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37 THE BEST-PERFORMING CEOS IN THE WORLD, 2018

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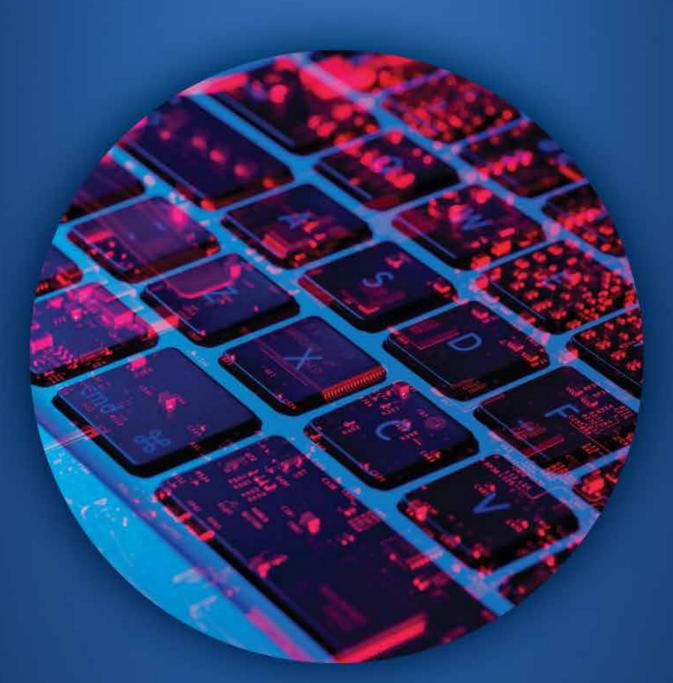
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MANAGING YOURSELF Cultivating Everyday Courage

The right way to speak truth to power James R. Detert



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FROM THE EDITOR

STABILITY AMID TURMOIL



One of the most striking things about this year's list of the best-performing CEOs is how consistent it is with last year's. Fully 70% of the leaders in our 2018 ranking are returnees. That stability is reflected in the average tenure of the CEOs—16 years, compared with 7.2 years for S&P 500 CEOs in 2017. These are extraordinarily turbulent times, and the longevity of our top 100 is remarkable.

The CEOs on our list (beginning on page 41) have prospered even as the global business environment has gotten more challenging. Escalating trade tensions only add to the complexities of digitization, disruption, and shifting consumer expectations. Of course, the trends cut both ways: The forces that kept Pablo Isla of Inditex (parent of fast-fashion leader Zara) atop our ranking are the same ones that weakened industry mainstays such as L Brands, whose leader, Leslie Wexner, fell off our list this year.

Chief executives are also dealing with rising dissension on all sides. Activist investors are routinely forcing their hands, and workers are demanding more say in how their companies are run—as staffers at Google did when they objected loudly to developing a censored version of the search engine for China. And CEOs themselves are increasingly willing to take a stand on hotbutton issues such as gun control and gay rights.

Leading a company has never been easy, but these days it just seems harder than ever before. Piloting a business to real success year after year is an undeniably impressive feat.

ADI IGNATIUS, EDITOR IN CHIEF

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Building Responsible Partnerships

CONTRIBUTORS



When Cameroon native Acha Leke completed a PhD at Stanford, in 1999, he felt a strong pull to return to Africa. "I had to come back to effect change," he says. He joined McKinsey & Company and eventually opened its office in Nigeria-the first for any major consultancy. Currently the chair of McKinsey's Africa practice, Leke has helped dozens of companies access African markets. He is a coauthor of Africa's Business *Revolution*, from which this article is adapted.

116 FEATURE

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Africa: A Crucible for Creativity



Ayelet Fishbach has built a career studying ways in which people fail at self-control. She enjoys testing her findings on herself. She recently started watching her favorite TV show while on the treadmill, because one of her studies showed that it's virtually impossible to adhere to longterm goals that aren't inherently enjoyable. "I used to do what I thought would be most effective, but after this study I said, 'I'm going to do the exercise that's the most fun," she told an interviewer. "And now I'm exercising more!" In this article Fishbach, a professor at the Booth School of Business, shares tips for sustaining motivation.

138 MANAGING YOURSELF How to Keep Working When You're Just Not Feeling It



When **Bernard** Kümmerli stepped away from consulting at age 43 to pursue a degree in fine arts, his fellow partners at Bain wondered what had gone wrong. Studying at California College of the Arts and working with firms including LUNAR, Frog, and IDEO, he discovered the power of bringing together left- and right-brain thinkers and divergent worldviews. This marked the beginning of his work on leadership alignment techniques, a subject Kümmerli—now a partner at Innosightand his coauthors explore in this issue.





Cyril Bouquet was born in France and moved frequently during his early years. "Although being different was hard," he says, "especially when I moved from France to New Caledonia [an island in the South Pacific] and then to Réunion Island [in the Indian Ocean], those experiences pushed me to question the 'standard' or 'best' way of doing things." Since joining IMD as a management professor, in 2008, Bouquet has helped hundreds of executives learn to look beyond the status quo in their markets-a topic he and his coauthors address in this article.

102 FEATURE Bring Your Breakthrough Ideas to Life



The portraits in this feature article are the work of the American photographer Lee Friedlander, who has famously trained his lens on the "social landscape." They come from two series: "Telemarketing," shot in Omaha for the New York Times in 1995, and "Changing Technology," shot along Massachusetts's Route 128 tech corridor for the MIT Museum in 1985-1986. Of the latter series Friedlander wrote, "I chose to photograph people working at computers as these ubiquitous machines seemed to be the vehicle for that change."

82 FEATURE Reinventing Customer Service



#DontCrackUnderPressure

Gulf

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Sophie Wyman

INTERACTION



THE NEED TO CULTIVATE CURIOSITY

HBR ARTICLE BY **FRANCESCA GINO,** September-october

Leaders may say they value inquisitive minds, but in reality they often stifle curiosity, fearing it will increase risk and inefficiency. Yet new research shows that curiosity is vital to an organization's performance. So how can leaders nurture it and ensure that it translates into success?



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This article is an insightful look at curiosity and how it affects creativity, productivity, and so much more in organizations. But the Ford Model T example confused me. In his effort to improve the model, didn't Ford experiment and innovate? Don't precision and focus on efficiency require even a little curiosity? Maybe the focus was narrow, but wouldn't the breadth of possible solutions require an exploratory approach? Surely the endeavor to make improvements would have prompted more than a few what-ifs. Or could it be that a narrow focus is intense enough to create blind spots and stress, which aren't conducive to any real curiosity? Ankita Verma, writer

The accompanying Spotlight article "The Five Dimensions of Curiosity" rightly asserts that curiosity has multiple dimensions, and it is very likely that not even "curious professionals" score high on all of them. However, I had a bit of a problem with the first dimension, deprivation sensitivity. The exhibit statements emphasize the search for solutions and problem solving. We have learned that complex problems cannot really be "solved." So professionals who face them may not act in the way suggested by the wording of the statements but still be very curious. Might it make sense to slightly change the framing to reflect that reality, or do the authors feel that this aspect is sufficiently covered in the stress tolerance dimension? Wouter Kersten, the New ABC

TOO MANY PROJECTS

HBR ARTICLE BY **ROSE HOLLISTER** AND **MICHAEL D. WATKINS,** SEPTEMBER-OCTOBER

If "the essence of strategy is choosing what not to do," as Michael Porter wrote, then the essence of execution is truly not doing it. That may sound simple, but most organizations struggle to kill initiatives, even those that no longer support their strategies. Productivity, engagement, performance, and retention tend to suffer as a result. Overload is common in teams and companies with boundaries. But the agile framework, which is becoming more and more common across organizations, helps to offset it. With return on investment as the guiding principle for most strategic initiatives (otherwise, who will fund a project?), setting priorities will be tough.

Jaganath Sahu, engagement manager, Fractal Analytics

My company has made many of these improvements, but it could make many more. This article is very initiative focused, but we are in the process of transitioning from initiative-based to product-based resource allocation. In our product mindset, we are looking to invest in products according to their intended business outcomes (backed by key performance indicators). A product manager would lead decision making regarding what work would best achieve the desired outcomes. Ideally, investments at the product level would have much shorter time horizons to allow for experimentation. Although most of the article's concepts would seem to apply to either initiatives or products, decision making might require a different approach. Eric Allen, manager, strategic operations, Allstate

GIVE YOURSELF A BREAK: THE POWER OF SELF-COMPASSION

HBR ARTICLE BY **SERENA CHEN,** September-october

When we experience a setback at work, we tend to either

HBR SURVEY RESULTS

Percentage of 25,578 respondents who say they get at least seven hours of sleep a night, from the online assessment "How Productive Are You?" by Robert C. Pozen, published August 28, 2018.



RARELY SOMETIMES

MOSTLY

become defensive and blame others or berate ourselves. Neither response is helpful. Shirking responsibility by getting defensive may alleviate the sting of failure, but it comes at the expense of learning. Self-flagellation may feel warranted in the moment, but it can lead to an inaccurately gloomy self-perception. Research shows that we should respond instead with self-compassion.

Terrific article—especially inspiring for those outside the corporate world and those who are in small and midsize and owner-operated businesses. In the United Kingdom these form a fast-growing group that employs millions. For those of us who must deal with failed initiatives and disappointments on a regular basis, employing self-compassion is the only way.

Alistair Morrell, the Wine Inspector

WHY DESIGN THINKING WORKS

HBR ARTICLE BY **JEANNE LIEDTKA,** SEPTEMBER-OCTOBER

We know a lot about practices that stimulate new ideas, but innovation teams often struggle to apply them. Why? Because biases and entrenched behaviors get in the way. How can design thinking help overcome that problem? Though ostensibly geared to understanding and molding the experiences of customers, it profoundly reshapes the experiences of innovators, too.

Design thinking has been met with a lot of criticism, but its popularity enables designers to lead strategic decisions and makes executing the design-driven path simpler. It takes a whole village to ship and support a modern product or service. Embrace design thinking and then scale it up by going digital so that it becomes a weekly habit. **Mariano Suarez-Battan,** CEO, Mural

Most criticism of design thinking comes from a misunderstanding of its purpose. Design thinking is not just a tool for designers; it's one that nondesigners can use to come up with creative solutions to problems. Designers criticize it because it undermines their expertise: If anyone can solve design problems, why do we even need designers?

As a designer, I can see how design thinking can hurt the design industry. But I don't think design should be limited to a select few. It would be wonderful to see everyone practice it, and design thinking provides a solid framework to do so. **Michael Degtyarev,** senior UX/UI designer, Yardi



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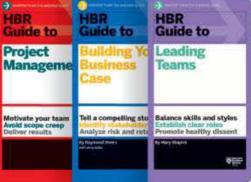
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New Thinking, Research in Progress



IN THEORY

MAKING PROCESS IMPROVEMENTS STICK Early excitement usually leads to backsliding.



tarting with Frederick Taylor and W. Edwards Deming, managers have long been obsessed with ways to improve business processes. And in the past 20 years a host of improvement initiatives, including lean production, Six Sigma, and agile, have swept through a range of industries. Studies show that companies embracing such techniques may enjoy significant improvements in efficiency and costs. But when the University of North Carolina's Brad Staats and the University of Oxford's Matthias Holweg and David Upton looked at the benefits, they noticed a gap. "These things always work well initially, but often the gains fade very quickly," Holweg says. "It's always felt like researchers were telling only half the story. It's not just about putting the programs in place—it's also about making them stick."

To understand why some improvements are sustained and others aren't, the researchers examined 204 lean projects launched from 2012 to 2017 at a European bank with more than 2,000 branches in 14 countries and serving more than 16 million customers. The lean initiative, started by the head office, was supported by a global consulting firm, which helped create an in-house academy to train lean "champions" at each regional subsidiary. Initial projects focused on processes (such as opening an account and making a wire transfer) that could benefit from decreased handoffs and fewer steps and were common to all regions. The regional offices subsequently identified additional projects according to their needs. The projects shared an overarching goal: to increase labor productivity, a key variable in service operations.



At first glance, the initiative appeared to be a great success. Over the first four years the bank launched 33 to 51 projects every six months, each involving 1,600 employees, on average. Initial improvements in efficiency averaged 10%; the gains rose to 20% after a year and 31% after two years. Those numbers are in line with the best-performing lean implementations in any industry, the researchers say, and the bank was rightly very pleased.

But when the researchers looked more closely, they found a more complicated picture. Despite the impressive aggregate gains, 21% of projects failed to yield any improvements. And among the 79% that showed initial improvements, many regressed: Only 73% were still producing results above baseline after a year, and after two years the number fell to 44%. Adding up the projects that had no improvements and the ones for which improvements were temporary, only slightly more than one-third of projects held on to gains after two years.

The researchers also explored whether projects that were initially successful could not only preserve the gains but also show continuous improvement—getting progressively better over time, which is the goal of many lean projects. Just 51% of them were continuing to improve a year after launch; after two years the figure dropped to 36%.

Seeking to understand these findings, the researchers looked at factors identified in previous research as influencing the initial success of lean projects: the experience of local leaders driving implementation, the level of training provided, and teams' familiarity in working together. None explained the difference, suggesting that what accounts for initial success is different from what's needed to hold on to gains or to improve further.

Interviews with lean champions in the bank's 14 countries provided some insight. Managers said that one condition needed to keep improving was visible support from board members and senior leadership-without it, frontline workers believe that the company's enthusiasm for the effort has waned, and backsliding ensues. They also cited the need for consistent measurement and monitoring and noted that problems arise when significant early improvements give way to diminishing returns. "Addressing the low-hanging fruit is easy; it becomes harder in the long term," one lean champion told the researchers.

The data reinforces these observations. Projects with strong support from the head office showed 35% greater improvement after a year than ones without that support; they were also less likely to backslide, with 79% performing above baseline after a year, compared with 61% of projects not driven by the head office. "Senior leadership, through paying attention to the lean improvements, clearly has a major enabling role in sustaining improvements," the researchers write. Some companies hope that a continuous-improvement mentality will become embedded in their culture and will motivate frontline workers even without the involvement of senior leaders, but this work suggests that hope may be unrealistic.

The researchers also interviewed executives with deep experience leading lean initiatives across a range of industries; from this, they identified three ways in which organizations can help initiatives achieve sustained improvements.

The first is by communicating the program in a clear narrative that aligns with the organization's purpose. For example, a hotel might focus on how a lean process will improve guest satisfaction; that's more likely to motivate employees than an emphasis on cost savings. The second is by directing efforts toward pain points whose easing would clearly benefit employees. For instance, one hospital's initiative aimed to decrease the time medical personnel spent on paperwork, freeing them up for patient care. The third is by ensuring that senior leaders act as coaches, enabling small wins to increase employees' motivation and engagement.

A particularly troublesome obstacle to sustained improvement, the researchers say, is initiative fatigue, which occurs when leaders jump too quickly from one improvement fad to another. (One of the researchers has joked about the danger of airport bookstores, which tempt traveling executives to pick up business books that may send them in pursuit of a new improvement plan.) Embarking on a new project is often more exciting than staying the course, but that doesn't necessarily deliver the best long-term results. Staats says, "It's always easier to start something, whether it's weight loss, going to the gym, or smoking cessation. Getting individual changes to stick is hard, and getting organizational changes to stick is even harder." HBR Reprint F1806A

BABOUT THE RESEARCH "Making Process Improvements Stick," by Matthias Holweg, Bradley Staats, and David M. Upton (working paper)

"Leaders must make sense of these things."

Helen Bevan

Helen Bevan has spent 25 years overseeing change initiatives at England's National Health Service, which serves more than 50 million patients and employs 1.2 million health care staffers. She spoke with HBR about the challenges of preserving the gains from one initiative while launching new efforts. Edited excerpts follow.

Why is it so hard to sustain an initiative's improvements? It's an issue of energy. And when a new initiative comes along, people ask, "What do we do with the old one?" Much of our workforce models the behavior of senior leaders, and when those leaders shift their energy to something else, it's hard to sustain things.

What differentiates changes

that stick? Sustainability starts at the beginning, in how we frame a project and what it means to the organization and our purpose. It's the difference between behaving like a buyer and behaving like an investor. If we're asking doctors to get on board something that's under way, it's already too late. We need to get them invested in the project, and thinking like owners, well before it begins. When I look at the difference between projects that are sustained and ones that aren't, it often has to do with taking the time at the beginning to



set them up, frame them the right way, and get people invested.

Is this especially hard in a health care setting, where efficiencies may seem to conflict with quality care? Our purpose is health and wellness. That's what motivates people in this sector; they don't come for the pay. If we can frame a project as relating to things that really matter to the people who work here, they will connect with it on an emotional level. Even doctors, who make decisions logically, are more likely to engage and be motivated if an initiative fits with their emotions and values. So we show data and avoid jargon. If we talk about "lean" and "agile" and use words like kanban, kaizen, and

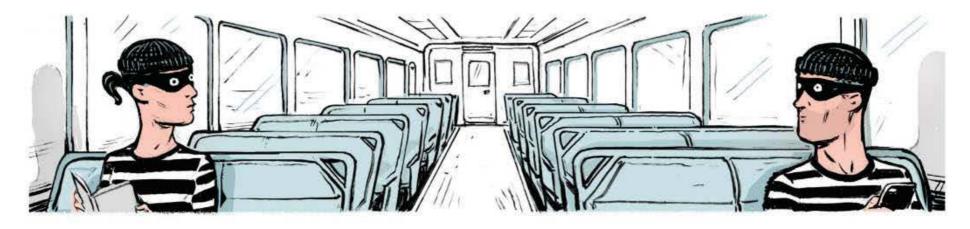
scrum, it feels like we're taking away people's autonomy. We can convey those concepts perfectly well without those words.

But don't people worry that the programs are actually

about cost cutting? Of course we focus on costs—we have finite resources. But it's about framing. Instead of talking about waste, we focus on unwarranted variation in care. Every patient with the same condition should get the same high-quality treatment; when that doesn't happen, it can be a matter of life and death. Variation also adds to cost, so reducing unwarranted variation increases care and reduces cost. We see more success when we frame things in terms of our mission, which is care.

How do you start an initiative without losing the gains of the previous one? Four years ago we did a crowdsourcing exercise in which we asked colleagues about the biggest barriers to change. The most common answer was "confusing strategies." People said that when a new initiative, target, goal, or focus comes along, they don't know whether it's more important than the previous one. We have to find ways to continue the journeys we've started by sustaining people's energy while creating space for new things. Managers and leaders must make sense of those things and reduce ambiguity.





ETHICS The Partners-in-Crime Effect

Who is more likely to behave unethically: an individual, a pair of friends, or a pair of strangers?

A recent study suggests that two "unbonded" strangers are the most likely to bend the rules. In one experiment, individuals and pairs of strangers taking a computerized exam were given an opportunity (owing to an apparent computer glitch) to inflate their scores. Seventy-three percent of the pairs and 54% of the solo test takers cheated. In another experiment, participants imagined negotiating a job offer with a candidate who they knew would be laid off in six months; their own performance reviews, they were told, would be significantly affected by whether they closed the deal. When asked if they would honestly answer the candidate's questions about job security-the ethical thing to do-pairs who had just met were more likely to say they would hide the bad news than were individuals or newly formed pairs who had engaged in some relationship-building exercises.

The researchers posit that for strangers, engaging in unethical acts can serve as a bonding ritual. "Our work suggests that allowing individuals to socially bond with each other before entrusting them with joint decisions is actually very important, at least if ethics are at play," they write.

ABOUT THE RESEARCH "Stranger Danger: When and Why Consumer Dyads Behave Less Ethically Than Individuals," by Hristina Nikolova, Cait Lamberton, and Nicole Verrochi Coleman (Journal of Consumer Research, 2018)

CAREERS Greatest Hits Come in Bursts

Gamblers, athletes, and investors all experience hot streaks. A new study of artists, movie directors, and scientists investigates whether the same phenomenon applies to creative endeavors. Researchers examined auction prices for works by 3,480 artists, critical ratings for movies from 6,233 directors, and research citations for papers by 20,040 scientists, identifying each person's biggest successes and analyzing how the "hits" were distributed over the course of a career. For people in all three professions, the two most successful works were roughly 1.5 times as likely to be produced back-to-back as one would expect by chance.

The researchers also looked at how many consecutive works exceeded the median in a measure of quality, finding a pattern "characterized by long streaks of excellent works clustered together in sequence." The vast majority of people in all three professions enjoyed at least one such "hot hand" period during their careers, but standout second acts were less common: Only about 30% of artists and scientists, and 11% of movie directors, had two hot-hand stretches. And the most common duration of hot streaks varied, from 3.7 years (scientists) to 5.2 years (directors) to 5.7 years (artists). "Individual careers are far from being random, but [are] characterized by bursts of high-impact works occurring in sequence," the researchers write. Their findings may be especially relevant to managers trying to predict future output as part of hiring and promotion decisions.

BABOUT THE RESEARCH "Hot Streaks in Artistic, Cultural, and Scientific Careers," by Lu Liu et al. (Nature, 2018)

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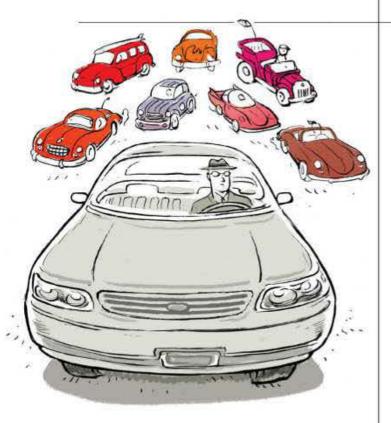
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RETAIL What Spurs Demand for Product Versions?

When companies are deciding how many variants of a product to offer, what should they take into account? In a series of six experiments, researchers identified a key factor: whether people see the item as utilitarian or as hedonic—that is, related to pleasure.

In one experiment, students were instructed, variously, to select a song to listen to for enjoyment or to choose one to evaluate as a task and asked how many possibilities they wanted. In another, participants were told to imagine they'd be choosing paint colors for either a car driven for weekday commutes or one used for weekend excursions. In both scenarios the people making utilitarian decisions wanted fewer choices than those thinking

ONE THUMB UP!

Moderately positive online reviews are more persuasive than extremely positive ones, according to a study involving granola bars, pens, and other products. A caveat: Extremely positive reviews gain persuasiveness if they are long.

"Glowing Reviews Aren't Always the Most Persuasive," by Daniella Kupor and Zakary L. Tormala

about pleasure. Why? According to the researchers, people believe that when it comes to pleasure, their preferences are highly personal and may be hard to satisfy, so consumers focusing on pleasure typically prefer a large assortment. But people are less apt to think their workaday needs are unique.

This insight has implications for retailers, because assortment sizes are critical for attracting and keeping customers and often drive decisions about buying online (where assortments typically run deeper) or in physical stores. "If a firm chooses to emphasize the hedonic benefits of a particular product, offering a greater variety is likely to attract more customers," the researchers write, while "an emphasis on utilitarian aspects calls for a smaller category size."

ABOUT THE RESEARCH "The Influence of Purchase Motivation on Perceived Preference Uniqueness and Assortment Size Choice," by Sarah C. Whitley, Remi Trudel, and Didem Kurt (Journal of Consumer Research, forthcoming)

NOVATION How to Say No to Crowdsourced Ideas

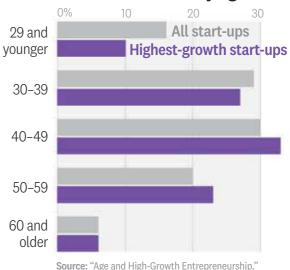
Consumers often have great ideas for improving the products they use, which is why many companies have turned to crowdsourcing when seeking innovation ideas. Many crowdsourcing campaigns receive hundreds or even thousands of submissions; in return, those submitting ideas generally receive...silence.

A new study examined the crowdsourcing efforts of 70,159 organizations, finding that 88% didn't bother replying to submitters whose ideas were not selected. And not surprisingly, first-time submitters who got no response were less likely to send the same organization a second idea. People who did get a rejection notification generally reacted positively, and they felt more bonded to the organization than did people who heard *continued on page 24*

ENTREPRENEURSHIP It's Not Too Late

Conventional wisdom holds that the most successful start-ups are created by young adults. But an analysis using U.S. Census data on the 2.7 million founders in the United States from 2007 to 2014 shows that the average age is actually 42. And when researchers identified the top 1% of start-ups by employment growth, they saw that more than half were started by founders in their forties, fifties, or sixties. The researchers write, "The preeminent place of young founders in the popular imagination may...reflect disproportionate exposure to a handful of consumer-facing IT industries, such as social media."

Share of founders by age



Source: "Age and High-Growth Entrepreneurship," by Pierre Azoulay et al. (NBER, 2018)

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continued from page 22

nothing. Textual analysis suggested that rejections explaining why the idea wasn't selected further boosted people's positive feelings toward the organization, especially if they were linguistically similar to the submission. (If a submission used formal language, for example, a rejection note might do the same.) "Our research indicates that managers may use explicit rejections to foster contributors' willingness to continue to engage," the researchers write. They say that venture capital and other industries that typically reject large numbers of people could also learn from the findings.

ABOUT THE RESEARCH "Idea Rejected, Tie Formed: Organizations' Feedback on Crowdsourced Ideas," by Henning Piezunka and Linus Dahlander (Academy of Management Journal, forthcoming)

BOARDS Directors with Marketing Expertise Can Help Firms Grow

Research has shown that having a chief marketing officer (CMO) on the top management team has no effect on a company's revenue growth, but few studies have considered the impact of marketing expertise at the highest level of the firm. Does having a marketing pro on the board of directors make a difference?

Researchers examined director biographies in all firms consistently listed on the S&P 1500 from 2007 to 2012 (a total of 12,106 directors across 1,091 companies) to identify board members with

executive-level marketing expertise. They found that about 3% of directors fit that description and that 16% of boards had at least one such member. Analyzing firm financial statements, they saw that having a marketing expert on the board was positively associated with revenue growth, in some cases raising it by nearly eight percentage points. This effect was magnified under certain circumstances: when industry growth or the firm's recent market-share growth was weak (conditions that should make boards more receptive to marketing input); when the CEO was also the board chair (presumably boosting management's incentive to implement board recommendations); and when relatively few board members were CFOs (finance types are often resistant to marketing counsel because of the two functions' differing organizational goals).

Follow-up interviews with CMOs, recruiters, and board members suggest that directors with marketing expertise achieve this positive effect by shaping meeting agendas and focus areas, steering discussions and decision making, and influencing the CMO and other C-suite executives between meetings of the board. The study's findings "should compel boards to reconsider their demonstrated reluctance to include marketers," the researchers say. "Boards can generate better revenue growth by including marketers among their ranks, especially when growth is difficult."

ABOUT THE RESEARCH "When and How Board Members with Marketing Experience Facilitate Firm Growth," by Kimberly A. Whitler, Ryan Krause, and Donald R. Lehmann (Journal of Marketing, 2018)



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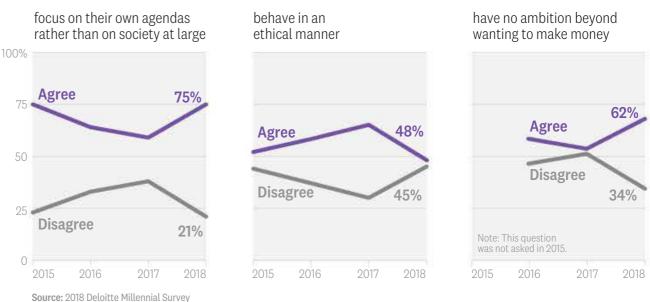
When asked to choose between two custom coffee mugs, conservative Americans were more likely to pick the one bearing the slogan "Just Better," and liberals preferred "Just Different"—one of several experiments suggesting that conservatives buy products that signal superior quality, while liberals are drawn to uniqueness.

"How Liberals and Conservatives Shop Differently," by Nailya Ordabayeva

CORPORATE RESPONSIBILITY Losing Faith in Business

Surveys of 10,455 Millennials in 36 countries show increasing doubts about whether businesses are really helping society, and fewer than half of respondents in 2018 said they think companies behave ethically. The researchers cite the growth of disruptive technologies along with political turmoil as possible explanations for the unease. The good news: As the oldest Millennials gain experience, more are moving into senior roles in which they can influence how businesses operate.

Share of Millennials who say that businesses...



MANAGEMENT Hate Your Boss? Things Could Be Worse

When people get along with their leader, they're more motivated, they perform better, and they're more likely to go the extra mile, research has shown. When they don't, bad things can happen.

But viewing the boss-employee dynamic as purely positive or purely negative creates a false dichotomy; it is often mixed. In three studies involving 952 working adults and undergraduate students, researchers found that employees who assessed their relationship with their supervisor as highly ambivalent performed worse in their jobs (according to the boss's rating) than those who saw the relationship as more clearly positive or negative. Although it seems surprising that people who dislike their boss perform better than people with an equivocal view, the finding is consistent with prior research on ambivalent relationships in social settings, which has shown that inconsistency increases stress and anxiety and can therefore affect the quality of work.

The researchers say that conflicted relationships between bosses and employees don't always lead to poor performance, however; empathy and advice from colleagues or the organization can provide an effective counterweight. "Leaders should try to encourage team members to support each other [by] creating an environment where employees feel safe being themselves and raising issues," the researchers say.

ABOUT THE RESEARCH "Leader-Member Exchange (LMX) Ambivalence and Task Performance: The Cross-Domain Buffering Role of Social Support," by Allan Lee et al. (Journal of Management, 2017)





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TALENT Overruling Performance Evaluations

In many professional settings, objectively measuring employee performance is challenging, and evaluations hinge on a single boss's opinion. Companies recognize the risks this poses. So in some organizations, first-line bosses' ratings are reviewed—and often second-guessed—by a group of higherlevel managers, sometimes called the calibration committee. According to one survey, 54% of companies with 2,500 or more employees use such a system.

A new study provides insight into how this review-of-reviews process has played out at one organization: a large multinational. Working with a threeyear data set from one department, the researchers examined 1,333 ratings of 686 employees submitted by 110 supervisors and subsequently calibrated by 12 committees. In this firm, a committee doesn't necessarily know the workers whose evaluations it is reviewing, so rather than second-guess the ratings for individual employees, it focuses on how each manager's ratings compare with those of other managers, looking for signs that the scores someone assigns are routinely too high or too low. During the period studied, committees changed about 25% of ratings (mostly those that deviated significantly from the department average), with downgrades happening four times as often as boosts. Supervisors seemed to learn from the process: Over time, their ratings fell more closely in line with the average.

Surveys of 220 employees and 47 supervisors showed that workers viewed the system as generally fair, although it did not entirely eliminate perceptions of favoritism, while supervisors complained about the demands it placed on their time. The researchers conclude that despite the costs and complexity, "calibration adjustments do improve the consistency of ratings across supervisors," helping to overcome the subjectivity inherent in evaluations of knowledge work. However, they note that by increasing the number of scores that cluster near the average, the system could make it harder to identify high and low performers.

ABOUT THE RESEARCH "The Role of Calibration Committees in Subjective Performance Evaluation Systems," by B. William Demeré, Karen L. Sedatole, and Alexander Woods (Management Science, forthcoming)

THE HBR ARCHIVES

From the February 2002 Issue

"[A] staggering number of people who work for organizations are no longer traditional employees of those organizations....the attenuation of the relationship between people and the organizations they work for represents a grave danger to business. It's one thing for a company to take advantage of long-term freelance talent....It's quite another to forget, in the process, that developing talent is business's most important task."

"They're Not Employees, They're People," by Peter F. Drucker

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Michael T. French of the University of Miami and colleagues surveyed more than 2,000 people in the United States and found that those with tattoos were no less likely to be employed than their uninked counterparts, and that average earnings were the same for both groups. In fact, tattooed men were slightly more likely to have jobs than other men. **Conclusion:**

A Tattoo Won't Hurt Your Job Prospects



Professor French, DEFEND YOUR RESEARCH

French: We went in expecting to find a negative relationship between tattoos and success in the labor market. My coauthors-Karoline Mortensen, who is also at Miami, and Andrew Timming of the University of Western Australia-and I thought we might see a wage penalty or employment difficulties, because hiring managers have said in previous studies that they'd discriminate against tattooed candidates. But in this analysis, after we controlled for factors that could affect job prospects-such as alcohol use and whether people had been in jail-we found no significant correlation between body art and employment or earnings.

Regardless of size, number, visibility, or offensiveness, tattoos don't seem to stop people from finding jobs or bringing in as much pay as everyone else. We even saw two small positive correlations: Men who had tattoos were 7% more likely to be employed than men who didn't have them, and both men and women with tattoos worked more hours per week.

HBR: So, if I'm a guy struggling to find a job, some ink might help? Well, I'd urge caution about that. We uncovered a correlation but not causation. The message of this research isn't that you can boost your job prospects by getting a tattoo. It's that there's no labor market penalty for having one.

Why were you interested in the effect of tattoos? There's been a lot of research on the career effects of other personal characteristics-race, age, beauty, health, height, weight, and disabilities-and of behaviors such as drinking, smoking, and drug use. But nothing much had been done on tattoos. Initially, we could find only two existing data sets in which people had been asked, "Do you have a tattoo?" When we compared their responses with their employment status, we also found no significant correlation. But that single question didn't take tattoo size or location into account. We thought we might get different results by asking about tattoos you could see or that were especially large or considered offensive. Our initial hypothesis was also informed by studies suggesting that tattoos are taboo in the workplace. One showed that tattooed people were perceived to be less honest, motivated, and intelligent; in another, 80% of HR managers and recruiters expressed negative feelings about visible ink on prospective employees. And in a 2016 study, Andrew found that tattooed applicants were rated significantly less "hirable" for customer-facing jobs. Until recently, tattoos may have been associated with rebellion, criminal activity, or gang membership—nothing you're looking for in an employee.

But times have changed? Yes, some of those studies are more than a decade old. Since then, body art has gained much more acceptance as a form of personal expression, just like your clothing, jewelry, or hairstyle. Among our survey respondents, 23% of men and 37% of women had tattoos. Some estimates suggest that there is a tattooed person in 40% of U.S. households, up from 21% in 1999. I'd also note that, as economists have shown in other contexts, stated preferences don't always match revealed preferences. You might say you'd hire someone without tattoos over someone with them for a particular job. But when it comes right down to it, you'll choose the most qualified person, body art or not. Even the U.S. Marines now allow recruits to have visible tattoos anywhere but the face, because when tattoos were banned, the organization found it was losing out on good candidates.

I wonder, though: Is there a blue-collar/ white-collar divide? Are tattoos OK for tradespeople but not professionals? That's something I wish we'd asked about. A 2010 study did show that consumers perceived visible tattoos to be inappropriate in white-collar professions but not in blue-collar ones. And it's possible that the people we surveyed were mostly in lower-paying jobs, since they'd volunteered to answer our questions for a small fee on Mechanical Turk. Their average annual salary was \$36,485 for men and \$25,930 for women. In some types of jobs body art might be seen as less of a negative or even a positive. But I suspect that nowadays most people think it's OK for even doctors, lawyers, and accountants to have tattoos.

Women, too? Yep. Women accounted for two-thirds of our sample, but we found no employment or wage penalty for those with body art.

And even offensiveness isn't a deal breaker? Not according to our data. The respondents who told us they had offensive tattoos were just as likely to be employed as those without any tattoos. But we were relying on selfreporting, so our sample size on that measure was small. And offensiveness is subjective. Is a Confederate flag a symbol of Southern heritage or racial oppression? It's also possible the offensive tattoos were in places people could cover up. Is cultural context important? Would you get different results in other countries? My gut instinct is that we'd see the same findings in Western Europe. In places like Eastern Europe and South America, we might even see that tattoos are more valued. I'm not sure about Asia. This would be a way to extend our research.

I have to ask: Do you have a tattoo? I have a few. On one calf I have a campfire and on the other my favorite motorcycling road. On my bicep I have a waterfall scene, and on the inside of my left forearm, I have a colorful arrow, which I get lots of compliments on. I got my first one 10 years ago.

And sorry to get even more personal, but how old are you now? 57.

Hmm. What if all the employed people with tattoos only got them once they were established in their careers—as you did? And that's why they suffer no penalty? We note in the study that we have no information on the timing of tattoos. It's possible that when you reach a certain earnings threshold, you say, "OK, I'll get a tattoo now." But the Pew Research Center has reported that 38% of Millennials have tattoos. So we're definitely talking about people early in their careers, too.

What's next in the field of tattoo research? We plan to use eyemovement tracking technology to see how people respond to photos of visible and offensive tattoos. But honestly, I feel that if our findings can be replicated with different samples, researchers should spend less time studying tattoos as they relate to employment and earnings. We should study other potentially stigmatized groups and try to correct real, not just perceived, biases. 🕞

> Interview by **Alison Beard HBR Reprint** F1806B



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HOW I DID IT COBRA'S CHAIRMAN ON TURNING AN INDIAN BEER INTO A GLOBAL BRAND

by Karan Bilimoria

hen I was a young boy in Hyderabad, India, teachers told me I wasn't creative. I couldn't draw or play the piano, so they advised me to focus on academics, which I did. I graduated from a university in India with a commerce degree and moved to London to take a job at Ernst & Young, where I qualified as a chartered accountant (CPA). I then went to Cambridge University to read law, assuming that I'd become a barrister or an M&A adviser.

But a latent creativity was inside me waiting to break out. Sitting in a traditional British pub one evening after classes, wondering whether to have a too-fizzy lager or a too-heavy ale, I had an idea: I wanted to create a more balanced beer, one that would pair well with food, especially the spicy curries from home. It would appeal to both men and women. And I could eventually sell it around the world.

That was the dream. Today it is a reality. The beer brand I eventually launched, Cobra, now generates \$250 million annually in global retail sales. The journey required a great deal of creativity. It also demanded vision, flexibility, and integrity—not just from me but from everyone who helped me build the business. I never reconnected with those grade school teachers, but I hope they would be proud.

ENTREPRENEURSHIP WAS ALWAYS CALLING

Although I declined to continue my career in accounting or to pursue one in the legal profession, the specialized



training I received in both fields was invaluable. Particularly in the United Kingdom, many CEOs and FTSE 100 board members start as CPAs; we all benefit from a firm grounding in finance. Indeed, in addition to serving as CEO, I led the finance function at Cobra for its first 10 years. My time at Ernst & Young also provided an excellent professional foundation. I learned how to operate in a global firm and was exposed to a variety of businesses from the inside; this gave me insight into how I might run my own. As a law student who debated in the Cambridge Union and stood for university union elections, I learned how to build relationships, make a case with passion and reason, and get people behind me.

But entrepreneurship was always calling to me in the background. My great-grandfather had pursued this path: He built his own business (and lost it three times) before eventually amassing the family fortune. He then became a noted philanthropist and a member of the House of Lords in India. I was just three years old when he passed away, but one of his daughters, my great-aunt, told many stories about him, so he remained an important influence.

When the idea for Cobra struck me in that Cambridge pub, I couldn't let it go. I was a beer lover but often found lagers to be gassy, bland, and bloating; ales, meanwhile, were too heavy and bitter to drink with food. I wanted something in between—cold and refreshing but also smooth. Each night I found myself experimenting, mixing brews that were then on the market to find the right blend. At the same time, I knew that launching a beer brand was too ambitious for a first venture. I needed to acquire some business experience first. When my polo team at Cambridge did a tour of India, I saw an opportunity: selling Indian-made polo sticks in the UK. That was a way to open lines of commerce between the country where I'd been raised and the one to which I'd emigrated as a student. Although India was then a closed economy with a socialist model, I anticipated liberalization.

So in 1989 I teamed up with Arjun Reddy, a friend from Hyderabad, and we launched our polo-stick-importing business. I knew from my days running for office at Cambridge that when it comes to selling, there's no shortcut. You have to go door-to-door with your pitch. Soon Harrods and Lillywhites were clients, and we'd expanded into other traditional Indian goods, including leather, silks, and garments.

Within nine months, however, we'd been introduced by chance to India's largest independent brewer, in Bangalore. It employed the country's finest brewmaster, an Indian biochemist who had studied in Prague, but it had never exported its product. I seized the opening and explained my idea. The company first suggested that we import two of its brands to the UK: Pals and Knock Out. But the former shared the name of a British dog food, and the latter-suggesting a boxer's punch-wasn't what we had in mind. Amazingly, the company agreed to let us develop our own brand. I already had the taste in my mind; the brewmaster and I just needed to sit in the laboratory and come up with the recipe.

I parked myself in India for several months while my partner held down the fort in London. We knew we had to get the product right. This was well before the craft beer boom, but we still had to make ours different from and better than the hundreds of brands already out there.

Once I thought we had it right, I returned to the UK and began driving around—in a battered old Citroën—to all the top Indian restaurants so that I could introduce the proprietors to our beer. I knew that if they placed an order, other curry houses would too, and then distributors would pile in to serve this growing segment of the industry-up from a handful of establishments serving mostly expats in the 1950s to about 6,000 restaurants that drew all types of British consumers in the early 1990s. (Today curry restaurants in the UK number more than 12,000.) In that first sales push we managed to presell one shipping container's worth of bottles-half to restaurants and half to a distributor in Newcastle.

The Cobra name was what sealed the distribution deal. After lots of brainstorming sessions, we had decided to call our beer Panther. We'd already designed the labels; the beer was waiting to be bottled and sent to the UK. But potential distributors complained to Arjun that they didn't like the name Panther—they couldn't say why, they just didn't. So we thought back to our runner-up choice. "Ask if they'll buy something called Cobra," I told my partner. The distributors said yes, so I asked my brother, who was in advertising, to design us a new label. Adapt or die.



SURVIVING THREE CRISES

In those early days finance was the biggest challenge. With reorders strong, we realized very quickly that people loved our product, and that gave us confidence. But we needed money to make more beer, and we didn't want to give up our majority stake in the fledgling company. We availed ourselves of every form of government finance and eventually found an angel investor who took a 5% share that valued us at £1 million.

Three years in we hired a few more salespeople and began to invest in marketing. We created pint glasses featuring a map of India and gave them to restaurants, whose owners reported that customers liked them so much they were taking them home. At the five-year mark Arjun decided he wanted to move back to India. At the time, our revenue was about £2 million, and perhaps he didn't expect it to grow much more. But I wanted to stick with Cobra. I strongly believed that it could become a global brand, so I bought him out on his terms, and we remain good friends.

Happily, sales doubled the next year. Now production was the problem. The Bangalore brewery couldn't cope, and we had issues with quality, consistency, and availability. I had to decide whether to expand capacity in India or in the UK. The knee-jerk reaction from distributors was to insist that we remain an imported beer. But when we surveyed consumers, we found that they appreciated the beer's extra-smooth taste more than its country of origin. That gave me the confidence to adapt again and move production to Bedford, in the UK. With increased capacity, we were able to

expand our reach to different types of restaurants along with pubs and bars; we could produce Cobra in kegs to serve on draft—exactly the way I'd been drinking beer when I came up with the concept.

The climb from there to where we are today has not been without further setbacks, however. In fact, in a nearecho of my great-grandfather's experience, I almost lost the business three times. The first crisis was sparked in 1998 by an article criticizing the service in Indian restaurants-published in a trade magazine that I'd helped create and that still listed my name on the masthead. That prompted a yearlong boycott of Cobra, during which we had to close our UK depots and lay off employees. Sales grew by an anemic 3% over that 12-month period, and I thought we were finished. Eventually, however, with a lot of hard work, we persuaded the restaurants that we would never want to harm them, and they lifted their ban.

The second crisis came in 2008. By this stage Cobra was a much larger company, and we needed significant investment to pursue our global growth plans. One of the world's largest liquor companies had agreed to pay £30 million for a 30% equity stake in the company. But its management suddenly got cold feet and pulled out. Thankfully, I had a plan B: financing from an Indian bank. We secured the loan—just two weeks before Lehman Brothers collapsed.

That bought us some time, but within a year we were confronting the third existential threat: A financial backer that had suffered badly in the

global downturn called in its loan and ordered us to sell the company in the worst possible climate. Our valuation had been £100 million; now we would get much less. That was very painful. In March of 2009 Molson Coors expressed interest in a joint venture: It would take 50.1%; I would retain 49.9% and stay on as chairman and integrate my team. The deal satisfied 90% of our creditors, but one balked, forcing us to enter what is called a pre-pack administration, in which anyone can bid for the company. We persuaded Molson Coors to come back to the table with us and put in a joint bid. It did, and we saved the company, ensuring that one-third of our employees could move to the joint venture and that those made redundant would be paid out in full, along with some remaining shareholders.

THE KEY ELEMENTS OF SUCCESS

When I reflect on how we managed to survive each of those scenarios, I seize on the elements I mentioned at the start of this story. First, my vision for the company never wavered. I wanted to create the finest Indian beer and sell it everywhere. With determination, my team and I turned Cobra into a household name in Britain, and that strength of brand helped us through tough times; during none of the crises did our sales decline.

At the same time, we've been creative and flexible—willing to constantly adapt, learn, grow, and innovate. That's the heart of successful entrepreneurship: knowing where you want to go but staying open to different ways of getting there.

AT THE BREWERY:

Cobra's bottling plant in Burton-on-Trent, England, produces the equivalent of one million 620 ml bottles of beer a week.

Another key element of our success has been integrity. Throughout the life of Cobra, I have been surrounded by loyal partners, employees, and family—especially my wife, whom I met one year after I started the business. They stuck with me and the company through thick and thin, and I am immensely grateful. As a group we have also always adhered to strong moral principles. Even when others didn't play it straight, we did. In my opinion, it's better to fail doing the right thing than to succeed doing the wrong one.

Now that we're a part of the Molson Coors family, I continue to stoke the same fires: vision, creative flexibility, and integrity. Cobra has won 101 gold medals at the Monde Selection competition over the years, and we now export to nearly every European Union country, along with Japan, Canada, and Australia. Because Anheuser-Busch has the King Cobra brand, we've wrestled with trademark restrictions in the United States.

Although a large company can be bureaucratic, I still push for innovation, adaptation, and a fast pace. In 2018 we launched Cobra Malabar, a blond IPA. It comes from a complex, top-fermented recipe, and it took us two years to deliver. But we got there in the end, and now Cobra has the whole Molson Coors machine—finance, marketing, and distribution—behind it.

I continue to focus on building strong, trusting relationships across the company. Because Arjun and I spent the early years of Cobra doing everything, from setting up production to negotiating with restaurants to hiring employees, I can visit every part of this American-Canadian-British-Indian



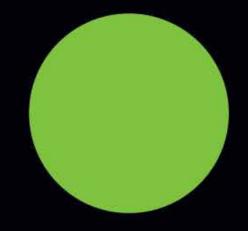
business and identify with what people are doing. At the executive level I've gotten to know Pete Coors, the Molson family, and the global and UK leadership teams personally. Churn is inevitable in an organization as big as ours, but there's no reason we can't cultivate the same loyalty we had in Cobra's start-up days—and endeavor together to always do what's right.

For the past decade and a half I've also become involved in the broader UK business and political community. I have served as deputy lieutenant of Greater London, and in 2006 I was named an independent crossbench life

peer in the House of Lords. I've tried to bring my entrepreneurial experiences and approach to these roles, too. Over the past few years, for example, I've been quite vocal about my opposition to Brexit. I'm sticking my neck out because I believe this is so important-not just to Cobra and other UK-based businesses but also to future generations of citizens. We are better off remaining in the European Union. This is yet another situation outside the world of music and art that calls for vision, creativity, and integrity. But I believe that I, my team, and my adopted country are up to the challenge. 😡 HBR Reprint R1806A







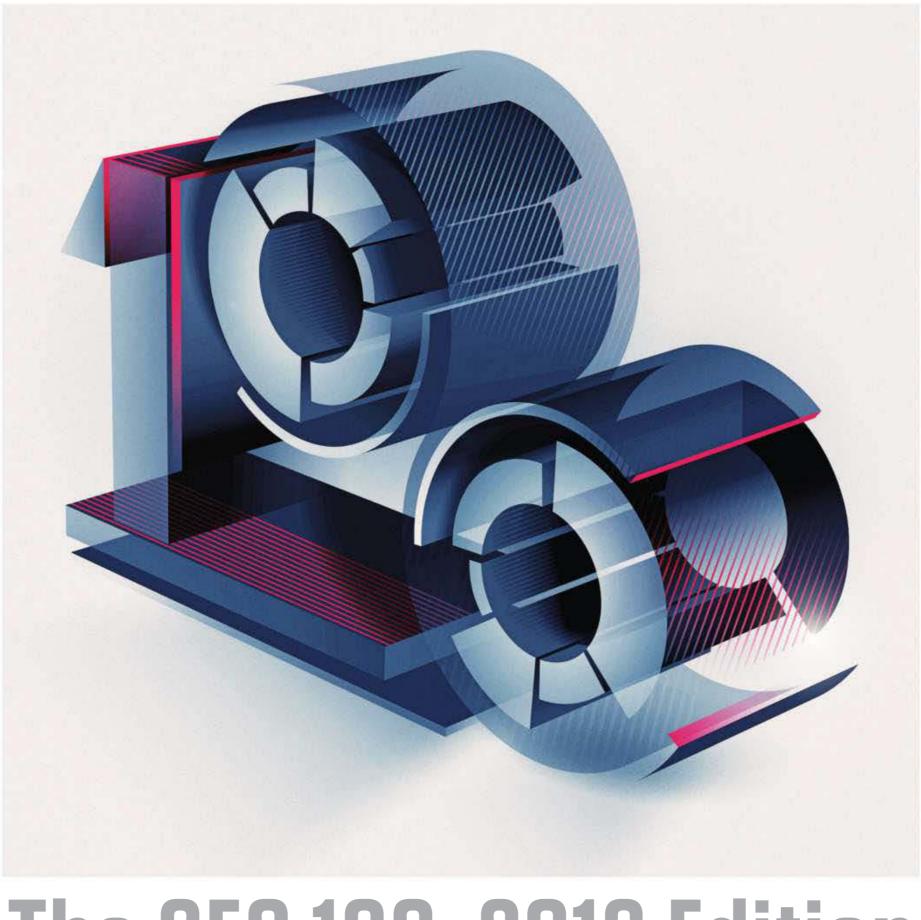
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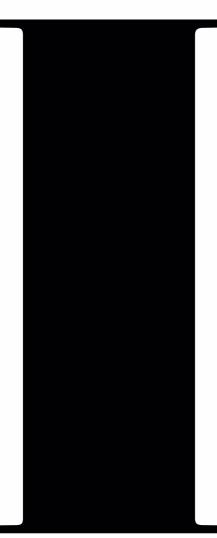
Spotlight



The CEO 100, 2018 Edition

Spotlight

The Best-Performing CEOs in the World



n turbulent times, steadiness and stability can be significant virtues. These qualities are evident in the 100 men and women who've achieved a spot in HBR's 2018 ranking of the world's top-performing CEOs. They face an array of outside forces-savvy competitors, demanding customers, profit-hungry investors, political and economic headwinds. Nonetheless, their companies have shown a remarkable ability to sustain momentum: Seventy of the 100 leaders in last year's ranking performed well enough to achieve the distinction again this year-including Pablo Isla, of the Spanish fast-retailing giant Inditex, who repeats as the number-one-ranked executive.

This consistency is the result not just of an unwavering leadership style but of the way HBR measures performance. In a business world that often seems obsessed with today's stock price and this quarter's numbers, our ranking takes the long view: It's based primarily on financial returns over each CEO's entire tenure-and because these CEOs have been successful, many have enjoyed a long run in the job. (CEOs on the list have been in the position for an average of 16 years, versus an average in 2017 of 7.2 years for S&P 500 CEOs.) To calculate the final rankings, we also factor in each company's rating on environmental, social, and governance (ESG) issues; for a full explanation of



the methodology, see the sidebar on the following page.

This focus on career numbers results in a ranking with limited annual churn. Seven of this year's top 10, and 18 of the top 25, were ranked at those levels last year. In a typical year, from one-quarter to one-third of CEOs in the prior year's ranking fall off owing to retirement, resignation, death, or poor financial performance. Among the notable names on the 2017 list who failed to repeat are Martin Sorrell, of WPP (who resigned amid allegations of misconduct); John Mackey, of Whole Foods (whose company was acquired by Amazon); and Leslie Wexner, of L Brands (its stock tanked this year).

Other trends remain more or less consistent. In the good news-bad news department, female representation among the 100 CEOs is up 50% from last year-but that's because this year's ranking includes three women, compared with just two during prior years. (Here we offer what has become a familiar explanation: The paucity of women in the ranking says nothing about men's performance as CEOs versus that of women; rather, it's the result of very low female representation among the CEOs of global S&P 1200 companies, the universe from which our ranking is drawn.)

Although year-to-year shifts in our rankings aren't dramatic, examining the rankings over longer stretches illustrates the challenge of sustaining world-beating performance. Since 2013 only six CEOs have appeared every year: Jeffrey Bezos, of Amazon; Pablo Isla, of Inditex; Blake Nordstrom, of Nordstrom; Paolo Rocca, of Tenaris; James Taiclet Jr., of American Tower; and Renato Alves Vale, of CCR. Even among this select group, Bezos stands tall: On the basis of financial performance alone (that is, disregarding the ESG component of our rankings), Amazon's founder has been the top-performing leader each year we've compiled the ranking since we began using our current methodology, in 2014. And since Bezos first topped the list, in November of that year, the company's stock price has grown more than sixfold.

One of the tests of any leader is how he or she adapts to a shifting environment. Among the biggest shifts companies face right now is in the global political environment. The rise of populism as a potent force is most apparent in the election of Donald Trump and Great Britain's departure from the European Union, but it's evident in many other regions, too. For business leaders, especially in manufacturing, this has brought the threat (and sometimes the reality) of tariffs and trade wars, along with industry-specific opportunities and challenges.

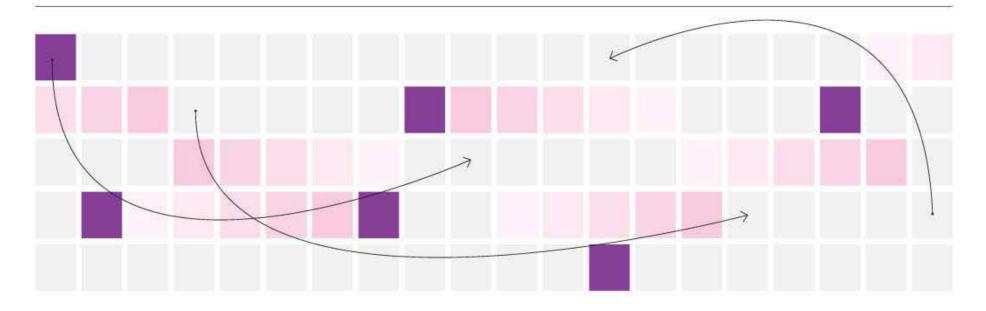
Amid such uncertainty, how actively should corporate leaders speak out on political issues—and on which ones? Two U.S. CEOs on this year's list illustrate differing views.

Satya Nadella succeeded Steve Ballmer as CEO of Microsoft in 2014; that company's turnaround, led by the growing strength of its cloud-computing business (which Nadella headed before becoming CEO), helped put him at #46 on the 2018 list. Nadella believes in taking a stand on issues that are directly relevant to Microsoft's business, such as immigration reform, but he draws the line at voicing his personal political beliefs. "No one elected me," he told HBR editor in chief Adi Ignatius in a 2017 interview. "When we talk about taking a political stance, that's not…what our employees expect of me."

Other leaders view this piece of the CEO role more expansively. Among them is JPMorgan Chase CEO Jamie Dimon, who is #22 this year, owing to a sharp run-up in the bank's stock since 2016. "If you want the right public policy, you have to be an advocate," Dimon told Ignatius in a 2018 interview. "And you can't be parochial. You can't talk only about that one little regulation that's going to help your company. You need to talk about tax policy, trade, immigration, technology."

Whether and when CEOs speak out doesn't factor directly into our rankings-but such activism may be captured indirectly in ESG scores, according to the experts at CSRHub and Sustainalytics, the firms that help us crunch the data. For instance, ESG ratings do account for company lobbying expenditures, the degree of disclosure on issues such as carbon use, and the presence of a sustainability officer at the company's top level, among other measures. A CEO's political statements (or lack thereof) may also show up in data gleaned from employee review sites such as Glassdoor. The phrase "CEO activism" connotes proactive behavior by leaders-but more and more often, dealing with political realities is just another facet of a multifaceted job. 😡

Spotlight



How We Calculated the Rankings

To compile our list of the world's bestperforming CEOs, we began with the companies that at the end of 2017 were in the S&P Global 1200, an index that comprises 70% of the world's stock market capitalization and includes companies in North America, Europe, Asia, Latin America, and Australia. We identified each company's CEO but, to ensure that we had a sufficient track record to evaluate, excluded people who had been in the job for less than two vears. We also excluded executives who had been convicted of a crime or arrested. All told, we ended up with 881 CEOs from 870 companies. (Several companies had co-CEOs.) Those executives ran enterprises based in 29 countries.

Our research team, headed by Nana von Bernuth and assisted by the coders Onorina Buneanu and Clara Frank and the data programmers Morand Studer and Daniel Bernardes from Eleven Strategy Consultants, gathered daily financial data for each company from Datastream and Worldscope, starting with the CEO's first day on the job and ending April 30, 2018. (For CEOs who took office before 1995, we calculated returns using a start date of January 1, 1995, because industry-adjusted returns prior to then were unavailable.)

We then calculated three metrics for each CEO's tenure: the country-adjusted total shareholder return (including dividends reinvested), which offsets any increase in return that's attributable merely to an improvement in the local stock market; the industry-adjusted TSR (including dividends reinvested), which offsets any increase that results from rising fortunes in the overall industry; and change in market capitalization (adjusted for dividends, share issues, and share repurchases), measured in inflationadjusted U.S. dollars.

We then ranked each CEO—from 1 (best) to 881 (worst)—for each financial metric and averaged the three rankings to obtain an overall financial rank. Incorporating three metrics is a balanced and robust approach: While country-adjusted and industryadjusted returns risk being skewed toward smaller companies (it's easier to get large returns if you start from a small base), the change in market capitalization is skewed toward larger companies.

To measure performance on nonfinancial issues, HBR consulted with Sustainalytics, a leading provider of environmental, social, and governance (ESG) research and analytics that works primarily with financial institutions and asset managers, and with CSRHub, which collects, aggregates, and normalizes ESG data from nine research firms and works mainly with companies that want to improve their ESG performance. We computed one ESG rank using Sustainalytics ratings and one using CSRHub ratings for every company in our data set. To calculate the final ranking, we combined the overall financial ranking (weighted at 80%) and the two ESG rankings (weighted at 10% each), omitting CEOs who left office before June 30, 2018.

HBR's list of best-performing CEOs was conceived by Morten T. Hansen, Herminia Ibarra, and Urs Peyer. Previous rankings have been published in HBR in 2010 and annually since 2013; the rankings prior to 2014 utilized different methodologies.

The CEOs

23 of the CEOs on this year's list have appeared 3 times in the past 5 years; 17 have appeared 4 times; and 6 have appeared on all 5 of those lists: Jeffrey Bezos, of Amazon; Pablo Isla, of Inditex; Blake Nordstrom, of Nordstrom; Paolo Rocca, of Tenaris; James Taiclet Jr., of American Tower; and Renato Alves Vale, of CCR.



OMPANY Salesforce.com

INDUSTRY Information

Technology

United States

CSRHUB RANKING

FINANCIAL RANKING

SUSTAINALYTICS RANKING



Pablo Isla		Jensen Huang					
COMPANY Inditex	START YEAR 2005	COMPANY NVIDIA	START YEAR 1993				
INDUSTRY Retail	INSIDER X	INDUSTRY Information Technology					
COUNTRY Spain	мва Х	COUNTRY United States	мва				
FINANCIAL RANKING	29	FINANCIAL RANKING	4				
SUSTAINALYTICS RANKING	60	SUSTAINALYTICS RANKING	125				
CSRHUB RANKING	128	CSRHUB RANKING	304				
6 Marc Benioff	<u> </u>	7 Jacques					

Jacques Aschenbroich Valeo 2009 INDUSTRY Automobile INSIDER X COUNTRY France FINANCIAL RANKING SUSTAINALYTICS RANKING CSRHUB RANKING

START

2001

INSIDER

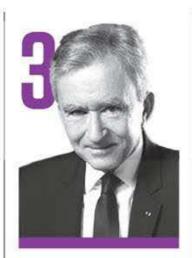
1

MBA X

8

315

286



Bernard Arnault

COMPANY LVMH	START YEAR 1989
INDUSTRY Consumer Goods	INSIDER X
COUNTRY France	мва Х
FINANCIAL RANKING	7
SUSTAINALYTICS RANKING	226
CSRHUB RANKING	186

8

COMPANY KBC

Belgium

START

MBA X

75

33

61

Johan Thijs

INDUSTRY Financial Services

FINANCIAL RANKING

CSRHUB RANKING

SUSTAINALYTICS RANKING



François-Henri Pinault

START YEAR

2005

INSIDER

MBA

35

65

133

START

1996

INSIDER

1

MBA X

46

202

206

COMPANY

INDUSTRY

Goods COUNTRY

France

FINANCIAL RANKING

CSRHUB RANKING

9

COMPANY **Sysmex**

country **Japan**

Health Care

FINANCIAL RANKING

CSRHUB RANKING

SUSTAINALYTICS RANKING

START

2012

INSIDER

1

MBA X

64

17

169

SUSTAINALYTICS RANKING

Hisashi letsugu

Kering

Consumer



Elmar Degenhart

company Continental	START YEAR 2009
INDUSTRY Automobile	INSIDER X
COUNTRY Germany	мва Х
FINANCIAL RANKING	30
SUSTAINALYTICS RANKING	74
CSRHUB RANKING	308



Martin Bouygues

COMPANY Bouygues	START YEAR 1989
INDUSTRY Industrials	INSIDER
COUNTRY France	MBA X
FINANCIAL RANKING	54
SUSTAINALYTICS RANKING	259
CSRHUB RANKING	140



Spotlig	ght								
11 Solution Wes Bush ¹		12 Shantanu Nara	yen	13 Bernard Charlè	s	14 Solution		15 Michael Mussal	llem
COMPANY Northrop Grumman	START YEAR 2010	COMPANY Adobe Systems	START YEAR 2007	COMPANY Dassault Systèmes	START YEAR 1995	COMPANY Nike	START YEAR 2006	COMPANY Edwards Lifesciences	START YEAR 2000
INDUSTRY Industrials	INSIDER	INDUSTRY Information	INSIDER	INDUSTRY Information		INDUSTRY Consumer Goods	INSIDER	INDUSTRY Health Care	INSIDER
COUNTRY	MBA	Technology COUNTRY	MBA	Technology COUNTRY	MBA	COUNTRY	MBA	COUNTRY	MBA
United States	× 41	United States	∽ 56	France	× 37	United States	× 32	United States	× 27
SUSTAINALYTICS RANKING	353	SUSTAINALYTICS RANKING	257	SUSTAINALYTICS RANKING	479	SUSTAINALYTICS RANKING	405	SUSTAINALYTICS RANKING	355
CSRHUB RANKING	153	CSRHUB RANKING	192	CSRHUB RANKING	141	CSRHUB RANKING	258	CSRHUB RANKING	359
16 Brad Smith ²		17 Hamid Moghad	am	18 Tai-Ming "Terry	y ²³	19 Fabrizio Freda		20 Benoît Potier	
COMPANY Intuit	START YEAR	COMPANY Prologis	START YEAR 1997	GOU COMPANY Hon Hai Precision	START YEAR	COMPANY Estée Lauder	START YEAR	COMPANY Air Liquide	START YEAR 1997
INDUSTRY Information	2008 INSIDER	INDUSTRY Real Estate		Industry INDUSTRY Information	1974 INSIDER	INDUSTRY Consumer Goods	2009 INSIDER	INDUSTRY Materials	ISIDER
Technology COUNTRY United States	мва	COUNTRY United States	MBA	Technology COUNTRY Taiwan	MBA X	COUNTRY United States	MBA X	COUNTRY France	MBA X
FINANCIAL RANKING	52	FINANCIAL RANKING	80	FINANCIAL RANKING	9	FINANCIAL RANKING	34	FINANCIAL RANKING	75
SUSTAINALYTICS RANKING	333	SUSTAINALYTICS RANKING	57	SUSTAINALYTICS RANKING	299	SUSTAINALYTICS RANKING	422	SUSTAINALYTICS RANKING	302
CSRHUB RANKING	184	CSRHUB RANKING	244	CSRHUB RANKING	574	CSRHUB RANKING	267	CSRHUB RANKING	66
21		22		23		24		24	
Sergio Marchio	nne ³	Jamie Dimon	START	Paolo Rocca	START	Florentino Pére Rodríguez	START	Lars Rasmusse	START
Fiat Chrysler	YEAR 2004	JPMorgan Chase	YEAR 2005	Tenaris	YEAR 2002	ACS	YEAR 1993	Coloplast	YEAR 2008
INDUSTRY Automobile	INSIDER	INDUSTRY Financial Services	INSIDER	INDUSTRY Energy	INSIDER	INDUSTRY Industrials	INSIDER	INDUSTRY Health Care	INSIDER
COUNTRY Italy	мва	COUNTRY United States	MBA	COUNTRY Argentina	MBA X	COUNTRY Spain	MBA X	COUNTRY Denmark	MBA
FINANCIAL RANKING	42	FINANCIAL RANKING	84	FINANCIAL RANKING	44	FINANCIAL RANKING	60	FINANCIAL RANKING	107
SUSTAINALYTICS RANKING	444	SUSTAINALYTICS RANKING	189	SUSTAINALYTICS RANKING	214	SUSTAINALYTICS RANKING	173	SUSTAINALYTICS RANKING	37
CSRHUB RANKING	270	CSRHUB RANKING	196	CSRHUB RANKING	547	CSRHUB RANKING	486	CSRHUB RANKING	246

85 YEARS ALWAYS IN STYLE

111

FI

111



Spotlig	ţht								
	5					26 Ajay Banga		27 Richard Fairba	nk
	of	the CEO	s leo	ad		COMPANY Mastercard	START YEAR 2010	COMPANY Capital One	START YEAR 1994
		inies bas				INDUSTRY Information Technology		INDUSTRY Financial Services	INSIDER
th	eir	countrie	s of	birth.		COUNTRY United States	MBA	COUNTRY United States	MBA
			-			FINANCIAL RANKING	24	FINANCIAL RANKING	24
						SUSTAINALYTICS RANKING	463 488	SUSTAINALYTICS RANKING CSRHUB RANKING	616 336
28 Frederick Smith	START YEAR 1971	29 Marillyn Hewso	on Start Year 2013	Shigenobu Nagamori Nidec	START YEAR 1973	31 Mike Lawrie	START YEAR 2012	32 Robert Iger COMPANY Disney	START YEAR 2005
INDUSTRY Transportation	I971 INSIDER	INDUSTRY Industrials	INSIDER	INDUSTRY Industrials	I973 INSIDER	INDUSTRY Information		INDUSTRY Consumer Services	2005 INSIDER
COUNTRY	MBA	COUNTRY United States	MBA	COUNTRY	MBA	Technology COUNTRY United States	MBA	COUNTRY United States	MBA
United States	× 21	FINANCIAL RANKING	× 91	Japan FINANCIAL RANKING	× 12	FINANCIAL RANKING	50	FINANCIAL RANKING	× 63
SUSTAINALYTICS RANKING	459	SUSTAINALYTICS RANKING	289	SUSTAINALYTICS RANKING	599	SUSTAINALYTICS RANKING	378	SUSTAINALYTICS RANKING	407
CSRHUB RANKING	530	CSRHUB RANKING	148	CSRHUB RANKING	482	CSRHUB RANKING	406	CSRHUB RANKING	297
33 Orito		34 Description Statements		35 Tadashi Yanai	×	36 Original States Stat		37 Daniel Amos	
COMPANY Anheuser-Busch InBev	START YEAR	COMPANY BlackRock	START YEAR	COMPANY Fast Retailing	START YEAR	COMPANY Iberdrola	START YEAR	COMPANY Aflac	START YEAR
INDUSTRY Consumer Goods	2005 INSIDER	INDUSTRY Financial Services	1988 INSIDER	INDUSTRY Retail	1984 INSIDER	INDUSTRY Utilities	2001 INSIDER X	INDUSTRY Financial Services	1990 INSIDER
COUNTRY Belgium	мва	COUNTRY United States	мва	COUNTRY Japan	MBA X	COUNTRY Spain	MBA	COUNTRY United States	MBA X
FINANCIAL RANKING	7 8	FINANCIAL RANKING	5	FINANCIAL RANKING	11	FINANCIAL RANKING	151	FINANCIAL RANKING	18
SUSTAINALYTICS RANKING	322	SUSTAINALYTICS RANKING	558	SUSTAINALYTICS RANKING	470	SUSTAINALYTICS RANKING	41	SUSTAINALYTICS RANKING	643
CSRHUB RANKING	278	CSRHUB RANKING	666	CSRHUB RANKING	720	CSRHUB RANKING	33	CSRHUB RANKING	511

									Ĩ
37 David Simon		39 June Hock Tan		40 O	ne				
David SimonHock IanCOMPANY Simon PropertySTART YEAR 1995COMPANY BroadcomSTART YEAR 2006INDUSTRY Real EstateINSIDER *INDUSTRY Information TechnologyINSIDER X COUNTRY United StatesINDUSTRY *INSIDER YEAR 2006COUNTRY United StatesMBA *COUNTRY United StatesMBA *COUNTRY United StatesMBA *FINANCIAL RANKING12FINANCIAL RANKING10SUSTAINALYTICS RANKING561SUSTAINALYTICS RANKING519CSRHUB RANKING641CSRHUB RANKING701				COMPANY Accenture INDUSTRY Information Technology COUNTRY United States FINANCIAL RANKING SUSTAINALYTICS RANKING CSRHUB RANKING	START YEAR 2011 INSIDER MBA X 145 128 32	have an MBA, up from 29 last year.			
41 Reinhard Ploss		42 Mark Bertolini		43 Michael Mahon	ev	44 Thomas Enders		45 Hubert Joly	
COMPANY Infineon Technologies INDUSTRY Information Technology	START YEAR 2012 INSIDER	COMPANY Aetna INDUSTRY Health Care	START YEAR 2010 INSIDER	COMPANY Boston Scientific INDUSTRY Health Care	START YEAR 2012 INSIDER	COMPANY Airbus INDUSTRY Industrials	START YEAR 2012 INSIDER	COMPANY Best Buy INDUSTRY Retail	STAR YEAI 2012 INSIDEF
COUNTRY Germany FINANCIAL RANKING SUSTAINALYTICS RANKING	^{мва} х 142 151 27	COUNTRY United States FINANCIAL RANKING SUSTAINALYTICS RANKING	^{MBA} 49 536 200	COUNTRY United States FINANCIAL RANKING SUSTAINALYTICS RANKING	^{MBA} 77 402 210	COUNTRY France FINANCIAL RANKING SUSTAINALYTICS RANKING	^{мва} х 130 254	COUNTRY United States FINANCIAL RANKING SUSTAINALYTICS RANKING	мв/ 111 304
CSRHUB RANKING	37	CSRHUB RANKING	399	CSRHUB RANKING	312	49	47	CSRHUB RANKING	159
Satya Nadella COMPANY Microsoft	START YEAR	Martin Anstice	START YEAR	Xavier Huillard	START YEAR	Michael Zahn COMPANY Deutsche Wohnen	START YEAR	Huateng "Pony COMPANY Tencent	STAR YEA
INDUSTRY Information Technology	2014 INSIDER	INDUSTRY Information Technology	2012 INSIDER	INDUSTRY Industrials	2006 INSIDER	INDUSTRY Real Estate	2008 INSIDER	INDUSTRY Information Technology	199 INSIDE
COUNTRY United States	MBA	COUNTRY United States	MBA X	COUNTRY France	MBA X	COUNTRY Germany	MBA X	COUNTRY China	ME
FINANCIAL RANKING	153	FINANCIAL RANKING	100	FINANCIAL RANKING	95	FINANCIAL RANKING	72	FINANCIAL RANKING	2
SUSTAINALYTICS RANKING	140	SUSTAINALYTICS RANKING	165	SUSTAINALYTICS RANKING	521	SUSTAINALYTICS RANKING	440	SUSTAINALYTICS RANKING	77(
CSRHUB RANKING	4	CSRHUB RANKING	432	CSRHUB RANKING	134	CSRHUB RANKING	404	CSRHUB RANKING	630

Spotli	ght								
		e an eng ree, up j last ye	fron			51 Joint of the second sec	START YEAR 2000 INSIDER ✓ MBA X 28 656 553	52 Image: State Stat	Jr. START 2004 INSIDER MBA X 107 450 173
53 Solution	fer	53 Sichard Gonzal	lez	55 Som		56 Debra Cafaro		57 O Erik Engstrom	_
COMPANY Regeneron Pharmaceuticals	START YEAR 1988	COMPANY AbbVie	START YEAR 2013	COMPANY SoftBank	START YEAR 1981	COMPANY Ventas	START YEAR 1999	COMPANY RELX	START YEAR 2009
INDUSTRY Health Care	INSIDER	INDUSTRY Health Care	INSIDER	INDUSTRY Telecommunication	INSIDER	INDUSTRY Real Estate	INSIDER X	INDUSTRY Consumer Services	INSIDER
COUNTRY United States	MBA X	COUNTRY United States	MBA X	COUNTRY Japan	MBA X	COUNTRY United States	MBA X	COUNTRY United Kingdom	MBA
FINANCIAL RANKING	23	FINANCIAL RANKING	117	FINANCIAL RANKING	17	FINANCIAL RANKING	43	FINANCIAL RANKING	178
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COUNTRY	МВА	Technology COUNTRY	MBA	COUNTRY	MBA	COUNTRY United States	MBA	COUNTRY United States	MBA
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SUSTAINALYTICS RANKING	318	SUSTAINALYTICS RANKING	428	SUSTAINALYTICS RANKING	821	SUSTAINALYTICS RANKING	571	SUSTAINALYTICS RANKING	437
CSRHUB RANKING	532	CSRHUB RANKING	531	CSRHUB RANKING	624	CSRHUB RANKING	180	CSRHUB RANKING	392

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¹ retired July 9, the day on which Dr Pepper Snapple completed its merger with Keurig

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FINANCIAL RANKING	3	FINANCIAL RANKING	58	FINANCIAL RANKING	98	FINANCIAL RANKING	150	FINANCIAL RANKING	105
SUSTAINALYTICS RANKING	873	SUSTAINALYTICS RANKING	585	SUSTAINALYTICS RANKING	588	SUSTAINALYTICS RANKING	339	SUSTAINALYTICS RANKING	472
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	673	SUSTAINALYTICS RANKING	667	SUSTAINALYTICS RANKING	298	SUSTAINALYTICS RANKING	390	SUSTAINALYTICS RANKING	59
CSRHUB RANKING	587	CSRHUB RANKING	340	CSRHUB RANKING	111	CSRHUB RANKING	501	CSRHUB RANKING	33

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The End of Bureaucracy

How a Chinese appliance maker is reinventing management for the digital age

ureaucracy has few fans. Walmart CEO Doug McMillon calls it "a villain." Berkshire Hathaway vice chair Charlie Munger says its tentacles should be treated like "the cancers

they so much resemble." Jamie Dimon, the CEO of JPMorgan Chase, agrees that bureaucracy is "a disease." These leaders understand that bureaucracy saps initiative, inhibits risk taking, and crushes creativity. It's a tax on human achievement.

Though mindful of its evils, many people believe bureaucracy is unavoidable. Dimon remembers an outside adviser who defended it as the "necessary outcome of complex businesses operating in complex international and regulatory environments." Indeed, since 1983 the number of managers, supervisors, and administrators in the U.S. workforce has grown by more than 100%, while the number of people in all other occupations has increased by just 44%. In a survey by *Harvard Business Review,* nearly two-thirds of respondents said their organizations had become more bureaucratic in recent years. Peter Drucker's prediction that today's organizations would have half as many layers and one-third as many managers as their late-1980s counterparts was woefully off the mark. Bureaucracy has been thriving.

Meanwhile, productivity growth has stalled. From 1948 to 2004, U.S. labor productivity among nonfinancial firms grew by an annual average of 2.5%. Since then its growth has averaged just 1.1%. That's no coincidence: Bureaucracy is particularly virulent in large companies, which have come to dominate the U.S. economy. More than a third of the U.S. labor force now works in firms with more than 5,000 employees—where those on the front lines are buried under eight levels of management, on average. Some look to start-ups as an antidote. But although firms such as Uber, Airbnb, Farfetch, and Didi Chuxing get a lot of press, these and other unicorns account for a small fraction of their respective economies. And as entrepreneurial ventures scale up, they fall victim to bureaucracy themselves. One fast-growing IT vendor managed to accumulate 600 vice presidents on its way to reaching \$4 billion in annual sales.

Why is bureaucracy so resistant to efforts to kill it? In part because it works, at least to a degree. With its clear lines of authority, specialized units, and standardized tasks, bureaucracy facilitates efficiency at scale. It's also comfortably familiar, varying little across industries, cultures, and political systems.

Despite this, bureaucracy is *not* inevitable. Since the term was coined, roughly two centuries ago, much has changed. Today's employees are skilled, not illiterate; competitive advantage comes from innovation, not sheer size; communication is instantaneous, not tortuous; and the pace of change is hypersonic, not glacial.

These new realities are at last producing alternatives to bureaucracy. Perhaps the most promising model can be found at a company that would not, at first glance, appear to be a child of the digital age. Haier, based in Qingdao, China, is currently the world's largest appliance maker. With revenue of \$35 billion, it competes with household names such as Whirlpool, LG, and Electrolux. At present, Haier has some 75,000 employees globally. Outside China it has 27,000 employees, many of whom joined the company when it bought GE's appliance business, in 2016.

Over the past decade the gross profits of Haier's core appliance business have grown by 23% a year, while revenue has increased by 18% annually. The company has also created

IDEA IN BRIEF

THE PROBLEM

Big companies end up creating big bureaucracies, which sap their organizations of creativity, willingness to take risk, and productivity. Though many executives express the desire to stamp it out, bureaucracy is thriving.

WHY IT HAPPENS

With its clear lines of authority, specialized units, and standardized tasks, bureaucracy promotes efficiency at scale. It is also familiar, varying little across industries and cultures. Some believe it is the natural outcome of dealing with a complex business environment.

THE SOLUTION

A new organizational form is challenging the bureaucratic model. Exemplified by the Chinese appliance maker Haier, it makes employees energetic entrepreneurs directly accountable to customers and organizes them in an open ecosystem of users, inventors, and partners. Microenterprises are free to form and evolve with little central
direction, but they all share the same approach to target setting, internal contracting, and cross-unit coordination.



more than \$2 billion in market value from new ventures. Those feats are unmatched by any of Haier's domestic or global competitors. This remarkable journey hasn't been entirely pain-free. In recent years Haier dismissed more than 10,000 employees. Yet it has also generated tens of thousands of new jobs in its rapidly expanding ecosystem. Haier's logistics network, which stretches across China, now includes more than 90,000 independent drivers, for instance.

Haier's success is the result of a root-and-branch overhaul of its once-traditional management model. Having long viewed bureaucracy as a competitive liability, Zhang Ruimin, Haier's renegade CEO, has for a decade led an effort to build a company where everyone is directly accountable to customers (a policy he describes as "zero distance"), employees are energetic entrepreneurs, and an open ecosystem of users, inventors, and partners replaces formal hierarchy.

Haier's shorthand for these practices is *rendanheyi*, a mash-up of Chinese characters that connotes a tight coupling of the value created for customers with the value received by employees. The *rendanheyi* model departs from bureaucratic norms in seven critical ways, which we'll look at in depth in this article.

From Monolithic Businesses to Microenterprises

Large corporations often consist of a few dominant businesses, each with its own orthodoxy about strategy, customers, and technology. These tightly integrated entities and their monocultures make a company vulnerable to unconventional competitors and blind it to new kinds of opportunities. To avoid that risk, Haier has divided itself into more than 4,000 microenterprises, or MEs, most of which have 10 to 15 employees. To be sure, some MEs, particularly in manufacturing, have larger payrolls, but even in them decisions are made by small autonomous teams.

Microenterprises come in three varieties. First, there are roughly 200 "transforming" MEs—market-facing units that have roots in Haier's legacy appliance business but are reinventing themselves for today's customer-centric, web-enabled world. Zhisheng, which makes refrigerators for young urban customers, is a typical example. Second, there are 50-plus "incubating" MEs, or entirely new businesses. Some, like Thunderobot, are focused on emerging markets such as e-gaming, while others, like Xinchu—a "smart" refrigerator that connects users with third-party services that sell fresh food and deliver it within 30 minutes—are wrapping new business models around familiar products.

Finally, there are roughly 3,800 "node" MEs. These businesses sell component products and services such as design, manufacturing, and human resource support to Haier's market-facing MEs.

Microenterprises are key to Zhang's goal of building the world's first company for the internet age. That entails more than developing web-enabled products. It means creating an organizational model that mimics the architecture of the internet: "small pieces, loosely joined," as the Harvard technologist David Weinberger famously put it. The web is incredibly diverse and yet still coherent. While it has spawned countless innovations, it's held together by common technical standards that make cyberspace navigable and allow sites to swap resources like data.

Haier's modular structure is similarly flexible but coherent. MEs are free to form and evolve with little central direction, but they all share the same approach to target setting, internal contracting, and cross-unit coordination.

From Incremental Goals to Leading Targets

In most organizations there's little that supports bold thinking and doing. Old assumptions get challenged only once the business has hit a wall. Not so at Haier.

Every ME is charged with pursuing ambitious goals for growth and transformation—known internally as "leading targets." Rather than taking last year's performance as a starting point, objectives are set "outside in." A dedicated research unit collects product-by-product statistics on market growth rates around the world and then uses that data to establish targets for the MEs.

Market-facing MEs are expected to grow revenue and profit four to 10 times faster than the industry average. In product categories where Haier lags, the bar is set the



 Every market-facing microenterprise is expected to make
a transformative leap from selling products and services to building an ecosystem.

highest, since there's plenty of room to increase share. In areas where Haier leads, the target is more modest but still a multiple of the market baseline. As one ME's leader put it, "If you're number three or four in the market, leading targets force you to think about how to become number one, and if you're number one, they force you to think about how to extend your lead."

While ambitious, the targets do get adjusted when circumstances change. For example, when the Chinese government revamped its energy efficiency standards for appliances in a way that favored Haier's already efficient refrigerators, the Zhisheng ME raised its targets.

Every market-facing ME is also expected to make a transformative leap from selling products and services to building an ecosystem. A good example is Community Laundry. Having developed a popular smartphone app that allows university students across China to schedule and pay for the use of dormitory laundry facilities, the ME gave outside vendors access to the app's more than 9 million users. Today the Community Laundry platform hosts dozens of other businesses and takes a share of the revenue they generate.

Haier tracks the transformation of every ME with a "win-win value-added" statement, which captures detailed metrics such as the extent of user involvement in product development, the degree to which Haier's products offer unique customer value, and the percentage of profits derived from ecosystem revenue.

Like their market-focused siblings, node MEs have leading targets that are pegged to external benchmarks. A manufacturing node, for example, may be responsible for lowering costs, cutting delivery time, improving quality, and further automating its production facilities.

From Internal Monopolies to Internal Contracting

In most organizations, a significant percentage of employees are insulated from market forces. They work in functions that are, in essence, internal monopolies, such as human resources, research and development, manufacturing, finance, information technology, and legal affairs. However inept or inefficient these internal providers may be, they can't be fired by the units they serve.

At Haier every ME is free to buy services, or not, from other MEs. (A typical user ME will have agreements with dozens of nodes.) If an ME believes that an external provider would better meet its needs, it can go outside for services. Senior executives virtually never interfere with internal negotiations.

Each year every market-focused ME looks at its performance objectives and asks itself, "What sort of design, technology, production, and marketing support will we need to meet these goals?" Once it has the answers, it asks the nodes for bids. Usually, two or three nodes will respond with proposals. The ensuing discussions provide an opportunity for all parties to challenge existing practices and brainstorm new approaches.

While the process may sound cumbersome, it's facilitated by "presets": predefined rules about margin split and minimum performance standards that reduce friction during negotiations. Terms can be renegotiated over the course of a year as circumstances change—hence Haier's preference for the word "agreement" over "contract." One ME leader told us that he had replaced a dozen nodes with other suppliers in the past 18 months. Nodes that are unable to provide competitive service can and do go out of business.

A substantial part of a node's revenue depends on the success of its ME customers. When a customer unit fails to meet its leading targets, the node takes a hit. Every node is thus invested in the performance of the market-facing units, and every employee's pay is linked to market outcomes. Zhang is only slightly exaggerating when he says, "At Haier we are no longer paying our employees. Instead, they are paid by customers."

This compensation model has three benefits. First, it discourages mediocrity. Nodes that don't deliver high levels of service lose their internal customers. Second, it unites everyone around the goal of creating great customer experiences. When a user ME seems in danger of missing its targets, representatives of all its supplier nodes quickly come together to resolve the problem. Third, it maximizes flexibility: Market-facing MEs are free to reconfigure their network of service providers as new opportunities emerge.

From Top-Down Coordination to Voluntary Collaboration

How does a company with more than 4,000 independent operating units synchronize major investments in technology and facilities? How does it build cross-business capabilities such as manufacturing automation?

In a start-up, coordination happens spontaneously. When there's a problem people simply huddle and hash things out. As a company grows and operating units become more siloed, coordination becomes increasingly difficult. The typical solution involves more layers, mandates, and corporate-level functions.

Haier has a different approach: organizing all MEs into platforms. Some platforms bring together MEs operating in a similar category, like washing or audiovisual products, while others focus on building new capabilities, such as digital marketing and mass customization. A typical industry platform encompasses more than 50 MEs. (See the exhibit "A New Organizing Principle" for a snapshot of one.)

It's the job of the platform owner to get ME teams together and help them identify opportunities for collaboration, such as developing expertise in the internet of things. Critically, no one reports to the platform owner, nor does the platform owner have a staff. Here's how Wu Yong, the refrigeration platform owner, describes his role in getting MEs to adopt a new frost-free technology, a move that required an expensive upgrade of production facilities: "I helped facilitate, but the microenterprise teams planned and executed the job together."

Platform owners have leading targets and are expected to grow their platforms by developing new MEs. In 2014, for instance, motivated by Haier's goal of becoming the world leader in smart appliances, Wu funded the networked refrigerator start-up Xinchu. Platform owners are as much entrepreneurs as facilitators.

"Integration" nodes, found within every industry platform, help MEs import technology from across Haier and identify internal partners that can coinvest in new initiatives. Like platform owners, integration nodes encourage collaboration rather than exert control.

MEs also rely on the expertise of competence-focused platforms. Two of the most important are smart manufacturing

Birth of a Microenterprise

IN MAY 2013, Lu Kailin, along with three colleagues at Haier, set out to build a laptop computer for video gaming. The upside seemed enormous. Rising incomes and ever-cheaper technology were stoking demand for online games, while the business-oriented laptops on the market were ill-suited to hard-core gaming.

The team's first step was to pore over 30,000 online reviews of gaming PCs. Having distilled out 13 customer pain points, Lu and his colleagues wrote a note to Zhou Zhaolin, head of the Haier platform that included the laptop business, begging for a meeting. Zhou was initially skeptical. "My first instinct was to kill the project," he says. But then he realized that this really wasn't his call. "In making decisions," he says, "we have to let users and entrepreneurs-not managersspeak." He gave the team a little seed capital (1.8 million RMB, roughly \$270,000), with the understanding that further funding was conditional on a successful market test.

The team set out to produce a new laptop with the help of outside partners such as Quanta Computer, a Taiwanese manufacturer of PCs for Dell

and HP. By December 2013, only seven months after it began, the venture was ready to introduce a product. Offered on JD.com, a Chinese e-commerce site, the first batch of 500 brightly colored and aggressively styled laptops sold out in five days. A few weeks later a second batch—of 3,000 units-was snapped up within 20 minutes. Jazzed by that success, the team members crafted a detailed business plan and in April 2014 received an additional 1.2 million RMB from Haier, to which they added 400,000 RMB of their own money in exchange for a 15% stake. VC firms joined in subsequent funding rounds.

A little more than three years later, Thunderobot went public on China's NEEQ market with a valuation of 1.2 billion RMB (about \$180 million). With a staff of 80, the venture now leads e-gaming laptops in China and is making significant inroads into other Asian markets. Taking a lesson from its corporate parent, Thunderobot has spawned its own start-ups, which include a business that streams video games, a platform for organizing e-sports teams and tournaments, and a foray into virtual reality technology.

and marketing, each of which employs fewer than 100 individuals. The largest node within the manufacturing platform provides technical support for mass customization. Another node, smart engineering, deploys advanced production tools for the company.

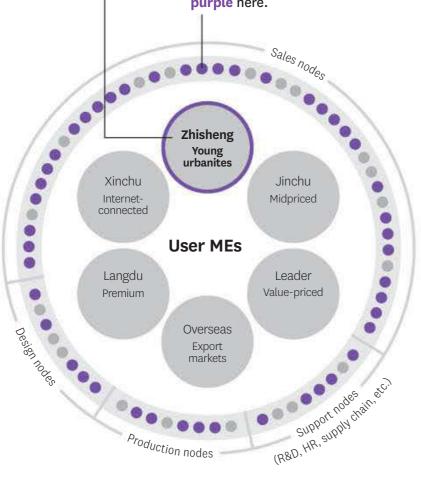
The primary role of the marketing platform is supplying customer information. While every user ME collects copious amounts of information through its own social media channels, the marketing platform's "big data" node integrates

A New Organizing Principle

Haier is made up of thousands of microenterprises (MEs), which are grouped into platforms. Below is a map of the refrigeration platform.

Each industry platform has a small number of marketfacing "user" MEs, serving different segments...

...and many "node" MEs dedicated to providing services and components to user MEs on the platform. The nodes supporting the Zhisheng user ME are shown in **purple** here.



Any user ME is free to hire and fire nodes as it sees fit—or to go outside for services if it believes an external provider can better meet its needs.

information from Haier's corporate website and from other sources within the company and without. The idea is to unearth cross-business insights and build predictive models that help MEs respond to emerging customer needs. One example: alerting MEs in the washing platform that a customer has bought a refrigerator and an oven and may be in the midst of a remodel that will call for new laundry equipment as well. While the marketing and manufacturing platforms do set standards—for brand visuals and factory automation software, for example—they issue few commands. And like other units at Haier, they have a financial stake in the success of their internal clients.

A final bit of grease on the runners of internal collaboration comes from Haier's shared accountability to customers. When, for example, several MEs began hearing that Haier's smart products didn't talk to one another, they convened and hammered out a "grand bargain" in which Xinchu would provide a common software platform for the company's networked devices while other MEs would contribute customer research and supporting technologies. The shared ecosystem, XCook, now encompasses 100 million end users and 400 partners.

In most companies, coordination means sacrificing speed and responsiveness for greater efficiency. Zhang believes that such trade-offs are best made by those closest to the customer, by MEs that are free to choose when to collaborate and when to go it alone.

Remember Weinberger's phrase "small pieces, loosely coupled"? The coupling of MEs is decidedly loose but still strong enough to ensure that Haier exploits its size and scope. Turns out it really *is* possible to achieve coordination without centralization.

From Rigid Boundaries to Open Innovation

Bureaucracies are insular. Typically, they make sharp distinctions between insiders and outsiders and are characterized by secrecy and a reluctance to tap external partners for mission-critical tasks. The problem with a closed system is that it doesn't adapt—it atrophies. Recognizing this, Haier sees itself not as a company but as a hub in a much larger network. The implications of this view are profound.

First, every new product or service at Haier is developed in the open. For example, when the company set out to build a new home air conditioner, it used Baidu's social media site to ask potential users about their needs and preferences. More than 30 million responses flooded in. Lei Yongfeng, the project leader, then invited more than 700,000 users to go deeper and share their thoughts about pain points and At Haier new offerings don't get a significant budget until they're
validated by users. Take the Air Cube. A preproduction model
of it was sold to 7,500 people on a crowdfunding site.



detailed product features. Unexpectedly, the top concern was the danger of contracting Legionnaires' disease. Minimizing that risk became a key priority and led to a radical rethink of the fan blade.

Second, Haier has assembled a network of 400,000 "solvers"—institutions and technical experts from around the world—that help the company address challenges in some 1,000 domains. More than 200 problems are posted each year on the Haier Open Partnership Ecosystem (HOPE). Lei's team, for instance, asked for help in designing the blades for its new air conditioner. Within a week the challenge had attracted several proposals. The winning design, mimicking a jet turbofan, came from researchers at the China Aerodynamics Research and Development Center. In all, 33 institutions contributed to the development of the air conditioner. When it launched, at the end of 2013, the Tianzun Wind Tunnel was an instant hit.

In collaborative projects like the Tianzun, Haier creates a "pool" in which its business partners confidentially share their patents—with the understanding that they'll be rewarded if their technology is used in the final product. Suppliers that contribute to the early design process also get preferred consideration when it comes to vendor selection.

By moving its product development process online, Haier has reduced the time from concept to market by up to 70%. Manufacturing and design nodes, user MEs, potential customers, and business partners work in parallel throughout, starting with the earliest discussions about customer needs. That maximizes creative problem solving and minimizes the risk of clumsy handoffs as the product moves toward launch. While many executives view their businesses as linear value chains, beginning with R&D and ending with sales and support, Haier sees them as value *networks* in which all parties collaborate at every stage.

A third feature of Haier's commitment to openness is its use of crowdsourcing to gather feedback on products and defray development costs. In part this is a response to the company's "zero fund" policy, in which new offerings don't get a significant budget until they're validated by users. Take the Air Cube, a groundbreaking combination of humidifier and air purifier. During its gestation, more than 800,000 online "fans" offered comments on it. Once a prototype was ready, it was made available on a popular crowdfunding site, where more than 7,500 individuals opted to buy a preproduction model. Their feedback helped Haier further refine the Air Cube before its formal launch.

Finally, Haier uses HOPE and other online platforms to recruit talent. Many MEs are led by people who joined the company after making standout contributions online. Tan Lixia, Haier's chief financial officer, sums up the company's mindset toward open innovation this way: "The border of the company is not important. If you can help create value for users, it shouldn't matter whether you're an employee or not."

From Innovation Phobia to Entrepreneurship at Scale

There's a reason big companies are frequently outmaneuvered by newcomers: Bureaucracies are intrinsically conservative. As Laurence J. Peter, author of *The Peter Principle*, wryly put it: "Bureaucracy defends the status quo long past the time the quo has lost its status." To counter this reverence for precedent, many companies have set up outposts in Silicon Valley and other innovation hot spots.

Haier, by contrast, has turned its entire organization into a start-up factory. Its 50-odd incubating MEs currently account for more than 10% of Haier's market cap. They run the gamut from Hairyongi, a fintech start-up that securitizes loans to small businesses—notably, Haier suppliers and distributors—to Express Cabinets, a network of storage lockers that allows local farmers to deliver directly to consumers in some 10,000 communities. (For more on how Haier builds new ventures, see the sidebar "Birth of a Microenterprise.")

There are three ways to launch a new business at Haier. In the first and most common case, an internal entrepreneur posts an idea online and invites others to help flesh out the nascent business plan. (This is how Zhang Yi, who at the time was an after-sales service manager working in the field, started Express Cabinets.) Second, a platform leader can invite insiders and outsiders to submit proposals for exploiting a white space opportunity. Third, would-be entrepreneurs can pitch their ideas at one of Haier's monthly road shows across China, which connect local innovators with platform leaders and members of Haier's investment and innovation platform.



Every incubating ME is a separate legal entity, funded in part by the founding team. Haier's leaders, recognizing they may not be well placed to judge the merits of a new idea, often require a start-up team to obtain outside funding from one of the company's venture capital partners before agreeing to contribute internal resources. In a recent period, nine out of 14 newly hatched MEs received external investment before getting money from Haier. Despite this, Haier often ends up with a majority stake in the start-ups, because it typically has the option of buying out its venture partners using a preset valuation formula.

Like other units within Haier, incubating MEs contract with nodes for development, distribution, and administrative support. Arm's-length internal agreements allow fledgling MEs to leverage Haier's size and bargaining power while avoiding the risk of bureaucratic meddling.

Explaining Haier's penchant for entrepreneurship, one VC said, "Microenterprises are like a reconnaissance unit—they scan the battlefield and identify the most promising opportunities. It's like a giant search function." Haier understands that innovation is always a numbers game. The only way to find that next billion-dollar opportunity is to launch a slew of start-ups and give each one the freedom to chase its dream.

7 From Employees to Owners

In a start-up, people tend to think and act like owners. Often they have equity in the venture, and some will have even risked their own capital in hopes of scoring a big win. Start-up teams also have a large degree of autonomy—and no one to blame if things go wrong. It is this combination of upside, freedom, and accountability that gives start-ups their edge.

A study of 780 U.S. companies published by the National Bureau of Economic Research explored the connection between gain sharing, autonomy, and voluntary turnover rates, which the authors used as a proxy for employee engagement. Turns out, neither gain sharing nor autonomy on its own had a significant impact on turnover. But in companies that offered employees both, voluntary turnover was less than half the rate observed when one or none of those two conditions were present. This makes sense. If you increase employees' authority without increasing their upside, the additional responsibility may well be seen as a burden. Conversely, if you grant people stock without increasing their authority, they'll still feel like minions.

At Haier, MEs are expected to be self-managing, and their freedoms are formally enshrined in three rights:

- **Strategy.** The right to decide what opportunities to pursue, to set priorities, and to form both internal and external partnerships.
- **People.** The right to make hiring decisions, align individuals and roles, and define working relationships.
- **Distribution.** The right to set pay rates and distribute bonuses.

These rights come with a commensurate degree of accountability. Targets are broken down into quarterly, monthly, and weekly goals specific to every member of an ME team. That makes it easy to see who's performing and who's not. Compensation is tightly coupled with business performance. As is true in most start-ups, base salaries are low. Opportunities for additional compensation are tied to three performance thresholds:

- **Baseline.** When an ME's quarterly sales and earnings growth exceeds a base target, team members get a bonus proportionate to the amount by which the target was exceeded.
- Value-adjusted mechanism (VAM). If the ME achieves a midpoint goal between the quarterly baseline and leading targets, the team's bonus is doubled. At this level, employees are also allowed to contribute their own money, typically 15,000 RMB (about \$2,200) each quarter, to a special investment account. If the team hits the VAM target the subsequent quarter, that investment produces a 100% dividend.
- VAM annual target. When an ME team beats its VAM target for four consecutive quarters, it becomes eligible for profit sharing. Twenty percent of the ME's net profits in excess of the VAM goal are distributed to the team, though 30% of that amount will be set aside to fund bonuses the following year. As an ME closes in on its leading target, the profit share increases proportionately, sometimes exceeding 40%. This combination of bonuses, dividends, and profit

sharing gives employees the opportunity for hefty payouts.

Poorly performing leaders are vulnerable to a hostile takeover. Anyone at Haier who believes that he or she could better manage a struggling microenterprise can make a pitch to its team.

With so much at stake, it's hardly surprising that ME team members have little tolerance for incompetent leaders. If an ME fails to hit its baseline targets for three months in a row, a leadership change is automatically triggered. If the ME is meeting its baseline targets but failing to reach its VAM targets, a two-thirds vote of ME members can oust the existing leader.

New leaders are chosen competitively. Typically, three or four candidates will present their plans to the ME team. The discussions are intense, as team members press for details on how prospective leaders will get things back on track. Occasionally, a team rejects the entire slate of candidates and the search process goes to round two.

Poorly performing leaders are also vulnerable to a hostile takeover. Anyone at Haier who believes that he or she could better manage a struggling ME can make a pitch to its team. Performance data for all MEs is transparent across the company, so it's easy to spot takeover opportunities. If an interloper's plan is convincing, a leadership change ensues. This may seem extreme, but it's simply an analogue of the market approach to corporate control. If a company consistently underperforms, its board will eject the CEO—or the business may be bought by a competitor who believes it can manage the assets more effectively.

In most large companies, upside opportunities are modest, often topping out at 10% or 20% of base pay. The implicit message from executives to employees: "We don't think you can do much that would make a truly significant difference to our business." Lacking both freedom and upside, frontline employees have little choice but to live down to these meager expectations, and in so doing reinforce management's lack of faith in their abilities. By contrast, Haier does everything possible to turn employees into owners. It is here that one finds the deepest explanation for Haier's track record of industry-beating growth and innovation.

UNLIKE ALIBABA OR TENCENT, Haier isn't one of China's new-economy superstars. Thirty years ago the company was a struggling state-owned enterprise turning out products of dubious quality. Today it's a case study in what can be accomplished when an established company is willing to challenge bureaucracy's authoritarian structures and rule-choked practices. Who would have imagined that it's possible to run a large global business with just two layers of management between frontline teams and the CEO?

The Haier we see today was nearly a decade in the making. The company began testing the concept of small, entrepreneurial sales and marketing teams in 2010. A year later self-managing teams were introduced in product units. Those early tests were instructive. At the outset internal contracting proved problematic. Negotiations were protracted and adversarial as every unit sought to maximize its own success. The solution? Build in a clause that links compensation to marketplace results. That reduced friction and increased alignment, turning a zero-sum game into a joint effort to create value for customers.

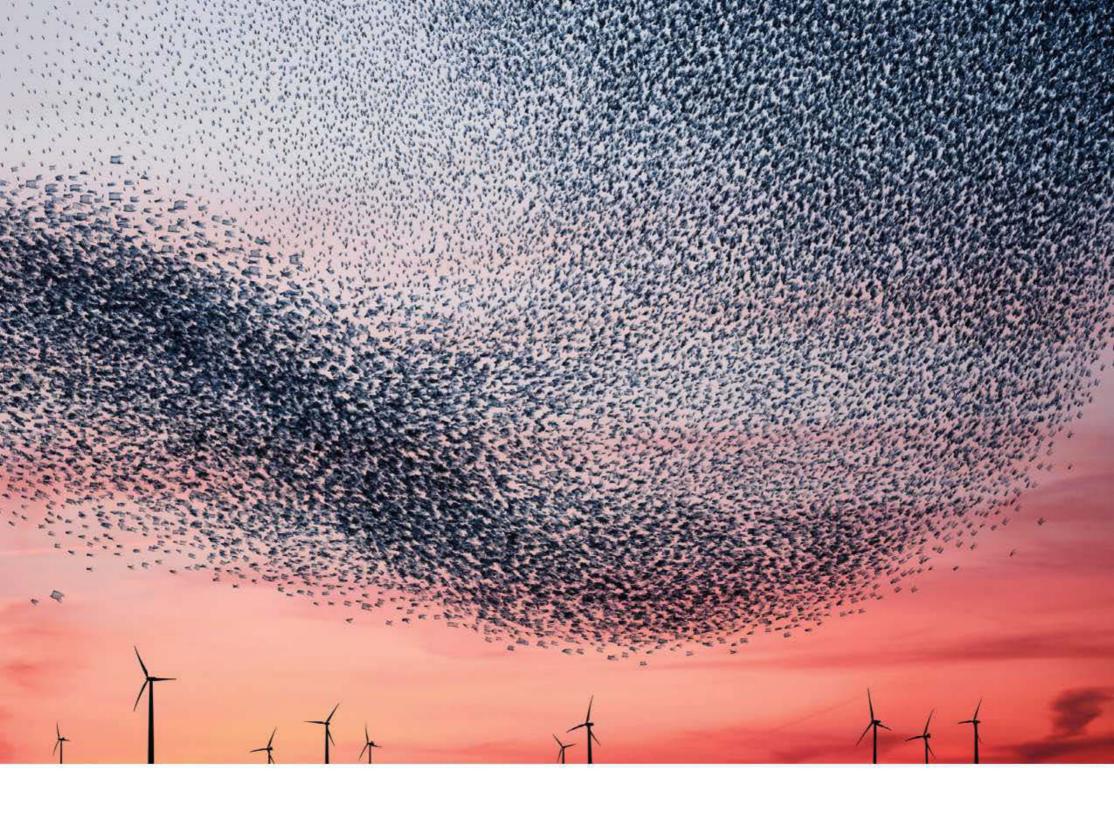
As Zhang often reminds his colleagues, it's impossible to engineer a complex system from the top down. It has to emerge through an iterative process of imagination, experimentation, and learning. When asked how Haier can accelerate its transformation, he has a simple answer: Run more trials and replicate the most successful ones faster, because revolutionary goals are best achieved through evolutionary means.

For decades, most companies have worked diligently to optimize their operations. More recently, they've raced to digitize their business models. Important as this is, Haier has done something even more consequential: It has humanized its management model. As Zhang said in a long-ago meeting with one of the authors of this article: "We want to encourage employees to become entrepreneurs because people are not a means to an end but an end in themselves. Our goal is to let everyone become their own CEO—to help everyone realize their potential." Haier's empowering, energizing management model is the product of a relentless quest to free human beings at work from the shackles of bureaucracy. ©

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Bernard C. Kümmerli Senior partner, Innosight B Scott D. Anthony Senior partner, Innosight B Markus Messerer Former head of corporate strategy, Swisscom; CEO of Alltron



2016, BERN-BASED SWISSCOM seemed trapped in a mature industry. The global telecom sector was flatlining, with revenue inching up a mere 1% per year and profits and prices under siege. Despite Swisscom's long track record of innovation—it pioneered international direct-dial telephone service in the 1960s and 2G mobile services in the 1990s, and was instrumental in Switzerland's having achieved the world's highest rate of broadband installation—stasis had set in at the \$12 billion company. CEO Urs Schaeppi and his senior leaders knew the firm needed

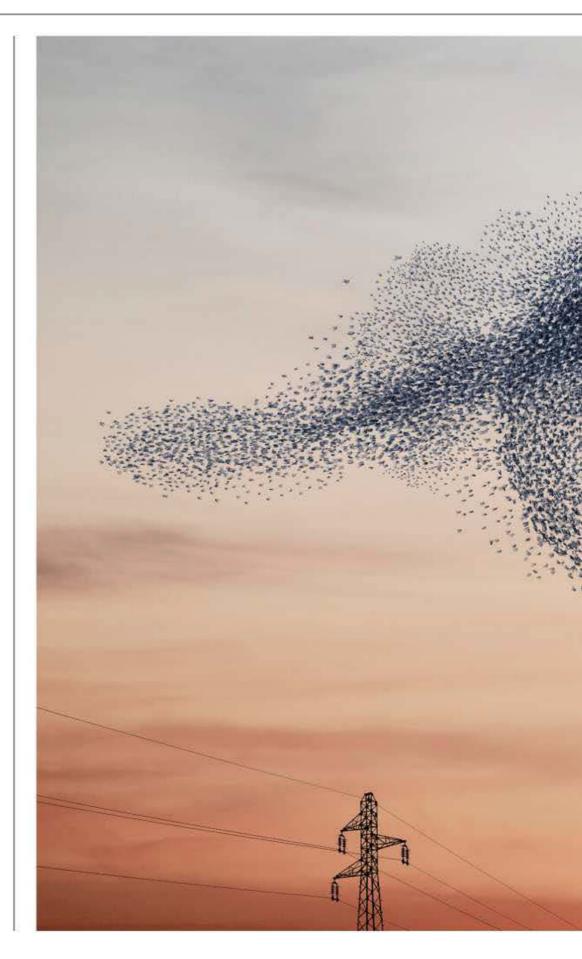


to refine its long-term growth strategy for a world transformed by digital technology, but they were divided by disagreement about the best path forward. Some executives were comfortable with slow growth and higher profits through efficiencies; others believed the company needed to move boldly into new markets. "There is limited perception of a shared or common agenda," one leader noted. Further complicating the strategy choices were Swisscom's culture and decision-making style. "It's a real Swiss democracy," said one executive, referring to the customary Swiss deference to a majority view. "We don't deal well with conflict," said another.

That state of affairs is all too common at large, successful enterprises. In the 1995 HBR article that laid the foundation for *The Innovator's Dilemma*, Clayton Christensen and Joseph Bower noted that in confronting disruptive change, the heart of the challenge is a human one. Leaders understand that they must allocate human and financial resources to newgrowth efforts or face a future in which start-ups and other rivals overtake them. Yet they are often paralyzed by the status quo and disagreement about the future.

The problem of alignment is so persistent that a body of research has emerged to describe it. For example, a recent MIT Sloan School survey of more than 4,000 managers found that only 28% could correctly list three of their firms' top strategic priorities. Many companies are caught in a vicious cycle that often results in a strategy-execution gap. "Our world is changing, and our strategy must change too," leaders exhort. Advisers are hired, data is gathered, numbers are crunched, and decisions are made. But the seeming consensus doesn't translate into action. So the process repeats, but the apparent alignment isn't deep enough to drive real change.

Recognizing the perils of divided leadership, Schaeppi formed a small strategic transformation team, led by one of



IDEA IN BRIEF

THE CHALLENGE

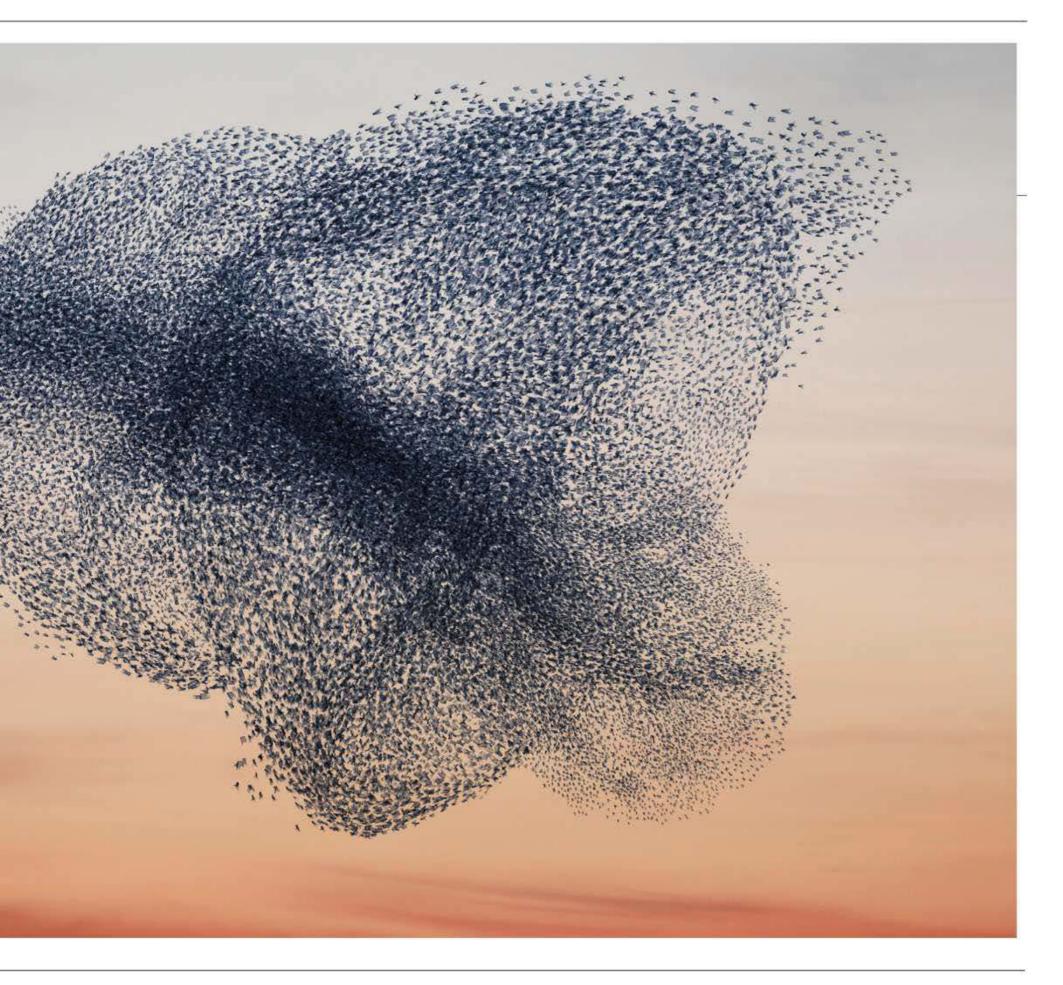
To remain competitive, firms must develop transformational newgrowth strategies. But leadership teams are rarely aligned on what degree of growth is needed and what markets and types of innovations to invest in.

THE APPROACH

Faced with stagnation or decline in a mature industry, leaders at the global telecom Swisscom engaged in a unique program involving structured dialogues and interactive exercises to reveal misalignments and help the team converge on common growth goals and strategy.

THE OUTCOME

Following the program, Swisscom embarked on a clear long-term growth strategy, launching a set of innovative ventures, creating a VC-like group to oversee related investments, and locking in a schedule of annually increasing funding.



us, Markus Messerer, along with an internal change manager from Swisscom. Bernard Kümmerli, from Innosight, served as adviser to the team. That group worked closely with the 10-member group executive board, which we'll call "the leadership team." Because Swisscom's traditional strategic-planning process focused on short- and mediumterm plans, Schaeppi decided to try a new approach. It comprised a trilogy of leadership dialogues enhanced with data visualization that aimed to establish a foundation of common understanding, expose misalignment, and catalyze decision making through physical exercises. By the end of the process, the leadership team had converged on the "North Star" vision of Swisscom for 2025 and allocated resources for growth opportunities such as data security, the internet of things, and vertical markets including financial tech and transportation.

THE IMPORTANCE OF PRECISE ASSUMPTIONS

etting long-term growth and performance aspirations is an exercise in uncertainty. How do we know that *this* part of the core business will go into steep decline and that part won't? Why will this innovation succeed and that one fail? How can we be sure we haven't overlooked other, more promising ideas? These questions are impossible to answer definitively; after all, conclusive data is available only about the past.

In the absence of data about the future, leaders must be precise in the assumptions that underlie their strategic plans. Good assumptions are specific, time-bounded, and easily tracked and

measured over time. Imagine a large global bank whose HR leadership team is contemplating its future workforce. "Our staff will get younger" is a nebulous assumption that is generally true but too broad to be useful in strategic planning. A more precise assumption would be "In 2023, the share of employees who are younger than 30 will be 26%, versus 21% today." That is specific enough to be measured and adjusted accordingly.

Clarifying assumptions in this way helps to combat "the ambiguity effect"—the tendency for people to choose options for which the outcome is known over those whose outcomes are unknown—and lays the foundation for ever sharper and more-useful planning.

The techniques used at Swisscom are based on thinking from fields including neuroscience, behavioral psychology, and the study of how physical movement and artifacts affect creative thinking. The method is generalizable and has had impact in industries ranging from medical devices to legal services, in multiple geographies. This article outlines the key elements of the approach, starting with the need to lay a strong foundation for discussion.

Establish Common Ground

Breaking the cycle of misalignment begins with the basics: defining your terms. The 20th-century philosopher Ludwig Wittgenstein noted that you cannot truly enter any world for which you don't have the language. Entering the world of future strategy requires that executives have common definitions and assumptions around three key questions.

What business are you in? A critical starting point at Swisscom was answering the question, What does it mean to be a telecommunications company? Leaders often have very different perceptions of the boundaries of their business, especially as industry borders blur. In the past, telecom was a circumscribed and predictable business in which a firm installed network assets and monetized them over years or decades. Swisscom was now operating in a world in which content and connectivity were converging and transformative technologies-from the cloud to virtual reality to the internet of things-were changing the game. Some Swisscom leaders had trouble thinking of telecom as extending beyond traditional lines of business such as voice and data services. Others viewed the industry as part of the much broader business of "productivity solutions," with many new opportunities on the table. The narrower view could consign Swisscom to stagnation, so at the outset, the leadership team decided that its strategy must extend the company beyond the core.

Where and how should it expand? Before debating that topic, Swisscom needed a common language for discussing innovation.

What is your innovation typology? As is commonly the case, executives at Swisscom had differing understandings of the various categories of innovation. For example, some believed that "disruptive innovation" referred broadly to start-ups' taking market share from industry leaders, while others had more-specific definitions, such as "innovations that expand access to nonusers." Even the term "strategic transformation" was interpreted in a variety of ways.

To help establish a shared language, the leadership team embraced a new lexicon: *Core innovation* makes existing products better and reduces the cost of making or distributing existing products; *adjacent innovation* and *transformative innovation* (including disruptive innovation) drive growth in new markets, customer segments, and business models.



The leadership team then used the definitions to examine potential growth opportunities. For each new-growth category, a subteam researched opportunities that fit with the broadened view of telecom as a "productivity solutions" business. Subteams looked at artificial intelligence, transportation platforms, data security, 5G networks, cloud applications, telematics, and blockchain-based financial services. They assessed market size, identified potential acquisition targets, and reviewed the competitive landscape.

What's your growth gap? A crucial step in planning for the future is to determine a firm's growth gap—the difference between revenue (or earnings) ambitions and what the current business is likely to deliver without major change.

This is so critical, and is influenced by so many variables (competition, cost of inputs, marketplace demand, the performance of new ventures, and so on), that it is best presented in interactive data visualizations. Research has shown that using such visualizations increases confidence in decisions, leading to better outcomes.

To help the leadership team understand the 2025 growth gap, the strategic transformation team deployed a visualization tool called a waterfall chart that showed the size of the gap and how various scenarios and changes to underlying assumptions would affect it. (Essentially, the tool presents in visual form data that finance teams routinely generate during scenario-planning exercises.) The goal was not to force the leadership team to make firm projections for future growth but rather to be exact about its assumptions. (See the sidebar "The Importance of Precise Assumptions.")

The waterfall demonstration was put to constant use throughout the strategy discussions, revealing in real time how estimates of future earnings performance can change depending on assumptions about operational efficiency, new regulations, technology trends, and various combinations of new-growth initiatives and technology platforms. For example, Swisscom found that 5G technologies and advanced mobile services could be a big lever for future performance.

The biggest eye-opener for the leadership team was the cost of lost opportunities. Without a focus on new growth, the gap between potential and unrealized revenues for 2025 ballooned to billions of Swiss francs (which are about equal to the U.S. dollar). This alarming display on the waterfall chart underscored the urgent need for alignment.

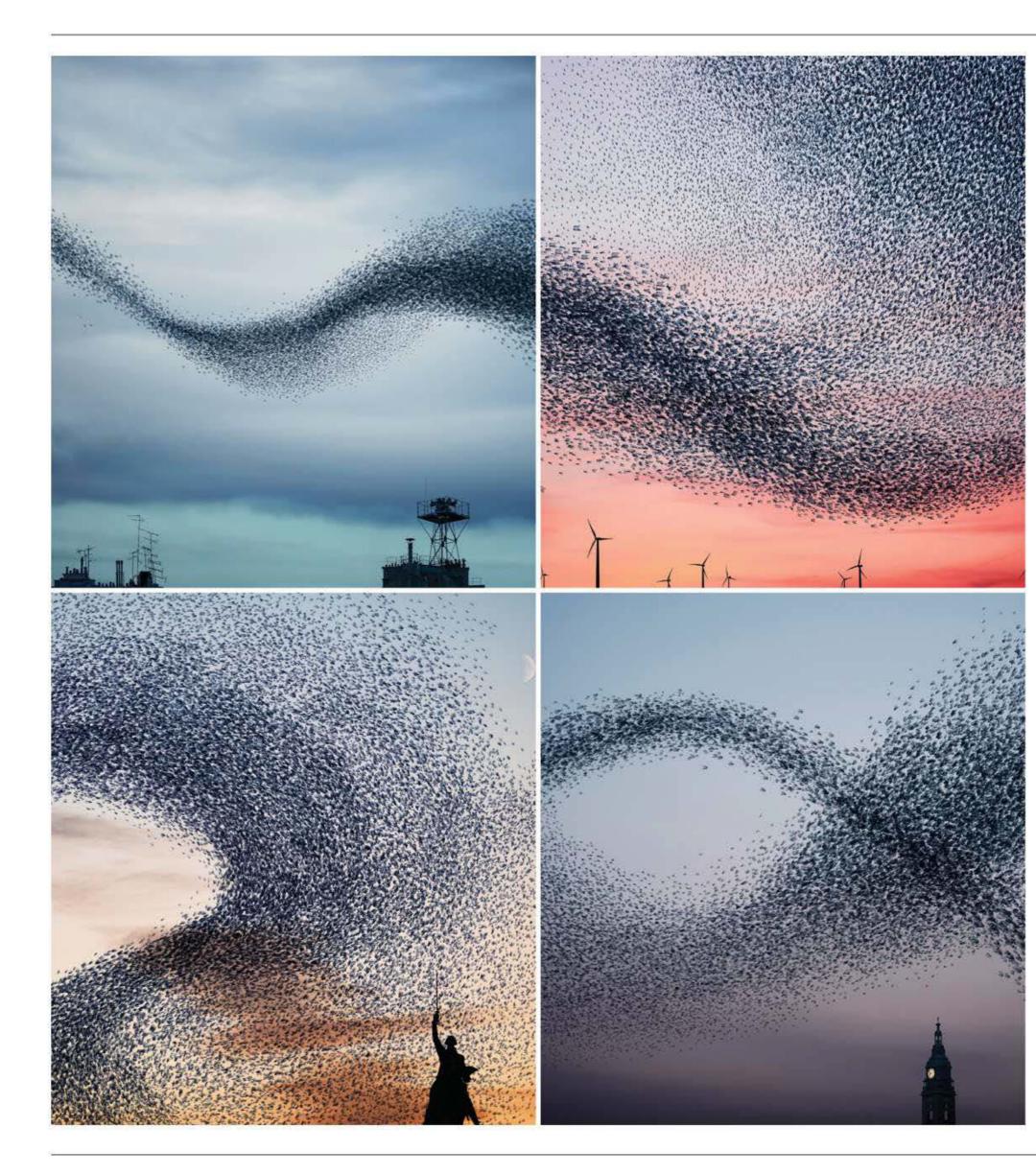
Expose Misalignments

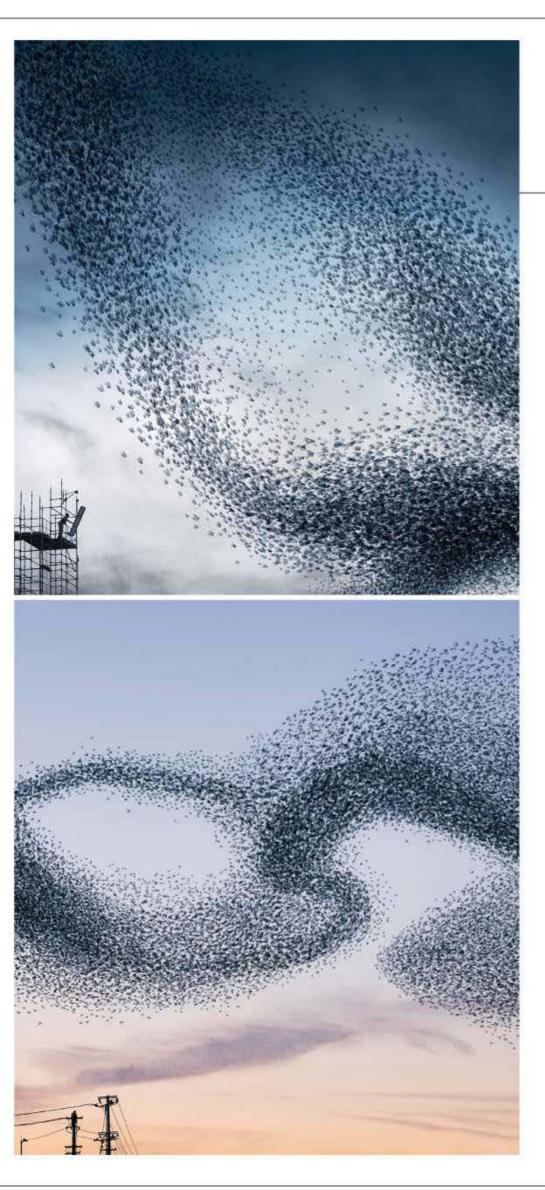
The second step of the process was geared toward uncovering misalignments on the leadership team. All 10 members had common demographics and backgrounds, and so it would seem that alignment would come naturally. However, even in such a homogeneous team culture, managers often defer to their superiors and even to colleagues at their own level, leaving disagreements simmering under the surface.

Reinforcing such deference is a set of cognitive biases that inhibit good decision making. A powerful one is groupthink, which keeps people from voicing views that might rock the boat. Often, too, members assume that someone else will speak up, or they worry that commenting will commit them to tasks they'd rather not perform. As a result, they sit quietly without truly agreeing or even participating, a pernicious effect known as social loafing. Add up these and other biases, and many groups succumb to the illusion of unanimity, where silence or weak agreement masks conflict.

Our goal was not to eliminate such conflict but rather to bring it into the open through structured discussions designed to expose the reasons behind differing points of view. Research by Elizabeth Mannix and Karen Jehn shows that controlled conflict can result in more-productive discussion. Their study found that groups that were most successful at fending off both groupthink and heated arguments reduced "relationship conflict," or personal dislikes, while gradually increasing "process conflict" (for example, examining the choices of leaders and how resources will be allocated). In addition, they maintained consistent levels of "task conflict," such as debating how an objective should be accomplished.

To encourage productive dialogue, the strategic transformation team identified disagreements beforehand (using e-surveys) to make sure that people weren't taken by surprise, which could derail discussions and make consensus harder to attain. Before one session, for example, the team members stated their views of what the firm's strategic aspirations should be, the potential of several growth ventures, the impact of emerging technology, and the firm's ability to drive sustainable differentiation in the core business. All 10 members then reviewed the survey results, which revealed even more misalignment than they had expected. This created curiosity about the exercise to come.





ABOUT THE ART: Photographs of a Man-Altered Skyscape Alain Delorme's "murmurations" of plastic bags illuminate the problem of global pollution. September 2013



Members of the leadership team were then sorted into two groups: six Optimists (who were asked to explain what would have to be true for everything to work out) and four Pessimists (who were asked to describe how things could go wrong). Labeling the two groups in this exaggerated way helped diffuse tension and bring humor to the situation. "You're such an Optimist," one member said. "You're such a Pessimist," another shot back. Members then stood up one by one to defend their positions, especially on growth versus retrenchment. One rule was strictly enforced: No one could take a pass. Each executive was required to state his case, ensuring that all views were transparent. This was hard for everyone, given the polite Swiss culture, but it was essential if the leadership team was to avoid discovering later that fundamental disagreements were simmering under the surface. The exercise revealed just how wide the range of views was, with Optimists arguing for major investments in growth and Pessimists championing strategic cost cutting.

To capture the opposing positions, the rival groups created wall-sized posters summarizing their reasons for optimism or pessimism. After each presented its side, the strategic transformation team asked whether any minds had been changed and whether anyone now wished to switch groups. No one did. That wasn't a surprise: Simply surfacing disagreements rarely changes people's minds.

The next session, therefore, would focus on getting people to modify their positions in order to reach alignment.

Get Physical

A facilitated roundtable discussion to seek consensus is typically the next step. But such exercises aren't usually effective at creating alignment, as they often lead to seeming agreement but no resulting change. So the strategic transformation team did something that may sound a bit weird: It asked the leadership team to physically engage. It took some convincing before everyone agreed to participate. But this was a crucial step in building alignment. (See the sidebar "Overcoming Resistance.")

A substantial body of research suggests that physically enacting difficult ideas can be a more effective way to bring them to life and encourage discussion than following conventional meeting etiquette of sitting, talking, and listening. In his



book *Supersizing the Mind*, British cognitive scientist Andy Clark argues that thinking doesn't happen only in our minds; it also happens "when we crisscross the boundaries of brain, body, and world." The locus of broader understanding involves physical action, he says, as is taught in yoga. Angela Leung and her colleagues at Singapore Management University have built on this theory, conducting experiments examining the effects of physical actions on cognition. They found, for example, that talking with one or both hands or working on puzzles while standing within or outside a large box had distinct effects on creativity and the application of knowledge.

More to the point for corporate leaders, research on the dynamics of small-group discussion has shown that the physical positioning of group members has a significant impact on communication—and that reorganizing the layout of the group can boost energy and improve outcomes.

The strategic transformation team deployed two active exercises designed to move the executives toward alignment:

Walking the line. To guide conversation in a concrete way, the facilitators laid a thick strip of tape on the floor, five meters long, curved into a semicircle. The tape was marked with the 2025 performance predictions each leadership team member had reported in a premeeting survey, ranging from a 2% decline on one end to a 30% increase on the other. Everyone stood on their marks on the tape.

The facilitators then instructed members to try to persuade people around them to jump to their marks. The arguments from both Optimists and Pessimists were loud, uncomfortable, at times fun, and filled with moments of surprise, hope, anger, and fear. But as the members aired their views, they shuffled positions and the optimistic views about new businesses and future growth began to hold sway.

A consensus emerged that Swisscom couldn't achieve its full potential through efficiency improvements alone (favored by the original Pessimists) or through growth-focused innovation alone (the Optimists' preference). It needed to do both. The breakthrough happened when it became clear that digital technologies could fundamentally improve the cost structure, freeing up substantial capital for new-growth areas as well as quality improvements and differentiation in the core.

With those consensus insights, members repositioned themselves a final time, "walking the line" in one direction or another. After all the arguments played out, everyone was surprised to be standing near the same point: a double-digit performance increase by 2025. It was a shockingly optimistic view of the future, but it was informed by detailed discussions of numerous potential innovations and acquisitions that could close the growth gap. One member who had started at the lower end of the line came an especially long way, and it was an emotional experience to get there. "It was a moment of joy and relief," he said.

Casting your vote. It was time to vote on a plan to achieve the team's vision. Should Swisscom buy (acquire), build, or partner in new disruptive-growth fields in order to forge new organizational capabilities? Since these questions involved allocating finite resources, it was important to reinforce the idea that difficult trade-offs would be required. The facilitators gave each member 100 Swiss francs to distribute into containers representing the three options: buy, build, and partner.

One after the other, the executives went to the front of the room and allocated their coins. These were complex decisions: They had to take into account historic investments, such as the failure of some deals to create value, and the fact that a recent scan of VC-backed start-ups had revealed few promising deals out there. The final tally answered the central strategic question: The leadership team decided to build, namely by investing in new capabilities and assets through entrepreneurial initiatives.

Throughout the sessions, the waterfall chart had been projected on a giant screen showing the growth gap in bright red, a persistent reminder that incremental improvements and half measures wouldn't make much of a difference. But once the leadership team began exploring the revenue potential of building new capabilities connected to growth initiatives, the red zone began to disappear.

In this way, the aligned strategy came into view for the first time. The preliminary debates about technology, efficiency, regulation, and growth potential helped the group settle on specific choices that would leverage Swisscom's core capabilities. The leadership team voted to invest in cybersecurity, cloud applications, business process outsourcing, blockchain, and automotive telematics. Some of these initiatives had the potential to become digital platforms that could scale globally.

By the end of the process, the leadership team had decided to set up separate entities with dedicated resources, locking in a schedule of funding that increased every year. It boosted investment in select growth areas fivefold, on the order of hundreds of millions of Swiss francs. Swisscom had successfully aligned behind its key priorities and embarked on a clear long-term growth strategy.

The Path Forward

After the dialogues, the group executive board assembled the company's top 100 managers to unveil the narrative of Swisscom 2025 and set out the path forward. There were four major elements of the plan:

A compelling story. The board established a clear narrative to guide all communication inside and outside the organization, engaging and building alignment among all 20,000 employees. Central to the narrative was the 2025 growth ambition for Swisscom in core, adjacent, and transformative innovation and the view of the business beyond traditional telecom.

Accountable governance. It established a VC-like venture decision board, with power to oversee the new-growth investment. The board was charged with allocating resources rapidly, but only when measurable milestones were achieved.

Separate management. It created a separate management team for the new-growth ventures. This included working with existing business units to establish an M&A strategy with dedicated funding to support the growth plan.

New metrics and incentives. It adopted new metrics for measuring the success of the transformation strategy, including measures of customer centricity and business agility, and reworking the incentive scheme of the entire corporation to make transformation the priority.

Within a few months of the dialogues, Swisscom began venturing outside its core with entrepreneurial spirit. In September 2017, it launched Swisscom Blockchain, a start-up based in Zurich, owned 70% by Swisscom and 30% by leaders recruited to run the new venture. In November 2017, it launched Open Banking Hub, a global platform accessed through mobile phones that allows firms of all sizes to exchange secure financial information. In May 2018, it launched AutoSense, an open telematics platform for drivers and companies managing fleets of connected cars. All this has enabled Schaeppi to tell the story of Swisscom as a longterm growth company for a digital world.

OVERCOMING RESISTANCE

ne of the

cornerstones of Innosight's strategic alignment approach is to "get physical." Sometimes, however, senior executives are reluctant to participate in such unconventional activities. Occasionally facilitators are met with eye rolls, but more often the reaction is mild puzzlement rather than fierce resistance. Innosight has found that a good way to get broad buy-in is to first discuss the exercises

with a few key people to get them on board, and then ask them to help pull the others along. Having the team members talk with executives from other companies who have gone through the experience is also helpful. And facilitators should stress that the exercise is grounded in solid behavioral and group-dynamics research. Sometimes it's necessary to simply ask squeamish executives, "What have you got to lose?" After all, what they are currently doing is not working.

The Leader's Choice

Disruptive change poses existential challenges to leadership teams, raising foundational questions about aspirations, identity, and the very soul of a company. So it is no surprise that teams struggle to reach consensus on a path to the future. The approach described here provides a novel and practical road map for achieving leadership alignment. It also offers tools for surfacing misalignment, a process often fraught with emotion.

Even when teams seem to be aligned, they are often divided in underlying ways. Bringing those divisions to the surface is the first step in creating an enduring alignment and a powerful new-growth strategy.

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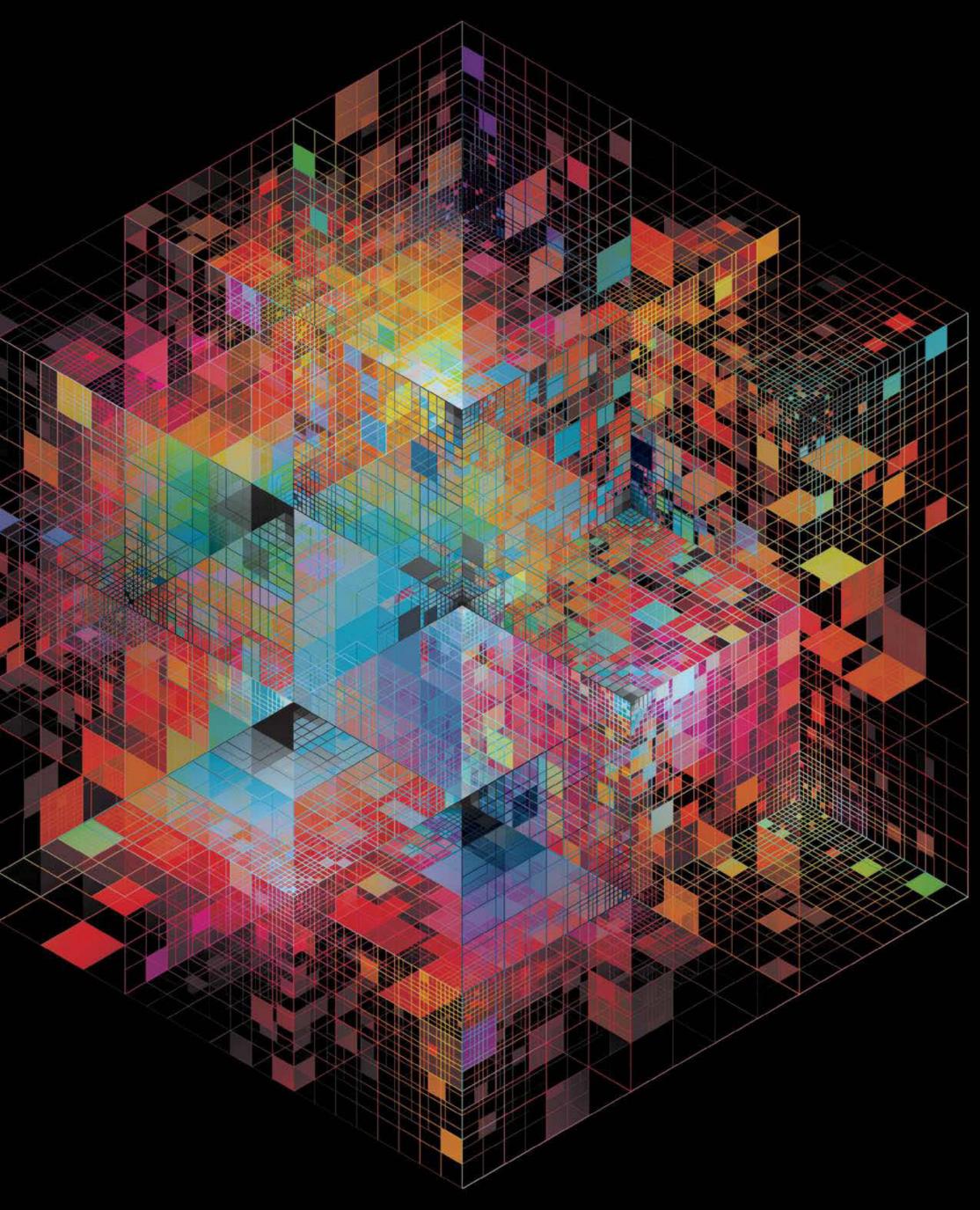
Better PEOPLE Analytics

Measure Who **THEY KNOW**,

Not Just Who THEY ARE.

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Illustrations by **ANDY GILMORE**





IDEA IN BRIEF

THE CHALLENGE

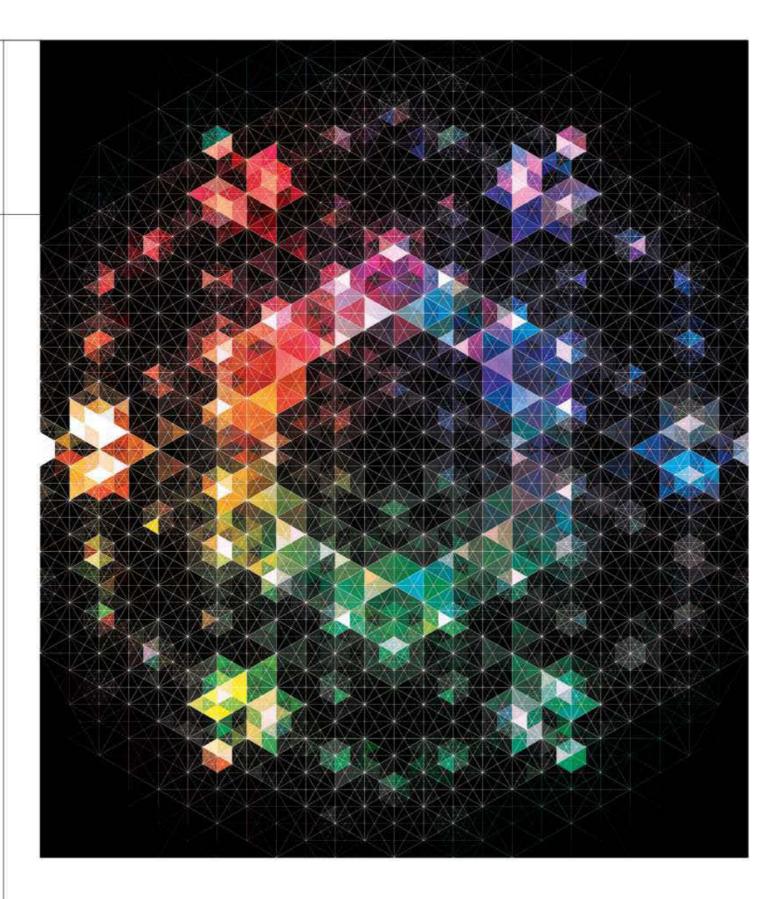
To bring the performance of people analytics up—and in line with the hype companies need to do more than analyze data on demographic attributes.

THE SOLUTION

Employ relational analytics, which examines data on how people interact, to find out who has good ideas, who is influential, what teams will get work done on time, and more.

THE RAW MATERIAL

Companies can mine their "digital exhaust"—data created by employees every day in their digital transactions, such as e-mails, chats, and file collaboration—for insights into their workforce.



"We have charts and graphs to back us up. So f *** off."

New hires in Google's people analytics department began receiving a laptop sticker with that slogan a few years ago, when the group probably felt it needed to defend its work. Back then people analytics using statistical insights from employee data to make talent management decisions—was still a provocative idea with plenty of skeptics Most people analytics teams rely on a narrow approach to data analysis.
They use data only about individual people, when data about the interplay *among* people is equally or more important.

who feared it might lead companies to reduce individuals to numbers. HR collected data on workers, but the notion that it could be actively mined to understand and manage them was novel—and suspect.

Today there's no need for stickers. More than 70% of companies now say they consider people analytics to be a high priority. The field even has celebrated case studies, like Google's Project Oxygen, which uncovered the practices of the tech giant's best managers and then used them in coaching sessions to improve the work of low performers. Other examples, such as Dell's experiments with increasing the success of its sales force, also point to the power of people analytics.

But hype, as it often does, has outpaced reality. The truth is, people analytics has made only modest progress over the past decade. A survey by Tata Consultancy Services found that just 5% of big-data investments go to HR, the group that typically manages people analytics. And a recent study by Deloitte showed that although people analytics has become mainstream, only 9% of companies believe they have a good understanding of which talent dimensions drive performance in their organizations.

What gives? If, as the sticker says, people analytics teams have charts and graphs to back them up, why haven't results followed? We believe it's because most rely on a narrow approach to data analysis: They use data only about individual people, when data about the interplay *among* people is equally or more important.

People's interactions are the focus of an emerging discipline we call *relational analytics*. By incorporating it into their people analytics strategies, companies can better identify employees who are capable of helping them achieve their goals, whether for increased innovation, influence, or efficiency. Firms will also gain insight into which key players they can't afford to lose and where silos exist in their organizations.

Fortunately, the raw material for relational analytics already exists in companies. It's the data created by e-mail exchanges, chats, and file transfers—the *digital exhaust* of a company. By mining it, firms can build good relational analytics models.

In this article we present a framework for understanding and applying relational analytics. And we have the charts and graphs to back us up.

Relational Analytics: A Deeper Definition

To date, people analytics has focused mostly on employee *attribute* data, of which there are two kinds:

• *Trait:* facts about individuals that don't change, such as ethnicity, gender, and work history.

• *State:* facts about individuals that do change, such as age, education level, company tenure, value of received bonuses, commute distance, and days absent.

The two types of data are often aggregated to identify group characteristics, such as ethnic makeup, gender diversity, and average compensation.

Attribute analytics is necessary but not sufficient. Aggregate attribute data may seem like relational data because it involves more than one person, but it's not. Relational data captures, for example, the communications between two people in different departments in a day. In short, relational analytics is the science of human social networks.

Decades of research convincingly show that the relationships employees have with one another—together with their individual attributes—can explain their workplace performance. The key is finding "structural signatures": patterns in the data that correlate to some form of good (or bad) performance. Just as neurologists can identify structural signatures in the brain's networks that predict bipolar disorder and schizophrenia, and chemists can look at the structural signatures of a liquid and predict its kinetic fragility, organizational leaders can look at structural signatures in their companies' social networks and predict how, say, creative or effective individual employees, teams, or the organization as a whole will be.

The Six Signatures of Relational Analytics

Drawing from our own research and our consulting work with companies, as well as from a large body of other scholars' research, we have identified six structural signatures that should form the bedrock of any relational analytics strategy.

Let's look at each one in turn.



Ideation

MOST COMPANIES TRY to identify people who are good at ideation by examining attributes like educational background, experience, personality, and native intelligence. Those things are important, but they don't help us see people's access to information from others or the diversity of their sources of information—both of which are arguably even more important. Good idea generators often synthesize information from one team with information from another to develop a new product concept. Or they use a solution created in one division to solve a problem in another. In other words, they occupy a brokerage position in networks.

The sociologist Ronald Burt has developed a measure that indicates whether someone is in a brokerage position. Known as *constraint*, it captures how limited a person is when gathering unique information. Study after study, across populations as diverse as bankers, lawyers, analysts,



Purple shows **low constraint:** He communicates with people in several other networks besides his own, which makes him more likely to get novel information that will lead to good ideas. Orange, who communicates only with people within his network, is less likely to generate ideas, even though he may be creative.

engineers, and software developers, has shown that employees with low constraint—who aren't bound by a small, tight network of people—are more likely to generate ideas that management views as novel and useful.

In one study, Burt followed the senior leaders at a large U.S. electronics company as they applied relational analytics to determine which of 600-plus supply chain managers were most likely to develop ideas that improved efficiency. They used a survey to solicit such ideas from the managers and at the same time gather information on their networks. Senior executives then scored each of the submitted ideas for their novelty and potential value.

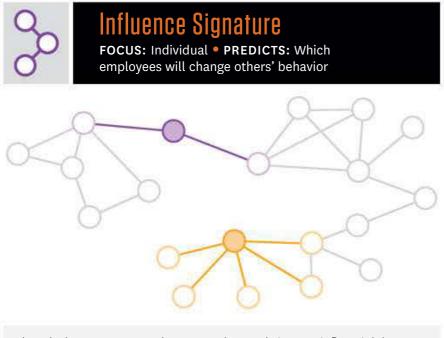
The only attribute that remotely predicted whether an individual would generate a valuable idea was seniority at the company, and its correlation wasn't strong. Using the ideation signature—low constraint—was far more powerful: Supply chain managers who exhibited it in their networks were significantly more likely to generate good ideas than managers with high constraint.

A study Paul did at a large software development company bolsters this finding. The company's R&D department was a "caveman world." Though it employed more than 100 engineers, on average each one talked to only five other people. And those five people typically talked only to one another. Their contact with other "caves" was limited.

Such high-constraint networks are quite common in organizations, especially those that do specialized work. But that doesn't mean low-constraint individuals aren't hiding in plain sight. At the software company, relational analytics was able to pinpoint a few engineers who did span multiple networks. Management then generated a plan for encouraging them to do what they were naturally inclined to, and soon saw a significant increase in both the quantity—and quality—of ideas they proposed for product improvements.

Influence

DEVELOPING A GOOD IDEA is no guarantee that people will use it. Similarly, just because an executive issues a decree for change, that doesn't mean employees will carry it out. Getting ideas implemented requires influence. Influence doesn't work the way we might assume. Research shows that
employees are not most influenced by the company's senior leadership.
Rather, it's people in less formal roles who sway them the most.



Though she connects to only two people, purple is more influential than orange, because purple's connections are better connected. Purple shows **higher aggregate prominence.** Orange may spread ideas faster, but purple can spread ideas further because her connections are more influential.

But influence doesn't work the way we might assume. Research shows that employees are not most influenced, positively or negatively, by the company's senior leadership. Rather, it's people in less formal roles who sway them the most.

If that's the case, executives should just identify the popular employees and have them persuade their coworkers to get on board with new initiatives, right? Wrong.

A large medical device manufacturer that Paul worked with tried that approach when it was launching new compliance policies. Hoping to spread positive perceptions about them, the change management team shared the policies' virtues with the workers who had been rated influential by the highest number of colleagues. But six months later employees still weren't following the new procedures.

Why? A counterintuitive insight from relational analytics offers the explanation: Employees cited as influential by a large number of colleagues aren't always the most influential people. Rather, the greatest influencers are people who have strong connections to others, even if only to a few people. Moreover, their strong connections in turn have strong connections of their own with other people. This means influencers' ideas can spread further. The structural signature of influence is called *aggregate prominence,* and it's computed by measuring how well a person's connections are connected, and how well the connections' connections are connected. (A similar logic is used by search engines to rank-order search results.)

In each of nine divisions at the medical device manufacturer, relational analytics identified the five individuals who had the highest aggregate prominence scores. The company asked for their thoughts on the new policies. About three-quarters viewed them favorably. The firm provided facts that would allay fears of the change to them as well as to the influencers who didn't like the policies—and then waited for the results.

Six months later more than 75% of the employees in those nine divisions had adopted the new compliance policies. In contrast, only 15% of employees had adopted them in the remaining seven affected divisions, where relational analytics had not been applied.

Efficiency

STAFFING A TEAM that will get work done efficiently seems as if it should be simple. Just tap the people who have the best relevant skills.

Attribute analytics can help identify skilled people, but it won't ensure that the work gets done on time. For that, you need relational analytics measuring team chemistry and the ability to draw on outside information and expertise.

Consider the findings of a study by Ray Reagans, Ezra Zuckerman, and Bill McEvily, which analyzed more than 1,500 project teams at a major U.S. contract R&D firm. Hypothesizing that the ability to access a wide range of information, perspectives, and resources would improve team performance, the researchers compared the effect of demographic diversity on teams' results with the effect of team members' social networks. One issue was that diversity at the firm had only two real variables, tenure and function. (The other variables—race, gender, and education—were consolidated within functions.) Nevertheless, the results showed that diversity in those two areas had little impact on performance. If 30% of project teams at the firm had internal density and external range
just one standard deviation above the mean, it would save more than
2,200 labor hours in 17 days.



The purple team members are deeply connected with one another—showing high internal density. This indicates that they work well together. And because members' external connections don't overlap, the team has high external range, which gives it greater access to helpful outside resources.

Turning to the relational data, though, offered better insight. The researchers found that two social variables were associated with higher performance. The first was *internal density*, the amount of interaction and interconnectedness among team members. High internal density is critical for building trust, taking risks, and reaching agreement on important issues. The second was the *external range* of team members' contacts. On a team that has high external range, each member can reach outside the team to experts who are distinct from the contacts of other members. That makes the team better able to source vital information and secure resources it needs to meet deadlines. The structural signature for efficient teams is therefore high internal density plus high external range.

At the R&D firm the teams that had this signature completed projects much faster than teams that did not. The researchers estimated that if 30% of project teams at the firm had internal density and external range just one standard deviation above the mean, it would save more than 2,200 labor hours in 17 days—the equivalent of completing nearly 200 additional projects.

Innovation

TEAMS WITH THE efficiency signature would most likely fail as innovation units, which benefit from some disagreement and strife.

What else makes for a successful team of innovators? You might think that putting your highest-performing employees together would produce the best results, but research suggests that it might have negative effects on performance. And while the conventional wisdom is that teams are more creative when they comprise members with different points of view, research also indicates that demographic diversity is not a good predictor of team innovation success. In our experience, even staffing an innovation team with ideators often produces no better than average performance.

But if you turn to relational analytics, you can use the same variables you use for team efficiency—internal density and external range—to create promising innovation teams. The formula is a bit different, though: The innovation signature is high external range and low internal density.



Purple team members aren't deeply interconnected; their team has **low internal density.** This suggests they'll have different perspectives and moreproductive debates. The members also have **high external range**, or wide, diverse connections, which will help them gain buy-in for their innovations.



That is, you still want team members with wide, nonoverlapping social networks (influential ones, if possible) to source diverse ideas and information. But you do not want a tight-knit team.

Why? Greater interaction within a team results in similar ways of thinking and less discord. That's good for efficiency but not for innovation. The most innovative teams have disagreements and discussion—sometimes even conflict that generate the creative friction necessary to produce breakthroughs.

The high external range is needed not just to bring in ideas but also to garner support and buy-in. Innovation teams have to finance, build, and sell their ideas, so well-connected external contacts who become the teams' champions can have a big impact on their success.

For several years, Paul worked with a large U.S.-based automobile company that was trying to improve its product-development process. Each of its global productdevelopment centers had a team of subject-matter experts focused on that challenge. The program leader noted, "We are very careful about who we select. We get the people with the right functional backgrounds, who have consistently done innovative work, and we make sure there is a mix of them from different backgrounds and that they are different ages." In other words, the centers used attribute analytics to form teams.

Managers at a new India center couldn't build a demographically diverse team, however: All the center's engineers were roughly the same age, had similar backgrounds, and were about the same rank. So the manager instead chose engineers who had worked on projects with different offices and worked in different areas of the center—creating a team that naturally had a higher external range.

It so happened that such a team showed lower internal density as well. Its members felt free to debate, and they ran tests to resolve differences of opinion. Once they found a new procedure, they went back to their external connections, using them as influencers who could persuade others to validate their work.

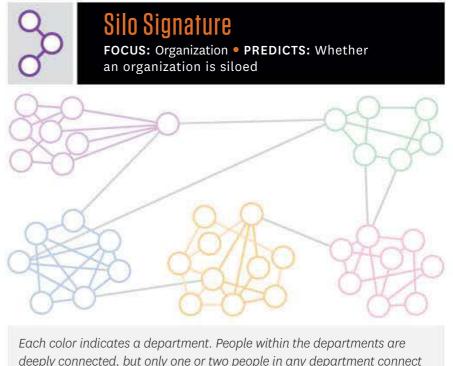
After three years the India center's team was producing more process innovations than any of the other teams. After five years it had generated almost twice as many as all the other teams combined. In response, the company began supplementing its attribute analytics with relational analytics to reconfigure the innovation teams at its other locations.

Silos

EVERYONE HATES SILOS, but they're natural and unavoidable. As organizations develop deep areas of expertise, almost inevitably functions, departments, and divisions become less and less able to work together. They don't speak the same technical language or have the same goals.

We assess the degree to which an organization is siloed by measuring its *modularity*. Most simply, modularity is the ratio of communication within a group to communication outside the group. When the ratio of internal to external communication is greater than 5:1, the group is detrimentally siloed.

One of the most strikingly siloed organizations we've encountered was a small not-for-profit consumer advocacy



Each color indicates a department. People within the departments are deeply connected, but only one or two people in any department connect with people in other departments. The groups' **modularity**—the ratio of internal to external communication—is high.



group, which wanted to understand why traffic on its website had declined. The 60 employees at its Chicago office were divided among four departments: business development, operations, marketing and PR, and finance. Typical of silos, each department had different ideas about what was going on.

Analysis showed that all four departments exceeded the 5:1 ratio of internal to external contacts. The most extreme case was operations, with a ratio of 13:1. Of course, operations was the department with its finger most squarely on the pulse of consumers who visited the site. It sat on a trove of data about when and why people came to the site to complain about or praise companies.

Other departments didn't even know that operations collected that data. And operations didn't know that other departments might find it useful.

To fix the problem, the organization asked specific employees in each department to become liaisons. They instituted a weekly meeting at which managers from all departments got together to talk about their work. Each meeting was themed, so lower-level employees whose work related to the theme also were brought into the discussions.

In short, the not-for-profit engineered higher external range into its staff. As a result, operations learned that marketing and PR could make hay out of findings that linked a growing volume of complaints in a specific industry to certain weather patterns and seasons. Because operations employees learned that such insights would be useful, they began to analyze their data in new ways.

Vulnerability

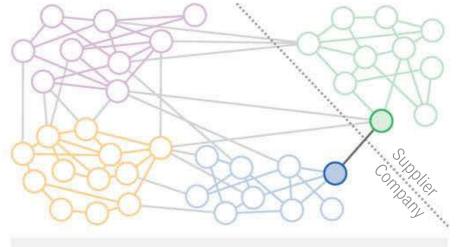
ALTHOUGH HAVING PEOPLE who can help move information and insights from one part of the organization to another is healthy, an overreliance on those individuals can make a company vulnerable.

Take the case of an employee we'll call Arvind, who was a manager in the packaging division at one of the world's top consumer goods companies. He was a connector who bridged several divisions. He talked regularly with counterparts and suppliers across the world. But on the organizational chart, Arvind was nobody special: just a midlevel manager who was good at his job. Companies are at risk of losing employees like Arvind because no obvious attribute signals their importance, so firms don't know what they've got until it's gone.

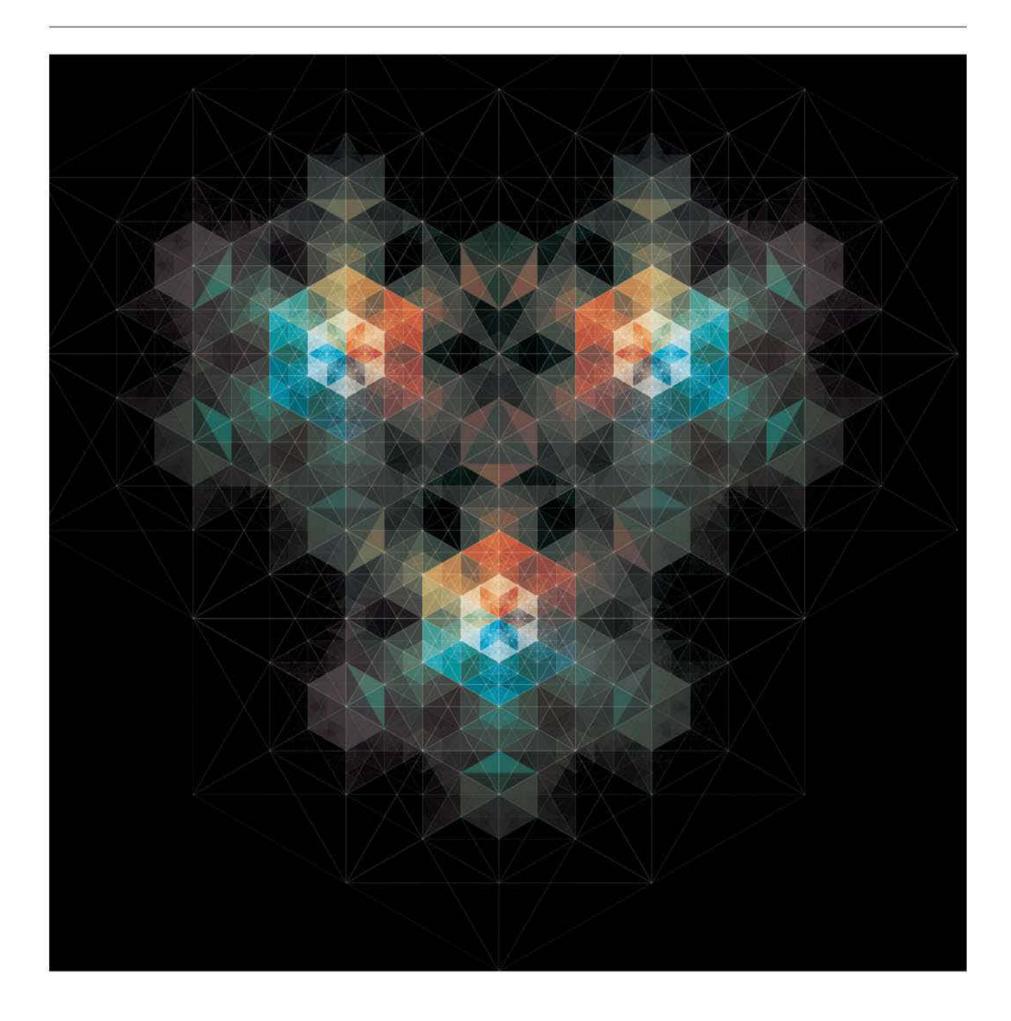
Without Arvind, the packaging division would lack *robustness*. Networks are robust when connections can be maintained if you remove nodes—employees—from it. In this case, if Arvind left the company, some departments would lose all connection with other departments and with suppliers.

It wasn't that Arvind was irreplaceable. He just wasn't *backed up*. The company didn't realize that no other nodes were making the necessary network connections he provided. That made it vulnerable: If Arvind was out sick or on vacation, work slowed. If Arvind decided that he didn't like one of the suppliers and stopped interacting with it, work slowed. And if Arvind had too much on his plate and couldn't keep up with his many connections, work also slowed.





Green is a critical external supplier to company departments blue, purple, and orange. Six people at the company have relationships with green, but 30 people rely on those relationships—which puts the company at risk. If blue's one connection to green leaves, for example, the department will be cut off from the supplier. While his title may not reflect his importance, that employee is vital to information flow. It wasn't that Arvind was irreplaceable. He just wasn't backed up. The
company didn't realize that no one else was making the network connections he provided. If Arvind was out sick or on vacation, work slowed.



WHAT ABOUT EMPLOYEE PRIVACY?

RELATIONAL ANALYTICS changes the equation when it comes to the privacy of employee data. When employees actively provide information about themselves in hiring forms, surveys, and the like, they know their company has and can use it. But they may not even realize that the passive collection of relational data—such as whom they chat with on Slack or when they were copied on e-mail is happening or that such information is being analyzed.

Job one for companies is to be transparent. If they're going to amass digital exhaust, they should ask employees to sign an agreement indicating they understand that their patterns of interaction on companyowned tools will be tracked for the purposes of analyzing the organization's social networks. Full disclosure with employee consent is the only option.

We've found some additional moves leaders can make to get ahead of privacy concerns:

First, give employees whatever relational data you collect about them. We recommend providing it at least annually. The data can include a map of the employee's own network and benchmarks. For example, a report could provide an employee with her constraint score (which shows how inbred someone's social network is) and the average constraint score of employees in her department. That score could then be at the center of a mentoring discussion.

Second, be clear about the depth of relational analytics

you intend to invest in. The level that is most basic—and the least prone to privacy concerns—is generic pattern analysis. The analysis might show, for example, that marketing is a silo but not identify specific individuals that contribute to that silo. Or the analysis could show that a certain percentage of teams have the signature for innovation but not identify which teams.

The second level identifies which specific employees in a company have certain kinds of networks. Scores may provide evidence-based predictions about employee behavior such as who is likely to be an influencer or whose departure would make an organization vulnerable. Although this level of analysis provides more value to the company, it singles particular employees out.

The highest level pairs relational analytics with machine learning. In this scenario, companies collect data about whom employees interact with and about the topics they discuss. Firms examine the content of e-mails and posts on social-networking sites to identify who has expertise in what domains. This information provides the most specific guidance for leadersfor example, about who is likely to develop good ideas in certain areas. This most advanced level obviously also comes with the most privacy concerns, and senior leadership must develop deeply considered strategies to deal with them.

On the day Noshir came to show the company this vulnerability in the packaging division, he entered a boardroom filled with cakes and sweets. A senior executive happily told him that the firm was throwing a party for Arvind. He was retiring. Noshir's jaw dropped. The party went on, but after learning how important Arvind was, the company worked out a deal to retain him for several more years and, in the meantime, used relational analytics to do some succession planning so that multiple people could take on his role.

Capture Your Company's Digital Exhaust

Once you understand the six structural signatures that form the basis of relational analytics, it's relatively easy to act on the insights they provide. Often, the fixes they suggest aren't complex: Set up cross-functional meetings, enable influential people, retain your Arvinds.

Why, then, don't most companies use relational analytics for performance management? There are two reasons. The first is that many network analyses companies do are little more than pretty pictures of nodes and edges. They don't identify the patterns that predict performance.

The second reason is that most organizations don't have information systems in place to capture relational data. But all companies do have a crucial hidden resource: their digital exhaust—the logs, e-trails, and contents of everyday digital activity. Every time employees send one another e-mails in Outlook, message one another on Slack, like posts on Facebook's Workplace, form teams in Microsoft Teams, or assign people to project milestones in Trello, the platforms record the interactions. This information can be used to construct views of employee, team, and organizational networks in which you can pick out the structural signatures we've discussed.

For several years we've been developing a dashboard that captures digital exhaust in real time from these various platforms and uses relational analytics to help managers find the right employees for tasks, staff teams for efficiency and innovation, and identify areas in the organization that are siloed and vulnerable to turnover. Here are some of the things we've learned in the process:

Passive collection is easier on employees. To gather relational data, companies typically survey employees about



whom they interact with. Surveys take time, however, and the answers can vary in accuracy (some employees are just guessing). Also, to be truly useful, relational data must come from everyone at the company, not just a few people. As an executive at a large financial services company told us, "If I gave each of my 15,000 employees a survey that takes half an hour to do, we've just lost a million dollars in productivity. And what if their relationships change in a month? Will we have to do it again at a cost of an additional \$1 million in people hours?"

Company-collected relational data, however, creates new challenges. Although most employment contracts give firms the right to record and monitor activities conducted on company systems, some employees feel that the passive collection of relational data is an invasion of privacy. This is not a trivial concern. Companies need clear HR policies about the gathering and analysis of digital exhaust that help employees understand and feel comfortable with it. (See the sidebar "What About Employee Privacy?")

Behavioral data is a better reflection of reality. As we've noted, digital exhaust is less biased than data collected through surveys. For instance, in surveys people may list connections they think they're supposed to interact with, rather than those they actually do interact with. And because every employee will be on at least several communication platforms, companies can map networks representing the entire workforce, which makes the analysis more accurate.

Also, not all behaviors are equal. Liking someone's post is different from working on a team with someone for two years. Copying someone on an e-mail does not indicate a strong relationship. How all those individual behaviors are weighted and combined matters. This is where machine-learning algorithms and simulation models are helpful. With a little technical know-how (and with an understanding of which structural signatures predict what performance outcomes), setting up those systems is not hard to do.

Constant updating is required. Relationships are dynamic. People and projects come and go. To be useful, relational data must be timely. Using digital exhaust in a relational analytics model addresses that need.

Additionally, collecting relational data over time gives analysts more choices about what to examine. For example, if an employee was out on maternity leave for several months, an analyst can exclude that time period from the data or decide to aggregate a larger swath of data. If a company was acquired in a particular year, an analyst can compare relational data from before and after the deal to chart how the company's vulnerabilities may have changed.

Analyses need to be close to decision makers. Most companies rely on data scientists to cull insights related to talent and performance management. That often creates a bottleneck, because there aren't enough data scientists to address all management queries in a timely manner. Plus, data scientists don't know the employees they are running analyses on, so they cannot put results into context.

Dashboards are key. A system that identifies structural signatures and highlights them visually moves analytic insights closer to the managers who need them. As one executive at a semiconductor chip firm told us, "I want my managers to have the data to make good decisions about how to use their employees. And I want them to be able to do it when those decision points happen, not later."

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B Matthew Dixon Chief product and research officer, Tethr

Reinventing Customer Service

How T-Mobile achieved record levels of quality and productivity

> ABOUT THE ART: The images in this article were taken by Lee Friedlander. They were shot in and around Boston, Massachusetts, in 1985–1986 and Omaha, Nebraska, in 1995. © Lee Friedlander, courtesy of Fraenkel Gallery, San Francisco





Turnover rates for customer service workers are among the
highest in the business world—27% annually, on average.

VISIT ANY BIG company, and few departments will be as instantly recognizable as customer service. The call center usually resembles a factory floor, with row after row of reps, headsets on, sticking to the script and rushing from call to call as they try to minimize "handle time." Supervisors walk the floor to deal with escalated calls and, every now and then, take individual reps to a back room to review their performance. While some organizations have invested in improving reps' lot, change has been slow to arrive in the practice of customer service. It's no wonder that turnover rates for customer service workers are among the highest in the business world—27% annually, on average, according to Mercer. The reasons departing employees cite most often include a lack of challenging work, inadequate recognition, limited career paths, and too little flexibility. For customers, the experience is hardly better. They are forced to navigate computerized call trees and, should they get a live person, they're often treated robotically and handed from one agent or department to another if their issue is outside a rep's narrow repertoire.

But walk into a T-Mobile contact center. The service department looks more like the sort of knowledge-work environment you'd expect to see in other parts of the company. Reps sit together in shared spaces called pods, collaborate openly, and are trained and encouraged to solve customer issues as they see fit. Most remarkably, these teams manage a specific pool of customer accounts, just as a small business would. Unshackled from legacy metrics like handle time, they instead think about the best way to solve each caller's problem and, ultimately, how best to improve customer retention, share of wallet, and loyalty. Customers know how to reach their dedicated teams, and they never have to go through a call tree. Once connected, they find reps who actually know them and can reliably help. The T-Mobile model is paying huge dividends for the company: In the three years since launch, T-Mobile's overall cost to serve is down 13%, its Net Promoter Score (a measure of customer loyalty) is up by more than half, and its customer churn rate has dipped to an all-time low. Employees are happier too; attrition and absenteeism have plummeted.

The Change Imperative

Over the past decade, T-Mobile's leadership team recognized that although the company's investments in self-service had paid off well, they'd also created a challenge. The basic transactional calls that once dominated call queues— balance inquiries, address changes, new-service activation, and the like—had all but disappeared as customers turned to self-service options for addressing those matters. Now the queue was dominated by the complex and varied issues that customers couldn't solve on their own—a shift that started to put real stress on the company's reps. In response, the leadership team went to the drawing board and, in 2015, set to work reinventing the service organization from the ground up.

The effort was led by Callie Field, the executive vice president of customer care. She and her colleagues wanted to improve reps' ability to handle thorny problems and, in the process, further differentiate the company in a crowded marketplace. Field, who started at T-Mobile in 2004 as a mallkiosk sales rep and rapidly rose through the ranks, faced an enormously challenging task. "But," she explains, "my team and I had a good sense—just from our own experience as customers and employees—of the kind of service that makes you feel good about a company. We knew we had to create that. And we focused on identifying and eliminating the things that drive customers crazy. In the end, we had a simple goal:

IDEA IN BRIEF

THE PROBLEM

In most big companies, customer service feels like a factory floor, with rows of reps all working in isolation and racing to minimize call handle time. Customer satisfaction is low, and employee turnover is high.

THE SOLUTION

T-Mobile redesigned its call centers by grouping reps into colocated teams, each responsible for customers in a specific region. Reps are encouraged to collaborate and innovate, with the goal of solving customers' problems.

THE PAYOFF

In the three years since launch, T-Mobile's cost to serve and its customer churn rate have dropped to all-time lows. Employees are happier too: Attrition and absenteeism have plummeted.





customer happiness. We figured happy customers would stay longer, spend more with us, and recommend us to others."

As Field's team devised the new model, members identified four questions to ask in assessing the transformation over time: (1) Are our customers happier? (2) Are they staying with us longer? (3) Are we deepening our relationship with them? (4) Are we making their service experience low-effort? Because the model's success hinged on T-Mobile's ability to engage and mobilize its frontline employees, the same questions would be used to gauge their experience.

Given its goals, Field's team reasoned that a version of the account management model common in B2B settings—in which a dedicated sales and service team manages a pool of customers—could work well in B2C customer service. The question was how to implement such a model at scale across thousands of reps at dozens of locations serving 40 million customers around the clock. At the time, it appeared that such a system had been deployed only in B2B settings where call volumes are low and issues are resolved in hours or days. It had rarely, if ever, been attempted in a high-volume B2C support center like T-Mobile's, which handles millions of calls each month and works to resolve issues in minutes or even seconds.

To tackle this, T-Mobile devised the Team of Experts model, or TEX. This involves cross-functional groups of 47 people who serve a named set of customer accounts in a specific market. The team members are colocated, but they may be hundreds of miles away from their clients. For instance, a team in Chattanooga is responsible for 120,000 customers in Detroit, and a team in Charleston serves a similar number of customers in Philadelphia.

In addition to the reps themselves, each team has a leader, four dedicated coaches, eight technology specialists who can handle more-complex hardware and software issues, a customer resolution expert (who spots trends and helps develop solutions to persistent issues), and a resource manager responsible for workforce scheduling and management. (See the exhibit "A Team of Experts.")

If call volume is unusually heavy, if a team is shorthanded, or if T-Mobile's centers are closed, backup comes from dedicated outsourced teams that likewise follow the TEX model (or are in the process of adopting it; T-Mobile expects full adoption by early 2019). All teams operate during business hours aligned to the time zones of the communities they support, and customers can reach an account rep directly through a variety of channels—T-Mobile's messaging app, the customer portal on T-Mobile's website, and the phone. And although customers may not connect with the same rep each time, they will always be served by someone from their dedicated team.

That person, moreover, will almost assuredly solve the problem. Each rep is a generalist who can handle everything from billing, sales, and line activation to standard technicalsupport inquiries. Transfers are rare; the only time a rep will hand off a customer is when an outside vendor needs to address a product issue or, on occasion, when an unusually complex problem requires the help of the team's tech specialists. Even then, the rep will stay on the call to learn how to resolve similar matters in the future.

To ensure that all team members work well together, T-Mobile built collaboration into the model. Teams hold stand-up meetings three times a week to share best practices, lessons learned, and ideas for handling recurring customer concerns. Members also collaborate in real time using an instant-messaging platform. This allows them to alert colleagues to emerging issues in the communities they serve (for instance, weather events and service outages) and to solicit advice during the course of a customer conversation. To encourage these exchanges, the pods include a central table and whiteboard for huddles and coaching sessions.

Teamwork and Creative Solutions

To encourage collaboration and innovation, the TEX model uses a balanced scorecard that weights both individual and team performance. (See the exhibit "Rewarding Team Performance.") This is a dramatic departure from typical schemes for evaluating customer service agents, which measure only individual performance, encouraging reps to hoard knowledge and look out for themselves. With the emphasis on team effectiveness, tenured reps have more incentive to share their best practices. As one of T-Mobile's senior account experts explains, "In the old model, it was sink or swim on your own. Now we all spend time helping the less-tenured team members and the new folks coming out of training, to make sure they're successful. At the end of the day, we succeed or fail as a team."

TEX teams are expected to manage their own profit and loss statements. Field says, "Our team leads used to look at

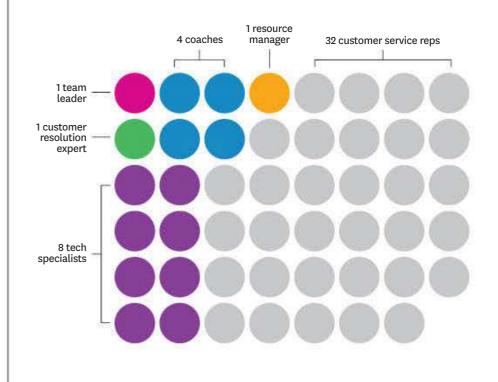
things like handle time and schedule adherence. Now they look at their P&L—are they keeping and growing customer business? Are they reducing calls per account and cost to serve? They're like mini-CEOs running their own businesses." Team leaders now engage in quarterly business reviews with senior managers, much as a business unit general manager reviews financial and operating performance with the CEO. As a result, coaching conversations with reps often focus on the business impact of individual decisions and how a decision for a given customer will affect that customer's loyalty and the team's financial performance. Such coaching enhances reps' skill sets; one team leader said, "I have no doubt that any of my team members could leave tomorrow and open their own business—and be really successful at it."

With group performance top of mind, account teams are encouraged to come up with innovative solutions to persistent service issues. A team serving Salt Lake City, for instance, noticed unusually high churn among younger customers. A deeper dive into the data revealed that a primary cause was the defection of young Mormons about to head out on their twoyear missions, during which time they are prohibited from having a phone. The team determined that although phones are not allowed, missionaries can have tablets. So when customers called to deactivate, reps offered them a tablet for the duration of their mission—a solution that helped the customers retain their phone numbers and accounts for their return. This clever solution generated one of the highest improvements in profitability for that particular customer base—and had a meaningful impact on team members' bonuses.

Similarly, when the company rolled out its T-Mobile ONE Military plan, which provides members of the armed forces with a 50% discount on family lines, TEX members serving communities with heavy military populations thought proactively about managing the effects of the discounted plan on their business objectives. The question was how to balance the obvious customer savings benefit with the potential revenue loss impacting their business goals. The solution: helping customers understand that the savings could be put toward an additional phone line that would keep family members connected. One team migrated 30% of its military customers to the new plan and increased average new-line sales from four per rep per hour to seven—while simultaneously increasing the Net Promoter Score among those customers by five points.

A Team of Experts

T-Mobile's cross-functional customer-service TEX teams each serve a specific pool of customers in a given market and operate like a small business, with members collaborating to improve financial and operating performance.



Rewarding Team Performance

Traditional customer-service performance-management schemes measure only individual performance. To encourage teamwork and innovation, compensation for TEX team members is variably weighted according to both individual and team performance.

	TEAM PERFORMANCE	INDIVIDUAL PERFORMANCE		
Customer service rep	50%	50%		
Senior customer service rep	60%	40%		
Coach	70%	30%		
Team leader	100%	0%		

Satisfied Customers, Happier Staff

In the three years since T-Mobile introduced its customer service teams, performance has improved on a host of measures.

71% decrease in transferred customer calls (from 14% to 4%) 31%

reduction in calls escalated to supervisors (from 2.9% to 2.0%) 25⁷⁰ drop in postpaid customer churn (from 1.27% to 0.95%) 56% increase in Net Promoter Score (from 43% to 67%) 48% decrease in annual rep attrition (from 42% to 22%)

Making It Local

No matter how far TEX teams are from the communities they support, members are intimately familiar with the places their customers live. Teams decorate their workspaces to reflect the markets they serve. The Chattanooga-based team serving Detroit, for example, has decked out its work area with "Motor City" signage and memorabilia. And the Salem, Oregon, pod that serves San Francisco built a Golden Gate Bridge out of Legos. Says a senior rep in Idaho whose team serves San Diego, "We're constantly talking about what's happening there. I've never been to San Diego, but I know what's going on in the local news, where the best place is for fish tacos, and what the surf report looks like for the next few days."

This local connection helps the TEX team members manage community-level situations. For instance, the San Diego team was recently deluged with calls about a widespread outage caused by a local brush fire. "In the old world," one rep said, "I wouldn't have had any idea that this was happening—or that it was happening to more than one customer—so I'd have said, 'I'm really sorry about the inconvenience. Let me submit a ticket to engineering.'" But the new model enabled the rep to deliver a tailored response: "Yes, we're aware that a brush fire outside the city is affecting your service, and we're working on the issue. I've been in touch with the engineers on the ground, and they're working to restore service as we speak. They're telling me it should be up and running within 24 hours."

One leader on a team serving Seattle customers said that local knowledge and connections have enabled his group to deliver the kind of service you'd expect from a mom-and-pop store. "If a customer orders a new device and wants to pick it up in the store, we need to make that as easy as possible. Because I know all the store managers in my area, I can call the local manager and ask that he have the phone ready to go. It makes a big impression when the store manager meets a customer as she walks in and says, 'Hey there—Nick from your Team of Experts called me to say you were coming by. Here's your new phone; you're all set.'"

The Payoff

The new model's business results speak for themselves. In the first quarter of 2018, the company recorded the lowest cost to serve in its history (a 13% decline since 2016). Liberated from legacy metrics like handle time, reps now take a little longer on each call to make sure they've not only solved the customer's immediate issue but also anticipated and addressed in advance issues the customer might call back about. The result: a 21% reduction in calls per account, which more than offsets the longer length of calls.

And because customers are now receiving better service, reps no longer have to issue credits for previous missteps. Such "apology credits" are down 37% across the board. The results are also seen in record levels of customer retention (an all-time low in customer churn in Q1 2018) and increased customer loyalty (see the exhibit "Satisfied Customers, Happier Staff"). Reflecting customers' satisfaction, T-Mobile has been ranked the number one wireless company for customer service by Nielsen for the past 24 months and has received twice in a row—the highest score ever awarded by JD Power in its rankings of wireless-provider customer-service quality.

The company has also seen positive effects among employees, including record highs in rep engagement and record lows in turnover (from 42% annually before the rollout to 22% today). Absenteeism—typically a trouble spot for most contact centers—has plummeted too: Because TEX



teams can manage their own schedules and tailor shifts to members' needs, absenteeism has dropped 24%. The four outsourcing partners who have adopted the TEX model have seen an even steeper decline in turnover: Historical frontline turnover levels in partners' call centers had been more than 100% annually; today, average turnover is at 14%—*below* that of T-Mobile's in-house customer-care centers.

Getting Started

T-Mobile executed this transformation with its existing talent—there was no wholesale revamping of the hiring profile and no mass exodus of frontline staffers who couldn't cut it. Instead, the company found that most reps were up to the task and wanted to do well. What they needed was freedom from the old model that had been holding them back, coupled with the training to succeed in the new world. As Field sees it, "If all you ask people to do is bring down their handle time, they can do that. But if you empower them to do more—to think like a small-business owner who is focused on the customer's happiness and the strategic management of their P&L—they can do that too. And they'll do it really well if you give them the tools and get out of their way."

That said, a wholesale transformation from factory floor to knowledge-work environment hasn't been without challenges. One lesson T-Mobile learned early on is that colocation is essential. Field explains, "We originally thought we could pull this off by setting up virtual teams and leveraging collaboration tools, but it turned out to be easier said than done. We didn't get the level of collaboration we needed, and the teams failed to gel when they were spread all over the country. So we decided that the teams needed to sit together, which meant investing in a new physical layout for our contact centers."

Although the cost of redesigning the contact center floor wasn't extraordinary ("We knocked down some cube walls," Field said, "and bought everybody better headsets so they could roam"), the company's investment in talent was significant. In addition to modestly increasing pay for reps in recognition of their expanded responsibilities, T-Mobile doubled down on training to help reps transition from a narrow focus on specialized lines of business—such as billing, collections, and tech support—into generalist roles. For new hires, the cost of more training (10 weeks instead of eight) was offset by reductions in ramp-up time. The company also gave managers more time to deliver coaching, which meant increasing the ratio of managers to reps. In the first year of the new model, T-Mobile promoted more than 2,100 employees to management positions, providing commensurate raises and management training. Although those investments were expensive, Field notes that the resulting reductions in cost to serve and the improvements in customer retention and wallet share have delivered an ROI that far surpassed original projections.

However, while most reps embraced the training and gamely transitioned to the team-based model, not all did. As the incentive structure shifted from emphasizing individual performance to rewarding team performance, some reps who had shined as individual workers ended up being frustrated when their rankings dipped as a result of softer team performance. Some balked at the perceived unfairness of the new system, and a few left.

A final word of caution from T-Mobile's leaders: Before heading down this path, companies should consider their cultural readiness. One team leader explains, "We never believed in scripting our people and were always very focused on hiring people who really wanted to deliver great service. So we had the basics, from a cultural and talent standpoint, already in place. That's probably not the case for many other companies." Even for T-Mobile, the leader acknowledged, it took some time for reps to feel comfortable with the level of ownership they were offered: "In the beginning, we told them to make decisions on their own and do what they felt made sense for the customer, but we still had a lot of folks who would put the customer on hold and ask their supervisor for permission anyway."

The Bigger Story

T-Mobile has established itself as the "Un-carrier"—a company not afraid to challenge standard industry practices that it sees as flawed and unfair to customers. It was the first to stop locking customers into two-year service contracts and the first to stop charging usurious fees for exceeding data limits. As CEO John Legere said in testimony before Congress in June 2018, "We set out to fix a stupid, broken, arrogant industry." The TEX model of customer care is in keeping with that mission.

New Service Technologies Cut Both Ways



WHILE SOME organizations are leveraging new technologies such as artificial intelligence (AI) to bring greater analytic power and predictability to service interactions, others are using them to reinforce legacy operating models, potentially discouraging innovation.

One large insurer is using AI to provide reps with real-time sentiment analysis—a coffee cup appears on the rep's screen if she needs to pick up the energy when handling a call, and a scowling face tells her that the customer is getting agitated and she must act fast to turn the conversation around. Another company, in the telecommunications industry, deploys AI to remind reps to use companyapproved greetings, thank customers for their loyalty, and pitch special upsell and cross-sell offers.

But some companies see such monitoring and control as a modern twist on an outdated management philosophy. This view is well-supported by research. CEB (now part of Gartner) found that the single biggest driver of frontline service rep performance more than IQ or emotional intelligence—is something called control quotient. That's shorthand for reps feeling empowered to use their own judgment to engage customers and resolve issues. (See The Effortless Experience: Conquering the New Battleground for Customer Loyalty, by Matthew Dixon, Nick Toman, and Rick DeLisi.)

Unfortunately, the research also shows that a high percentage of customer service organizations actively discourage reps from exercising their judgment. When managers tell reps to "stick to the script," audit their performance using rigid qualityassurance checklists, and implement screen alerts telling them what to say and do, it squelches any impulse to use judgment.

Transformative companies are investing time and resources in technologies that enable a knowledgework environment for service reps instead of reinforcing a factory floor atmosphere. Allstate, for instance, has built an AI-powered digital assistant that supports reps by retrieving information during service interactions-saving them time that would otherwise be spent rooting around knowledge bases for answers to callers' sometimes arcane and complex inquiries. The lawn care company TruGreen is utilizing machine learning to dissect the language used by its best service and sales reps-the specific phrases and conversational techniques that lead to positive customer outcomes-in order to overhaul the training and coaching reps receive. They're getting insights that help them better exercise their judgment, rather than edicts about what to say when.

But T-Mobile's service transformation is part of a larger story of reinvention that's been playing out in other corporate functions—at many companies—over the past few decades. HR leaders, for instance, once faced an existential threat from the automation of transactional processes such as payroll and benefits. Progressive HR executives transformed themselves and their departments into strategic partners to the board and the CEO by handing off transactional work to human resource management systems and outsourcing business processes, while simultaneously developing new capabilities such as strategic workforce planning, leadership development, employee engagement, and succession management.

Customer service organizations that emphasize knowledge work haven't abandoned their core function: handling and addressing customer issues. But companies that adopt models like T-Mobile's TEX will be more competitive in an environment characterized by increasingly complex customer issues and high expectations. At the same time, they'll discover new ways to deliver value to employees, customers, and business partners, deepening their relationships across the board. \bigcirc

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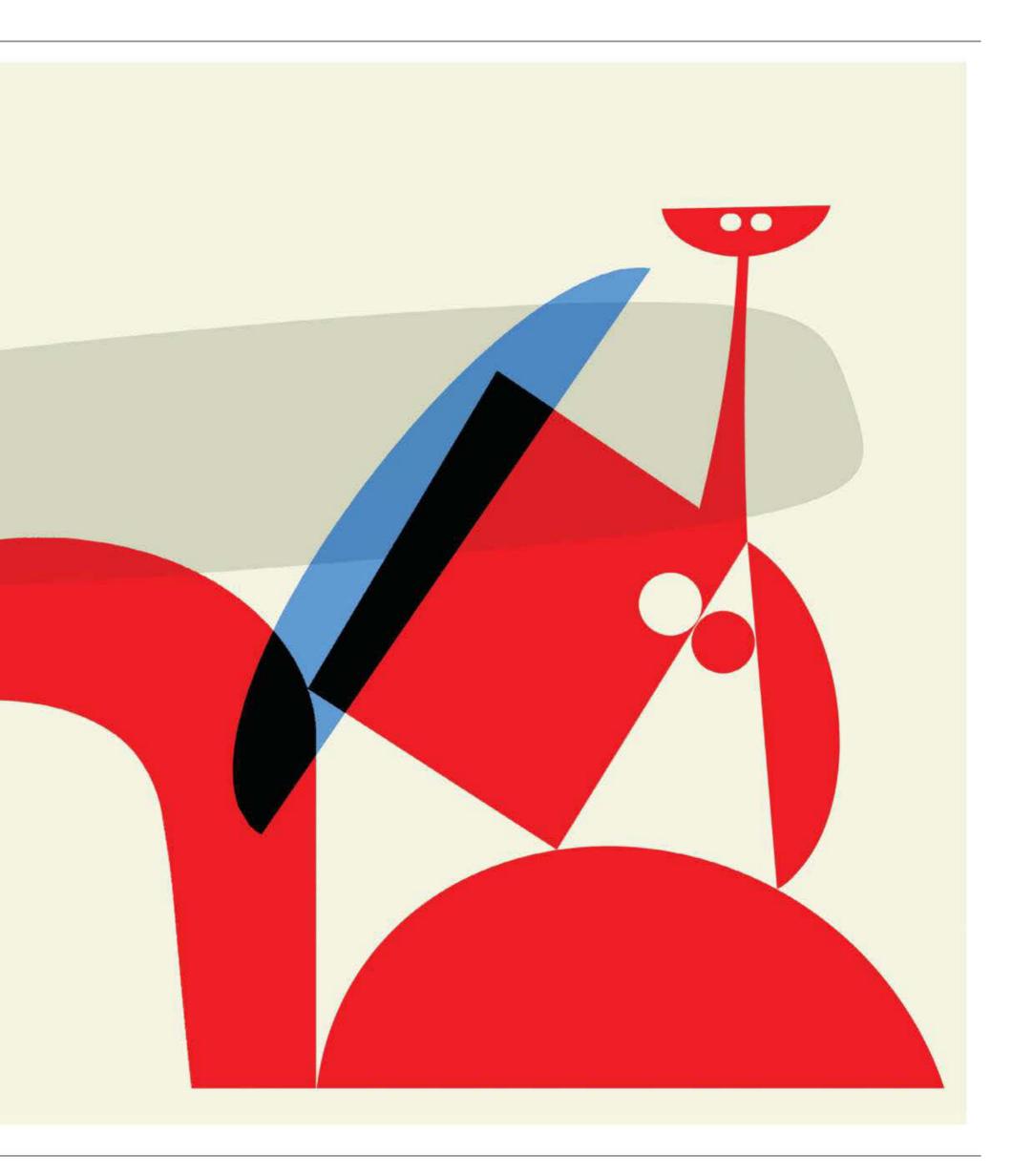
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IDEA IN BRIEF

THE PROBLEM

Instead of training salespeople to understand and overcome the obstacles inherent in selling completely new products, most companies overrely on product demonstrations. Thus sales teams often struggle to close deals.

THE RESEARCH

Studies show that customers are often enthusiastic about new products early in the selling cycle but become resistant later. Studies also show that salespeople who take the long view and have a learning mindset are better prepared to handle the frustrations inherent in the longer process.

THE SOLUTION

Train salespeople on process, not a product's bells and whistles. Create a psychological profile of the ideal buyer. Assess salespeople for resilience and grit. Use strategic account management.



WHEN WE TALK WITH COMPANIES about the biggest challenges they face in growing revenues, we hear a consistent complaint: Senior leaders have great confidence in their ability to develop innovations but not in their ability to commercialize them. Our research suggests that this gap results from a lack of formal processes and effective talent-management strategies. It's a big problem, because it limits the return companies reap from their R&D spending. To put it simply, companies that have invested millions to dream up new-to-the-world innovations need to become more adept at selling them to customers.

On average, salespeople who sell new products spend *32% more time meeting customers face-to-face* than do other reps.

To understand why that's so difficult, we combed the academic literature, conducted numerous one-on-one interviews with senior sales leaders, and led several studies of our own. We found that successful companies recognize that the sales process for new products requires different allocations of time and must overcome different objections and barriers by comparison with the traditional approach. We also found that people who excel at selling new products have traits and behaviors different from those of people who successfully sell existing product lines—and that the best companies develop organizations and cultures to support salespeople in rising to the challenge.

A New Sales Process

To better understand what makes the sales process for new products different, we surveyed 500 salespeople at B2B companies across a wide variety of industries, from technology to financial services to industrial products. We wanted to understand how they spend their time during the process and how the challenges they face vary as it unfolds.

Demands on time. We found that selling new products requires greater intensity and consumes much more attention. On average, salespeople spend 35% more time meeting with customers throughout the sales cycle than they do when selling established goods and services. Since much of that time is spent educating customers on how the product will change their current business practices, these meetings are typically conducted in person, with 32% more time spent in face-to-face meetings. And because committing to a completely new product requires broader consensus within a targeted company, salespeople spend 30% more time meeting with customers' cross-functional teams. Given that time is a salesperson's most precious resource, that's a costly investment.

Barriers to closing. We asked people to report when they met resistance and what their biggest challenges were in each of the six stages common to most sales processes: (1) *sales inquiry,* when the initial call is made; (2) *needs recognition,* when the salesperson helps the customer better understand his or her needs; (3) *evaluation,* when the customer begins to consider various products; (4) *solution development,* when the customer sits down with a limited set of suppliers and

works out potential solutions; (5) *decision,* when the customer decides whether or not to buy; and (6) *after-sale maintenance,* which takes place when the product is being used.

One important finding is that resistance to the sale typically occurs later in the process for new innovations than for established products. That's because customers are often curious about new products, so more of them will say yes to an initial meeting. One buyer who rarely accepts appointments with sales reps commented, "I will always listen if someone brings me a new idea. I want to make sure we are staying current with the best of what is being done in our industry." But as the process continues, customers become more hesitant to abandon the status quo.

The challenges faced in the sales process change over time. In the first two stages, the biggest barrier is that customers think they have only limited information about the product because the salesperson is not revealing something important about it. Similarly, in the next stage, evaluation, they often worry that they still don't fully understand the product.

A big shift occurs in the solution-development stage. At this point customers turn their attention to how their business practices would change if they decided to adopt the product. The two biggest issues are: Customers don't like open-ended situations, which create uncertainty and raise doubt, and they worry that their way of doing business will get disrupted. Also, the buying unit typically expands at this point, and some of those just joining the process wonder, *What will happen to me?* Similar concerns are raised in the decision stage, as customers continue to focus on risk and how people in the organization will be affected, worry that they will regret a decision to buy, and wonder whether they can accurately predict their switching costs.

From the sales organization's perspective, this pattern is problematic and difficult to overcome. Because people with new products to sell can book lots of initial meetings, they feel a sense of accomplishment: They are getting in front of customers and creating relationships with prospects who previously might not have taken their calls. The initial customer enthusiasm is seductive and persuades the salesperson that his or her time is being put to good use. But as the process unfolds, it becomes clear that many of those curiosity-driven meetings were never real opportunities, leaving the salespeople with little to show for their efforts. Sales

What typically passes for training when a product is launched is merely *a product showcase in disguise*.

The training needed. In general, organizations don't do enough to help salespeople navigate this complex process. Our research suggests that what usually passes for training when a product is launched is merely a product showcase in disguise; the main challenges that will arise during the sales cycle aren't addressed. At the launch meeting, product development teams typically devote too much attention to the product's bells and whistles, believing that their primary goal is to get the salespeople excited enough about the innovation to take it to all their customers. Early in the cycle, not only must the salesperson provide the right product information, but customers must *feel* they have the right information. That involves establishing trust and demonstrating a deep understanding of the customer's challenges. Later in the cycle, the salesperson must help the customer understand, assess, and manage the risks and the people issues associated with change. Too few companies help salespeople learn to do this.

Sales teams would be better off spending their time developing a psychological profile of the ideal customer. What traits suggest that a prospect might be willing to adopt a new way of doing business? What behavioral clues signal that he or she is serious about making a purchase rather than simply learning about a new technology? Does the prospect's organizational culture support learning and change? For prospects who best fit the profile, the sales team should map out all the steps that will need to be taken-and all the people who will need to be met. This exercise is creative in nature, because the goal is to envision what should be new and different in the sales process. The team should ask, "Will the buyer need to create new evaluation criteria before a sale can be made? Which groups in the buying organization stand to lose power, and how might they be mollified? Do we know everyone who will be affected by the change? If not, how can we develop the network we need?"

Although the sales team won't have all the information required to get this perfectly right the first time around, working through the exercise will help avoid major stumbling blocks and focus on finding the right types of customers.

What Makes for Successful Salespeople?

To learn what traits and competencies characterize people who thrive selling new products, we began by analyzing

the characteristics of just over 2,500 salespeople from five leading companies in industries including digital media, pharmaceuticals, and industrial products and services.

They take the long view. Our first observation: The most successful salespeople manage their time more deliberately than other salespeople do. On average, they divert their attention from existing products and services and use less time on administrative work in order to spend 4.5 more hours a week selling innovations. They invest more time up front identifying good prospects, ruthlessly targeting a few customers who are likely to adopt rather than spreading their attention over many accounts. We also found that a focus on long-term outcomes with customers is closely associated with success. One customer described a favorite rep this way: "His philosophy was that if he could help us do better, then we would ultimately spend more money with his company, and in the long run we would all do well."

They have different concerns. Successful salespeople perceive barriers very different from those that others see. They are concerned about people and process issues at the buying organization and about whether the sale will stall if the buyer lacks the evaluation criteria to make a purchase. They worry that the customer will see the switching costs as being too high, or that too many people will be heavily invested in the status quo. In contrast, other salespeople focus on their product knowledge, worrying that they lack descriptive information or that the information they've received is unclear.

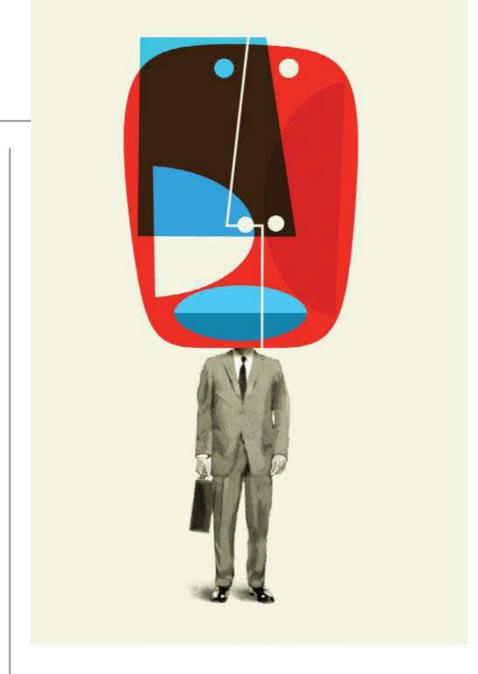
They exhibit more resolve. Although grit matters in most sales, it is even more important when selling new products. Setbacks often occur late in the process, causing salespeople to feel that the rug has been pulled out from under them. As one senior sales leader told us, "Salespeople will never turn down the opportunity to sell new products. They view them as another arrow in their quiver and immediately see them as a key to their success. But whether they put sustained effort into selling them is another matter." Those with a long-term orientation focus on the future payoff and develop coping strategies to deal with the obstacles they encounter along the way.

They have a learning mindset. Goal orientation also plays a role in success at selling new products. Some salespeople have a learning orientation—a desire to improve their abilities and a need to master difficult tasks. These

individuals greatly value personal growth. Others have a performance orientation, craving praise for superior work or dreading poor evaluations. A recent study by Annie Chen of Westminster Business School and colleagues looked at how differences in goal orientation affected salespeople's belief in their abilities and their motivation to sell new products. They found that those with a strong learning orientation were confident and eager to meet the challenge. Salespeople with a performance orientation fell into two camps: Those who framed the challenge as an opportunity for praise felt the same way that people with a learning orientation did, but those who dreaded poor evaluations worried they would fail and consequently were less likely to put effort into selling the product.

We looked at how goal orientation affects sales over time at one of the five companies in our study and found that performance suffers initially, when a product is launched, regardless of which orientation a salesperson has. Reps with a learning orientation spend more time acquiring new sources of information and experimenting with different strategies and less time selling; their performance tends to suffer more at first than that of performance-oriented salespeople. In effect, they are making a conscious tradeoff-and the period of active learning yields a long-term payoff. Once they understand the market and have found effective strategies, their performance eventually stabilizes at a higher level than that of their performance-oriented peers. For managers this demonstrates that giving salespeople time to experiment and learn about the market will pay off in the long run, but you need the courage to weather an early performance dip.

They are knowledgeable, customer focused, and adaptable. We identified several other characteristics associated with success in selling new products. Salespeople need both *product knowledge* and *market knowledge*—an understanding of market trends and customer buying patterns. Given the changes that will take place in the customer's business if the offering is adopted, they need *customer focus*—a predisposition to meet customer needs above and beyond what is required. And the pace of change means they need *adaptability* to adjust their internal processes and style quickly according to feedback from the team, other managers, and market influences.



To examine whether all salespeople—the more and the less successful ones—recognize whether they have the needed characteristics, we compared how they and their customers rated their abilities on the above dimensions. The pattern was striking: Confident in their own abilities, most salespeople gave themselves high ratings across the board. Customers, however, gave them high ratings on product knowledge only—on most dimensions their evaluations were only about a third as high as the salespeople's own, and less than a tenth as high on adaptability. The salespeople thought they were adjusting quite well to outside influences, but customers saw them as stuck in their ways. It is clear from this analysis that sales organizations need to provide guidance and support for their team members' improvement.

A Culture That Supports New-Product Sales

Frontline sales managers play a central role in executing organic growth strategies, because they deal with the



The best companies customize training to meet individual needs and *tie assessments to performance*.



toughest people decisions on a day-to-day basis. During the product launch phase they help existing salespeople learn new behaviors and keep up morale when performance dips. If the company is building a sales force from scratch to support a new product, these managers are responsible for hiring people with the appropriate skills and abilities. If the company is launching a new growth strategy, they must translate it into actions that will work in the field a challenging job, because they need to make decisions without knowing exactly what will work.

We found that the best companies use competency assessment and training programs to help frontline sales managers effectively meet those challenges. Competency assessments identify individual salespeople's strengths and weaknesses by measuring traits and skills; their sophistication varies widely across companies. Many organizations don't map and assess competencies at all—or if they do, it's in a general way, not with an eye to selling new products. Companies may develop group training programs to address deficiencies in the sales force, but the main focus of such programs is to help people take stock of their own abilities.

Assess skills systematically. The best companies take this a step further by customizing training to meet individual needs and tying assessments to performance. Metrics such as new-product sales productivity and new-product share of wallet are used to discern who is excelling in the marketplace. Managers use the assessments to guide one-on-one coaching sessions about specific behaviors that will lead to higher performance and to develop focused learning plans. During the launch phase of a new product, the companies don't know exactly what skills will be needed for success, so they make an educated guess. They revisit their competency maps as it becomes clear who is thriving in the market and revise their training programs to overcome deficiencies. They create a culture in which salespeople aspire to grow.

The training required in these programs tends to be broad, encompassing both skill building and personal growth, because new products test salespeople's self-confidence. For example, a media company told us that its salespeople were becoming so overwhelmed by the pace of change in the digital market that they could not engage with customers. They could ask the right questions to assess customer needs and had adequate product knowledge, but they couldn't bring themselves to discuss solutions. A constant stream of digital disruptions shook their confidence in their understanding of the market, and they did not want to appear ignorant to their customers.

Train for knowledge and resilience. The media company took a two-pronged approach to this problem. To address knowledge concerns, it created a market awareness training program. After that ended, it provided regular updates on trends in digital media so that salespeople could help their customers make sense of where the market was moving. But more important, it provided its people with coping mechanisms to make them more comfortable with the pace of change. The emotional barriers to making a sale were bigger than the knowledge barriers. One senior manager described the challenge this way: "Our salespeople could assess the customer's needs and offer appropriate solutions. But the disruption in the digital market was so overwhelming that they did not feel clear about what they were supposed to do. They were stuck in place until we could get them over this hurdle. To help them cope, we asked them to reflect on what their role was and was not. We found that it was helpful for them to write down their thoughts in a journal. We needed them to recognize that they did not have to be an expert in all things."

Salespeople (like many others) often don't want to see that the world is changing and need prodding to learn new behaviors. Competency assessments foster behavioral change because they provide data from an outside source about where salespeople's skills need improvement. These assessments are most effective when questions focus on specific behaviors-such as "When selling new products, do you first go to existing customers to gauge their reactions?"and respondents cannot guess at the right answers. Making comparisons that force them to wrestle with difficult facts can foster behavioral change. For example, an individual's skills and behaviors can be benchmarked against the best salespeople at innovative companies in the industry, the best salespeople at his or her own firm, or customers' assessments. The goal is to provide the manager with enough data for any discussions that need to take place.

Competency assessments also encourage sales managers to focus on what the world *should* be rather than what it is. If a product represents a change in direction for the company, assessments can help determine who will be able to operate



in the new world and who will struggle. If the company is building a new sales force to support the product, assessments can help determine what to look for in job candidates and how to screen for the right traits. Changing behavior is as difficult for sales managers as it is for salespeople. Successful managers sometimes think, *I know from experience what works, so why should I change?* When problems arise in the field, these managers tend to blame the product rather than the salespeople or themselves. If the sales management team is stuck in the old world, significant turnover may be needed. In an extreme case, we have seen half of a frontline sales management team turn over in one year because its members could not make the necessary leap.

The Benefits of Strategic Account Management

We also found that the best companies often launch new products through strategic account management programs. Strategic account managers (SAMs), who are assigned to the most important customers, are permitted to take a longer-term perspective for business development and are responsible for building a useful network at all levels of their customers' organizations. They help the field sales team overcome challenges as they arise. SAMs typically receive more long-term incentives as part of their compensation than regular salespeople do; companies with SAMs typically experience higher sales costs but usually see a return on that investment. At large companies SAMs help break down internal barriers between business divisions that prevent important conversations with customers. One member of an operating board commented, "If I were to ask our business division heads if we needed a strategic accounts management program, they would all say no, because they worry about the cost. But from my position, I know that those programs are a key driver of our growth."

Make sure someone's looking at the big picture. It is best practice for SAMs to hold regular planning meetings with customers and establish mutually beneficial goals to support the sale of new products. This form of planning and collaboration allows SAMs to become intimately familiar with customers' business practices, culture, and strategies. They analyze their customers' industries and identify their customers' strengths and weaknesses relative to competitors in the market. Intimately working together on strategic

Senior leaders should allow strategic account managers to *focus on long-term goals*.



priorities lowers barriers to adoption for new products. Trust is established, so customers don't worry that the seller is holding back information about the product and are confident that the seller understands the challenges they will face as the product is rolled out to users.

SAMs make sure that experts are connecting and new opportunities are surfaced at lower levels of both companies. Describing a typical success story, one commented, "Once a business unit told me that the customer was not interested in energy storage technologies. They had asked the wrong people. I put them in contact with the customer's R&D center, where I knew that a team of eight people worked on storage innovation, and that team was indeed interested in cooperating with us." When the right connections are made, the two companies often jointly develop technologies, promoting an even deeper level of trust.

Build partnerships with your best clients. SAMs are responsible for bringing together the senior leadership teams to show how the two companies can grow together. Senior leaders at the selling organizations demonstrate their personal commitment to these programs by regularly calling on customers and holding strategy meetings with SAMs. One senior leader explained, "The involvement of the board shows our commitment to customer centricity; it builds trust between the board and the customer's top executives and provides the board a more direct view of what customers want. This program gives the SAMs further strength via our top management inside and outside the organization." Commitment at this level helps the operating team understand its customers' challenges and anticipate problems that might be created by the adoption of a new product. And it reassures customers that problems will be addressed in a timely manner, lowering the risk associated with making a purchase.

Senior leaders also use strategic account management to balance the need for long-term growth with pressure to meet short-term earnings targets, which can create tension in sales organizations and undermine a company's ability to sell new products. Our research suggests that senior leaders resolve some of this pressure by letting SAMs focus on long-term goals and managing earnings through nonstrategic relationships. In one study we found that most companies use their sales organizations to manage earnings targets—81% of senior sales leaders said that their CEO, and 75% said that their CFO, requests revenue or expense management actions to smooth earnings. But the leaders did not treat all accounts equally: We found that the biggest factor in letting customers become strategic accounts was their potential for long-term growth, and that senior leaders were about half as likely to request short-term actions in strategic accounts as in others. One SAM described his company's focus this way: "We see consistency as being a driver of strategic relationships and are willing to suffer through periods of reduced profitability to maintain progress." This long-term focus is key to selling new products.

SUCCESSFULLY EXECUTING an organic growth strategy requires a deep and lasting commitment from the entire senior leadership team, because bringing new-to-the-world products to market transforms selling organizations as much as it transforms buying organizations. The best companies are strategically aligned, from the sales force to the C-suite, when new products are launched. They recognize that selling these products involves different barriers, and they develop new processes to overcome them. HR creates competency maps to assess the skills and behaviors needed to sell the products and works with sales managers to establish the necessary training and coaching programs. Frontline sales managers buy into the strategy behind a product launch and support the learning process that salespeople go through in the field. The C-suite maintains a long-term orientation by nurturing strategic accounts and making sure that pressure to meet earnings targets does not stand in the way of future growth.

At the best companies we visited for our interviews, the entire sales organization takes pride in having developed a long-term mindset regarding organic growth. These companies recognize that investing in R&D is not enough to ensure that it will bear fruit; they make the same commitment to commercialization that they make to idea development. Too much is at stake to do otherwise. HBR Reprint R1806G

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How the most successful innovators do it

KK h THROUGH ŀΔS **Cyril Bouquet** Professor at IMD Jean-Louis Barsoux Professor at IMD ė Michael Wade Professor at IMD





IDEA IN BRIEF

THE PROBLEM

Despite recent digital advances and an improved understanding of the innovation process, game-changing offerings remain hard to come by.

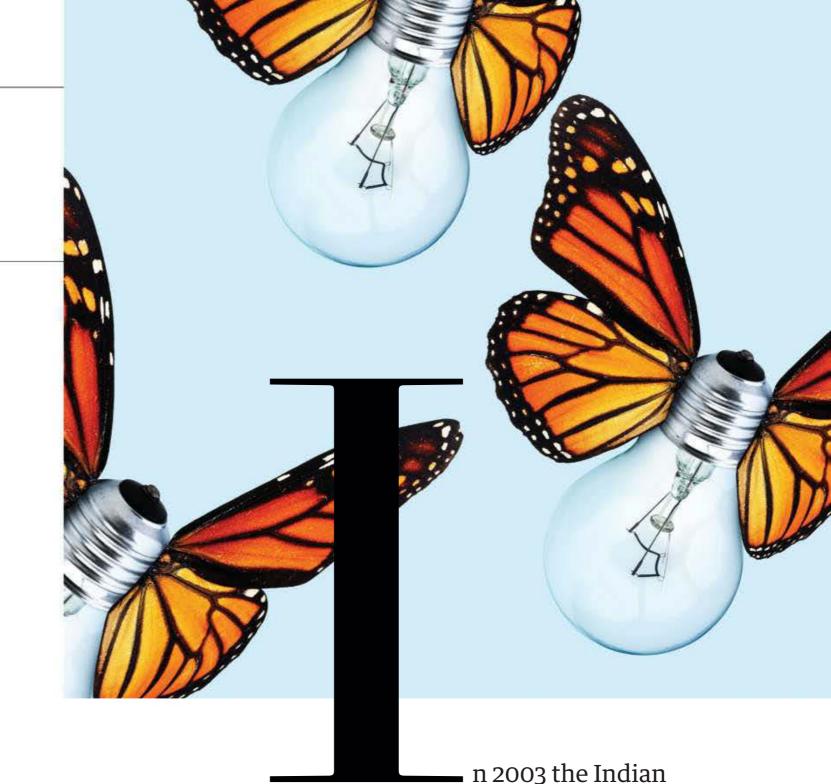
WHY IT HAPPENS

Existing innovation models are unrealistic and often incomplete, failing to incorporate the digital aspect of innovation and emphasizing speed over deep reflection. They gloss over pitfalls and biases and may focus so intensely on users that other key stakeholders are neglected.

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THE REMEDY

Five practices can help bring breakthrough ideas to fruition: Attend closely and with fresh eyes, step back to gain perspective, imagine unorthodox combinations, experiment quickly and smartly, and navigate potentially hostile environments both inside and outside the company.



environmental researcher Narayana Peesapaty spotted an alarming trend: Groundwater levels in the region of Hyderabad were falling precipitously. He examined rainfall records but found nothing to explain the drop. Looking deeper, he discovered that the culprit was a change in agricultural practices. Many area farmers had abandoned millet—a traditional crop increasingly regarded as "the poor man's food"—in favor of rice, a thirsty crop that requires 60 times as much water to grow. And because they had access to heavily subsidized electricity, the farmers were continuously pumping water into their fields.



Peesapaty tried to influence agricultural policies by documenting the problem in government reports, to no avail. So he looked instead for ways to boost demand for millet. He hit on the idea of turning it into "edible cutlery"—a solution that could attack not just the groundwater deficit but also the scourge of plastic waste. Peesapaty quit his job to pursue the project. A decade later, after a video he posted about the cutlery went viral, orders began pouring in. Two crowdfunding campaigns exceeded their targets by more than twelvefold, and the first corporate orders shipped in 2016. It's too soon to know whether groundwater levels have stabilized. But many farmers have already resumed growing the more sustainable crop, and to further boost production, the government declared 2018 the National Year of Millets.

As Peesapaty's story demonstrates, there are two potential routes to any solution: *conformity* (in this case, trying to use established channels to affect policy) and *originality*. The first is adequate for many everyday challenges. But for thornier problems, more-divergent thinking may be required.

As academics with a long-standing interest in attention, sense making, innovation, and digital transformation, we have spent the past decade researching pioneering thinkers and changemakers in a wide range of fields, from entrepreneurs to medics to chefs. Our work with corporate clients has included running top-team innovation workshops, leading full-scale acceleration programs, and orchestrating enormous transformation journeys. We have also interviewed and surveyed hundreds of executives involved in innovation efforts. Through these efforts we have identified recurrent patterns in the evolution of breakthrough ideas and constructed a five-part framework for developing them and ensuring their survival.

Unconventional thinkers focus their attention closely and with fresh eyes, step back to gain perspective, imagine unorthodox combinations, experiment quickly and smartly, and navigate potentially hostile environments outside and within their organizations. The challenge throughout is to overcome biases and mental models that may constrain creativity or doom a great idea.

In this article we'll describe the five elements of the framework and explore how digital tools can augment them. But first let's look at why game-changing innovation remains so difficult despite organizational and societal pressure for transformative results.

The Elusiveness of Breakthrough Innovations

he digital advances of the past two decades have enabled a much broader population than ever before to express creative intelligence. Unconventional thinkers the world over have unprecedented access to the distributed knowledge, talents, capital, and con-

sumers they need to create a start-up or a movement around a great idea. Innovation has been thoroughly democratized.

And yet breakthrough offerings remain hard to come by. Apart from the transformation of services powered by mobile apps and the internet, we have not seen spectacular surges of innovation across sectors. The economists Tyler Cowen and Robert Gordon have spoken of innovation stagnation. The business thinker Gary Hamel notes that corporations are awash in ideas that fall into one of two buckets: incremental no-brainer or flaky no-hoper. And in our consulting work with innovation teams we see many promising ideas become superficial, narrow, or skewed—or perish altogether.

The lack of progress is surprising given that companies have an improved understanding of the innovation process,



driven in large part by design thinking and lean start-up methodologies. Terms such as "user centered," "ideation," and "pivot" have become commonplace and have changed the way business leaders think about creating new offerings. Yet for all this guidance, only 43% of corporations have what experts consider a well-defined process for innovation, according to the research firm CB Insights.

When we talk with entrepreneurs and executives about existing innovation frameworks, their criticisms center on three overlapping issues. First, the models are unrealistic: The still-influential waterfall, or stage-gate approach, for example, is overly linear, with little regard for the constant zigzagging between activities that may be called for. Elmar Mock, a serial entrepreneur who co-created the Swatch, put it this way in a 2016 podcast: "The very natural instinct for an innovator is to move in a nonlinear way, to go from concepts to know-how back to concept, to relook for new know-how, to change the concept again." Second, the models are incomplete: They don't incorporate the digital aspect of innovation or show how it relates to the "humancentric" principles enshrined in design thinking. They emphasize action and fast iteration (pillars of the lean start-up methodology), but in doing so they tend to downplay what Wharton's Adam Grant calls strategic procrastination-allowing yourself time for deep reflection. Third, the models are misleading: They gloss over the pitfalls and biases that may constrain creativity. And by focusing so intensely on users, they minimize the roles of other stakeholders and the need for inventiveness in mobilizing support to establish and deploy novel offerings.

Regarding this last point, executives recognize that to devise ingenious innovations, they must break paradigms and shift mindsets—but when it comes to delivery, they often lapse into standard ways of thinking. Consider the failed Sony Reader. All the creativity that went into its development was undone by a lack of originality in execution. Sony neglected to enlist the book publishing industry as an ally—a mistake Amazon did not make when it launched the technically inferior but hugely successful Kindle, 14 months later. To make your stellar innovation thrive, approach unconventional partners, identify underutilized channels, and invent new business models. Put as much creative energy into introducing and delivering offerings as you did into generating them. Sony engineered an elegant *device*, but Amazon designed an original *solution*. Our framework complements design thinking, lean start-up, the business model canvas, and other innovation strategies. It is more accepting of the messiness inherent in developing a truly breakthrough solution, recognizing that the activities involved relate to one another in unpredictable, nonlinear ways. The elements of our framework are not unique, but collectively they capture the full scope and reality of the innovation process, including the critical role of reflection in conceiving opportunities and the level of organizational reinvention needed in the final push to market.

Let's turn now to those five elements.

Attention: Look Through a Fresh Lens



ttention is the act of focusing closely on a given context to understand its dynamics and latent needs. The trouble is that expertise often interferes, directing people's attention and unconsciously blinding them to radical insights. The French call this

déformation professionnelle: the tendency to observe reality through the distorting lens of one's job or training. To combat that bias, question what perspective drives your attention and what you may be missing as a result.

Take the case of Billy Fischer, a U.S. infectious disease expert who regularly traveled to rural Guinea to fight the Ebola epidemic. In May 2014 he saw that the recommended approach was not working: The local treatment facility was focused on containing the spread by isolating anyone exposed to the virus, but people were hiding to avoid being quarantined. Talking with patients, Fischer realized that the problem was fear: The mortality rate for patients in quarantine was 90%—so people understandably saw it as a death sentence. He insisted that the clinic prioritize patient recovery instead. Testing new treatment combinations, he and his colleagues slashed mortality rates to 50%, reversing the negative perception of quarantine and thus helping to stem the contagion.

By setting aside your preconceptions, you become a sharper observer of what people say and do. This changes not just *how* you pay attention but also *whom* you pay attention to—and previously unconsidered niche populations often reveal unsuspected pain points. The toy group Lego learns a lot from the frustrations of its adult enthusiasts, the cleaning-products giant S.C. Johnson from observing hygiene-obsessed OCD sufferers, and IKEA from trying to understand what "IKEA hackers," who customize and repurpose the furniture maker's goods, are "trying to tell us about our own products."

Digital technologies allow the tracking of behavior on a much larger scale than was previously possible, offering complementary ways of detecting tacit needs. In health care, for instance, researchers are studying the lived experience of Parkinson's disease by having volunteers use their smartphones to measure tremors (thanks to the function that captures portrait and landscape views), muscle tone (the microphone indicates the strength of the patient's voice box), involuntary movements (the touch screen records them), and gait (if the phone is in a pocket, it senses the patient's unsteadiness). The researchers can thus track the efficacy of medication not just before and after dosing but over time. And they get a rich picture of what participants actually do, as opposed to what they say they do.

Cyberspace can also help companies identify expert users in their practice communities. Medical device companies could glean insights from the online forums of "body hackers"—people who implant microchips, magnets, LED lights, and other technology in themselves with the aim of augmenting human capabilities. Inspired by that ethos, Medtronic is considering how its pill-sized pacemaker could be enhanced and implanted in healthy people to give them biometric feedback and improve their lifelong care.

Companies can use digital technology to engage with trendsetters directly or eavesdrop on user forums and blogs for clues about evolving needs. In 2009 Nivea conducted an online analysis, or "netnography," of discussions about deodorant use across 200 social media sites. Contrary to expectations, the key preoccupation was not fragrance, effectiveness, or irritation but the staining of clothes. This insight paved the way for a new category of antistain deodorants in 2011, the most successful launch in the company's 130-year history. In the public sector, online media analysis is being used to explore issues such as exercise, generic drugs, and—in an effort to improve health care social workers' interventions—resistance to vaccination.

Digital technologies can't replace direct observation, of course. But they expand the number and type of insights

Game Changers



A 3-D model of Bertrand Piccard's solar-powered plane in 2007



The C-shaped blades developed by Van Phillips to help amputees run and jump





'Shrek models," handbuilt by Frank Gehry to learn from clients' discomfort

The first digital camera, created by Steven Sasson in 1973 while he was working for Eastman Kodak

How Robust Is Your Creative Process?

To assess your capacity to innovate, answer the following questions and calculate your average score for each element. Scores below 4 indicate areas for improvement.

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I know how to tailor and deliver a message for different audiences. 1 2 3 4 5 6 7		1	2	3	4	5	6	7
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generated, providing access to a wealth of unfiltered and unstructured user-generated content that people can then make sense of.

Perspective: Step Back to Expand Your Understanding

aving zoomed in to gather insights about a situation, a need, or a challenge, you must then pull out to gain perspective, fighting against framing and action biases that might encourage you to accept the issue as presented and rush into problem solving.

To process what you have learned, detach: Change activities, or take a strategic break. During his third attempt to circle the globe by balloon, in 1999, the Swiss psychiatrist and adventurer Bertrand Piccard was obsessed by fuel conservation. After completing the exploit, with barely any liquid gas to spare, he realized that he had spent his 20 days aloft in constant fear of running out. As he waited (for half a day) to be picked up from the Egyptian desert, it dawned on him that the core problem was not how to manage fuel but how to manage *without* fuel. Redefining the issue in this way set the stage for his next circumnavigation challenge—in a fully solar-powered plane.

His insight occurred only after Piccard stepped back. It's not easy to prime yourself for inspiration while you're in the thick of action. Consider the pioneering chef Ferran Adrià, who melded haute cuisine, art, and science; generated more than 1,800 signature dishes over 20 years; and earned his restaurant, El Bulli, the rating of "world's best" a record five times. The key to his creativity, Adrià once explained to HBR, was closing his restaurant for six months each year. "The pressure to serve every day doesn't offer the kind of tranquility necessary to create as we would like," he said. "The most important thing is to leave time for regeneration." This mindset is reflected in the Japanese concept *ma*, which stresses that space is necessary for growth and enlightenment.

Digital tools can help create that space, freeing up your time through automation and increasing your capacity to pause and make sense of weak signals. Take the experience of Nancy Lublin. While serving as CEO of DoSomething, a Organizations may ask, "What if we no longer did what we
do now?"—not necessarily because they intend to abandon current activities but as a way to envision connections between existing strengths and new opportunities.



global nonprofit that works with young people to effect social change, she ran charity drives that mobilized volunteers by text. Along with messages from people looking to donate their time—some 200,000 messages in a typical campaign—incoming texts would include a handful of unrelated messages from distressed teenagers. Staffers would respond with referrals to relevant helplines, until one particularly disturbing message, from a girl being raped by her father, forced them to rethink their approach.

After two weeks of sleepless nights, Lublin realized why adolescents were contacting her organization with problems unrelated to its cause: Texting is anonymous, private, and quiet. The cries for help pointed to an unmet need, leading Lublin to create Crisis Text Line (CTL), a free service that offers round-the-clock counseling and intervention. Although launched without fanfare, it has outpaced even Facebook's reach throughout the United States.

Imagination: Look for Unexpected Combinations

o produce a truly original idea, you must free your imagination, challenge orthodoxy, and envision that which is not. But "functional fixedness" often limits the ability to think creatively or to conceive of alternative uses for familiar objects and concepts. Overcoming this barrier requires asking uninhibited questions such as "Why not?" and "What if?"—as Van Phillips did when he queried the requirement that prosthetic limbs resemble human ones. His now-familiar C-shaped blades help amputees run and jump much the way able-bodied athletes do.

To spur imagination, organizations may ask questions such as "What if we no longer did what we do now?"—not necessarily because they intend to abandon current activities but as a way to envision connections between existing strengths and new opportunities. In 2009 the McLaren Group, known for Formula 1 racing, asked precisely that question—which liberated it to think about how its capabilities in materials science, aerodynamics, simulation, predictive analytics, and teamwork might apply to other sectors. It leveraged those capabilities to improve the performance of clients ranging from elite rowing, cycling, and sailing teams to health care systems and air traffic control services. As a result, it has morphed into a consulting and technology group that happens to have a successful Formula 1 team.

Imagination is often seen as something mystical and inaccessible, but it is chiefly a matter of positing unexpected combinations. At the most basic level, you can apply an existing solution from one domain to another. Jonathan Ledgard, a war reporter and a former longtime Africa correspondent for the *Economist*, imagined a drone-based network for delivering medical supplies to remote areas in Africa. Thus was born Redline, which began trial operations in Rwanda in 2016. Because the price and efficiency of drone batteries has not kept pace with advances in airframes, Ledgard has begun to focus on developing droneports to support the air cargo routes.

Outsiders often find it easier than insiders do to connect disparate thoughts, because they come to the table with fewer preconceptions. Phillips was not an engineer and had never worked in a prosthetics lab; his running blades were inspired by his experience as a pole vaulter and a springboard diver prior to losing a leg in an accident. The latest medical innovation for assisting difficult births-successfully tested in South America and recently licensed by Becton, Dickinson—was the brainchild of an Argentinian car mechanic, Jorge Odón. Enthralled by a YouTube video on using a plastic bag to retrieve a cork from inside an empty wine bottle, the father of five realized that the same principle could save a baby stuck in the birth canal. As a chief medic at the World Health Organization told a New York Times reporter, "An obstetrician would have tried to improve the forceps or the vacuum extractor, but obstructed labor needed a mechanic."

Research confirms that distance often helps in coming up with novel ideas. In one study, separate groups of carpenters, roofers, and in-line skaters were asked for ideas on how to improve the design of carpenters' respirator masks, roofers' safety belts, and skaters' kneepads. Each group was much better at coming up with solutions for the fields outside its own.

Organizations try to spark such connections by bringing together people with diverse knowledge bases and perspectives. Technology allows them to tap the wisdom of experts far beyond their networks—people who may have no familiarity with a given market or industry but can bring different experiences to bear. For example, in 2007 the Oil Spill Recovery Institute used crowdsourcing to tackle the long-standing problem of cleaning up oil spills in subarctic waters. The



Your belief in your idea may lead you to underestimate the effort needed to steer past obstacles. You must sharpen your reading of hostile environments, including your organization's own immune system.

winning idea came not from an oil industry specialist but from a chemist, John Davis, who applied his expertise in the concrete industry to devise a means of keeping oil liquid as it is pumped. Examining 166 problem-solving contests posted on the InnoCentive innovation platform, Harvard Business School's Karim Lakhani found that winning entries were more likely to come from "unexpected contributors" with "distant fields" of expertise.

In addition, the digital revolution has blurred industry boundaries, facilitating unexpected combinations. The data routinely collected in one area can benefit players in unrelated fields, opening up new uses for underleveraged assets. Melinda Rolfs, an executive at Mastercard, which sells its anonymized transaction data and analytics to merchants and financial institutions, realized that the data could be made available free to charities and other nonprofits to bolster their fundraising efforts. She now spearheads Mastercard's data philanthropy program, creating value in new ways for the business and for society.

Experimentation: Test Smarter to Learn Faster

xperimentation is the process of turning a promising idea into a workable solution that addresses a real need. The big risk, once you start testing, is that confirmation biases and sunk cost effects will deaden your responsiveness to corrective feedback. Successful innovators design their experiments to learn faster and cheaper, and they remain open to sharp changes in direction. They test to *improve* rather than to *prove*.

The lean start-up methodology puts learning at the heart of its approach, and although that objective is certainly important, it often conflicts with the emphasis the model's proponents also put on speed. Frenetic cycles of build-measure-learn encourage organizations to settle for a "good enough" productmarket fit, leading them to miss more-ambitious solutions.

Instead, externalize your idea early and often so that others can visualize, touch, or interact with it. When pitching his idea to doctors, Jorge Odón used a glass jar for a womb, a child's doll for a trapped baby, and a fabric bag sewn by his wife as his lifesaving device. This kind of low-cost mock-up is sometimes dubbed a Frankenstein prototype. Negative reactions are as valuable as positive ones and are critical to avoiding costly errors. To take an extreme example, the pioneering architect Frank Gehry produces what he calls Shrek models, intended to make clients uncomfortable. ("Shrek" is Yiddish for "fear.") Successive models don't build on the ones before them; rather, they depict divergent approaches, enabling Gehry to explore and learn from client discomfort and allowing the ideas to mature.

Be careful not to overinvest in your prototype. The aim is to test without building. One way is to use off-the-shelf technology or human intervention to fake a functional product or service—a so-called Wizard of Oz prototype. Researchers working on robot-assisted therapy for health care interventions typically assess user reactions to proposed designs with a Wizard of Oz technique: Without the patient's knowledge, the "robot" is controlled by a human operator. This kind of mock-up lets the researchers explore their concepts before writing any code.

Digital tools are a great aid to simulation. A website or a video can create the illusion of an offering before it exists—as Dropbox did when it made a video demo of the prototype for its file-sharing software to avoid bringing to market a product no one would want. Digital technology also simplifies A/B testing, whereby you propose two versions of an offering to learn what users value most. Nancy Lublin initially planned to use counselors from paid crisis centers on the hotline but changed her mind after comparing their performance with that of volunteers trained in best practices that had been identified by digital text analysis. One salient finding from the analysis: "I" statements-discouraged in traditional counseling-were three times as effective as other statements in keeping discussions going. Armed with this type of knowledge, the volunteers outperformed their professional counterparts on every key indicator: They were faster and cheaper and got higher-quality ratings. This persuaded Lublin to flip her business model, ditching the paid counselors in favor of trained volunteers.

Digital advances help you get closer to the ultimate goal in testing: trial without real-world error. To build his solarpowered plane, Bertrand Piccard approached conventional aircraft manufacturers, but they showed little interest. So he found partners outside the industry—80 in all. In conjunction with an advanced software and solutions provider, they created a "digital twin" of the plane, using 3-D software to design and test the individual parts and complex assemblies. That allowed them to forgo costly and slow physical prototypes and simulate the plane's performance under a variety of conditions, dramatically reducing the number of dead ends. What started as a purely technological experiment became an experiment in virtual collaboration as well.

Navigation: Maneuver to Avoid Being Shot Down

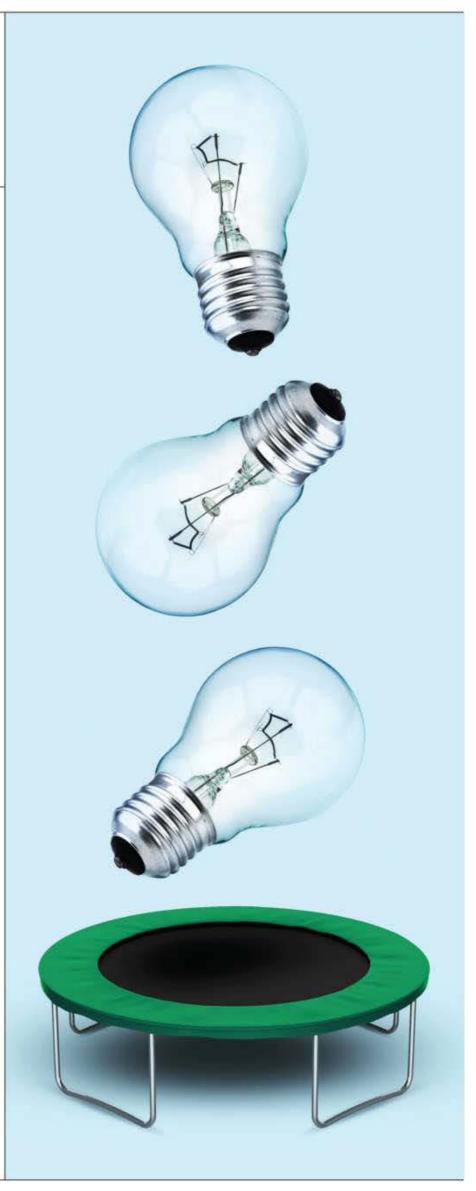
o bring your idea to fruition, you'll need to adjust to the forces that can make or break it. But your belief in your idea—and your overfamiliarity with the context—may lead you to underestimate the effort needed to mobilize supporters and steer past obstacles. You must sharpen your reading of hostile environments,

including your organization's own immune system, and meet multiple persuasion challenges. Original thinking is essential in shaping your business model as well as your offering.

The way an idea is framed affects how people perceive its value. Steve Sasson, the Kodak engineer who invented the digital camera, acknowledges that dubbing his innovation "filmless photography" was a serious hindrance to gaining internal support at a company whose very existence revolved around film. Your enthusiasm may blind you to the threat you pose to others, and your offering—often developed under the radar, with input only from trusted critics—may not survive first contact with skeptics.

By contrast, when Jonathan Ledgard conceived of drones as an answer to Africa's transport challenges, his adroit framing paved the way for acceptance: He called the unmanned aircraft "flying donkeys" (a reference to the loads they could carry), rendering a potentially menacing concept unthreatening, concrete, and sticky. An engaging frame uses the familiar to explain the less familiar and emphasizes continuity. If it resonates, digital channels can accelerate interest, as they did for Narayana Peesapaty's edible cutlery.

Presenting a disruptive innovation in a way that is responsive to the collective DNA of your organization is also crucial. According to Jean-Paul Bailly, who oversaw a dramatic transformation of the French National Mail Service (La Poste) from 2002 to 2013, "You have to demonstrate that the change





can help you remain true to your identity." In 2010, even as the state-owned entity began to privatize, Bailly continued to emphasize public service values and public trust. Those core assets underpinned new activities, including e-commerce, banking, and mobile telephony. Building on public confidence in mail carriers, the organization added services for the elderly—an innovative response to both the country's aging population and the declining number of letters sent by post. Customers can now commission the local mail carrier to drop in on aging relatives, and postal workers are trained in the situations they might encounter when they do. Because of such measures, the transformation was completed without any layoffs, and the mail service's revenues have continually grown.

Even if you've managed to secure internal buy-in and user interest, remember that an entire ecosystem stands between you and those you hope to serve. The input, connections, or cooperation of an array of stakeholders could determine the outcome of your offering. Owlet devised a wireless wristband to monitor hospital patients' vital signs. The development team thought it had a winner, because neither patients nor nurses liked the wired products. But that issue was not a pain point for hospital administrators, who refused to pay for the wristbands. In focusing solely on users, Owlet had neglected buyers. It eventually hit the mark with a smart sock that tracks a sleeping infant's pulse and breathing and, when warranted, sends an alarm to the caregiver's smartphone. This time, crucially, the buyers anxious parents—were also beneficiaries.

Successful navigation isn't just a matter of anticipating blockers; gaining support from unconventional allies can also be essential. The Mexico-born theme park KidZania is an indoor "city" where children can role-play adult jobs. When its founders ran out of development funds, they approached corporate sponsors—not just for financial support but also for professional expertise, facilitating a more realistic experience in terms of props, activities, architecture, and interiors. KidZania's industry partners create mini versions of their stores, banks, and offices, adding authenticity to the role-playing: Children can deliver packages dressed as DHL drivers or train to be pilots on a British Airways flight simulator. The concept took off, and KidZania became the world's fastest-growing group in experiential learning for children, with operations on five continents.

Digital technologies offer further opportunities for novel collaborations. For example, Vestergaard Frandsen (VF), a Switzerland-based disease-control company, devised an ingenious line of water filters, but they were too costly for the rural African and Indian communities that needed them most. Because the filters reduce emissions by eliminating the need to purify water over open fires, VF came up with the idea of distributing the devices free through funding from carbon offsets. To unlock that novel source of funding, it had to satisfy independent auditors that hundreds of thousands of filters were indeed being used. The platform's developers drew on an open-source data-collection platform developed at the University of Washington to create a smartphone app that would let field representatives photograph recipients of the filters and record their homes' GPS coordinates. Thus each recipient was reachable for follow-up and auditing purposesmaking the solution both scalable and sustainable.

A Flexible Sequence



or the sake of convenience, we've presented our framework as a kind of process. In practice, though, the five elements constitute not an orderly sequence or even a cycle but a mix that involves frequent crisscrossing among activities. This accounts for two realities that are

often overlooked by conventional innovation methodologies: **Multiple entry points.** Although *attention* is a logical starting point for innovation, others are valid too. *Imagination* is a

common gateway. Jorge Odón was not looking to improve on

FURTHER READING

ATTENTION

"Becoming a First-Class Noticer" Max H. Bazerman HBR, July-August 2014

A Practical Guide for Improving Your Observational Skills James H. Gilmore Greenleaf Book Group, 2016

An entire ecosystem stands between you and those you hope to serve. The input, connections, or cooperation of an array of stakeholders could determine the outcome of your offering.

existing birthing equipment; the idea literally came to him in his sleep. Imagination was also the entry point for Bertrand Piccard's solar plane. His story shows that to achieve a breakthrough innovation, you don't necessarily have to know something no one else does; you can get there by believing in something no one else believes in. Design thinking has difficulty accommodating such big-leap innovation, which is based largely on a top-down belief in possibility rather than on present needs or technologies. Part of our genius as human beings is imagining that which is currently out of reach. Still-immature technology that might be available in a few years is not a direct focus of design-thinking methodologies.

Another entry point is *experimentation,* as when you stumble upon a finding that leads you not to merely pivot but to reboot. A few years ago Jeannette Garcia, a chemist at IBM Research who was seeking to synthesize a particular polymer, set up a chemical reaction and stepped away to fetch an ingredient. Returning to the flask, she found a bone-hard substance: It turned out she had discovered the first new class of polymers in decades. The new substance was superstrong, lightweight, and, unlike comparable materials, easily and infinitely recyclable. That unique combination makes it a breakthrough discovery with a wide range of potential applications in aerospace, autos, electronics, and 3-D printing, although for now it remains a solution in search of meaningful problems.

Multiple pathways. Just as you can start anywhere in your creative process, you can proceed in any direction and switch focus as required. Existing innovation models do not explicitly acknowledge such freedom—and so they are often taken too literally and reduced to rigid, unrealistic recipes.

Consider Garcia's polymer discovery. Looking ahead, IBM has twin priorities to juggle: It must define relevant customer needs (attention) while deciding with whom it should partner (navigation) to bring a solution to fruition. This may involve much back-and-forth along with further experimentation (to produce prototypes) and occasionally stepping back (to maintain perspective and avoid overstretching).

The creative process is full of dead ends that may require you to revisit your original question, the options for responding, or your choice of partners (as CTL did when it pivoted away from established crisis professionals). Insights may occur after a partnership has been formed. Knowledge gained through experimentation may deepen your understanding of users and the problems they face. Sometimes you will address the challenge of asking the right people the right questions late in the process—as when Owlet realized that wireless health monitors were a pressing need not for hospital administrators but for new parents. Follow whatever sequence works for you. Process fixedness is itself a barrier to breakthrough innovations.

A caveat in closing: Although the order is flexible, you do need to touch all the elements at least once, because each one neutralizes different biases. Neglecting even one can lead you to focus on the wrong problem, idea, or solution. Creativity is a journey of sense making. By attending to all five elements, you will maximize your chances of reaching a truly game-changing innovation at the journey's end.

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PERSPECTIVE

"Are You Solving the Right Problems?" Thomas Wedell-Wedellsborg HBR, January-February 2017

The Pause Principle: Step Back to Lead Forward Kevin Cashman Berrett-Koehler, 2012

IMAGINATION

"Find Innovation Where You Least Expect It" Tony McCaffrey and Jim Pearson HBR, December 2015

The Dance of the Possible: The Mostly Honest Completely Irreverent Guide to Creativity Scott Berkun Berkun Media, 2017

EXPERIMENTATION

"Increase Your Return on Failure" Julian Birkinshaw and Martine Haas HBR, May 2016

The Innovator's Hypothesis: How Cheap Experiments Are Worth More Than Good Ideas Michael Schrage MIT Press, 2014

NAVIGATION

"How to Get Ecosystem Buy-In" Martin Ihrig and Ian C. MacMillan HBR, March-April 2017

The Obstacle Is the Way: The Timeless Art of Turning Trials into Triumph Ryan Holiday Portfolio, 2014

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Artificial intelligence (AI) fuels innovation and creates lasting competitive advantage for business. See how KPMG Ignite, our AI technology portfolio, helps you automate, accelerate and enhance key decisions and processes that not only drive your future, but let you lead the way. To learn more about how to become an AI-first enterprise, visit read.kpmg.us/ai

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The Al-First Enterprise: The New Imperative

Artificial intelligence is racing from the lab to the front lines. Companies that fall behind now may never recover.



By Brad Fisher Partner and US Leader, Data & Analytics, KPMG LLP

Early this year, Amazon announced it was entering the health care business—and sent shares of insurers and pharmacies plunging. In Detroit, car companies are watching tech giants build driverless cars. On Wall Street, wirehouses are competing with robo advisors—in part by creating their own AI-driven investment advice platforms.

For these industries, the artificial intelligence revolution is already here. For others, it's just around the corner. For companies everywhere, the reality is this: Blink now, and you could wake up tomorrow to news that your way of doing business is no longer viable.

The idea that artificial intelligence (AI) and automation could upend entire business models and industries is hardly new. What's new is that these technologies are rapidly approaching critical mass in ways that threaten to blindside inattentive CEOs and their organizations. For C-suite leaders, the challenge now is to realign their organizations to fully capitalize on AI's transition from lab to front lines and become an AI-first enterprise.

There is a clear way forward. It begins with the systematic automation of business processes using a wide range of AI technologies, such

that internal silos begin to break down and operations become seamlessly integrated. Leaders in a variety of industries are already doing this, from insurance companies using AI to automate underwriting to banks using it to extend and manage credit. They understand that hyper-efficient business cycles and automated decision processes create massive competitive advantage.

For organizations eager to join them, we recommend simultaneous action on three fronts.

Understand where to play. Determine which processes have the greatest transformational opportunities if AI were embedded into them, and the organizational changes required to support that transformation. Envisioning the end state will make it easier to articulate a business case. KPMG

AI is rapidly approaching critical mass in ways that threaten to blindside inattentive CEOs and their organizations.

has developed a methodology to do this. It focuses on clarifying the vision and value of AI and automation for specific business processes from a technology, data, and people perspective, and breaks big initiatives into manageable pieces.

Execute AI at scale. It's imperative to experiment, but success won't be sustainable by doing little things in isolation. AI leaders string individual successes together and use them collectively to rethink and refine business models and processes. To effectively deploy AI at scale, companies need a platform that efficiently curates and enhances critical data and enables a continuous AI learning loop. KPMG Ignite, our AI technology portfolio, can help. It includes proprietary accelerators—patterns and tools that allow for the rapid development and delivery of AI solutions. They are built atop leading proprietary, open source and partner technologies, and can significantly reduce implementation times.

Transform the culture. People are a mission-critical element of the AI equation. CEOs and their leadership teams need to create organizations that are not only agile enough to adapt to, but also willing to embrace, the changes that AI and automation delivers-while also creating an ethical framework to manage its responsible implementation. Many organizations will find they lack the internal expertise or bandwidth to do this themselves. So, while an AI-first enterprise requires internal AI know-how as a core competency, most will want to turn to outside experts to help them ramp up their capabilities at the speed and scale required by the AI revolution.

As with every transformative technology that's come before it, AI promises to change the way organizations everywhere understand and connect with their customers and deliver the goods, services and experiences those customers expect. In fact, it's already happening. Sitting this revolution out is simply not an option.

Learn more about how to execute AI at scale and become an AI-first enterprise at read.kpmg.us/ai.

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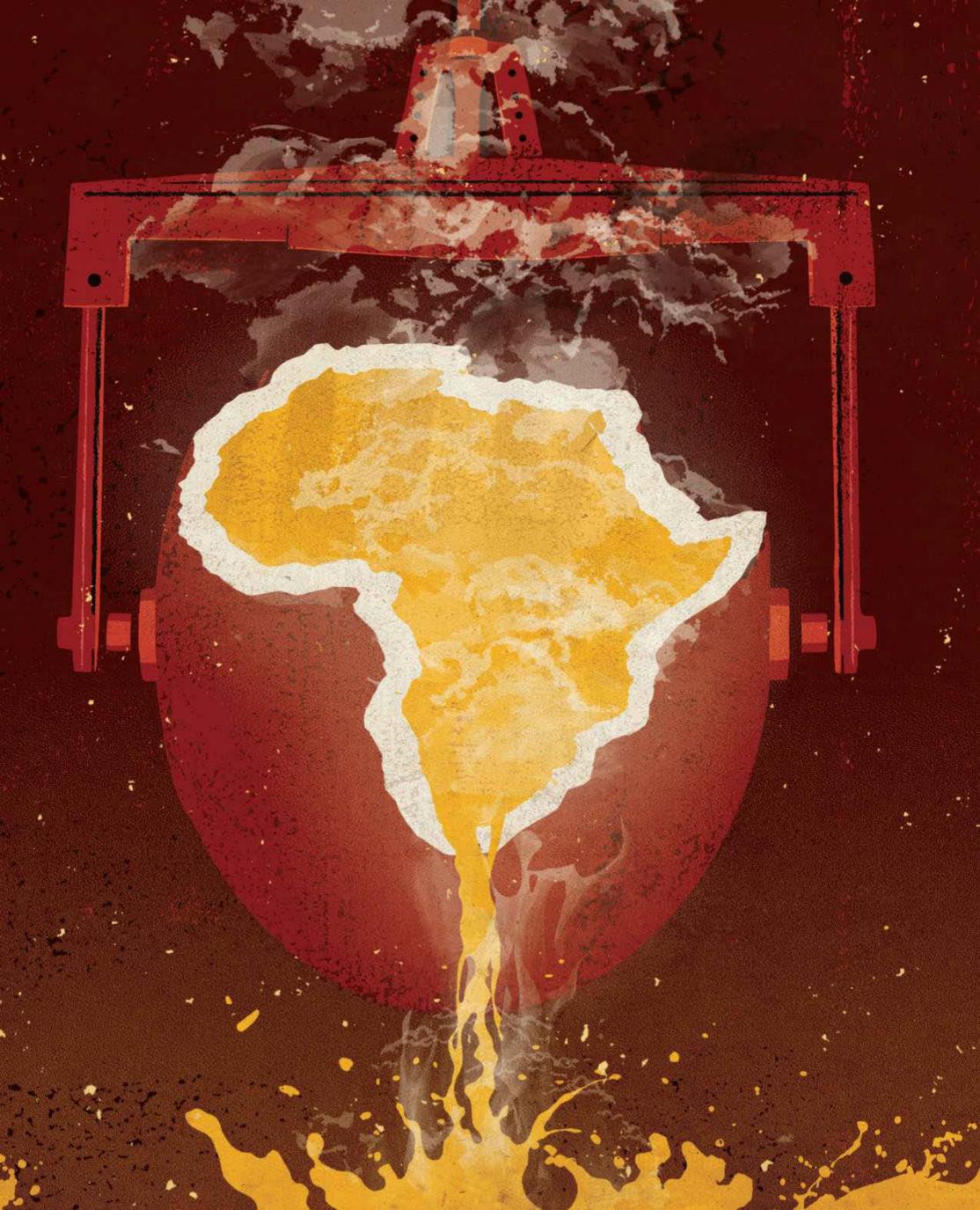


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ACRUCIB CREATIVI

Lessons from the continent's breakout businesses







MANY COMPANIES IN AFRICA earn annual revenues of \$1 billion or more? Most global executives we speak with guess there are fewer than a hundred. Many answer "zero." The reality? *Four hundred* such companies exist—and they are, on average, both faster growing and more profitable than their global peers.

We have advised many of these companies as they have spread rapidly across Africa and beyond, and we've observed an unexpected side effect of this growth burst: Africa has become an important test lab for global innovation. If you can build a product, a service, or a business model that's cost-effective and robust enough to succeed in Africa, chances are it will be competitive in many other regions of the world.

We don't mean to minimize the challenges of doing business in Africa (challenges of which successful entrepreneurs are well aware). Inadequate infrastructure may mean that companies need to build their own supply chains, for example, and inadequate public education may mean they need to train workers in basic skills and mindsets. But as we shall see, those challenges also provide opportunities for value creation. To help global executives and entrepreneurs pinpoint the Africa-born innovations they can learn from, partner with, or invest in, we have sketched a taxonomy of six innovation types, which we describe in the following pages. Technology is the golden thread running throughout: More than perhaps any other region, Africa is piloting digitally enabled breakthroughs that can aid companies in surmounting entrenched barriers and unlocking exponential progress.

Low- and High-Tech Moves Toward Financial Inclusion

IN EMERGING ECONOMIES, 2 billion individuals and 200 million businesses lack access to savings and credit, and many of those with access pay dearly for a modest range of products (see the exhibit "Who Are the Financially Excluded?"). The problem is by no means limited to the developing world. In the United States, one in 14 households—some 9 million in all—lacks a checking or savings account, often for reasons of affordability. Another 24 million are underbanked: Although they have accounts, they also resort to costly financial products and services outside the banking system, such as payday loans.

To serve excluded households—and to do so in a profitable, sustainable way—banks and other firms must use technology-based solutions and low-tech work-arounds. African companies provide compelling examples of both. Consider Equity Bank, born of a small building society in Kenya in 2004. By 2017 it had more than 12 million clients across East Africa, more than \$5 billion in assets, and reported pretax profits of \$270 million. James Mwangi, the founding CEO, told us that the bank's very purpose is "to solve a social problem: lack of access to financial services." That problem is deeply personal for him. "I grew up in a rural

IDEA IN BRIEF

THE CONTEXT

African markets present a multitude of challenges. For example, in some cases the infrastructure won't support business growth, while in others potential employees lack access to good public education.

THE POSSIBILITIES

Hundreds of companies have achieved high levels of growth and profitability nonetheless often by seeing the potential in those challenges.

THE FOCUS

Tremendous innovation is emerging in six areas: financial services, infrastructure development, manufacturing, food production, affordable consumer products, and education. area, and my mother didn't have a bank account," he said. "The nearest bank branch was 50 kilometers away, and the minimum opening balance was equivalent to several years of her earnings." Kenyans' response was to keep their money under the mattress.

Fewer than one in 10 Kenyan adults had a bank account at the turn of the 21st century. Today, thanks in large measure to Equity Bank's innovations, two-thirds do. "We knew we had to address the needs of people like my mother," Mwangi said. Well before cell phone-based banking came along, Equity Bank introduced what it called mobile banking: mini bank branches that fit in the back of a Land Rover and were driven from village to village. The bank's best-known innovation, though, is its agency banking model: It has accredited more than 30,000 small retail outlets across the country as bank agents, able to accept deposits and dispense cash.

Alongside these low-tech innovations, Equity Bank has harnessed the exponential growth in mobile telephony in Africa. In 2000 the entire sub-Saharan region had fewer telephone lines than the island of Manhattan. By 2016 there were more than 700 million mobile phone connections across the continent-roughly one for every adult. Cell phones have transformed Africans' lives in important ways, such as by replacing cash transactions with instant and secure mobile payments. There are now 122 million active mobile money accounts in sub-Saharan Africa-more than in any other region of the world (see the exhibit "Africa Is the Leader in Mobile Money"). That growth enabled Equity Bank to move beyond Land Rovers and create true mobile banking via its Equitel cell-phone banking application, launched in 2015. Equitel now handles the vast majority of the bank's cash transactions and loan disbursements, helping to make the bank extremely cost-efficient.

New Partnerships for Infrastructure Development

BOTH DEVELOPED AND DEVELOPING countries have glaring gaps in transportation, power, and water infrastructure and in "soft" infrastructure such as health care facilities. Our McKinsey colleagues estimate that the global gap between current and required infrastructure spending

Who Are the Financially Excluded?

Millions of people in emerging economies lack access to banking services.

Financially excluded, as a share of the adult population and in millions, 2017

Africa and the Middle East (52%)	395M
South Asia (30%)	
	387
Southeast Asia (53%)	
247	
China (20%)	
226	
Latin America (45%)	
207	
Eastern Europe and Central Asia (32%)	
125	

Source: The World Bank's Global Findex Database, 2017; McKinsey Global Institute analysis

is \$350 billion a year; unless it is closed, growth will slow and fast-growing cities will come under enormous strain. Nowhere is the gap bigger than in Africa; for instance, nearly 600 million people there lack access to electricity. The deficit has spurred some bold public-private collaborations that could serve as a model for other regions.

A case in point: the "company to country" agreements between GE and various African governments. These represent a new frontier in the company's approach to public-sector clients. For example, GE's agreement with Nigeria supports the financing, design, and building of vital infrastructure, with projects including the development of 10,000 megawatts of power generation capacity, upgrades to airports, the modernization and expansion of the national railway corporation's locomotives, and the construction of public hospitals and diagnostic centers. Jay Ireland, the recently retired president and CEO of GE Africa, describes the approach as "an umbrella agreement matching our capabilities as a company with the issues the country was facing, including putting more power on the grid, strengthening logistics, and improving health care outcomes."

Other African innovators are harnessing mobile money, along with advances in solar power and battery storage, to

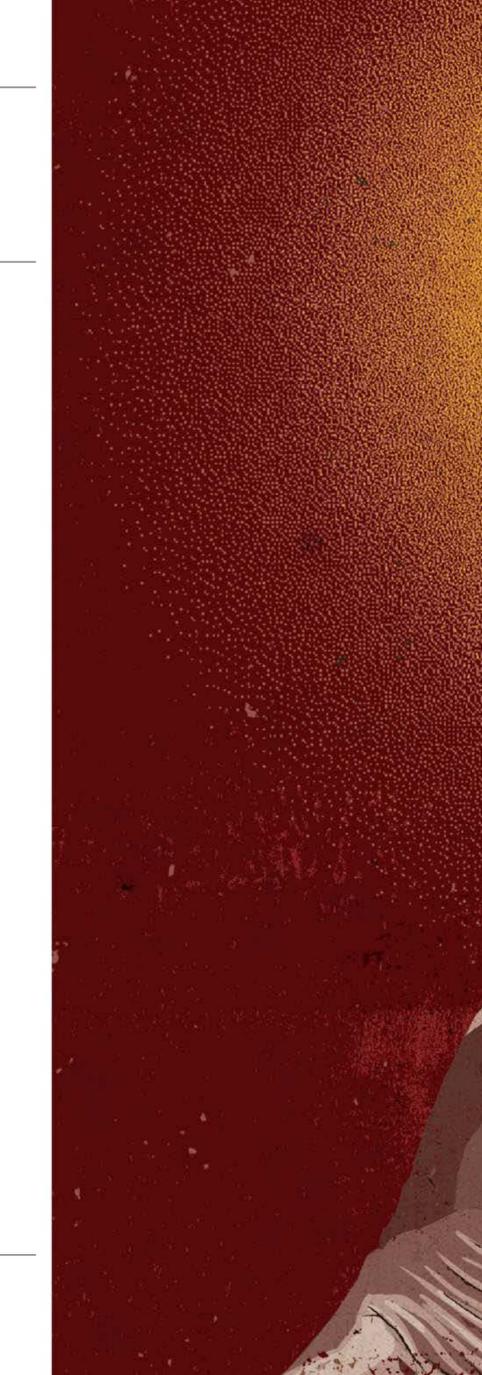


leapfrog the continent's gaps in electric power generation. One example is Kenya-based M-KOPA, which provides affordable solar-powered electricity generation and storage solutions to households that lack access to the grid—and finances payment over a 12-month period via mobile money accounts. Since its founding, in 2011, M-KOPA has sold more than 600,000 household kits and garnered investments from multinationals including Japan's Mitsui. Another example is Uganda-based Fenix, which has sold 140,000 solar power kits, also enabled by mobile money. In late 2017 Fenix was acquired by Engie, a major global energy company based in France, as part of a drive to use digital technologies to provide 20 million people around the world with decarbonized, decentralized energy by 2020.

Smart Approaches to Industrialization

MANUFACTURING REPRESENTS ANOTHER CLASS of African innovations relevant to other regions seeking to build or revitalize their industrial base to meet local demand and create stable jobs. One pioneer is Nigeria's Aliko Dangote, whose Dangote Industries achieved the seemingly impossible task of building large-scale manufacturing businesses when the country was plagued by chronic power outages, exchange rate volatility, and other impediments, including underdeveloped local supply chains and shortages of technical skills. "We knew that everyone who had tried industrialization in Nigeria had gone out of business," Dangote told us. So he built a shock-proof manufacturing model that included vertical integration, on-site power generation, robust engagement with the government, and an internal manufacturing academy. Today his group produces pasta, sugar, salt, flour, plastics, and cement in large volumes, and it will soon add refined petroleum and fertilizers-all commodities that Nigeria has historically imported. The company has created 30,000 jobs and made Dangote Africa's richest person.

Africa is also home to a growing group of innovative industries, from car making to chemicals, that meld the latest technologies with the continent's labor force advantages to meet both African and global demand. An analysis by the McKinsey Global Institute suggests enormous potential to increase the production of such "global innovations," which





could enable Africa to double its manufacturing output in a decade. In Morocco, for example, the automotive industry has multiplied its export revenue by a factor of 12, taking it from \$0.4 billion in 2004 to \$5 billion in 2015, and added 67,000 jobs during that time. The French automakers Renault and Peugeot have together invested more than \$2 billion to create assembly capacity for 650,000 cars and 200,000 engines. Morocco has also built industries in aerospace and other advanced sectors. In these high-tech African industries, companies make use of both automation and skilled labor. That makes sense: In Morocco, for example, labor costs are about one-third those in even the lowest-cost European countries. And Africa's labor force is expanding fast; by 2034 it will surpass China's and India's. By 2050 the continent's working-age population will exceed 1.5 billion (see the exhibit "A Population Boom in Africa").

New Models of Food Production

MORE THAN 800 MILLION PEOPLE worldwide—11% of the global population—are affected by hunger. The vast majority are in the developing world, with 520 million in Asia and 240 million in Africa. But hunger also besets many low-income households in rich nations, including more than 40 million people in the United States. The UN has set a goal of banishing hunger by 2030. To achieve that, the agricultural sector will need to step up innovations in technology and management to improve yields, and food companies will have to create affordable, nutritious foods and reconfigure distribution systems to get those foods onto the tables of people who need them. Africa is home to exciting innovations in all these arenas.

Consider Babban Gona (in Hausa, "great farm"), a Nigerian social enterprise serving networks of smallholders. Its members receive development and training, credit, agricultural inputs, marketing support, and other key services. Since its founding, in 2010, Babban Gona has enlisted more than 20,000 Nigerian farmers, who have, on average, more than doubled their yields and increased their net income to triple the national average. Participating smallholders, who are typically considered a high credit risk, have a 99.9% repayment rate on credit obtained through the program. Babban Gona's founder, Kola Masha, aims to enlist one million farmers in the program by 2025, thus providing livelihoods for 5 million people. Other smallholder-focused programs are being launched across the continent, and large commercial farms are also boosting their scale and output. Together these efforts could banish famine in Africa forever. Our analysis shows that the yield increases facilitated by Babban Gona, if replicated across the continent, would be enough to feed Africa's growing population *and* export to other regions.

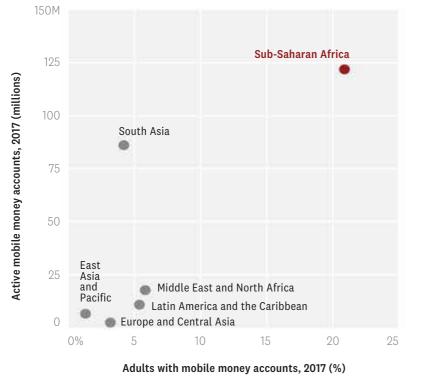
Africa's "green revolution" is being accelerated by a new breed of tech entrepreneur. One such is Sara Menker, an Ethiopia-born former Wall Street commodities trader. She realized that farmers and investors lacked the information needed to choose crops and markets, manage weather and other risks, and identify where and when to invest in infrastructure. So she created Gro Intelligence, which she describes as "a Wikipedia for agriculture, but with a very deep analytical engine built on top of it." With offices in Nairobi and New York, the company has clients ranging from some of the world's largest sovereign-wealth and hedge funds to individual commodity traders in Africa and around the globe. Other digital start-ups are providing farming advice, weather forecasts, and financial tips and helping farmers measure and analyze soil data so that they can apply the right fertilizer and optimally irrigate their farms.

Affordable, Accessible Consumer Products

GROWING MORE FOOD is a key step in banishing hunger, but it's just as important that ordinary people have access to nutritious, affordable meals. Readers of this magazine may be familiar with Indomie noodles—one of Nigeria's most successful consumer products (see "Africa's New Generation of Innovators," HBR, January–February 2017). Sold in single-serving packets for the equivalent of less than 20 cents, the noodles can be cooked in under three minutes and combined with an egg to produce a nutritious meal. Dufil Prima Foods introduced them to Nigeria in 1988. They took off, and the company soon shifted from importing to manufacturing locally. CEO Deepak Singhal told us, "We created a food that was relevant for Nigeria. And in 10 to 15 years we became a household name."

Africa Is the Leader in Mobile Money

Banks have taken advantage of mobile phones' ubiquity to provide millions of people with financial services.

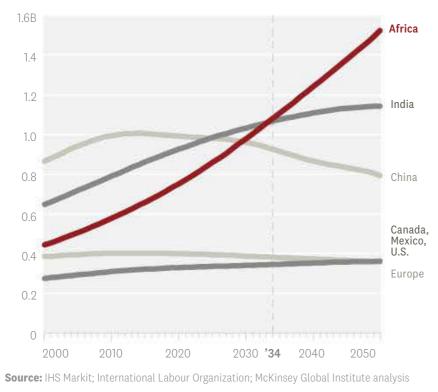


Source: GSMA Mobile Money Deployment Tracker; GSMA State of the Industry Report on Mobile Money, 2017; The World Bank's Global Findex Database, 2017

A Population Boom in Africa

The continent is expected to have a larger working-age population than China's or India's by 2034.

Working-age population (aged 15 to 64), in billions





Dufil has also driven fundamental innovation in getting Indomie noodles to consumers throughout Nigeria. It has a "feet on the street" distribution network of more than 1,000 vehicles, including motorcycles, trucks, and three-wheelers. When distributors can't go any farther by vehicle, they continue on foot. That was a critical innovation, because the company's route to consumers was through thousands of small, often informal outlets rather than an organized supermarket network. Dufil's distribution approach has garnered global attention: In 2015 Kellogg invested \$450 million to acquire a 50% stake in the West African sales and distribution arm of Indomie's parent company, Tolaram Africa, and in 2018 it ponied up \$420 million more for a stake in Tolaram's food-manufacturing business.

Again, innovations in Africa's consumer sector are being accelerated by bold moves from tech entrepreneurs. An example is the e-commerce start-up Jumia. Launched in 2012, it now has more than 2 million active customers in 13 African countries, and sales are doubling each year. Although Jumia has yet to deliver fully on its business model—or to make a profit—it has attracted hundreds of millions of dollars in investment from Goldman Sachs and others. Sacha Poignonnec, Jumia's France-born co-CEO, points out that Africa has 60,000 people for each formal retail outlet, whereas the United States has only about 400 people per store. He told us, "In the U.S., e-commerce is slowly changing centuries-old shopping habits. Here it is *creating* habits. People are making their first big buys, such as smartphones, and their first online purchases simultaneously."

To encourage these habits, Jumia created the JForce sales program, in which agents go door-to-door with Wi-Fi-connected tablets, taking orders from customers who lack internet access. "It allows agents to become entrepreneurs," Poignonnec said, "effectively operating their own online retail business right from home." In addition, Jumia created a logistics service to fulfill its e-commerce orders; in 2017 it delivered 8 million packages, many of them to remote rural areas. And it built an in-house payment platform to help African consumers gain trust in online payments. These innovations could help Africa bypass costly brick-and-mortar retail and go directly to an e-commerce model that brings consumers greater choice and lower prices wherever they live.

Harvard Business Review November-December 2018



Future-Focused Capability Building

WITH SO MANY YOUNG PEOPLE entering Africa's workforce, innovations in education and skills development are essential. They are also globally relevant: More than 75 million young people worldwide are unemployed, while many companies can't find people with the skills needed for entry-level jobs. This happens in part because many education systems don't provide either the technical or the behavioral skills needed to succeed and adapt in the rapidly changing world of work.

One African solution to the youth skills gap is Generation Kenya, a nonprofit with 180 local employer partners, which operates 37 training locations across the country. Each offers immersive "boot camp" programs lasting six to eight weeks, aimed at building job readiness in areas such as retail and financial sales, customer service, and apparel manufacturing. The programs not only teach relevant technical skills; they also use role-playing and team exercises to impart behavioral and mindset skills such as punctuality and resilience. By 2017 more than 8,000 young Kenyans had gone through a Generation program, with 89% of them finding formal employment within three months of graduationheartening evidence that smart development programs can quickly equip young people, wherever they are, to become high-performing employees in modern businesses. (Disclosure: Generation, today a global nonprofit, was founded by McKinsey, and we continue to support it, alongside philanthropic groups such as USAID.)

Other African education innovations are decidedly hightech. GetSmarter is a South African start-up that offers online certification courses to students around the world, supported by remote tutors and coaches. In 2017 it was acquired by the U.S.-based ed-tech company 2U for \$103 million. Another example is the African Leadership University, or ALU. Its campuses in Mauritius and Rwanda empower students to manage their own education using technology, peer-to-peer learning, and four-month internships with partner companies, enabling ALU to get by with a small teaching staff. Founder Fred Swaniker is a Stanford-educated Ghanaian who set about creating a business model for higher education from scratch. "Our university produces talent that competes with students from Harvard and Stanford," he told us. "But we do it using one-tenth of the real estate and at one-tenth to one-twentieth of the cost."

How to Scale and Sustain Innovation

IN OUR CONSULTING WORK we've watched a diverse cohort of entrepreneurial and corporate innovators in Africa and beyond create remarkable businesses on the continent. Although those innovators differ widely in geographic reach and sector focus, they all see challenges as a spur to innovation and unmet market demand as room for growth. They have honed mindsets and practices that companies in other markets could profitably apply to their own growth strategies. That should start with a granular, empathetic understanding of potential customers' needs-recall what M-KOPA did for people who lacked electricity and what Indomie noodles did for consumers seeking cheap, nutritious, and convenient meals. It also means rethinking the business model to truly engage with customers, as Equity Bank did through its agency banking model and its innovations in cell phone banking. These examples point to an additional activity needed for success: harnessing technology in imaginative ways, including to drive down costs and price points.

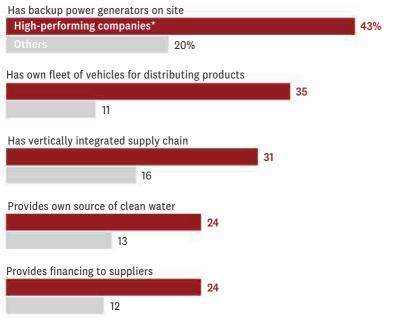
We've also observed that successful African innovators, far from being starry-eyed, are more aware than anyone else of the barriers to success and that they build long-term resilience into their business models. Dufil's Deepak Singhal says that it takes a "lion's heart" to succeed in a market like Africa. "We have our own logistics company, our own raw material, our own plants, and our own packaging facilities," he told us. "Controlling our supply chain is very important." In a global survey of executives, we found that such steps were closely correlated with reported growth and profitability in Africa (see the exhibit "Building Resilience into Your Business"). Given the world's increased volatility—in politics, markets, trade, and even weather—innovative firms everywhere would do well to consider such approaches.

Companies also need to take a firm stand against another tough barrier to business: corruption, which remains widespread in Africa. We advise clients to stick to their values no matter what. We faced a test of that principle ourselves in South Africa, where we briefly explored partnering with a

Building Resilience into Your Business

High-performing companies actively manage the challenges they face. Shown below are results from a survey of executives whose companies do a significant amount of business in Africa.

Share of respondents who say their organization does the following to overcome barriers to conducting business in Africa:



^{*}Companies that reported both rapid revenue growth and significantly increased profitability **Source:** McKinsey Insights executive survey on business in Africa, 2017

local firm to support Eskom, the national electricity utility, only to learn that the firm was owned by a questionable character linked to a national corruption scandal. Although we terminated the discussions, we learned hard lessons from the experience, including how critical it is to deeply understand the context of any potential engagement and the actors involved.

What motivates Africa's innovators to get out of bed each morning, navigate this complex terrain, and keep building their businesses? What they have in common, in our experience, is a deeper purpose. When faced with Africa's high levels of poverty and its gaps in infrastructure, education, and health care, they don't see only barriers to business; they see human issues they feel responsible for addressing. Take Strive Masiyiwa, the chairman of the pan-African telecom, media, and technology company Econet Group. There is no doubting his business ambitions: He is the major shareholder in the fast-growing Liquid Telecom, Africa's largest broadband infrastructure and data services company. But Masiyiwa has put equal energy into philanthropic initiatives; for example, he has used his wealth to provide scholarships to more than 250,000 young Africans. "To be successful, you need to be more than a businessman; you need to be a responsible citizen," he told us. "If you see a problem, think about how you can solve a piece of it." He added, "The exciting part is asking 'What is the root cause of this problem? What can we do to address that root cause?"

Graça Machel, an international human rights advocate (and the chancellor of ALU), points to business's responsibility to help meet the UN's Sustainable Development Goals. "Those goals are an ambitious universal call to end poverty, protect the environment, and ensure that all members of our global family enjoy peace and prosperity," she told us. "They require that we leave no one behind." Machel sees an opportunity for the private sector to partner in poverty eradication efforts and collaborate with the public sector and civil society to drive job creation on a massive scale. That will "require a change in mindset in all of us," she said. "Entire industries and leaders themselves have to meaningfully transform-it can no longer be business as usual." Her late husband Nelson Mandela would have agreed. As he famously wrote, "There is no passion to be found playing small-in settling for a life that is less than the one you are capable of living."

HUMANKIND HAS NEVER before had such resources, knowledge, and technology at its disposal—yet it is a long way from translating those advances into decent livelihoods and dignified lives for all the world's people. We believe that innovation by businesses large and small can play a central role in solving the world's greatest challenges and ushering in an era of shared abundance. Addressing the deprivation that is still widespread in Africa will be an important step toward that goal. But the challenges Africa is known for are present to a surprising degree in every other region of the globe. That makes the innovations born in the African test lab critically important for the rest of the world. ©

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Transforming Health Care with the Power of Data and Al



ew technologies like artificial intelligence (AI) are allowing organizations to gather, sort, and interpret huge amounts of data. These powerful new tools promise to revolutionize whole segments of the economy, making companies faster, more efficient, and far more personalized.

At Optum, we're not waiting for these changes; we're driving them. Now.

OptumIQ[™] represents the health care intelligence that comes from our curated data, analytics, and multidisciplinary expertise, which we infuse in our products and services.

This article will share examples from our OptumRx[®] pharmacy care services division. We will look at how we have leveraged the power of synchronized data and analytics in the doctor's office, as well as our call centers to serve our clients and their members.

Using Data to Simplify Prescribing

Increasingly, doctors are treating patients who could benefit from one of today's advanced medicines. But making that decision is not always simple. These drugs are often very expensive. In addition, they can be highly targeted; aimed only at certain types of a disease, or only at people with precisely defined genetic features. Finally, coverage rules are complicated, and until now, doctors have rarely had detailed insight into how they work for an individual's benefit level.

In order to make this process work better for doctors and patients, OptumRx has

created a new tool called PreCheck MyScript. PreCheck MyScript seamlessly integrates with physicians' electronic medical record (EMR) systems, and provides real-time, memberspecific benefit information at the time and place of patient care.

PreCheck MyScript gives physicians access to benefit information, including whether or not a medication is covered, how much the medication will cost, and even if there is an alternative that will save the member money. This allows physicians to compare recommended treatment options side by side. If prior authorization is required, physicians can process in the EMR, with immediate approval in most cases.

PreCheck MyScript brings together highly diverse data streams into one simple-touse tool. Our unique ability to combine pharmacy and coverage data translates into actionable insights for providers using PreCheck MyScript.

Since OptumRx launched PreCheck MyScript in 2017, more than 1.8 million patients have filled their prescriptions faster and at lower costs. Results to date include:

- One out of five transactions with a recommended alternative resulted in a drug change or lower-cost alternative, delivering significant cost savings for patients and payers.
- More than 30 percent of PreCheck MyScript prior authorizations were initiated electronically—or were avoided altogether—as a result of access to realtime patient-specific benefit information.

John Prince, chief executive officer, OptumRx, recently summarized the advantages like this: "PreCheck MyScript enables patients and their care providers to know out-of-pocket costs and lower-cost alternatives while at the doctor's office increasing adherence, convenience, and outcomes, while driving costs down."

Improving the Call Center Experience

In this section we will look at two kinds of call center experiences: One prioritizes high-volume/fast resolution, while the other emphasizes high-touch/high-impact contacts with members. Our members only need one phone number to contact OptumRx and we provide them with the experience that best fits their needs.

AI-Enabled High-Volume/Fast-Resolution Calls

Modern high-volume call centers, like those that support the OptumRx home delivery service, have moved far beyond the old "first-available representative" call routing. That's a requirement when you operate at the scale we do, filling some 60 million prescriptions per year.

While over 99 percent of these prescriptions proceed without delay, sometimes questions do arise. In order to capitalize on our highly automated fulfillment centers, we need to reconcile these questions as quickly as possible. So OptumRx has leveraged an artificial intelligence and machine learning (AI/ML) capabilities to perform an automated way to match member questions or problems with the right people best able to solve them. This is called **behavioral pairing**.

Behavioral pairing begins with the system categorizing all of the variables of possible questions or issues. Then, it identifies subtle strength patterns among our work force, in order to determine what kinds of problems each employee excels at solving.

Next, the system automatically routes the call to the representative who is the best match to the member who called, and to this specific question or issue.

Finally, the AI software is continuously analyzing the data for each outcome, relative to both the types of questions or problems and the performance of the OptumRx representatives. In effect, the system is learning to improve itself, with no human interaction.

The result is a better member experience, and an increased ability for OptumRx to promote higher medication adherence rates and better health for millions of members with chronic conditions.

Data-Enabled High-Touch/ High-Impact Engagement with Members

Our final example illustrates how OptumRx has leveraged ongoing advances in predictive analytic technology to drive a very different kind of member call experience. In these situations, our member advocates field all sorts of questions from members, often for common issues like a lost identification card, or the location of a local network pharmacy.

Our goal in these situations is to look past the initial reason for their call. Instead, we treat these calls as golden opportunities to connect with each member on health and savings opportunities, like condition management, pharmacist medication consults, lower-cost-drug alternatives, wellness programs, and behavioral services.

Our approach incorporates a customized recommendation engine, backed by OptumIQ, that suggests the next best

action to the call center agent, providing him or her with robust benefit information. This approach to customer care considers all of the relevant variables to automatically populate the advocate's dashboard screen with personalized care improvement choices. As a result, the representative can suggest the best solutions available under the member's benefit to help promote cost savings and better outcomes.

After first addressing the member's reason for calling, we can address other memberspecific opportunities to save money and utilize other program benefits. And these opportunities are presented to the member in a highly personalized way: Our Next Best Action approach incorporates a uniquely unified data infrastructure with advanced analytics to **rank-order** the self-care options offered to members under their plan.

Employing principles from the emerging field of behavioral economics, Next Best Action (NBA) uses predictive analytics to determine the likelihood that someone will accept a given engagement option.

Employing principles from the emerging field of behavioral economics, NBA uses predictive analytics to determine the likelihood that someone will accept a given engagement option, for example, a smoking cessation program. We call this **propensity to accept**.

While we might offer the member several options for better health, the best course of action for that individual, as determined by the model, is listed first. In other words, we can help them determine not just a next best action, but the next best action that is personalized for them. This significantly increases patient engagement, which translates into higher aggregate medical expense savings for clients and a better experience and better health outcomes for members.

OptumIQ[™]: Health Care Intelligence Delivered

CURATED DATA Build a common language.

We integrate data from across health care, standardizing and linking records to create a comprehensive view of quality, cost, access, and satisfaction.

LEADING ANALYTICS Innovate with purpose.

We apply artificial intelligence to metrics and measures in pragmatic ways, looking for patterns that transform data into insights.

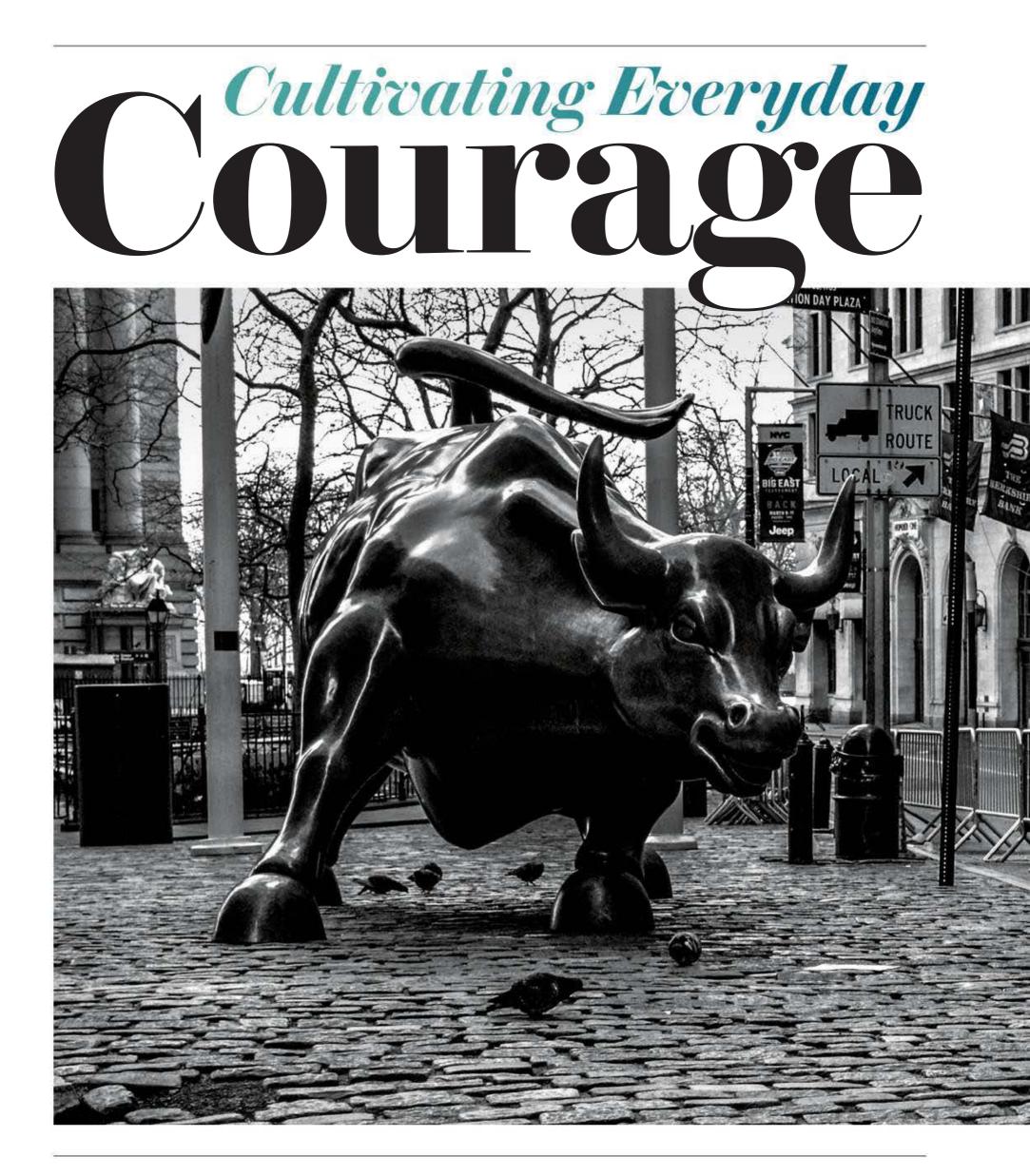
APPLIED EXPERTISE Guide action for success.

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The right way to speak truth to power









IDEA IN BRIEF

THE CHALLENGE

Professionals who perform courageous acts—such as pushing to change a flawed policy or speaking out against unethical behavior—risk their reputations and even their jobs.

A BETTER WAY

.....

People who succeed in their courageous acts, or suffer fewer negative consequences, tend to exhibit certain behaviors and attributes: They lay the groundwork for action; they carefully choose their battles; they manage messaging and emotions; and they follow up afterward.

GETTING STARTED

A good way to learn and master competently courageous behaviors is to engage in smaller, everyday acts before proceeding to progressively more difficult ones. Above all, keep your values and purpose front and center.

In many stories we hear about workplace courage,

the people who fight for positive change end up being ostracized-and sometimes even lose their jobs. What I've seen in the course of my research, though, tells a more nuanced story. Most acts of courage don't come from whistleblowers or organizational martyrs. Instead, they come from respected insiders at all levels who take action-be it campaigning for a risky strategic move, pushing to change an unfair policy, or speaking out against unethical behavior-because they believe it's the right thing to do. Their reputations and track records enable them to make more headway than those on the margins or outside the organization could. And when they manage the process well, they don't necessarily pay a high price for their actions; indeed, they may see their status rise as they create positive change.

Consider Martha (not her real name), a finance manager at a small company. For years she endured risqué comments and sexual innuendo from her boss, the company president, and she struggled with how to handle it: Should she talk to him about his behavior, or just quit? How could she protect the other women at the firm? Then, at a staff gathering, her boss grabbed her inappropriately during a light moment, thinking it was funny. Later that day, she confronted him in his office, prepared to quit if he made no changes. She told him that his behavior made her uncomfortable and was a signal to her that she'd never advance in the company because he didn't view her as an equal. She said that perhaps he was trying to promote a fun work environment, but he was failing.

Martha was terrified that he would fire her, be angry, or tell her to toughen up. But instead, to her surprise, he apologized. He was horrified that this was how she felt—and that other women in the company probably felt the same way. He praised her for speaking out when no one else had dared to. Over subsequent months, he continued to seek her guidance on the issue and made a formal apology to the staff. A year later, Martha was promoted to a VP role: an incredible position to be in for someone who once believed that the president would never promote a woman to that level.





I began investigating workplace courage after spending more than a decade studying why people so often don't speak up at work. I've found many examples of people at all levels who created positive change without ruining their careers. Their success rested primarily on a set of attitudes and behaviors that can be learned, rather than on innate characteristics. I call people who exhibit these behaviors competently courageous because they create the right conditions for action by establishing a strong internal reputation and by improving their fallback options in case things go poorly; they carefully choose their battles, discerning whether a given opportunity to act makes sense in light of their values, the timing, and their broader objectives; they maximize the odds of in-the-moment success by managing the messaging and emotions; and they follow up to preserve relationships and marshal commitment. These steps are useful whether you're pushing for major change or trying to address a smaller or more local issue.

Lest anyone think I'm naive, let me be clear: Of course bad things do happen when people challenge authorities, norms, and institutions. Courage, after all, is about taking worthy actions *despite the potential risk*. If no one ever got fired, was socially isolated, or suffered other consequences for a particular action, we wouldn't consider it courageous. And good outcomes are more likely to come from some types of actions than from others. For example, challenging the inappropriate behavior of a colleague with whom you have a decent relationship is, all else being equal, likely to go better for you than defying the entire power structure over an unethical practice.

Among those I studied who had failed to create positive change, almost all still thought their risk-taking had been the right thing to do. They were proud they had stood up for what they believed in—but they wished they'd done so more skillfully. Following the four principles laid out here can help people at all levels improve their chances of creating positive change when they do decide to act.

Laying the Groundwork

My research shows that employees whose workplace courage produces good results have often spent months or years establishing that they excel at their jobs, that they are invested in the organization, and that they're evenhanded. They've demonstrated that they're able to stand both apart from and with those whose support they need. In doing so, they've accumulated what psychologists call idiosyncrasy credits—a stock of goodwill derived from their history of competence and conformity—which they can cash in when challenging norms or those with more power. (I've also seen the reverse: When people with a reputation for selfishness or ill will stand up for legitimately needed change, they tend to be less successful.)

Competently courageous people also work to earn the trust of those who see them as their champions. They invest in those relationships, too—engaging with people individ-ually, taking the time to empathize with them, and helping them develop professionally.

Consider Catherine Gill, a former senior vice president of fundraising and communication at the nonprofit social investment fund Root Capital. Gill wanted to speak up about what she and colleagues saw as the organization's unintentional yet manifest internal bias against women. The issue was particularly tricky because criticizing the leadership could easily be viewed as criticizing the organization's socially conscious mission. But she was able to launch an honest—if painful—conversation with her colleagues in senior management about the organization's culture, leading to a number of concrete changes.

Gill's track record of excelling and fitting in at the organization was fundamental to her success. Over her first two years at Root Capital, she achieved consistently high performance as a fundraiser and exhibited the emotional and intellectual intelligence to navigate complex issues. She showed that she was deeply committed to the organization's mission, regularly adjusting her role to tackle the most pressing challenges and showing how various initiatives she launched were aligned with core strategic priorities. She was careful to point out when she didn't consider something a gender issue so that people on both sides would see her as fair. All that gave her the idiosyncrasy credits she needed to be heard by the leadership team. She determined the limits of what change was possible so that she wouldn't push too far and get "voted off the island." Through her work ethic, judgment, and humor, she set the stage for more visible moments of courageous action.

Not every opportunity to display courage is worth taking. The people I've studied
who have been successful in their courageous acts asked themselves two questions before moving ahead: Is this really important? and, Is this the right time?

Sometimes things don't work out, even with the best preparation. Competently courageous people develop mechanisms to mitigate fallout. That might mean finding ways to make themselves indispensable to the organization, keeping external options open, or minimizing economic reliance on an employer. For example, former Telecom Italia leader Franco Bernabè rejected many of the perks that came with being the CEO of a major company, knowing that doing so made it easier to take risks. "If I had lost my job," he said, "and gone back to something more subdued and less glamorous—well, it wouldn't have changed my life."

Choosing Your Battles

Not every opportunity to display courage is worth taking. The people I've studied who have been successful in their courageous acts asked themselves two questions before moving ahead: Is this really important? and, Is this the right time?

Importance, of course, lies in the eye of the beholder. It depends on your goals and values and those of your colleagues, stakeholders, and the organization itself. As you gauge whether an issue is truly important, be aware of your emotional triggers; allow yourself to be informed but not held hostage by them. Also assess whether engaging in a potential battle—whatever the outcome might be is likely to aid or hinder winning the war. Ask yourself, for example: Will securing resources to address this problem make it less likely that a higher-priority proposal will subsequently get funded?

Competently courageous people are masters of good timing. To avoid being seen as a broken record, they are less likely to act if they recently cashed in hard-earned idiosyncrasy credits. They observe what is going on around them, and if the timing doesn't look right, they patiently hold off. They scan the environment for events and trends that could support their efforts, making the most of an organizational change or the appearance of a new ally, for example. They stay attuned to attention cycles—to public upwellings of enthusiasm for the issue at hand. Pushing for a more globally representative strategy or leadership team, for example, was for a long time risky in many organizations; now companies are more open to tackling those issues. Unless they've concluded that taking action is necessary to preserve their sense of integrity or to plant the seed of an idea, competently courageous people don't act before those around them are ready to take them seriously.

For example, when "Mandy" joined an accessories and apparel company as a product manager, she quickly learned that one of the company's vendors was highly problematic. Its reps were rude, dishonest, and manipulative, and the product itself was subpar. However, ties between the two companies were long-standing and included a friendship between two key managers. Mandy wisely waited; she didn't suggest a change until six months later. By that point she had demonstrated her commitment to the organization, and she was better able to gauge the relationships between the people involved. She used the intervening time to collect evidence of the problems, identify alternative vendors, and quantify the improvements they could offer. When she finally did make her proposal, the VP in charge responded positively.

In some cases, conditions or events such as sagging sales or a change in leadership create urgency for courageous acts—and make them more likely to succeed. Tachi Yamada, a physician-scientist turned business leader, has been a

FURTHER READING

"Get the Boss to Buy In" Susan J. Ashford and James R. Detert HBR, January-February 2015

"Harnessing the Science of Persuasion" Robert B. Cialdini HBR, October 2001 The HBR Guide to Office Politics, "Conducting Difficult Conversations" Karen Dillon HBR Press, 2015

"The Necessary Art of Persuasion" Jay A. Conger HBR, May–June 1998 "Moves That Matter: Issue Selling and Organizational Change" Jane E. Dutton, Susan J. Ashford, Regina M. O'Neill, and Katherine A. Lawrence Academy of Management Journal, 2001 Giving Voice to Values: How to Speak Your Mind When You Know What's Right Mary C. Gentile Yale University Press, 2012 Made to Stick: Why Some Ideas Survive and Others Die Chip Heath and Dan Heath Random House, 2007



master of seizing the day during a successful career as a senior executive in the health care sector. When Yamada became head of R&D at Smith Kline Beecham in 1999, he quickly concluded that the R&D organization needed to be restructured around disease areas or "assets" (the molecules or compounds that might eventually make it to market) rather than the traditional silos. When a merger with another pharmaceutical giant-Glaxo-was announced, he campaigned for the R&D function of the combined company to be structured in that way. The proposal didn't go over well. R&D leaders and scientists at Glaxo were particularly upset; here was the new guy from the much smaller company in the merger telling them they needed a major change. They "were pretty much aligned against me," recalls Yamada. But he knew that the timing could be used to his advantage: "The merger and the thin pipeline in both companies gave me a burning platform." His push for the reorganization succeeded in part because of his ability to recognize the opportunity and capitalize on it.

Persuading in the Moment

Workplace courage is, of course, about more than preparation. Eventually you must take action. During this step, competently courageous people focus primarily on three things: framing their issue in terms that the audience will relate to, making effective use of data, and managing the emotions in the room. (See "Further Reading" for more on persuasion.) They connect their agenda to the organization's priorities or values, or explain how it addresses critical areas of concern for stakeholders. They ensure that decision makers feel included—not attacked or pushed aside.

Mel Exon, a former executive at the advertising firm Bartle Bogle Hegarty (BBH), excels at framing proposals in ways that make them attractive to those whose support she needs. For example, when Exon and a colleague first pitched the idea for an internal innovation unit—BBH Labs to senior management, support was far from unanimous. Some executives worried that the creation of a separate innovation group would imply that parts of BBH *weren't* innovative. This was a concerning in a firm that proudly considered itself the contrarian visionary in the industry, with a black sheep as its calling card. To convince the skeptics that BBH Labs was philosophically aligned with the company's mission, Exon took advantage of internal stakeholders' pride in the black sheep image, pointing out that some of BBH's clients had come to the company specifically for groundbreaking ideas. A lab focused on innovation would fulfill exactly that need. She won over others by describing the work of the new lab as advance scouting, promising that everyone at the firm would share in its findings. Exon eventually got the go-ahead from senior management, and later BBH's CEO complimented her approach, describing it as building on the company's DNA rather than trying to change it.

Keeping your cool as you perform your courageous act can be just as important as how you make your case. A manager I'll call Erik, who was tasked with growing the solar business at one of the world's largest multinationals, frequently butted heads with senior executives in the company's traditional lines of business. When he sought their support for new business models, they often pushed back, telling him brusquely, "We don't do that" or "That will never work here." The discussions could get heated, and Erik often felt frustrated by the executives' defensiveness. But instead of taking the emotional bait, he reminded himself that their response was a normal reaction to fear of the unknown. Acknowledging their mindset helped him stay calm and concentrate on simply making data-driven arguments. In the end, he was able to bring others around to his point of view, and the business made a strong pivot toward his recommended strategy.

Following Up

Those who exhibit competent courage follow up after they take action, no matter how things turned out. They manage their relationships with the people involved: When things go well, they thank supporters and share credit. When things go badly, they address lingering emotions and repair ties with those who might be hurt or angry.

For example, Catherine Gill made an in-the-moment decision to launch her campaign to change the culture at Root Capital during a retreat with about 30 leaders present. But as a result of her spontaneous decision, she caught the CEO off guard. Knowing that the very difficult conversation

Competently courageous behaviors can be learned. They're dependent on effort and practice, rather than on some heroic personality trait limited to the few.

that ensued might have felt to him like an indictment of his leadership—and that he might see her actions as a personal attack—Gill checked in with him privately at that evening's dinner. She assured him that she wasn't trying to start a revolution; she was trying to advance the firm's evolution into its ideal form.

Follow-up also means continuing to pursue your agenda beyond the first big moment of action. Even when their initial steps go well, the competently courageous continue to advocate, reach out to secure resources, and make sure others deliver on promises. And when things don't go well, they take it in stride, viewing setbacks as learning opportunities rather than hiding from the fallout or giving up.

Take Fred Keller, who established a welfare-to-career program at the company he founded, Cascade Engineering. In the initiative's first incarnation, participants were often late or absent, and their performance was poor. Within a few weeks, not one of the new hires remained, and Cascade's employees and supervisors were left feeling frustrated. Instead of giving up, Keller viewed the failure as an opportunity to learn. Finding that neither Cascade nor its new hires had been well prepared for the program, he reinstated it with more training for everyone involved. When this second attempt seemed headed toward a similar fate, Keller harnessed the growing criticism to get it right. He further increased training of leaders and partnered with a county official to bring a social worker on-site to work with the new hires to identify and solve problems before they escalated. This time Keller's persistence and learning paid off: The program is now a core part of the organization and is widely lauded as a model for transitioning people from welfare to work. And through his persistence, Keller earned tremendous loyalty from his staff at all levels of the company.

Getting Started

Courage isn't required only for high-stakes campaigns. My research with Evan Bruno, a PhD student at Darden, shows that a host of everyday actions require employees to act courageously. Sometimes simply doing one's job well requires courage. It's also worth noting that "risk" encompasses more than the prospect of financial ruin or getting fired. Humans naturally fear rejection, embarrassment, and all sorts of other social and economic consequences. From the outside, for example, it might be easy to question whether Fred Keller's actions required courage. As the owner of the company, Keller could do whatever he wanted, so where's the risk? But for years, he faced doubters both inside and outside his organization. To persevere knowing that people might think he was a "nutcase" or that he was wasting time or money took courage.

The good news is that the experiences of those I've studied show that competently courageous behaviors can be learned. They're dependent on effort and practice, rather than on some heroic personality trait limited to the few. (So don't use that as an excuse to let yourself off the hook if you find yourself in a situation that calls for courage!) One piece of advice I give to students and clients: Don't jump into the deep end right away. Instead, approach this work incrementally by trying smaller, more manageable acts before proceeding to progressively harder ones. That might mean having a difficult conversation in some other sphere of life, or broaching a tough topic with a colleague you like and respect, before confronting a boss about demeaning behavior. It might mean guiding your own team in a new direction before suggesting a transformation of the whole organization. And consider what "small" means to you-we all have different perceptions of which actions require courage. (To see how your perception of what takes courage lines up with others', take our Workplace Courage Acts Index self-assessment at www.workplacecai.com.) Then, as you tackle each step, focus on what you learn, not whether it goes perfectly the first time.

Above all, keep your values and purpose front and center. You'll have a stronger sense of self-respect through any setbacks you face, and you'll be less likely to regret your actions, no matter how things turn out. And by using the principles discussed in this article, you'll increase the chances of successfully creating change, making the risks you take all the more worthwhile. Image MBR Reprint R1806K

JAMES R. DETERT is a professor of business administration and the associate dean of Executive Degree Programs and Leadership Initiatives at the University of Virginia's Darden School of Business.



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MANAGING YOURSELF

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Four strategies for motivating yourself

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The former U.S. secretary of state on collaboration and compromise

Motivating yourself is hard. In fact, I often compare it to one of the exploits of the fictional German hero Baron Munchausen: Trying to sustain your drive through a task, a project, or even a career can sometimes feel like pulling yourself out of a swamp by your own hair. We seem to have a natural aversion to persistent effort that no amount of caffeine or inspirational posters can fix.

But effective self-motivation is one of the main things that distinguishes high-achieving professionals from everyone else. So how can you keep pushing onward, even when you don't feel like it?

To a certain extent, motivation is personal. What gets you going might not do anything for me. And some individuals do seem to have more stickto-itiveness than others. However, after 20 years of research into human motivation, my team and I have identified several strategies that seem to work for most people—whether they're trying to lose weight, save for retirement, or implement a long, difficult initiative at work. If you've ever failed to reach an attainable goal because of procrastination or lack of commitment—and who of us hasn't?—I encourage you to read on. These four sets of tactics can help propel you forward.

DESIGN GOALS, NOT CHORES

Ample research has documented the importance of goal setting. Studies have shown, for example, that when salespeople have targets, they close more deals, and that when individuals make daily exercise commitments, they're more likely to increase their fitness levels. Abstract ambitions—such as "doing your best"—are usually much less effective than something concrete, such as bringing in 10 new customers a month or walking 10,000 steps a day. As a first general rule, then, any objectives you set for yourself or agree to should be specific.

Goals should also, whenever possible, trigger intrinsic, rather than extrinsic, motivation. An activity is intrinsically motivated when it's seen as its own end; it's extrinsically motivated when it's seen as serving a separate, ulterior purpose—earning you a reward or allowing you to avoid punishment. My research shows that intrinsic motives predict achievement and success better than extrinsic ones do.

Take New Year's resolutions. We found that people who made resolutions at the start of January that were more pleasant to pursue—say, taking on a yoga class or phone-free Saturdays—were more likely to still be following through on them in March than people who chose more-important but less enjoyable goals. This is despite the obvious fact We don't all get assignments we love. The trick is to focus on the *elements* of the work that you do find enjoyable. Think expansively about how the task might be satisfying—by, for example, giving you a chance to build important internal relationships.

that aspirations for the New Year are usually tough to achieve; if they weren't, they wouldn't require a resolution!

Of course, if the external reward is great enough, we'll keep at even the most unpleasant tasks. Undergoing chemotherapy is an extreme example. In a work context, many people stay in their jobs for the money, feeling like "wage slaves." But in such situations they usually do the minimum required to meet the goal. Extrinsic motivation alone is unlikely to help us truly excel.

In an ideal world we would all seek out work roles and environments that we enjoy and thus keep our engagement high. Unfortunately, people often fail to do this. For example, my research shows that when asked whether positive relationships with colleagues and managers are critical in their current position, most people say yes. But they don't remember that office morale was key to success in past jobs, nor do they predict it will be important for them in the future. So simply remembering to consider intrinsic motivation when choosing jobs and taking on projects can go a long way toward helping sustain success.

In cases where that's impractical—we don't all find jobs and get assignments we love—the trick is to focus on the *elements* of the work that you do find enjoyable. Think expansively about how accomplishing the task might be satisfying—by, for example, giving you a chance to showcase your skills in front of



your company's leaders, build important internal relationships, or create value for customers. Finally, try to offset drudgery with activities that you find rewarding for instance, listen to music while tackling that big backlog of e-mail in your in-box, or do boring chores with friends, family, or your favorite colleagues.

FIND EFFECTIVE REWARDS

Some tasks or even stretches of a career are entirely onerous—in which case it can be helpful to create external motivators for yourself over the shortto-medium term, especially if they complement incentives offered by your organization. You might promise yourself a vacation for finishing a project or buy yourself a gift for losing weight. But be careful to avoid perverse incentives. One mistake is to reward yourself for the quantity of completed tasks or for speed when you actually care about the quality of performance. An accountant who treats herself for finishing her auditing projects quickly might leave herself open to mistakes, while a salesperson focused on maximizing sales rather than repeat business should probably expect some unhappy customers.

Another common trap is to choose incentives that undermine the goal you've reached. If a dieter's prize for losing weight is to eat pizza and cake, he's likely to undo some of his hard work and reestablish bad habits. If the reward for excelling at work one week is to allow yourself to slack off the next, you could diminish the positive impression you've made. Research on what psychologists call balancing shows that goal achievement sometimes licenses Interestingly, giving advice rather than asking for it may be an even more effective way to overcome motivational deficits, because it boosts confidence and thereby spurs action.

people to give in to temptation—which sets them back.

In addition, some external incentives are more effective than others. For instance, in experiments researchers have discovered that most people work harder (investing more effort, time, and money) to qualify for an uncertain reward (such as a 50% chance of getting either \$150 or \$50) than they do for a certain reward (a 100% chance of getting \$100), perhaps because the former is more challenging and exciting. Uncertain rewards are harder to set up at work, but not impossible. You might "gamify" a task by keeping two envelopes at your desk-one containing a treat of greater value—and picking only one, at random, after the job is done.

Finally, loss aversion—people's preference for avoiding losses rather than acquiring equivalent gains-can also be used to design a strong external motivator. In a 2016 study scientists from the University of Pennsylvania asked people to walk 7,000 steps a day for six months. Some participants were paid \$1.40 for each day they achieved their goal, while others lost \$1.40 if they failed to. The second group hit their daily target 50% more often. Online services such as StickK.com allow users to choose a goal, like "I want to quit smoking," and then commit to a loss if they don't achieve it: They have to donate money to an organization or a political party that they despise, for example.

SUSTAIN PROGRESS

When people are working toward a goal, they typically have a burst of motivation early and then slump in

the middle, where they are most likely to stall out. For instance, in one study observant Jews were more likely to light a menorah on the first and last nights of Hanukkah than on the other six nights, even though the religious tradition is to light candles for eight successive days. In another experiment, participants who were working on a paper-shape-cutting task cut more corners in the middle of the project than they did on their initial and final shapes.

Fortunately, research has uncovered several ways to fight this pattern. I refer to the first as "short middles." If you break your goal into smaller subgoals say, weekly instead of quarterly sales targets—there's less time to succumb to that pesky slump.

A second strategy is to change the way you think about the progress you've achieved. When we've already made headway, the goal seems within reach, and we tend to increase our effort. For example, consumers in loyalty programs tend to spend more when they're closer to earning a reward. You can take advantage of that tendency by thinking of your starting point as being further back in the past; maybe the project began not the first time you took action but the time it was first proposed.

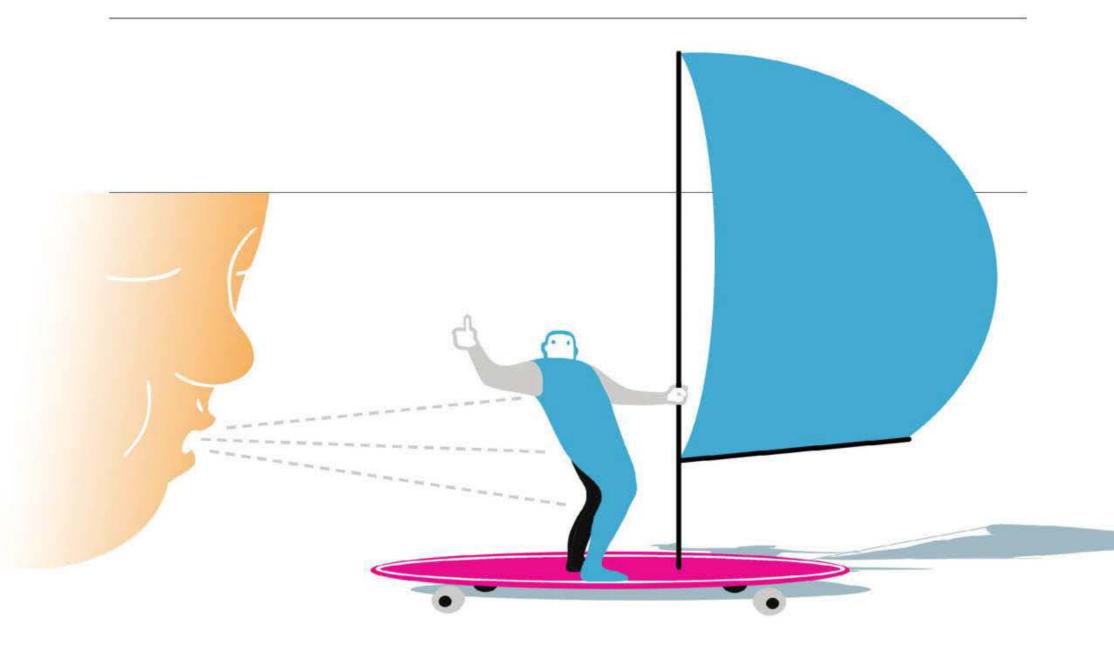
Another mental trick involves focusing on what you've already done up to the midpoint of a task and then turning your attention to what you have left to do. My research has found that this shift in perspective can increase motivation. For example, in a frequent-buyer promotion, emphasizing finished steps ("you've completed two of 10 purchases") increased customers' purchases at the beginning, and emphasizing missing steps ("you are two purchases away from a free reward") spurred consumption as buyers neared the goal.

This tactic can work for rote tasks (such as sending out 40 thank-you notes) as well as for more-qualitative goals (becoming an expert pianist). The person writing the notes can gain motivation from reminding herself how many she's sent until she passes 20; then she should count down how many she has left to do. In the same way, a novice pianist should focus on all the scales and skills she has acquired in her early stages of development; then, as she improves, focus on the remaining technical challenges (arpeggios, trills and tremolos, and so on) she needs to master.

HARNESS THE INFLUENCE OF OTHERS

Humans are social creatures. We constantly look around to see what others are doing, and their actions influence our own. Even sitting next to a highperforming employee can increase your output. But when it comes to motivation, this dynamic is more complex. When we witness a colleague speeding through a task that leaves us frustrated, we respond in one of two ways: Either we're inspired and try to copy that behavior, or we lose motivation on the assumption that we could leave the task to our peer. This is not entirely irrational: Humans have thrived as a species through individual specialization and by making the most of their comparative advantages.

The problem is that, especially at work, we can't always delegate. But we can still use social influence to our advantage. One rule is to never passively



watch ambitious, efficient, successful coworkers; there's too much risk that it will be demotivating. Instead, talk to these peers about what they're trying to accomplish with their hard work and why they would recommend doing it. My research shows that when a friend endorses a product, people are more likely to buy it, but they aren't likely to if they simply learn that the friend bought the product. Listening to what your role models say about their goals can help you find extra inspiration and raise your own sights.

Interestingly, giving advice rather than asking for it may be an even more effective way to overcome motivational deficits, because it boosts confidence and thereby spurs action. In a recent study I found that people struggling to achieve a goal like finding a job assumed that they needed tips from experts to succeed. In fact, they were better served by offering *their* wisdom to other job seekers, because when they did so, they laid out concrete plans they could follow themselves, which have been shown to increase drive and achievement.

A final way to harness positive social influence is to recognize that the people who will best motivate you to accomplish certain tasks are not necessarily those who do the tasks well. Instead, they're folks who share a big-picture goal with you: close friends and family or mentors. Thinking of those people and our desire to succeed on their behalf can help provide the powerful intrinsic incentives we need to reach our goals. A woman may find drudgery at work rewarding if she feels she is providing an example for her daughter; a man may find it easier to stick to his fitness routine if it helps him feel more vibrant when he is with his friends.

IN POSITIVE PSYCHOLOGY, *flow* is defined as a mental state in which someone is fully immersed, with energized focus and enjoyment, in an activity. Alas, that feeling can be fleeting or elusive in everyday life. More often we feel like Baron Munchausen in the swampstruggling to move forward in pursuit of our goals. In those situations it can help to tap the power of intrinsic and extrinsic motivators, set incentives carefully, turn our focus either behind or ahead depending on how close we are to the finish, and harness social influence. Self-motivation is one of the hardest skills to learn, but it's critical to your success. 😡 HBR Reprint R1806L

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CASE STUDY CAN YOU FIX A TOXIC CULTURE WITHOUT FIRING PEOPLE?

A CFO WONDERS HOW TO TURN AROUND A STRUGGLING DIVISION. BY FRANCESCA GINO

The flight attendant had to ask her twice, "Anything to drink, ma'am?"

"Oh, sorry—water, no ice, please," said Noelle Freeman, the CFO of Franklin Climate Systems. Watching the clouds out her window at 30,000 feet, she'd been deep in thought. She was on her way home from two days in Arkansas visiting her company's largest facility. Franklin was in the business of designing, engineering, and manufacturing climate control systems for cars and SUVs. It was a division of FB Holdings, a manufacturing company based in Aurora, Illinois, and it had the unfortunate distinction of having been the group's poorest-performing unit for nearly a decade.

As CFO, Noelle was, of course, concerned about the numbers. But after spending time in Little Rock, she worried they might be facing a bigger problem. She'd gone to Arkansas to review operational plans and financial projections for the rest of the year with the team on the ground. FB Holdings had made it through the financial crisis of 2008 without losing money—but the climate control systems divisions, a Tier 1 automotive supplier, had not fared as well. Franklin had finally returned to profitability, but she and Cameron Koren, a turnaround specialist who'd been brought in as CEO five years earlier to right the ship, were still working hard to keep the business on track. She knew the Little Rock plant had been through years of belt-tightening and turnover, so she hadn't expected a warm welcome, but the negative vibe she'd felt from the employees had been even worse than she'd expected. The word that kept popping into her mind was "toxic."¹

Doug Lee, the company's head of HR, had warned her and Cameron about the plant's "bad mood," as he called it. He'd been very vocal about his concerns that although Franklin was now on stable financial ground, a less quantifiable problem was still dampening performance: extremely low morale and widespread disengagement,² especially in Little Rock.

Noelle had listened to Doug's concerns, but as a numbers person, she'd assumed that once the

FRANCESCA GINO is a behavioral scientist and the Tandon Family Professor of Business Administration at Harvard Business School.

HBR's fictionalized case studies present problems faced by leaders in real companies and offer solutions from experts. This one is based on the HBS Case Study "Webasto Roof Systems Americas: Leadership Through Change" (case no. 917015-PDF-ENG), by Francesca Gino and Paul Green, which is available at **HBR.org**. division was out of the red, the people problems would go away. As the plane descended into Aurora, Noelle wondered if she was wrong. *This may be a problem a spreadsheet just can't fix,* she thought.

TWO DAYS EARLIER

It was Noelle's third scheduled meeting to review financials, and again she was alone in a conference room waiting for people to show up.

When one of the plant supervisors popped his head into the room, she asked, "Are you joining?"

"I guess so," he said noncommittally and took a seat at the opposite end of the table.

Noelle leaned toward him, hoping to demonstrate her eagerness to engage.

He leaned back. "I don't even know if I'm supposed to be here," he said. "I got an invite, but it was forwarded to me by someone else."

Noelle had been hearing things like that all day. It was clear that people weren't communicating across departments or even with colleagues on their own teams. No one seemed interested in hearing a financial update—the few who had shown up in previous meetings were just short of hostile. When she'd walked into the building earlier that day, it had been dead silent. On the plant floor and in the offices people kept to themselves; when she walked by, no one even looked up. There was no bustle, no camaraderie.

"Can I ask you a favor, Marshall?" Noelle asked. "It is Marshall, right?" He nodded. "The feeling is that Aurora is focused on the bottom line. Everything that's been done over the past few years has been about the penny, not the people."

"It doesn't look like anyone else is coming to this meeting," she said, looking at the clock, which now read 11:20. "Can you tell me what's going on here?"

Marshall sat quietly for a minute and then shrugged. "I guess I have nothing to lose at this point," he said. "This just isn't a good place to work anymore. I have people quitting or threatening to quit all the time.³ People don't like coming to work. They clock in and clock out. I've been here for 18 years, and it hasn't always been like this. We used to have fun at work, and we'd hang out together after. Now all I hear is 'I just want to do my job and get out of here.' There's no sense of community."

"Because of the cuts?" she asked, knowing the answer before she even finished the question.

"Yes, exactly. Everyone knows that the company hit hard times. But all the 'belt-tightening'"—he used air quotes here, and Noelle winced, realizing how stupid the euphemism sounded—"has taken a toll. The perks that used to bring teams together—on-site lunches and dinners; bonuses, even small ones—they meant a lot to our people. Now we don't do anything for them. And making \$15 an hour isn't cutting it for them." "I appreciate your being candid with me," Noelle said. "I imagine it can't be easy."

"Like I said, nothing to lose." Marshall smiled ruefully. "But it's sad. I remember when it felt like the company noticed me, even cared about me. But now it's like nobody trusts anybody."

"Is there any way the company can regain your faith?"

"Honestly, I'm not sure. The feeling is that Aurora is focused on the bottom line. Everything that's been done over the past few years has been about the penny, not the people. The message has become 'Just be glad you have a job.' And I haven't seen any signs that things will be changing anytime soon."

BACK IN AURORA

The morning after Noelle returned from Little Rock, she found herself in another empty conference room, this time waiting for Cameron and Doug. A few minutes later, they walked in together.

"How was your trip?" Cam asked. "Bleak," she said. She recounted her meeting with Marshall.

Cam shook his head impatiently. "These are tough times for everyone. Our other sites have felt the pinch, but

CLASSROOM Notes

 When is calling a culture "toxic" appropriate? How bad do things need to be to earn that label? 2. This is not uncommon. Gallup's 2017 State of the Global Workplace report found that 67% of employees are "not engaged" and 18% are "actively disengaged" at work. **3.** Downsizing a workforce by 1% leads to a 31% increase in voluntary turnover the next year, research shows. **4.** Studies show that when employees feel valued by their companies, they are more committed and satisfied in their jobs and show fewer signs of stress and burnout. none has turned as sour as Little Rock." He paused. "You know we're still under intense scrutiny from FB. Layoffs might be our best option to keep things moving in the right direction."

Noelle exchanged a quick glance with Doug. She knew he was adamantly against more layoffs now that they were on better financial footing.

"I realize that personnel cuts are not necessary from a financial perspective. But culturally, it might be time for a purge," Cam continued. "We can't have people like Marshall—a supervisor spreading doom and gloom across the entire facility. We need people who are positive about the company's future, not holding on to an unattainable past."

Doug spoke up. "Respectfully, I disagree with you, Cam." He had never been one to tell the CEO only what he wanted to hear. "These employees have stuck with us through the worst of it, and with the right initiatives, we can bring them back around. Additional layoffs-especially now that we're making money again—would just make things worse. And who wants to join a company that treats its people like that?⁴ How would we find enough people to replace the experienced-albeit disengaged-staff we'd be letting go? And remember the research I showed you: Companies that lay off large numbers of employees are twice as likely to file for bankruptcy as companies that don't."

"But your engagement surveys not to mention the anecdotal stories like Noelle's—show that things are just getting worse," Cam responded. "So I'm struggling to find a way to make this work. We're still not where we need to be operationally and financially, and maybe that's because we have too many people holding us back.⁵ It's like we're surgeons who have a patient bleeding out on the operating table. Do we join hands and sing 'Kumbaya'? Or pull out our scalpels?"

Doug stood firm. "I think—and correct me if I'm wrong, Noelle—that the bleeding has stopped. So now it's more like we have a patient in the ICU who needs help getting better."

He and Cam sat back and looked at her, waiting for her response.

"You're right that we've stabilized, Doug," she said. "But given what I saw in Arkansas, the patient is definitely not out of the woods."

HIT THE RESET BUTTON

The following Saturday, Noelle met her friend Joss at the reservoir near their houses. The two women had gone to business school together and had both ended up in Aurora, so they often turned to each other for work advice. Having executed a successful turnaround as COO of a construction company, Joss had been especially helpful to Noelle during her time at Franklin.

Now, as they started out on their five-mile loop, Noelle described the situation in Little Rock and Cameron and Doug's most recent debate. "We talked a lot about 'excising the bad seeds,' and as you know, we've already laid off a lot of people. But the crazy thing is that even once the worst offenders were gone, morale stayed just as low." "It's not the people who are toxic," Joss said, "it's the culture.⁶ So even though it's hard, you have to fix that first. I gave you the name of the consultants we worked with, right?"

"Yes, Doug and I even had an exploratory call with them. But whenever we've floated the idea of working with them to Cameron, he has shot it down, saying we can't afford it right now. And he's right. Our bottom line will look better if we keep reducing overhead⁷ rather than spending more money to try to fix the problem."

"For our company, it was the best money we ever spent," Joss said. "Arduous, yes. Time-consuming, yes. Most of the time it felt like I was living in a *Dilbert* parody. But employees' attitudes have really improved, and so have the numbers."

"I've got more than enough to do with the financials—I don't know why I'm even getting involved.⁸ But I hate feeling that the executive team is letting our people down—and using my numbers to justify it."

"Bringing the company back to a high level of operational performance will take the focus and energy of hundreds of employees," Joss said. "Cameron is kidding himself if he thinks he can rely on a few good people who somehow—miraculously—manage to stay engaged through another round of cuts."

"I just keep looking around for the reset button," Noelle said.

"Unfortunately, when it comes to culture, no such thing exists."

5. In the U.S. layoffs are straightforward from a legal standpoint. In other countries they are highly regulated, and in some regions companies are required to justify the reductions to authorities.

6. Is Joss right in saying that getting rid of toxic people won't change the culture? **7.** Is this viewpoint too narrow? In a 2012 review of 20 studies of companies that had conducted layoffs, Deepak Datta of the University of Texas at Arlington found that staff reductions had a neutral to negative effect on stock prices in the days after the announcement and that most of the companies eventually suffered declines in profitability. **8.** Should a CFO be getting involved in HR issues?

SHOULD NOELLE SUPPORT THE LAYOFFS OR ADVOCATE FOR CULTURE CHANGE? THE EXPERTS RESPOND

Jeremy Andrus is the CEO of Traeger Grills.

FRANKLIN WILL PROBABLY need to let more people go at some point, and Noelle and Cameron will want to focus those layoffs on employees who don't embrace their values or believe in the future of the company. But I think the leadership team has a lot more work to do before making a decision.

Noelle can't fix these problems by herself; as the CFO, she has only so much power. It's Cameron, the CEO, who needs to take the lead. In fact, I was surprised to hear that he hadn't visited the Little Rock facility himself to get a better sense of what's happening on the ground. He seems disconnected from the people running this business, and that's dangerous. A CEO should never delegate culture.

When I took over Traeger Grills, in 2014, the mood at the company felt a lot like what's described here: There was no collaboration. People wanted to come in, be left alone, and do the minimum amount of work to get their paycheck every other Friday. Everyone—including me, if I'm honest hated going to work then.

Since my earlier experience had been at a start-up, I'd thought that we could strategize and operationalize our way out of the situation. But I was wrong. Business success doesn't lead to a positive culture. It's the other way around.

When I started to listen to people, I heard stories that shocked me. A salesperson told me that he'd taken a client out to dinner—one of the key ways salespeople build connections with customers—and been slapped on the wrist for not getting approval first. Another deserving employee told me that the only bonus he'd ever received from the company before I came was a \$36 check meant to be spent on a turkey. The mood was so bad that when we decided to make some supply chain changes and closed down a warehouse, disgruntled employees set a semitruck on fire in the parking lot.

It became clear to me that the company needed a fresh start, and that was a big part of why we relocated. Of the 140 people employed with us at the time, we invited only about 25 to move with us. We wanted people who believed in our company's values, not ones entrenched in the toxic culture.

Noelle or Cameron might eventually decide that's the right path for Franklin too. But before they fire anybody else, they need to really understand the situation in Little Rock. This is clearly a group of people who have been beaten down. Why do they feel so disengaged? Why have they stayed? What would make them feel invested in the company and their work? They also have to articulate the

BUSINESS SUCCESS DOESN'T LEAD TO A POSITIVE CULTURE. IT'S THE OTHER WAY AROUND.

kind of culture they want to build. Then they can make hiring and firing decisions accordingly.

Leaders create strong cultures when they are transparent with their teams about where the company has been and their aspirations for where it should go. Once Franklin's leaders do this, they might find that many employees can't or won't join them on the journey. But those losses will be for the greater good. Only the right people can help the company thrive.

146 Harvard Business Review November-December 2018 *Philipp Schramm* is the chief financial officer and vice president of human resources of Webasto Roof Systems.

NOELLE SHOULD ADVOCATE to keep people on board, not get rid of them. Franklin needs an "all hands on deck" mentality, where everyone understands the ongoing struggles and feels invested in making the division succeed. That's the only way it will be able to tackle the challenges it's facing—both financial and cultural.

The first step is for leaders in the organization to set a vision. Where should the division be in a year? In five years? How can employees help make that happen? Franklin's managers should then be transparent with employees about exactly where the company stands financially and engage them in the new vision. This gives people something to rally around.

As a next step, management should foster in employees a sense that they are all vital to Franklin's success. Few people in Little Rock feel that their work matters, and that has to change. Of course, convincing disengaged employees to take ownership over their work isn't easy. I'd start by gathering more data on the underlying issues (using employee surveys, for example) or just simply listening to people's hopes and fears.

Franklin should then identify employees who are eager to help change the status quo (using network analysis, for example) and empower them to serve as role models and unofficial leaders of the charge. It's vital to do all this with the support of the parent company.

This case is loosely based on my experience back in 2013 at Webasto Roof Systems, which is part of the Webasto Group, a leading supplier to the automotive industry. To find our change agents, we asked colleagues who wanted to be actively involved in transforming the culture to apply. We had around 180 applications for 18 spots—a good sign. We selected the change agents and met as a group to define our goals for our culture and lay out the employee behaviors that would get us there. Then we rolled out programs to improve interaction and communication and to encourage people to take responsibility for the division's performance. Our parent company supported all these activities, even though they represented a shortterm deviation from groupwide norms.

We did all this without an external consultant, and that was critical to our success. In my experience, bringing in outsiders to reshape your culture can be counterproductive. This work has to

NO MATTER WHAT INDUSTRY YOU'RE IN, IT'S A PEOPLE BUSINESS.

feel authentic and come from people who understand the organization.

I'd be lying if I said our culture is now 100% positive, but we've significantly improved on all the criteria we measure, including financial ones.

CFOs are often tempted to focus only on the numbers. But I've learned that no matter what industry you're in, it's a people business. Franklin needs to tend to its culture now, not take actions that could further destroy it. 🖨

> HBR Reprint R1806M Reprint Case only R1806X Reprint Commentary only R1806Z

COMMENTS FROM THE HBR.ORG COMMUNITY

Target the Saboteurs

A purge will not resolve the culture issue; however, targeted removal of toxic employees may be necessary. Few employees are true saboteurs; most want to do good work. But anyone who is a saboteur has got to go. Kelly Smith Johnston, owner, Clarity Consulting Partners

Change from the Bottom Up Cameron should assemble a team in Arkansas to take responsibility for pushing change. But its membership has to reflect the attitudes of the workers, not company leadership. Culture change should come from the bottom up, and for that you need to empower people who are motivated to change things, even if they disagree with you. Jen Reid-Schram, manager, FlightGlobal

Think Global or Act Local Cameron needs to find out if the problems are confined to the Little Rock plant. If so, it may be the result of toxic leadership that should be replaced. If they are widespread, then Franklin needs to focus on improving culture companywide. Ravi Nemalikanti, senior director, Thomson Reuters

JULIE GAINES

Owner, Fishs Eddy and author of Minding the Store



WHAT I'M READING...

I love U.S. history. It feels connected to what I do: Some of the first products in our store were these sturdy vintage soup bowls and cups once used on Ellis Island. I think David McCullough's books are great. I also loved *Assassination Vacation*, by Sarah Vowell, a funny trip through our culture. Now I'm reading *What Is the What*, about the Lost Boys of Sudan, and *A Hologram for the King*, both by Dave Eggers. I like his voice.

WATCHING...

I watch a lot of CNN and MSNBC, but I just read an article about moms who leave the news on but never really pay attention, so I'm trying to be more disciplined. That said, I'm a big Rachel Maddow fan, which started with my love for her glasses. I also like the late-night shows: Stephen Colbert, Trevor Noah. I don't always

stay up, but I watch the opening monologues on YouTube the next day.



SYNTHESIS PREDICTING THE FUTURE What's really preventing leaders from Taking the long view? By ANIA G. WIECKOWSKI



LEADERS HAVE ALWAYS been eager to see into the future. What will delight customers in six months, a year, two decades? What external factors will influence their industries? What technologies will upset them? Uncertainty, complexity, and volatility—not to mention our own cognitive biases—often foil these attempts to take the long view.

That's why we need to remain vigilant in rationally calculating the future effects of big choices, says science writer Steven Johnson. In *Farsighted: How We Make the Decisions That Matter the Most,* Johnson reminds us that "the ability to make deliberative, long-term decisions is one of the few truly unique characteristics of *Homo sapiens*"—and we're actually getting better at it.

Take scenario planning. The power of this common tool lies in the discipline with which it forces us to explore uncharted territory. For

example, we can counteract the "fallacy of extrapolation"-a bias that causes us to assume that a current trend will continue into the future-by imagining in detail multiple ways a situation might unfold. Johnson suggests examining at least one model that is particularly optimistic, one that is particularly conservative, and one that is just plain odd. The exercise is not about predicting the future; it's "a rehearsal" for it.

A rule of thumb for predicting is that the more inputs you have, the better. Research by Wharton professor Philip Tetlock shows that people who consider multiple points of view make better predictions than those who hew to one perspective. Johnson concurs, recommending that decision makers cultivate diverse voices to avoid blind spots, using small-group activities like charettes to allow those voices to be heard.

Varied points of view can lead to friction, but that's to be encouraged. In *Imagine It Forward: Courage, Creativity, and the Power of Change,* former GE executive Beth Comstock has a name for outsiders who challenge the team to think differently: sparks. She notes that for corporate incumbents like GE, the problem of predicting the future is compounded by the paralyzing fear of making a wrong move because there's so much to lose. Sparks create the kind of discomfort that jolts people into action.

One such spark was entrepreneur and The Lean Startup author Eric Ries, whom Comstock brought in to talk to GE leaders and engineers about new-product development. The existing process depended on making big forecasts about sales and then slowly building a massive product toward that prediction. Comstock wanted to challenge people to think about the future in fresh ways. Ries came from a very different cultural context: Silicon Valley. When he began prodding, the folks at GE admitted that they didn't actually believe the predictions-and realized that they didn't have to predict so far out if they found ways to test ideas in the market quickly.

Fear of forward movement in the face of the unknown is just as prevalent among individuals as it is in firms, and Comstock has a tool for that,

LISTENING TO...

With podcasts, I'm very New York: the *New York Times Book Review*, the *New Yorker*, the *Bowery Boys*, who make the city's history so entertaining. I'll also tune into *This American Life*. But I can't listen when I'm in the car, because I'm a terrible driver and have to focus.



My favorite book is *Hyperbole* and a Half, by Allie Brosh. It's a hysterical, unapologetic graphic autobiography.

WHERE I'M GOING...

I'm an art junkie. I've been collecting since high school mostly oil portraits of everyday people—and I'm in museums all the time. The Metropolitan Museum of Art is the best. You can go in there and spend a week. I visit lots of other retail stores to look and compare, but I'm not big on industry events. I'm not trying to find the next trend; we do our own thing.

too. When her students at Crotonville, GE's institute for management, say they can't do something new because the company won't let them, she literally hands them a permission slip. As interested in creating the future as she is in predicting it, Comstock suggests that would-be innovators keep a stack of such slips at their desks: "Give yourself permission to imagine a better way," she advises.

Leadership guru Simon Sinek sees our difficulty in taking the long view as a mistake of mindset. In his book The Infinite Game, he contrasts activities that have finite rules—like chesswith those that constantly present new challenges-like business. In "infinite games," fixing on a just cause is the only way to outlast existential crises, adapt, and thrive into the future. Much as some parents focus on raising an inquisitive child rather than an obedient one, Sinek urges that leaders think less about endgames and more about new opportunities. Strive to build a customer relationship rather than close a sale; be attentive to the growth of individuals rather than quarterly earnings.

In On the Future: Prospects for Humanity, Martin Rees doesn't tell us how we should think about the future; instead he lays out his own predictions. A celebrated cosmologist and astrophysicist, Rees has written many books on popular science. This one examines trends in biotech, AI, the global climate, and spaceflight. In prognosticating about AI, Rees notes that machines will enable us to make better predictions about everything from which stocks will soar to which diseases will do us in. Of course, they also reveal the overwhelming complexity of our world, as technologist David Weinberger warns in a recent Wired article, forcing us to confront the fact that uncertainty isn't going away anytime soon. (Disclosure: I'm editing Weinberger's forthcoming book from HBR Press.)

A common thread across these volumes is the importance, and difficulty, of combating climate change. Rees laments the ongoing destruction of our planet, sorting out what we can predict—say, how much our CO_2 emissions will warm the planet—from what we can't—how the associated changes in clouds and water vapor will influence further climate change. Comstock's story of bringing the Ecomagination strategy to life at GE exemplifies the challenges of getting a big organization to tackle global ecological problems. Sinek sees federal legislation to reduce emissions as an act of an infinite mindset. And Johnson opens his book with a critique of the shortsighted decision to fill in Manhattan's only source of fresh water in the early 19th century.

Johnson maintains that we're much more deliberate in our predictions and decisions today, but I'm not so sure. Leaders seem unable to agree on what to do in the face of a warming planet. These books point to the need for a stronger response to looming challenges like climate change. We must push ourselves to imagine the fast-approaching future, counteract short-termism and other biases clouding our perspective, look for opportunities to innovate, and recognize that, although it may seem impossible to chart a course in an unpredictable world, inaction itself is also a decision. 😡

"Choosing the right path depends not just on our ability to understand the current state of the system but also on our ability to predict what comes next."

Steven Johnson, Farsighted: How We Make the Decisions That Matter the Most

Farsighted: How We Make the Decisions That Matter the Most Steven Johnson Riverhead Books, 2018

Imagine It Forward: Courage, Creativity, and the Power of Change Beth Comstock with Tahl Raz Currency, 2018

The Infinite Game Simon Sinek Portfolio, forthcoming, 2018

On the Future: Prospects for Humanity Martin Rees Princeton University Press, 2018



EXECUTIVE SUMMARIES NOVEMBER-DECEMBER 2018

SPOTLIGHT THE CEO 100, 2018 EDITION

HBR's annual list of the world's top chief executives page 37

THE COMPLETE SPOTLIGHT PACKAGE IS AVAILABLE IN A SINGLE REPRINT. **HBR Reprint** R1806B Spotlight



THE BEST-PERFORMING CEOs IN THE WORLD

Steadiness and stability—important virtues in turbulent times—characterize the 100 CEOs on HBR's list of top chief executives for 2018. Of those 100 men and women, 70 were on last year's list. Over the past five years, 23 have appeared three times, 17 have appeared four times, and six have appeared five times: Jeffrey Bezos, of Amazon; Pablo Isla, of Inditex (ranked number one for the second year running); Blake Nordstrom, of Nordstrom; Paolo Rocca, of Tenaris; James Taiclet Jr., of American Tower; and Renato Alves Vale, of CCR.

HBR's approach to measuring performance, as well as the unwavering leadership style of these CEOs, accounts for this consistency. Our ranking takes the long view: It's based primarily on financial returns over a CEO's entire tenure—and these executives have been in the role for an average of 16 years. It also factors in each company's rating on environmental, social, and governance (ESG) issues.

Among the biggest issues leaders face right now is the global political environment. Two U.S. CEOs who appear on this year's list hold differing views about speaking out on politics, which they have expressed in recent HBR interviews with editor in chief Adi Ignatius. Satya Nadella, of Microsoft, believes in taking a stand on issues that are directly relevant to his company's business but not in voicing his personal political beliefs. "Taking a political stance [is]...not what our employees expect of me," he says. In contrast, Jamie Dimon, of JPMorgan Chase, says, "If you want the right public policy....[y]ou need to talk about tax policy, trade, immigration, technology."

CEO activism doesn't factor directly into our rankings, but it may be captured indirectly in ESG ratings, which account for company lobbying expenditures, the degree of disclosure on issues such as carbon use, and the existence of a sustainability officer at the company's top level, among other measures.

HOW I DID IT

MANAGING CHANGE



COBRA'S CHAIRMAN ON TURNING AN INDIAN BEER INTO A GLOBAL BRAND

Karan Bilimoria | page 32

When he was a law student at Cambridge University, the author sat in a classic British pub one evening wondering whether to have a too-fizzy lager or a too-heavy ale. He longed to create a more balanced beer that would pair well with food, especially the spicy curries from his native India. Something cold and refreshing but also smooth. He started experimenting, mixing brews that were then on the market to find the right blend.

While on tour in India with his Cambridge polo team, he saw an opportunity to gain some business experience: He could sell Indian-made polo sticks in the UK. After being introduced by chance to India's largest independent brewer, he collaborated with its brewmaster to find the right recipe—and then drove around the UK in a battered old Citroën to market his beer to Indian restaurants.

Eventually the Indian brewery could no longer cope with increasing sales, so Cobra moved production to the UK. Then, after the company weathered what the author calls three "existential" crises, Molson Coors agreed in 2009 to a joint venture with Cobra, which now exports to nearly every European country along with Japan, Canada, and Australia. **HBR Reprint** R1806A

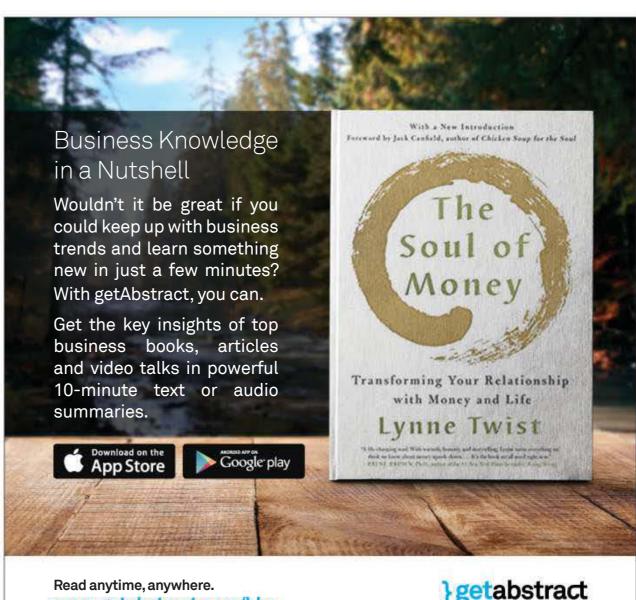
MANAGING YOURSELF



HOW TO KEEP WORKING WHEN YOU'RE JUST NOT FEELING IT

Ayelet Fishbach | page 138

Motivating yourself is one of the main things that sets high achievers apart, and it's hard. How do you keep pushing onward when your heart isn't in it? In her research, Fishbach has identified some simple tactics: Set goals that are intrinsically rewarding, and make them very specific. If a task isn't satisfying, focus on *aspects* of it that are or combine it with pleasant activities. Reward yourself in the right way for getting things done. To avoid slumps, break objectives into subgoals; look at how much you've accomplished until you're halfway there; and then count down what you have left to do. And use social influence: Let high performers inspire you, boost your get-up-and-go by giving advice, and keep the people you want to succeed for front of mind. HBR Reprint R1806L



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FEATURES

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THE END OF BUREAUCRACY

Gary Hamel and Michele Zanini page 50

While most business leaders recognize that bureaucracy squashes initiative, risk taking, and creativity, it continues to thrive. In a complex global environment, it's seen as a necessary coping mechanism.

Many look to start-ups for an answer. But the most promising solution may have emerged in an unlikely place: the world's largest appliance maker, Haier. Under a renegade CEO, it has been divided into 4,000 self-managing microenterprises. About 250 are market facing ("users"), and the rest ("nodes") supply them with components and services like IT and HR support. Users can hire and fire nodes-or contract with outside providers—as they see fit, and nodes' revenues are tied to their users' success.

Ultimately, everyone is accountable to the company's customers. Everyone is also encouraged to be an entrepreneur. All targets are ambitious, and rewards are tiered, performance based, and potentially hefty. So far that formula seems to be working beautifully, producing 18% yearly revenue growth for a decade and \$2 billion in market value from new ventures.

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UNITE YOUR SENIOR TEAM

Bernard C. Kümmerli, Scott D. Anthony, and Markus Messerer page 60

Disruptive change poses existential challenges to leadership teams, raising foundational questions about aspirations, identity, and the very soul of a company. So it is no surprise that leadership teams often struggle to achieve alignment on what degree of growth is needed and what markets and types of innovations to invest in.

This article provides a novel and practical road map for achieving leadership alignment. It offers tools to help executive teams establish a foundation of common understanding, expose misalignment, and catalyze decision making through physical exercises.

The approach is illustrated through the example of Swisscom, a global telecom facing stagnation and decline in a mature industry. Using the program, it converged on a clear long-term growth strategy, launching a set of innovative ventures, creating a VC-like group to oversee new innovation investments, and locking in a schedule of annually increasing funding.

HBR Reprint R1806D



BETTER PEOPLE ANALYTICS

Paul Leonardi and Noshir Contractor | page 70

Lately, people analytics using statistical insights from employee data to manage talent—has gotten a lot of hype and even won mainstream acceptance. Yet most firms lack an understanding of which talent dimensions drive performance in their organizations. Why? Their analytics examine only the *attributes* of employees, when people's *interactions* are equally, if not more, telling.

Research shows that a lot of employees' success can be explained by their relationships something that's the focus of a new discipline, *relational analytics*. The key is finding "structural signatures": patterns in social networks that predict who will have good ideas, which employees have the most influence (it's not senior leaders), which teams will be efficient, which will innovate best, where silos exist, and which employees firms can't afford to lose.

This article describes what indicators to watch for and how most firms already have the raw material they need to build relational analytics models: the "digital exhaust" from their internal communications.

HBR Reprint R1806E



REINVENTING CUSTOMER SERVICE

Matthew Dixon | page 82

Customer service jobs are notoriously joyless, and callers' experiences with reps can be just as unsatisfying. But T-Mobile has a new operating model that's making both employees and customers happier.

There are no rows of service agents robotically responding to random calls as quickly as possible. Instead, T-Mobile relies on colocated, collaborative teams of reps who manage specific accounts in a given locale, with a focus on autonomous problem solving. Reps get morecomprehensive training, managers get more time for coaching, and team members are evaluated on group performance as well as individual performance. In addition, teams are authorized and expected to manage their own P&L statements.

The results are impressive: In three years, T-Mobile has dramatically reduced its customer churn rate, cost to serve, and employee attrition and absenteeism. Its Net Promoter Score is way up too. Other companies might likewise benefit from similar efforts to rethink standard industry practices. **HBR Reprint** R1806F

SALES

INNOVATION



HOW TO SELL NEW PRODUCTS

Thomas Steenburgh and Michael Ahearne | page 92

Senior leaders have great confidence in their ability to develop innovations, say the authors, but not in their ability to commercialize them. This may result from a lack of formal processes and effective talent-management strategies. Steenburgh and Ahearne suggest a new approach: Assess the skills of your salespeople systematically. Train them for knowledge and resilience rather than focusing on a product's bells and whistles. Create a psychological profile of the ideal buyer. And assign strategic account managers to your most important customers.

When new products are launched, the authors write, the best companies are strategically aligned, from the sales force to the C-suite. HR creates competency maps and works with sales managers to establish training and coaching programs. Frontline sales managers support the learning process that their reps go through in the field. And top leaders make sure that pressure to meet earnings targets doesn't stand in the way of future growth. HBR Reprint R1806G



BRING YOUR Breakthrough Ideas to life

Cyril Bouquet, Jean-Louis Barsoux, and Michael Wade page 102

Digital advances in the past two decades have enabled more people than ever before to express creative intelligence. Yet apart from the transformation of services powered by mobile apps and the internet, few sectors have seen spectacular surges of innovation-and only 43% of companies have what experts consider a welldefined process for it. In this article the authors present a five-part framework to guide the development and ensure the survival of breakthrough ideas: Focus attention closely and with fresh eyes, step back to gain perspective, imagine unorthodox combinations, experiment quickly and smartly, and navigate potentially hostile environments outside and within the organization. The elements of this framework are not unique, but collectively they capture the critical role of reflection in conceiving opportunities, the ways in which digital tools can advance them, and the level of organizational reinvention needed in the final push to market. HBR Reprint R1806H Harvard Business Review

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FEATURES

INTERNATIONAL BUSINESS





AFRICA: A CRUCIBLE FOR CREATIVITY

Acha Leke and Saf Yeboah-Amankwah | page 116

How many companies in Africa earn annual revenues of \$1 billion or more? Most global executives guess there are fewer than a hundred; many answer "zero." The reality? Four hundred such companies exist-and they are, on average, faster growing and more profitable than their global peers. There's an unexpected side effect of this growth burst: Africa has become a test lab for global innovation. If your offering is cost-effective and robust enough to succeed on the continent, chances are it will be competitive elsewhere.

The authors offer a taxonomy of six innovation types: moves to build financial inclusion; partnerships for infrastructure development; smart approaches to industrialization; new models of food production: consumer products aimed at the low end of the market; and future-focused capability building, from jobreadiness boot camps to worldclass universities. Technology is the golden thread running throughout: Africa has become a proving ground for digitally enabled breakthroughs that can leapfrog entrenched barriers and unlock exponential progress. HBR Reprint R1806J



CULTIVATING EVERYDAY COURAGE

James R. Detert | page 128

In many stories we hear about workplace courage, the people who fight for positive change end up ostracized or lose their jobs.

Most acts of courage don't come from whistle-blowers or organizational martyrs, however. They come from respected insiders at all levels who take action because they believe it's the right thing to do. And when they manage the process well, they don't necessarily pay a high price; indeed, they may see their status rise.

People who succeed in their courageous acts, or suffer fewer negative consequences, tend to exhibit certain behaviors: They lay the groundwork for action; they carefully choose their battles; they manage messaging and emotions; and they follow up afterward. HBR Reprint R1806K

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Ruth Coffin-Villaroel, MANAGING DIRECTOR

THE BIG IDEA

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WORKING OLDER BY PAUL IRVING

While life expectancy is climbing, fertility rates are plummeting. The population in many parts of the world is aging fast. Many people in this swelling demographic want—or will need—to work deep into what used to be retirement age. Are companies prepared for this shift? Hardly. Though it will affect operations from hiring to training to marketing, few firms have a plan for addressing the "silver tsunami." This Big Idea explores how leaders can move past today's preconceptions about older employees and create a vibrant multigenerational workforce.

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COMPANIES ARE gathering more and more personal data on consumers all the time. How long can this practice go on?

LIFE'S WORK John Kerry Former Secretary of State



After a peripatetic childhood and a stint as a naval officer in Vietnam, Kerry came home to Massachusetts and dedicated his life to public service: as a war protester, a district attorney, a lieutenant governor, and a U.S. senator, a seat he held for 28 years. He narrowly lost the 2004 U.S. presidential election but went on to lead the State Department from 2013 to 2017. Interviewed by Alison Beard

HBR: What should every leader do on his or her first day in a new role, whether it's navy captain or secretary of state?

KERRY: Listen. But also come in with clearly defined standards and goals. One of the greatest deficits of leadership is to not command respect for knowing where you want to go. If people

doubt the mission or how it will be carried out, you've got a problem. That's true in the military, politics, and business.

You've assembled many teams—for campaigns and in your government offices. How do you choose your staff?

I look for people who are smarter than I am—and I like to joke that they're not hard to find. I look for people who will not just say what they think I want to hear but will say no to me and offer their own creative, thoughtful approaches to big challenges. I trust my own judgment, but I want contrary points of view so that I can see all the pluses and minuses before I make the call. Then, when I've made it, I want people who are also ready to go out and be team players and help implement it.

Politicians used to work across party lines to pass important laws. How can we achieve that again?

Those in power have to decide that it's important. They have to stand up courageously and say, "I'm not going to get dragged into this party orthodoxy or tribalism. I'm going to do what's best for the country." The American people elect representatives to go to Washington and get the job done. When you don't have a budget year after year, when you don't fix something that everyone knows is broken—like immigration because you want to create a wedge issue to exploit politically, you are complicit.

When you were a senator, how did you work relationships and process to wield influence? If you can show that you're not just asking people to walk the plank—that you care about them and their future and are sensitive to how you can shape what you're working on to help them—boy, you get a lot of things done.

You talk in your new memoir, Every Day Is Extra, about how compartmentalizing can help even archenemies learn to work together. Yes. Take Russia and Putin. What they've been doing in our elections is unacceptable. What they've done in Ukraine is unacceptable. What they did in Crimea is unacceptable, and we stood up to that with strong sanctions. But you have to compartmentalize because at the same time, you're working with Russia on getting chemical weapons out of Syria or on the Iran nuclear agreement or the Paris climate accord. It's the only way to make important things happen.

You've had some huge political setbacks. After those experiences, how did you reset and recover?

You look at the alternatives—crying into your teacup, pulling away from the field, becoming a hermit—and acknowledge that those are pretty stupid choices. I was not going to be cowed. I was not going to quit. The issues I was fighting for didn't all suddenly go away. So I just decided, I'm going back to work.

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