest was reeling from the abrupt halt in the Russian economy, as were so many others, but he'd thought they would stick this project out. The timeline had been extended, of course, but thanks to the strong architecture, engineering, and construction teams they'd assembled, they were only a year away from completion and already had a prime anchor tenant, a U.S. company opening its first Russian office.[2]

Nikolai explained more of the details. The proposed deal with the Kazakhs would monetize the project's $100 million of invested equity plus a small profit. This was only a fraction of the more than $475 million in profit that Alex and Nikolai had projected so confidently back in January—a healthy increase from the $200 million in profit expected when the project was first conceived.

Of course, as Alex well knew, the past few months had introduced many new risks. What would the Moscow real estate market look like in a year? Would the economy recover that quickly? Would people even be going to their offices? Or would companies shrink their footprints and let people work from home?[3] The team had navigated the 2017 slump in the Moscow real estate market. But this crisis was clearly different.

"I need to process this," Alex told Nikolai now.

"Look, we're all scrambling," Nikolai said. "Between you and me, my company needs the liquidity. But given how the world has changed this year—and specifically how the workplace has changed—I think it's smart to get out now. We might not be able to secure an offer like this again. Talk to Alicia."

Alicia Mendez was a managing director at a London-based insurance company with $150 billion in investments globally, including a 33% stake in Eastern Square.

"I need to talk to my bosses, too," Alex said. "And the construction team."

Alex stared out his apartment window. As an American expat with family roots in Poland, he'd come to love Moscow, and he hated to see so much suffering in this city as well as around the world. He believed this project would be a catalyst for the city's further growth—and he had put his heart and soul into it. If they sold now, his company and its partners wouldn't lose money, but he'd have wasted six years of his life. What's more, he'd forgo his outsize share of the potential profits. Did he really want to start a new project in this economy?

WE CAN SEE IT THROUGH

That evening Alex logged in to his last videoconference of the day—this one with Alicia. An influential partner at her firm, she managed a $30 billion real estate portfolio and had always been fully committed to the Eastern Square project. But like everyone else, she was now worried.

"Before we talk about Nikolai's proposal, I want some more info on where things stand with construction," she said.

"We had a two-hour meeting with the foreman earlier today; he and his team are set to restart as soon as they get the green light from the city," Alex explained. "But they're understaffed, and new guidelines are restricting the number of people we can have on-site. Their best guess is a year's delay at a minimum."

"And worst case?"

"He mentioned three years."[4]

Alicia's eyes widened. She took a breath. "Well, a delay could work in our favor, despite the higher

Case Study Classroom Notes

1. *Experts on business in Russia often recommend that foreigners operating there have a local partner to help manage the unique complexities of the market.*

2. *Despite increasing sanctions since 2016, thousands of U.S. companies have offices or facilities in Russia.*

3. *According to an April 2020 Gallup poll, 55% of U.S. managers expected to change their remote work policies in the wake of Covid-19.*

4. *Could a longer timeline benefit the project if it meant the complex opened in a stronger economy?*

5. *Health experts have recommended that offices reopen only if they are equipped with protections against spread of the coronavirus.*

6. *Given that his interests aren't the same as his partners'—he'll lose less financially if Eastern Square fails—how should Alex weigh their opinions?*

interest costs. It would allow time for the economy to recover, for a vaccine to be developed, for people to return to the office. And the anchor tenant?"

"I talked to the COO today, and she said they're deep in planning revisions but as of now still hoping to move forward with the expansion to Moscow. They might not need the full space though. She threw out the idea of 50% capacity."

Alicia was silent for a moment. Alex waited.

"As you know, we play the long game," she finally said. "Moscow's commercial office sector has long been underserved, especially at this grade." That was what had initially sold her on the project. The city had so few quality office buildings that competition over the existing stock was fierce. And Eastern Square was the most significant development in the pipeline through 2025.

"The question is, will there still be demand when the market recovers?" Alicia continued.

"Right, of course," Alex said. "That's hard to predict. There are some financial upsides—falling interest rates, cheaper labor costs—but we need to keep our tenant and also attract others. I think we can still achieve a profit of more than $400 million if we pursue the long game, as you said."

"There may be an opportunity to offer new state-of-the-art features like air filtration and touchless entry," Alicia replied. "Those could be critical differentiators.[5] If you feel strongly, I think I can persuade people here to see this thing through, with a fully baked proposal from you on how we can weather the storm. Things may get worse before they get better."

Alex nodded and smiled. "I can do that." But as soon as he closed the Zoom window, he asked himself, *Can I?* He couldn't escape the ominous headlines from cities around the world. If he was having trouble convincing himself, how could he convince others?[6] And even more distressing, should he try?

PAST EXPERIENCE

It was close to 2:00 AM, and Alex, still awake, called his mentor and former business school professor, Jay Huang, who'd spent his career in real estate development before joining academia.

"Are you getting any sleep?" Jay asked.

"Some," Alex lied. "I manage to fit a few hours in between scenario-planning sessions."

Jay knew Moscow well. Right after Russia opened to outside investors, he had bought up land and built numerous high-end properties in the country. He'd left

the city soon after the 2008 global financial crisis.[7]

"What are you seeing?" he asked.

"Obviously the possible range of outcomes is wide," Alex said. He explained that assumptions about rent and cost of capital could hold or, if things continued to deteriorate, could fall even further below his initial projections. The vacancy rate in Moscow had already spiked from 0.5% to 7% practically overnight.

Alex gave Jay more details about the Kazakh investor's offer. "Nikolai says they see this as an opportunity to get a trophy asset at a great price. And they're eager to close the deal soon, which would give Krasny Invest the liquidity it needs. Plus Alicia and I would get a modest return on our investment. The EPM brass wouldn't be angry, but they wouldn't be happy either. This was supposed to be our marquee development for 2021. If it turns out I'm selling at a bargain, it would be a bad move."

"What does your boss say?"

"He's super busy with other projects in the EPM portfolio. Honestly, most of my counterparts are in a worse position than I am. Besides, you know how EPM operates. I'm the one on the ground, so it's my call: Make it work or cut and run."

"If Alicia is willing to stick with you, could you persuade her to buy out Nikolai's company? Or would EPM?"

"Us, no. Not now. Alicia, possibly. But I'm not sure I can navigate this without Nikolai. I suspect that the project has gone as smoothly as it has only because he's a drinking buddy of half the town."

"I hope you're not beating yourself up," Jay said. "These are strange times, to say the least."

"I recognize that this is mostly out of my control, but I'd love to be the person who pulls it off despite the odds. There's no denying that it would have huge upsides for me, from both a financial and a career perspective."

"And you're so close to the finish line. This crisis will end. The global economy will recover. Companies will bounce back. The Moscow market will start growing again.[8] Even in the aftermath of 2008, I had success with my projects. These things pass."

"Spoken like a true real estate developer."

Jay laughed. "You're one of us now."

START OVER FROM SCRATCH?

Early the next morning, when the sun was barely up, Alex put on a mask and walked from his apartment to the Eastern Square site. A few months earlier these streets had bustled with people. Today the few others he passed were in medical or police uniforms and

7. Russia's economy was hit hard in 2008 when oil prices collapsed and foreign investors withdrew capital from the country.

8. According to an industry report, the value of commercial real estate transactions in Russia increased by 34% in 2019 to a total of $3.8 billion.

also had their faces covered. It felt like a dystopian future. Would any city ever operate normally again? Were he and Alicia crazy for thinking that a central-city office project could still succeed?

He reached his destination. If Covid-19 had never happened, construction workers would have been arriving, putting on their hard hats, and starting up the cranes and lifters for the day. But all was still. He looked up at the shell of the building and felt a tightness in his chest. He'd lined up a well-capitalized investor, a well-connected local partner, a reliable construction team, a premier location, and a world-class tenant. What seemed like the most promising project of his career was now at risk.

This development had been his life for six years, and the thought of giving up on it now was difficult to stomach. Beyond the emotional investment, Alex had real dollars to consider. If he could salvage the project, his company's share of the investment would be worth millions, whereas a sale now would mean starting this chapter of his career from scratch.

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Should Alex push the project forward or take the deal?

THE EXPERTS RESPOND

SHEILA BOTTING *is the president of Americas professional services at the commercial real estate firm Avison Young.*

This is a case for the bird in the hand.

Alex should take the deal with the Kazakh investors and benefit from the value he has created to date. Could he hold off and make more? Potentially. But he could also lose everything. And that's not a risk worth taking at this stage.

In my role at Avison Young, I regularly advise people on decisions like this one. This is a complex international development, and its success is contingent on local planning approvals, construction crews, and tenants requiring new office space—in the middle of a pandemic and an economic downturn. Many moving parts need to come together.

In addition, during this work-from-home period, organizations and employees are recognizing that they really don't need to be in the office every day. Flexible work is rapidly gaining traction, and with the right technology, many people can work anywhere, anytime. Office desks in North America are typically only 50% utilized, and even before the crisis, companies were questioning their real estate costs. I believe they will continue to reduce and optimize their footprints.

Don't get me wrong: I'm not declaring the office dead. But its role will evolve; workspaces will be hubs of innovation and collaboration where people, cultures, and ideas can mix, not places we go to every day. And flexible work schedules will be a key factor in the war for talent.

Of course, every project is unique. And before Alex decides what to do, he needs to complete a risk assessment based on data and financial analytics and also review the deal structure with an appreciation of each partner's perspective and exit requirements.

Then he should consider the macro geopolitical and economic environment, including the shrinking Russian and global economies. In June the World Bank predicted that the latter would contract by 5.2% in 2020.

Alex should also investigate the fundamentals of Moscow's office market: supply, demand, and pricing. As in many cities around the world, the Covid-19 crisis has caused the number of vacancies to rise, which doesn't bode well for Eastern Square.

As Alicia points out, down economies often mean lower development costs. But will labor be available to complete the project? Will materials costs go up? Will the anchor tenant reduce its commitment or drop out? And what about the planning approval process? Could Alex find a replacement for Krasny's role and equity?

Alex needs to quantify these risks and run a sensitivity analysis on the cost and revenue sides. He should also gather data from local real estate brokers who understand market dynamics and how tenants' needs are evolving.

Naturally, Alex is personally motivated to finish this project. But if he takes the deal now, he will most likely be making a shrewd decision to protect the capital of his employer. Rather than a career killer, this could be a career maker. And there will be another opportunity. In real estate there always is.

BRIAN PATTERSON
is the founder of White Star Real Estate, a Central and Eastern Europe–based developer and investor.

When market conditions change dramatically, there is often pressure to sell at the worst time.

Rather than pull the plug, Alex should focus on getting more information, evaluating options, and considering available solutions. In high-stakes situations, emotions will often lead you to exit before the door closes. But the door rarely closes completely, and it's never wise to make underinformed decisions.

This case is loosely based on my experience during the 2008 global financial crisis with a similar real estate development in Moscow. It was a different time—and a different crisis—but many of the considerations are the same. The question I faced was "Can I, along with my partners, address the uncertainties the crisis has introduced and find good outcomes for everyone involved?"

To answer that question, I did what my mentors have always counseled me to do with decisions during market dislocations: I broke down the big problems into smaller ones, brainstormed solutions with the team, and then considered how practical and feasible they were. We met with our key stakeholders and drilled down to understand the unique problems of each of them. Then, together, we thought about how to help them so that they could stay the course.

Our Russian partner needed to monetize his interest so we immediately started seeking a replacement investor. We closed with the new partner six months later, securing our original partner a far higher price than the discounted one that had been offered, as in this case, by a Kazakh firm. During those six months we worked in parallel to solve the other problems we faced.

We started with what I saw as the biggest risk: a default on our bank loans and foreclosure. To prevent that, we had to accommodate our anchor tenant's demands. This incurred a substantial additional cost but a huge potential payout. We then had the "dry powder"—a huge cash flow once the project was completed—to guarantee our contractors large fees and bonuses, payable when rental income started coming in, which would keep them afloat. In effect we shared the profits with the other stakeholders to address their issues. A crisis is no time to be greedy.

Alex should follow a similar process. Once he sees a path forward, he can create a compelling narrative that convinces his bosses, Alicia, Nikolai, the contractor, and the tenant that they can navigate from "The world is falling apart" to "We can make this project a success."

That will take time and a lot of effort, of course. Back in 2008 we had dozens of strategy meetings, and Alex will need to do the same. But our approach worked. The market settled. We were able to keep our lessees. And we made four times the profit we had initially projected.

I believe that's what will happen for Alex, too—especially if he's able to incorporate the state-of-the-art health and safety features that Alicia suggests and position Eastern Square as the office building of the future. Even in an era when more people are working from home, there will always be demand for quality commercial property, especially now that more space is needed to keep employees safe and productive. When you're in the depths of a crisis and everyone is panicking, it's best to hold steady until people see the green shoots—the signs of life—again. They will come.

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SYNTHESIS

PRESIDENTIAL OBSESSION

The complex and crucial relationship between our leaders, the media, and us

by Jeff Kehoe

SINCE DONALD TRUMP took office in January 2017, he has issued tens of thousands of tweets—some positive, some angry, some serious, some bonkers. Invariably, the media reacts, as do we, the public. We might write a letter to the editor, post a reply, retweet, like, dislike, or shake a fist at the screen.

This may seem like a dynamic peculiar to our current moment, but while the technology may be relatively new, the underlying human story is as old as the Republic. We U.S. citizens are obsessed with our presidents—always have been. We have an insatiable desire to read about what they say and do, watch them, rate them, and pass judgment on them.

The vigor of this ongoing obsession is well reflected in a raft of new books, from "best of" lists (Jason Stahl's *America's Presidents: Ranked from Best to Worst* and Robert Spencer's *Rating America's Presidents*) to biographies (David S. Reynolds's *Abe: Abraham Lincoln in His Times*; Fredrik Logevall's *JFK: Coming of Age in the American Century, 1917–1956*; Jonathan Alter's *His Very Best: Jimmy Carter, a Life*; and more).

But all these recent releases and our compulsive monitoring of presidential news reflect only part of the picture. What often escapes notice is presidents' equally intense obsession with how they are viewed by the citizenry and their unrelenting efforts to influence public opinion, working both through the press—from the 18th-century broadsheet to social media—and around it.

Trump's hot war on the "lamestream" media tests the boundary between freedom of the press and presidential power in a way that may feel uniquely combative. But in ***The Presidents vs. the Press,*** scholar Harold Holzer reminds us that this has happened before. Although George Washington enjoyed "the longest-ever press honeymoon in the history of the American presidency," baldly partisan newspapers eventually went on the attack. In response, Washington, aided by Alexander Hamilton, backed John Fenno's

Illustration by BETH GOODY

Gazette of the United States to act as the “quasi-official administration mouthpiece.”

During the Civil War, Abraham Lincoln shut down anti-Union papers and seized control of the North’s telegraph lines. Lincoln saw his aggressive suppression of the press as a war power crucial to preserving the Union. As Holzer writes: “The leader who later gained fame as the ‘Great Emancipator’ began his presidency as the ‘Great Censor.’”

In the 20th century, Franklin Delano Roosevelt emerged as a brilliant communicator, hosting a whopping 998 press conferences during his 12 years in office. His innovative “fireside chats,” via radio, signaled a revolution in presidential communication, allowing him to reach into Americans’ living rooms, assuage their fears during the Great Depression, and, not incidentally, circumvent the print media. Presidents have mastered the press milieu of their time in various ways—Theodore Roosevelt with his indomitable energy, Ronald Reagan with his affability and actor’s polish, Bill Clinton with his empathy—but the true communication pioneers were the ones who recognized the power of new technology to connect directly with citizens and shape public opinion. John Kennedy’s use of televised press conferences qualifies, as does Barack Obama’s embrace of the internet and social media, which allowed him to vastly expand and personalize his messaging.

President Trump is a pioneer in his own right. He sees most media organizations as adversaries and so works against and around them with instinctive skill, often in ways that many find disturbing. It’s strange to think of his tweets as somehow equivalent to FDR’s fireside chats, but they are. Holzer makes a powerful case that, “love him or loathe him,” Trump is “one of the most effective communicators in White House history.”

Of course, he has been helped by a highly partisan 24/7 cable news cycle and the social media platforms that carry his soundbites, often unmediated. In ***Terms of Disservice: How Silicon Valley Is Destructive by Design,*** Harvard researcher Dipayan Ghosh argues that companies like Facebook (his former employer), Twitter, and Google have caused “widespread damage” to “the American media ecosystem” by favoring profit over public good. He points to social media firms’ reluctance to mediate content posted by the current president as a central force undermining political discourse.

Not surprisingly, Ghosh thinks these platforms should be regulated like media companies. He calls for a new social contract for digital business that prioritizes the security and interests of consumers and articulates and acknowledges the civic responsibility of owning such vast information networks. The final chapter of the book provides a usefully detailed, if radical, blueprint for a regulatory framework that is sure to spur debate and, hopefully, progress.

In the new-media age that Ghosh describes, the idea of long-form presidential writing—and books in particular—as an effective image-shaping tool may strike some as overly analog, even quaint. However, in ***Author in Chief*** and its follow-up, ***The Best Presidential Writing: From 1789 to the Present,*** journalist and historian Craig Fehrman draws on more than 10 years of research to make a compelling contrary argument.

He explains that John Adams was the first president to write a memoir, and traces the many others who followed suit: Andrew Jackson, with the first campaign biography; Ulysses Grant, with the brilliant and moving *Personal Memoirs*; and Calvin Coolidge, whose intimate autobiography, published soon after he left office for maximum legacy impact, was hugely popular in its day. JFK wrote *Profiles in Courage* (with a ghostwriting assist from Ted Sorensen) before he was in office, a tradition continued by Obama, with his revealing, authentic *Dreams from My Father,* and by Trump, with the self-aggrandizing *The Art of the Deal* (also ghostwritten). Fehrman’s engaging and learned narrative reminds us that, with some exceptions, these longer presidential communications let us see presidents “at their most human…their most ambitious and their most reflective.”

While the mutual obsession between us and our presidents will no doubt continue—the onslaught of communications, whether mediated or not, will only intensify as digital platforms gain power—it’s important to remember that, ultimately, it is we citizens who determine our political leaders’ fate and legacy. Lincoln once said: “Public sentiment is everything. With public sentiment, nothing can fail; without it, nothing can succeed.” He was right. When presidents communicate, well or badly, our response is what matters. As long as the United States remains a democracy, we—not our elected officials—are the ones in charge.

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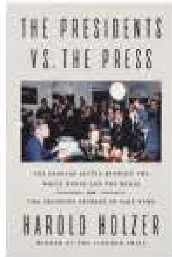
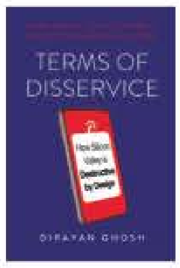
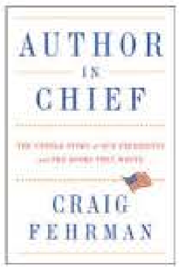


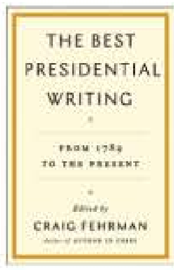
The Presidents vs. the Press
Harold Holzer
Dutton, 2020



Terms of Disservice: How Silicon Valley Is Destructive by Design
Dipayan Ghosh
Brookings Institution Press, 2020



Author in Chief
Craig Fehrman
Avid Reader Press, 2020



The Best Presidential Writing: From 1789 to the Present
Craig Fehrman (editor)
Avid Reader Press, 2020

JEFF KEHOE *is a senior editor at HBR.*

Executive Summaries September—October 2020

SPOTLIGHT

Making Sustainability Count

How to improve environmental, social, and governance (ESG) performance | **page 37**

THE COMPLETE SPOTLIGHT PACKAGE IS AVAILABLE IN A SINGLE REPRINT.
HBR Reprint R2005B

Social-Impact Efforts That Create Real Value

George Serafeim | page 38

Companies don't win over investors just by issuing sustainability reports and engaging in other standard ESG practices. What they need to do, says Harvard Business School's George Serafeim, is integrate ESG efforts into strategy and operations. He makes five recommendations: Identify the material issues in your industry and develop initiatives that set your firm apart from rivals; create accountability mechanisms to ensure the board's commitment; infuse the whole organization with a sense of purpose and enthusiasm for sustainability and good governance; decentralize ESG activities throughout your operations; and communicate regularly and transparently with investors about ESG matters.

The Board's Role in Sustainability

Robert G. Eccles, Mary Johnstone-Louis, Colin Mayer, and Judith C. Stroehle
page 48

To build long-term profitability, boards of directors must pay more attention to ESG concerns—and a compelling corporate purpose should underpin their efforts. That's the contention of the authors, who offer a research-based framework called SCORE to guide boards' actions: *Simplify*—define and communicate your purpose clearly; *Connect*—link your purpose to strategy and capital allocation decisions; *Own*—ensure that all employees embrace the firm's mission and have the means to deliver on it; *Reward*—tie executive compensation to metrics that include ESG performance; *Exemplify*—use data and narrative accounts to show stakeholders how you're achieving your purpose and improving sustainability.

The Challenge of Rating ESG Performance

Simon MacMahon | page 52

Over the past decade, more and more institutional investors have taken an interest in companies' records on environmental sustainability, social responsibility, and governance. In this article the head of ESG research at Sustainalytics, which gathers information on tens of thousands of companies worldwide, explains why this data matters and how his firm arrives at its performance ratings. The process involves identifying the risks a company faces, assessing how well it's managing them, and engaging in follow-up dialogue to ensure accurate analysis. MacMahon also discusses why certain companies' ratings have improved or worsened and how to put your best foot forward.

Features

HOW I DID IT

23andMe's CEO on the Struggle to Get Over Regulatory Hurdles

Anne Wojcicki | page 31

In 2013 the genetic testing firm 23andMe received a cease-and-desist letter from the U.S. Food and Drug Administration forbidding it from selling its spit-in-a-tube DNA test to consumers. Since its founding, six years earlier, 23andMe had operated in a murky space: Previously, genetic tests were ordered only by doctors, and it was unclear whether the device the company sold to consumers to facilitate testing constituted a "medical device." Over the next two years, while it continued to sell tests giving consumers information about their ancestry and ethnic origins, 23andMe had to work with the FDA to gain regulatory approval for its consumer health product. This required the company to prove not only that the test was valid but also that test results could be understood by untrained consumers. CEO Anne Wojcicki writes that the process helped her recognize an element of Silicon Valley arrogance in how the company had previously dealt with regulators, and helped 23andMe improve its product and become more resilient.

HBR Reprint R2005A

MANAGING YOURSELF

Learn When to Say No

Bruce Tulgan | page 135

If you're like most people, you're constantly fielding requests at work. The asks are formal and informal, large and small, and from all across the organization. The inflow is so great, you can't possibly agree to everything. So it's crucial to learn when to say no and how to say both no and yes.

Tulgan, who spent decades studying what makes people the most highly valued, indispensable employees at organizations, presents a three-part framework for managing the flood of requests. First, assess each ask, systematically gathering the details that will allow you to make an informed judgment. If you do have to turn someone down, deliver a well-reasoned no. A good no is all about timing and logic—it's in order whenever things are not allowed, cannot be done, or should not be done. Moreover, it's communicated in a way that makes the asker feel respected. If the answer is yes, make it an effective one by explaining how you think you can help, pinning down the deliverables, and laying out a focused plan for execution.

A considered no protects you. A good yes allows you to serve others, add value, and collaborate effectively. If you become skilled at conveying both, you can avoid burnout, increase your influence, and enhance your reputation.

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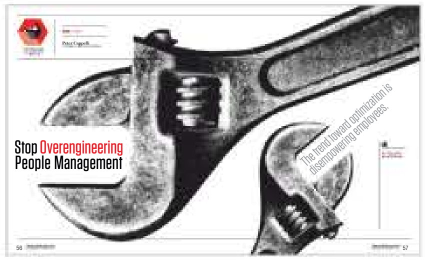
MANAGING PEOPLE



Stop Overengineering People Management

Peter Cappelli | page 56

For decades, the business world has embraced worker empowerment. But recently a countermovement—workforce optimization—has been on the rise. It treats labor as a commodity and seeks to cut it to a minimum by using automation and artificial intelligence, tightly controlling how people do their jobs, and replacing employees with contractors. This approach is especially prevalent in the tech sector and the gig economy. And it is cause for deep concern, says Wharton professor Cappelli.

Optimization appeals to most executives because they've been taught how to do it and understand it. It aligns with hard priorities, like lowering costs, that make Wall Street happy. Yet there's no evidence that it improves business results. Moreover, history suggests that seeing people management as solely an engineering challenge leads to enormous problems. Taking responsibility away from workers demotivates them and undermines productivity and innovation. When algorithms make all the decisions, it isn't even clear how employees can make suggestions.

Though many processes can still be improved by optimization, managers shouldn't choose it over empowerment. The key is to find the right mix of the two approaches, as the successful "lean production" model first introduced by Toyota does.

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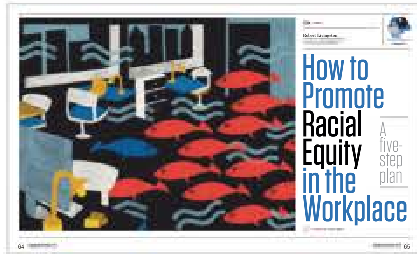
DIVERSITY



How to Promote Racial Equity in the Workplace

Robert Livingston | page 64

Many White people deny the existence of racism against people of color because they assume that racism is defined by deliberate actions motivated by malice and hatred. However, racism can occur without conscious awareness or intent. When defined simply as differential evaluation or treatment based solely on race, regardless of intent, racism occurs far more frequently than most White people suspect.

As intractable as it seems, racism in the workplace can be effectively addressed. Because organizations are small, autonomous entities that afford leaders a high level of control over norms and policies, they are ideal sites for promoting racial equity.

Companies should move through the five stages of a process called PRESS: (1) Problem awareness, (2) Root-cause analysis, (3) Empathy, or level of concern about the problem and the people it afflicts, (4) Strategies for addressing the problem, and (5) Sacrifice, or willingness to invest the time, energy, and resources necessary for strategy implementation.

HBR Reprint R2005D

Features

STRATEGY

Adapt Your Business to the New Reality

Michael G. Jacobides and Martin Reeves | page 74

Even in severe economic downturns and recessions, some companies are able to gain advantage. In the past four downturns, 14% of large companies increased both their sales growth rate and their EBIT margin.

A shock like the Covid-19 pandemic can produce lasting changes in customer behavior. To survive and thrive in a crisis, begin by examining how people are spending their time and money. Challenge traditional ideas and use data to actively seek out anomalies and surprises.

Next, adjust your business model to reflect behavioral changes, considering what the new trends might mean for how you create and deliver value, whom you need to partner with, and who your customers should be.

Finally, put your money where your analysis takes you and be prepared to make more-aggressive, dynamic investments.

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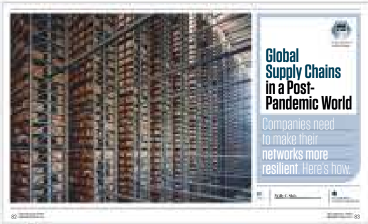
OPERATIONS



Global Supply Chains in a Post-Pandemic World

Willy C. Shih | page 82

The U.S.-China trade war and the supply and demand shocks brought on by the Covid-19 crisis are forcing manufacturers everywhere to reassess their supply chains. For the foreseeable future, they will face pressure to increase domestic production, grow employment in their home countries, reduce their dependence on risky sources, and rethink strategies of lean inventories and just-in-time replenishment, which can be crippling when material shortages arise.

This article provides advice to make your supply chain more resilient without sacrificing competitiveness. Start by mapping the full extent of your supply network to identify both direct and indirect sources. Determine how quickly those that are most vital for you could either recover from a disruption or be replaced by an alternative. Address the vulnerabilities by diversifying your suppliers or stockpiling essential materials. Explore production-process improvements or new technologies—such as automation, continuous-flow manufacturing, and 3D printing—that could lower your costs or increase your flexibility when faced with a shock. And revisit your product strategies: Offering consumers more choices isn't always better.

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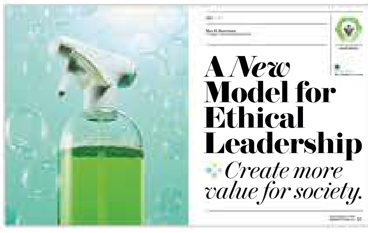
LEADERSHIP



A New Model for Ethical Leadership

Max H. Bazerman | page 90

Rather than try to follow a set of simple rules ("Don't lie." "Don't cheat."), leaders and managers seeking to be more ethical should focus on creating the most value for society. This utilitarian view, Bazerman argues, blends philosophical thought with business school pragmatism and can inform a wide variety of managerial decisions in areas including hiring, negotiations, and even time management. Creating value requires that managers confront and overcome the cognitive barriers that prevent them from being as ethical as they would like to be. Just as we rely on System 1 (intuitive) and System 2 (deliberative) thinking, he says, we have parallel systems for ethical decision-making. He proposes strategies for engaging the deliberative one in order to make more-ethical choices. Managers who care about the value they create can influence others throughout the organization by means of the norms and decision-making environment they create.

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ENTREPRENEURSHIP

When It's Time to Pivot, What's Your Story?

Rory McDonald and Robert Bremner | page 98

To succeed, a new company must rally investors, staff, customers, and the media around a good story. But often that narrative turns out to be wrong, and entrepreneurs realize they need to change direction. How that shift is communicated can have a huge impact on a venture's future.

Through extensive research with founders, innovation chiefs, analysts, and journalists, the authors have identified stratagems for maintaining stakeholder support during pivots. Early on, entrepreneurs should avoid a focus on overly specific solutions and instead present the big picture. When changing course, they can then signal continuity by explaining how the new plan fits with the original vision. Once the reboot has happened, it's critical to be conciliatory and empathetic to stakeholders who may feel abandoned. Employees and customers are far more willing to remain loyal if given guidance about how they'll be affected and if leaders seem to genuinely care about their situation.

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INNOVATION

Cultural Innovation

Douglas Holt | page 106

Companies struggle with innovation because they put all their chips on one innovation paradigm—what Holt calls *better mousetraps.* This is innovation as conceived by engineers and economists—a race to create the killer value proposition. It wins on functionality, convenience, reliability, price, or user experience.

Fortunately, building better mousetraps is not the only way to innovate. In consumer markets, innovation often proceeds according to a logic Holt calls *cultural innovation.* Better-mousetraps innovation is organized by quantitative ambitions: Outdo your competitors on existing notions of value. Cultural innovation operates according to qualitative ambitions: Change the understanding of what is considered valuable.

Holt's research and consulting reveal the strategic principles that allow companies to pursue cultural innovation. In this article he explores those principles using the stories of how the Ford Explorer reinvented the family car and how Blue Buffalo reinvented the ideology of dog food.

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STRATEGY

Joint Ventures and Partnerships in a Downturn

James Bamford, Gerard Baynham, and David Ernst page 116

To make it through the downturn and return to growth, companies will need to rewire operations, reallocate resources, and in some cases reinvent business models. Joint ventures and partnerships can help many firms with those efforts.

In this article three consultants outline how companies can shore up their existing JVs through capital-raising, cost-reduction, and synergy-tapping techniques that often aren't available to wholly owned entities. The authors then describe how parent companies can strengthen their own financial positions by using JVs and partnerships to make partial divestments, consolidate businesses, and collaborate on capital-light, low-risk growth initiatives.

JVs are already ubiquitous in sectors under pressure, like energy, and in innovative industries such as life sciences. At numerous firms, they drive a large share of earnings. Given that their returns have been climbing, their impact is quite likely to remain strong or even increase in the foreseeable future.

HBR Reprint R2005K

TECHNOLOGY

How to Win with Machine Learning

Ajay Agrawal, Joshua Gans, and Avi Goldfarb | page 126

Many companies can dramatically improve their products and services by using machine learning—an application of artificial intelligence that involves generating predictions from data inputs. Amazon, Google, and other tech giants are already experts at taking advantage of this technology. Smaller enterprises and late entrants, however, may be unsure how to do likewise to gain market share for themselves.

This article suggests that early movers will be successful if they have enough training data to make accurate predictions and if they can improve their algorithms by quickly incorporating feedback derived from customers' behavior. Latecomers will need a different approach to be competitive: The secret for them is to find untapped sources of training or feedback data, or to differentiate themselves by tailoring predictions to a special niche.

HBR Reprint R2005L

> "I might show up in a meeting with an astronaut suit on—I have several times. We embrace the things that make us unique."

JANELLE MONÁE

Growing up in a working-class Kansas family, Janelle Monáe explored her racial and sexual identity to find success as a singer-songwriter. A film career followed, with acting roles in the commercial and critical successes Hidden Figures *and* Moonlight. *Now, at age 34, she's mentoring and managing other artists as the founder and CEO of her own label, Wondaland Records.* **Interviewed by Curt Nickisch**

HBR: You worked service jobs before becoming a musician. Which boss was your best?
MONÁE: Probably the one that fired me. I worked at Office Depot during the day and was in the studio really late at night. Work was getting in the way of what I needed to do as an artist. When they fired me, I had no excuse. I had to go all in on my career.

How did you find your artistic voice? Early on I would show up at a photo shoot and stylists would say, "Hey, you're in this tuxedo wearing your hair natural. It's a bit avant-garde. Perhaps you should look like this." Or record label execs would say, "You're this Black girl talking about science fiction and technology. It's not marketable. How about you get a more simple song?" Those conversations made me think, *OK, if I don't find my voice, if I don't speak up for myself, somebody else is going to do it.* I don't shy away from my lived experiences. I'm a Black queer woman from the middle of America. I bring that with me everywhere I go. I wear it proudly.

What attracts you to projects? It has to do with following your inner compass and your gut. I don't think I knew that *Moonlight* would win Best Picture. I was just doing a film with a story that I felt needed to be told. It connected to my story and highlighted other marginalized voices that don't get the mic a lot. I love making radical art that pushes a culture forward and cuts through. I ask myself, "Who do I want to celebrate?" "Who am I OK with pissing off?" and "Who do I want to be included in this process—what kind of community?" I also want to like the people I'm collaborating with. Sometimes you learn from folks who don't have the same communication style and belief systems as you. But I've walked away from experiences that I thought would be stressful. I ask myself, "Do I need this in my life?"

What's your management style? When I'm collaborating, I want to hear from everyone. I'm taking in people's thoughts and asking them to be very transparent about what's moving them or not. I listen. I compromise. I look for the greater good. When I'm working on my own projects, such as an album, I take a more insular approach. It's about where my heart is in that moment. I like to know what others think. I just make the final decision.

How do you choose when and where to focus your activism? I'm not a politician. I'm an artist. I'm American, and I care about this country, so I critique things that I feel might be cancerous to the United States. Especially when the rights of those I love that come from my community are being trampled on, I feel a responsibility to use my platform to say something. These days I'm more about partnering with people who are doing the work on the ground, trying to get folks registered to vote, helping lower-income folks, and lobbying for women's reproductive rights, protection for LGBTQIA+ communities, and racial justice. These are issues I care about.

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Erin Patrice O'Brien/Redux

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