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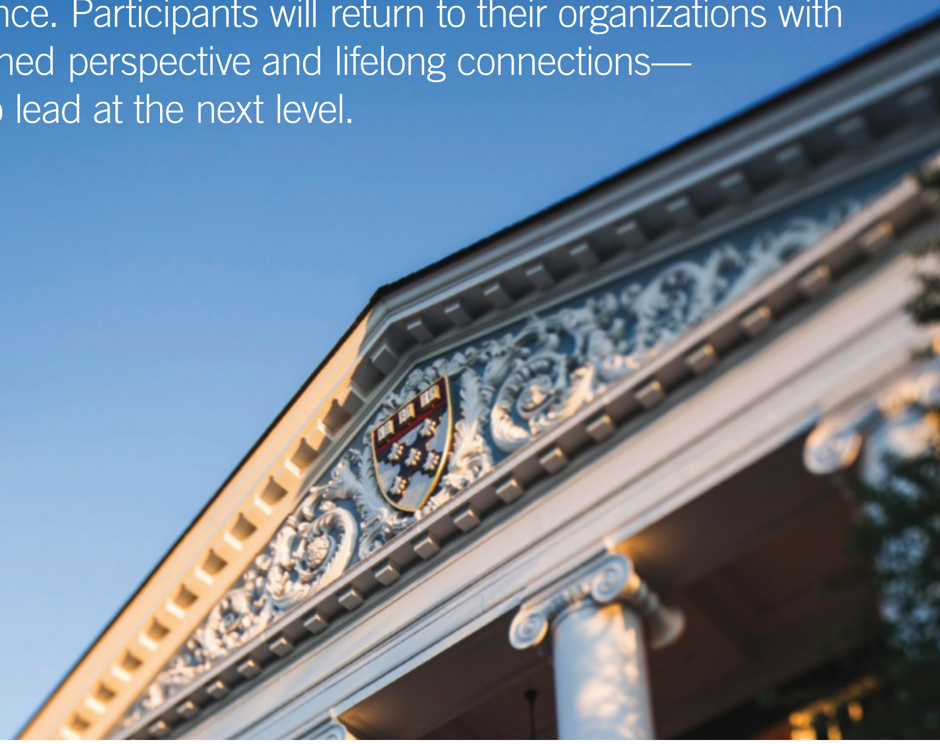

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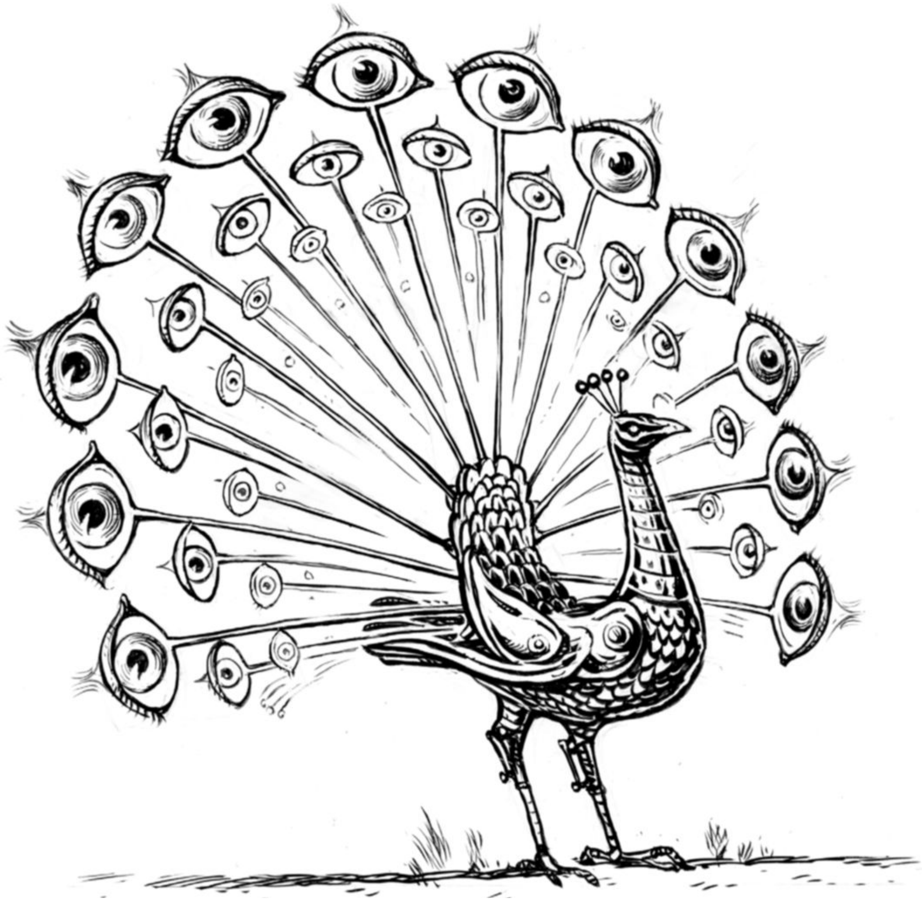

Innovation and Attention

Get a truly innovative chief executive to open up candidly, and you can learn a great deal. We feature five such CEOs in this issue. The first is Danny Meyer, the remarkable entrepreneur who started New York City's iconic Union Square Cafe and the wildly successful Shake Shack chain. In Ann Graham's profile, "Danny Meyer's Recipe for Success," we look closely at the philosophy he calls "enlightened hospitality," which Meyer used to help scale both his company and its culture (page 82). Second is Tim Armstrong, the digital media pioneer at the helm of Oath, the Verizon subsidiary whose assets include AOL, Huff Post, and Yahoo (page 136). The other three CEOs — Melissa Snover of Katjes Magic Candy Factory, Shin Sakane of Seven Dreamers Laboratories, and Valentin Stalf of N26 — share with Meyer and Armstrong the awareness that innovation doesn't stop with the design of products and services. It also involves the way you pay attention (page 66).

A good way to learn to pay attention more effectively is by reframing the deceptive messages that hamstring organizations. On page 100, neuroscientist

Illustration by Lars Leetaru

Jeffrey Schwartz and executive coach Josie Thomson explain how to go about it in "Changing the Conversations That Kill Your Culture" by addressing four types of misperceptions. How many times, for instance, have you had a new idea stymied by excessive risk aversion in the form of overly cautious approval requirements?

For innovative executives, a critical trend to pay attention to is Industry 4.0, also known as the next industrial revolution: the emerging infrastructure of platforms, robotics, AI, sensors, and the Internet of Things. "Digital Champions," by Reinhard Geissbauer, Stefan Schrauf, and Steve Pillsbury, lays out the four interrelated "ecosystems" of activity required to excel in this new world (page 116).

Elsewhere in this issue, *s+b* columnist Adam Kahane (a seasoned facilitator of difficult conversations) describes how to bring together dedicated enemies for common purpose, even if they distrust one another deeply (page 46). Another columnist, Liz Sweigart from PwC US's tax team, offers one of the most innovative articles you'll read on finance, explaining why even companies that are wealthy on paper must continually solve for accessible cash flow (page 57).

On page 36, PwC experts Tim Laseter, Andrew Tipping, and Frederick Duiven solve a problem that Laseter has been wrestling with in our pages since the late 1990s: how to get e-commerce products to the household door across what he once called the "last mile to nowhere." Now, thanks to the scale of Amazon and the industry as a whole, we're getting somewhere. In Leading Ideas, Miles Everson and John Sviokla lay out the three new forms of capital that enable fast-growing "bionic" companies (page 8); Anand Rao and Euan Cameron show how artificial intelligence will require new types of oversight (page 31); and Elizabeth Doty shows what managers can learn from improvisational theater (page 20).

Each of these articles, in its own way, demonstrates the link between attention and innovation. When you pay attention in new ways, it can be irresistible to bring what you see to life.

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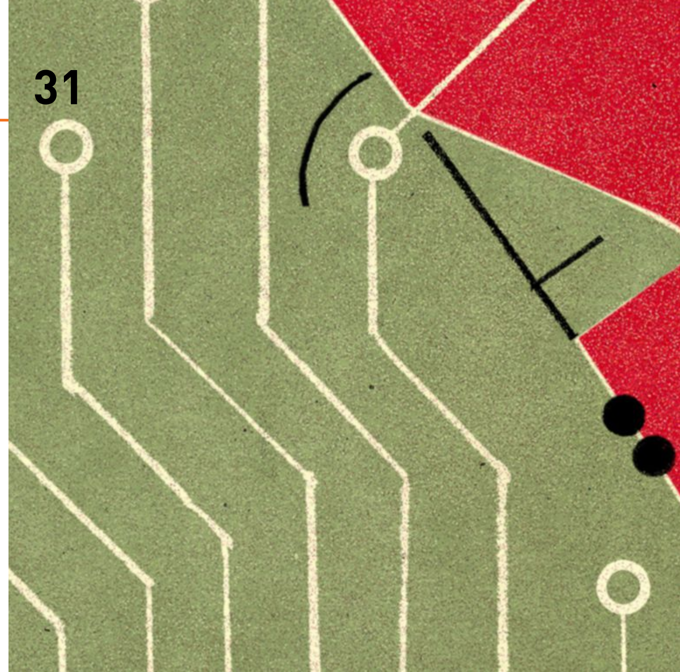
leading ideas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Cover illustration by André da Loba

strategy+business
Issue 92, Autumn 2018

strategy+business

Published by PwC

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Leading Ideas

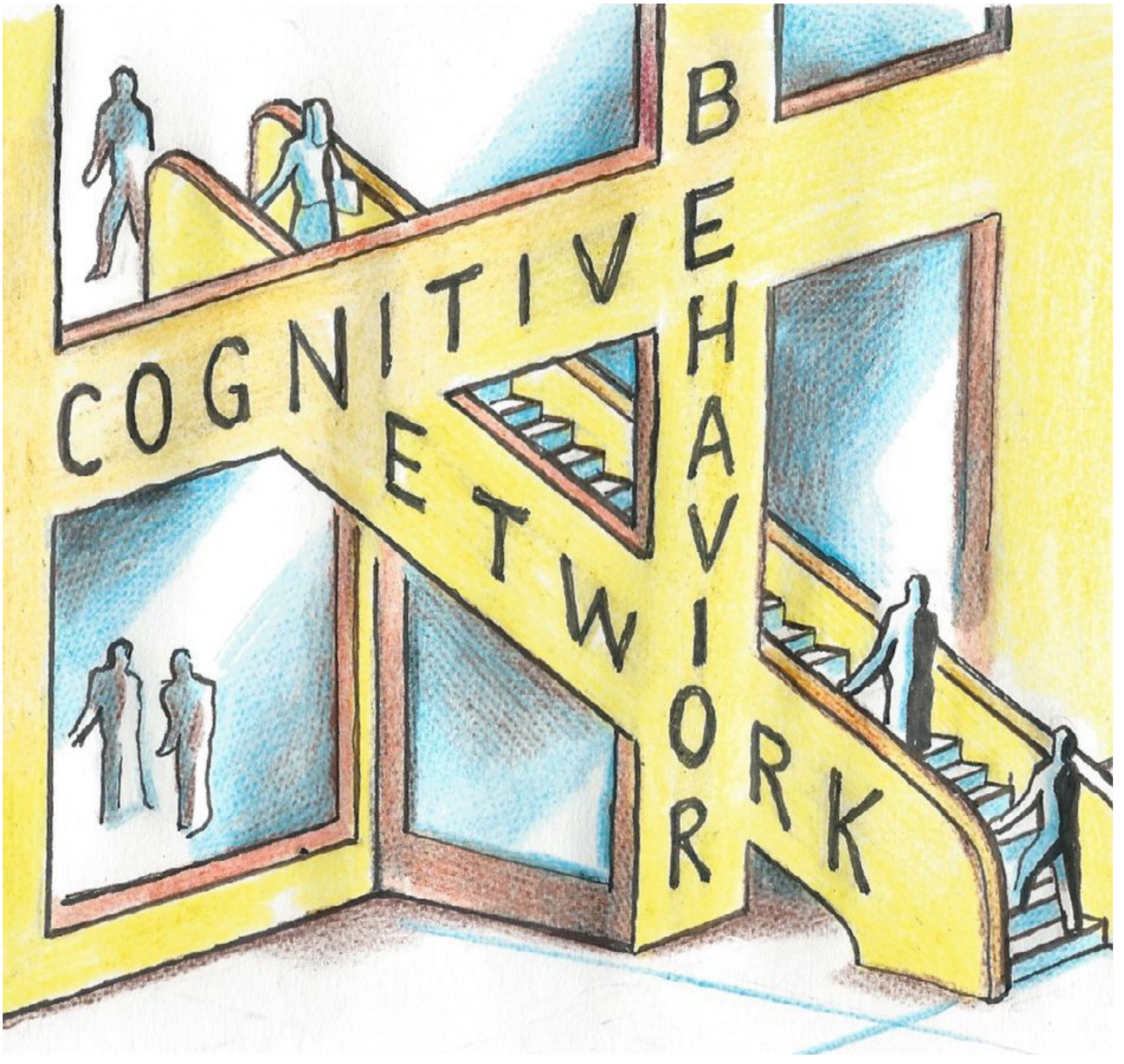

Illustration by David Suter

The Bionic Company

Businesses need to develop their behavior, cognitive, and network capital so they can create and capture value that competitors can't erode.

by Miles Everson and John Sviokla

During the heyday of the Industrial Revolution, at the end of the 19th century, few people understood the intricate dynamics of financial capital. Its growth often seems slow at first, but when managed well, it doubles regularly; this exponential growth can accelerate a company's progress. For early companies that pioneered better approaches to business economics, financial capital gave them a strong competitive advantage.

As the 20th century unfolded, two additional types of equity became important: human capital (the return gained from the development and deployment of staff and contractors), and natural capital (the manageable value of land, water, and other environmental resources). Business success came to depend on managing these three forms of capital effectively.

In the 21st century, with the accelerating increase of technological innovation, three more forms of capital have become critical to creating value: behavior capital (developed by tracking ongoing activity), cognitive capital (the value inherent in algorithms), and network capital (the connection points, with people and machines, that a company can deploy). Each of these forms compounds itself in an exponential way, and each also reinforces the others' growth. We sometimes refer to them collectively as BeCoN capital, because they are most effective when marshaled together. They are as poorly understood as financial, human, and natural capital were at the dawn of the 20th century.

Companies that manage all six forms of capital are what could be called bionic corporations: Some of them have gained immense value in very short periods of time. For example, five of the most highly capitalized companies on the U.S. stock market are bionic: Alphabet (Google), Amazon, Apple, Facebook, and Microsoft together account for about 13 percent of the capitalization of the entire

U.S. stock market. Bionic companies have grown rapidly without relying solely on physical assets such as people and land, or even on managing funds and investments effectively. Instead, they have grown by building and linking digitally based cross-boundary platforms that make the most of their BeCoN capital.

Let's look more closely at the three new forms of wealth accumulation that bionic companies deploy.

• **Behavior capital** is the collection and modeling of data that tracks the behavior of people, companies, nature, and manufactured things. As an Apple watch measures an ongoing heart rate, a GE air-craft engine records data on fuel performance, and Google captures everything about everyone on its platform, the value of that behavioral data increases. Apple, GE, Google, and their customers can use that information to make models of the aggregate behavior of people and machines, and therefore improve the value of their respective activities.

• **Cognitive capital** is the set of algorithms (some transparent to onlookers, others opaque) that represent the codified knowledge flows of individuals and the enterprise in a bionic world. These algorithms are becoming sophisticated enough to make many decisions on their own, or to start a machine-learning process that can lead to automated, continually improving routines. For example, the giant hedge fund Bridgewater uses artificial intelligence-based algorithms to make some decisions. Its co-chairman, Ray Dalio, has joked that he is trying to reduce his staff down to one employee, and thus run entirely on cognitive capital.

Bionic companies have grown rapidly without relying solely on physical assets such as people and land.

• **Network capital** is the set of connection points that an enterprise can use to develop and execute a successful strategy. For example, Netflix has developed, over the years, a large group of followers who have gotten into the habit of watching shows on its platform — and who exchange messages on social media about what they've watched. This consistent engagement is a form of network capital, enlarging audiences for many Netflix series and thus contributing to the overall value of its programming. Similarly, GE held an open innovation–style competition for an engine bracket design that would cost less than

US$7,000; although its own engineering team took part, the winner was a 21-year-old from Indonesia.

As with financial capital, each of these assets can grow in exponential fashion. The exact rate of growth may vary, but it's nonlinear; the assets grow more rapidly than your expectations. They are also mutually reinforcing — or can at least be designed to reinforce one another. You get faster growth when you put these forms of capital to work together.

How can your company accomplish something similar? By finding ways to raise the value of your own behavior, cognitive, and network capital. For example, in 2016, when Amazon entered the auto parts retail business, its established brick-and-mortar competitors were complacent. They assumed their customers would always want a personal connection with the experts in their stores. But then Amazon began paying auto manufacturers 30 percent more for their products, while continuing to underprice its rivals significantly. It used its network capital to pair those manufacturers with third-party service providers for specific product sales. Amazon also tracked its customers' purchases (behavior capital) to drive algorithms that can adjust prices and offers on the fly (cognitive capital). Major auto retailers lost significant market capitalization.

The venture capital firm SignalFire, with about US$380 million under management, has built a superior position through its BeCoN assets. SignalFire maintains an extensive database of several types of talent: software engineers, data scientists, and designers, among others. It has more than 10 million engineers in the database, and it estimates that it has profiled about 85 percent of all the software engineers practicing in English. Its algorithms analyze where the engineers went to school, how well they did, where they worked, how successful the company was, and what contributions they have made to academia or to open source projects through sites such as Bitbucket and GitHub. SignalFire uses this information as a key input into its investment decision making — along with company performance metrics — to make sure it is backing the best teams on an absolute and comparative basis. These are teams that have not only strong credentials but also proven track records, even if their backgrounds are a bit unusual. SignalFire can also use these three forms of capital to predict which people are likely to leave their employers soon, and to find connections with those individuals. Imagine what type of advantage this gives to a firm that might be interested in investing in technology companies.

CB Insights ingests massive amounts of data to predict future trends. It processes millions of articles, patent filings, and other documents, mixing them together in one vast data management system and delivering results to its analysts, who then publish the conclusions they reach about technological and financial dynamics. CB Insights' high levels of behavior and cognitive capital and the robustness of its networks have led to the development of tools it is famous for. For example, its market maps allow anyone to look at an economic sector (such as agricultural technology, life sciences, or construction) and see at a glance who the top competitors are, and what they are investing in. This enables investors to be more up-to-date and faster, with a more productive staff and more significant impact. The company's growing network of sources and subscribers continues to make it more influential.

GE's aircraft engine business uses sensors built into its engines and turbines to generate high levels of behavior capital (i.e., data describing what the engine is doing). Machine-learning algorithms conduct diagnostics and engine controls, thus providing cognitive capital. GE's engines around the world are in touch with one another, generating network capital that allows insights from one engine to be relevant to all. GE's operations help it accrue and reinvest all three forms of capital. For example, its store of data about engine behavior fans out to staff and customers on the ground, who know more about the engine's behavior than the pilots do. When it combines these assets with cognitive capital, embedded in its software routines, GE can deliver extraordinary engine maintenance service with high reliability at a very low cost, requiring fewer extra replacement engines to be parked around the globe in case of breakdown. GE's pricing model reflects this advantage; the company sells its engines not by the unit, but by the hour of use, just like cloud providers in the IT field do. This approach helps the company improve its designs and make more efficient use of its field service and design talent.

Start your BeCoN development by asking yourself about each of these three new forms of capital.

Incumbent companies that do not develop their BeCoN capital will find themselves on the wrong side of the next wave of industrialization. If you are an executive in an old-style company, a good place to start your BeCoN development is by asking yourself about each of these three new forms of capital in turn.

• **What do you know about your customers' behavior (and about that of the end-users in your sector)?** Do you capture it, analyze it, and model the ways it might change? If not, why not?

• **What can you automate using AI and advanced analytics?** How can you use systems that respond in real time to give customers faster service, better products, and a more powerful experience?

• **How can you build a complex, effective network?** This network allows you not only to manage your customers but also to leverage your deep knowledge of their behavior, providing service from other companies in your business ecosystem as well as your own, packaged in a way that meets your customers' needs. If you are first in the demand chain, with the largest network, then you have a deep competitive advantage.

Finally, although the three new BeCoN forms of capital are critically important, don't forget about the other three. FiHuNa capital — your financial value, the human talent you develop and draw on, and the natural resources you control — will also be critically important in the years to come. As you make the most of behavior, cognitive, and network capital, you will reinforce your growth in general. +

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How to Keep Your Customers Close

Subscription models can bring a steady revenue stream for companies that understand the customer life cycle.

by Dutta Satadip

A sales revolution is under way, and it can be summed up with one word: *subscriptions*. Faced with fierce competition and low customer switching costs, companies are turning to subscription-based offerings in search of revenue predictability. And their customers have responded in droves. In April 2018, the *Economist* reported that U.S. households have more than 200 million subscriptions to various streaming and Internet-based services. Amazon Prime announced the same month that it had exceeded 100 million subscriptions worldwide.

The shift toward subscription models is happening across industries. In apparel, some traditional retailers watched the subscription-box wave and saw an opportunity to rethink how they engage with customers, by offering curated selections or clothing rentals, as well as incentives for continuing to shop in-store. The auto industry is also entering the ring, with car companies eyeing the flexibility of subscriptions as a way to compete with car-sharing and ride-sharing companies. Meanwhile, industries such as telecom and insurance that have traditionally relied on subscription sales are feeling pressure to evolve their business models. They are competing with digital upstarts able to segment their offerings at a faster rate than ever before, focusing on unique customer needs. For example, Metro-mile is an auto insurance company that provides pay-per-mile insurance for consumers who drive less than 12,000 miles a year.

Unfortunately, in the rush to develop subscription offerings, company leaders often fail to consider the business model changes that are needed alongside their new sales strategy. Although this gap can appear in companies both old and new, setting up a sound subscription model can be particularly challenging for

traditional firms that have been using the same metrics within the same organizational structure for years. And whereas some companies have used acquisition to compete in the subscription space — for instance, Unilever's US$1 billion purchase of Dollar Shave Club in 2016 — others will be building an in-house capability. Any company adopting a subscription model will need to take a fresh look at how to measure and sustain its success.

A Focus on Retention

Businesses have traditionally sought to increase revenue by prioritizing customer acquisition. The initial sign-up transaction is used to determine customer lifetime value (CLV), or the gross profit a company will derive from a particular customer over time. CLV is calculated by aggregating the present value of all future streams of profit that customers generate over the course of their business

Illustration by James Yang

relationship with the company. In other words, companies acquire a new customer, and then predict how much that customer will spend.

Introducing a subscription model changes the calculus. For such a model to be profitable, customers must repeatedly renew their subscription with a company, and add on more products and services with each renewal. The combined cost of the renewal process and of upselling to returning customers is still cheaper than selling to entirely new customers. To calculate CLV accurately, then, companies need to understand their ability to retain customers and increase their share of wallet.

But for many executives, customer retention has tended to be an afterthought. Retention is often tracked with customer experience metrics such as net promoter score (NPS) or customer satisfaction (CSAT). These metrics measure customers' brand loyalty and overall feelings about a company, typically by gathering survey data post-sale. Company leaders then correlate experience and retention, following the assumption that happy customers will stay put. But correlation is not causation — and understanding the causation is key to growing revenue in a subscription model.

To calculate CLV more accurately when selling subscriptions, companies need to elevate retention from the realm of customer support; they must consider how various touch points across the customer's engagement with a company affect that customer's decision making. This analysis will reveal the financial impact of problems that may currently be hidden from view. It will also illuminate how resolving these problems can enable companies to increase their renewal rates, as well as their ability to upsell and cross-sell.

Each industry and company will have unique advantages and challenges; there is no universal set of retention metrics. But executives can identify those metrics that are right for their company by determining their customers' most critical touch points, the ease with which customers can reach their business when they need to, the biggest costs for their customers to do business with the company, their ability to ask for and receive incremental spending from customers, and the reasons that customers renew at lower rates or stop renewing altogether.

Consider online advertising. When a business purchases an online ad, it pays when the objectives from the campaign are met (for instance, the target number of customers visiting the company's website after seeing or clicking on the ad has been reached). If the business is pleased with the outcome, it renews its advertising buy, typically spending more per campaign. In contrast, weak ad performance leads to cancellations or reallocation of funds. If the latter is happening, the company selling the ads needs to understand the end-to-end customer life cycle in order to determine what's going wrong. The breakdown may be happening at a touch point into which the customer service team has little or no visibility.

In one case, a company discovered that businesses purchasing ads to run on its website were struggling with the initial ad setup on the site, and were requesting refunds at a shockingly high rate. But because refunds were handled by billing, the refund rate was not a metric that had factored into the company's understanding of customer retention. Once the company saw the ripple effect of customer frustration, it developed a setup service to help customers get it right the first time. This led to a drastic reduction in the refund rate, and an increase in customers' comfort using the product. The company was soon able to more easily and successfully ask customers to recommit and increase their spending — which resulted in more accurate CLV calculations.

Making the Case

Understanding customer retention is critical to the success of a subscription model, but in many companies the relevant data is scattered across business units. In a traditional organizational structure, each

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of the business leaders is accountable for a set of operating metrics. They are incentivized to meet and exceed only those. More often than not, cross-functional visibility is limited.

But in a subscription model, many internal departments engage with customers. And each of these interactions can affect retention and subsequent dollars spent. Returning to the online advertising example above: Billing difficulties are often a big driver of subscriber dissatisfaction, but traditional customer support organizations are seldom responsible for billing policies.

To overcome these structural challenges, companies need to create a highly specialized team that is empowered to reach across business units, analyze data, and develop and influence new ways of working based on what was learned. The specific responsibilities of such a team will vary across industries and companies. But a few universal principles can guide senior leaders when they are selecting team members.

Understanding customer retention is critical to the success of a subscription model, but in many companies the relevant data is scattered across business units. More often than not, cross-functional visibility is limited.

For instance, the team leader must have the ability to build relationships throughout multiple organizations to ensure that the team has the trust required to investigate and solve problems. The team itself needs people with the data science skills to synthesize disparate customer information, and the communication skills to articulate the results of their analysis to the various business units. Team members need the authority to prioritize specific challenges that they have identified as most critical to the customer's end-to-end experience, and also need to be empowered to experiment with new technology and automation techniques to solve those problems.

Ideally, the team will include new hires as well as people who have been with the organization for some time and bring critical institutional knowledge. The team will most likely report to the chief operating officer, but may report to the chief customer officer in companies that have this position.

When the new team begins to stitch data together, it can reveal critical insights. This may be a metric that has existed in a silo yet is found to have broad reach. Or it may be an entirely new metric developed to assess a specific business problem that was not previously being viewed as a retention issue.

In doing this type of work, teams may encounter resistance. For example, they may find that they lack a continuous historical audit, which would provide periodic snapshots of the data. This technical limitation can be overcome, but doing so requires reprioritization of work among some business units. That's not something people typically want to hear. However, the new team will be staffed with people capable of explaining the narrative: This is not a random analysis that will make life more difficult for no good reason — it is an analysis that will likely have a direct impact on customers' success. The key is listening to people's concerns, framing the problems, and working with people to help them understand their role in the solution.

Renewal and Growth

The subscription model offers companies the opportunity to build a lasting relationship with customers, one that grows over time and provides a steady stream of revenue. But if they are to reap the benefits, executives will have to consider whether they are relying on the metrics that best predict the likelihood of their customers' staying put, and whether their organization is set up to reveal and address the issues that may be driving customers away. All too often, in both of these areas, companies have not kept pace with the changing world around them. The time to act is now. ✚

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Using Improv to Transform How You Lead

By embracing the concept of "yes, *and*," managers can improve how they communicate.

by Elizabeth Doty

Leaders who listen and engage in open dialogue with their employees gain enormous advantages. Yet, in practice, leaders sometimes hesitate to invite such dialogue, because they fear their employees' opinions will be off-base. Rather than face a confrontation, these managers sidestep important conversations altogether.

Avoiding difficult conversations may seem easier in the short term. But over the long haul, leaders cannot achieve alignment, empowerment, or accountability without actively engaging their employees. What leaders need, then, is a way to be open and accepting, even if they ultimately disagree and decide to go in a different direction. This is where one of the key tenets of improvisational comedy can help: "yes, *and*." *Yes* means agreeing with your partner's premise, whatever it is; *and* means building on what he or she has offered. For example, if your improv partner raises her hand to her ear, pantomiming a phone, and says, "Customer service, may I help you?" you respond as a customer disputing a credit card bill. If your partner winds up for a pitch, you swing for the bleachers.

Over the past 10 to 15 years, leading companies and management programs have begun using improv to teach creativity and collaboration. The results are compelling: Using improv can energize teams, surface breakthrough ideas, and enable learning from failure. But improv is more than just a way to co-create with colleagues; it can help leaders rethink how they manage and communicate in every interaction. For example, improvisers learn to listen to their partners and embrace failure, rather than advancing their own agenda. This sounds simple enough, but in practice, most people default to "yes, but." They reject, contradict, or ignore their partner's offer. For example, a novice improviser might see her partner pantomime holding a phone and, instead of picking up the customer service theme, say something like: "You still have that itch on your ear? I told you to see the doctor!" The gag may get a laugh, but it has killed the scene in the process.

Leaders also tend to default to "yes, but" communications. They may try to sound supportive when employees offer suggestions or comments. They may even say the words "yes" or "I agree." But then they move on too quickly to "but" — explaining why a proposal isn't feasible, offering their own ideas, or reassuring employees that their concerns are unfounded. Sometimes this is because they don't want to get stuck agreeing with subpar ideas or dealing with tangents. Other times, they worry that allowing too many questions or concerns will create a downward spiral of negativity and low morale.

The fact is, to truly communicate, we need to connect. We need to let go of our message and actually engage with what others are offering. This is where "yes, *and*" becomes a philosophy, not just a tactic. As Kat Koppett, who leads improv-based training programs for multinational companies and has authored a book on business improv called *Training to Imagine*, explains, "'Yes, *and*' is a fundamental orientation toward noticing and accepting what is here in this situation, and building from there." By adopting this stance, leaders can open up frank conversations without compromising quality or outcomes, even on touchy subjects. The key, Koppett advises, is to separate the distinct steps of an interaction.

Step 1: Expand your awareness. "My first obligation is to notice as many offers as I can," explains Koppett. "This means having the presence of mind to fully listen — not just to the content of what is being said, but to the emotions, values, and deeper interests involved." By "offer," improvisers mean anything our partners are communicating, verbally or nonverbally. Imagine you walk into a meeting where

Illustration by Marc Rosenthal

a team is planning a product launch. How much do you notice? Do you take in the flip charts on the wall? Get a read on the energy level? Are they stuck or on the brink of a new idea? Leading effectively in that moment requires your full awareness and undivided attention. Yet many employees struggle to get on their leaders' radar. Start by putting a higher priority on just being available. Ask yourself, "What can I notice here?"

Step 2: Say "yes" to what is offered. The next step is to accept what others are communicating. "'Yes' does not mean agreeing," explains Koppett. "It means accepting what exists without attempting to dismiss, avoid, or invalidate it. This requires an internal shift [for the individual leader], to manage [his or her own] resistances, ego, or worries." It is easy to unknowingly reject, ignore, or override others' offers, because you have your own agenda or do not want to deal with the complexity of something new. Returning to the product launch meeting above, what if you walked in and said, "You're making this too complicated. Here's how I would approach it." Even if you then go on to ask the team's opinion, you have already blocked real engagement by failing at the outset to show an interest in the team's way of thinking about the problem. Instead, ask yourself, "What can I accept here?" Let go of your agenda for a moment and allow others to influence your thinking. Before you move on, paraphrase what you are hearing, until your team members are satisfied that you get it.

"'Yes' does not mean agreeing. It means accepting what exists without attempting to dismiss, avoid, or invalidate it. This requires an internal shift, to manage resistances, ego, or worries."

Step 3: Add to what is emerging. Finally, it is your turn to add to the picture. Ask yourself: "How can I build on these ideas or perspectives?" You might add some details to the plan or ask a question to draw out more of their vision, in a way that clearly connects to their thinking. The goal is not to debate competing ideas but to create something new together — what improvisers call "serving the scene." Koppett emphasizes that you can do this even while disagreeing. For example,

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you might say, "I like the basic idea, and I think we could make the plan simpler. What if we just used steps three and four?" Through this give and take, you and your team are developing a broader view of your options. This allows you to choose a more effective course of action or decide where they need more data to reconcile their views.

Living "yes, *and*" as a leadership philosophy requires courage. It challenges you to engage your employees and find out what they think, and then build from there. But when you approach every conversation as an opportunity to improvise, you and your team are more likely to reach the holy grail of communication: shared meaning that translates into intelligent action on the ground. +

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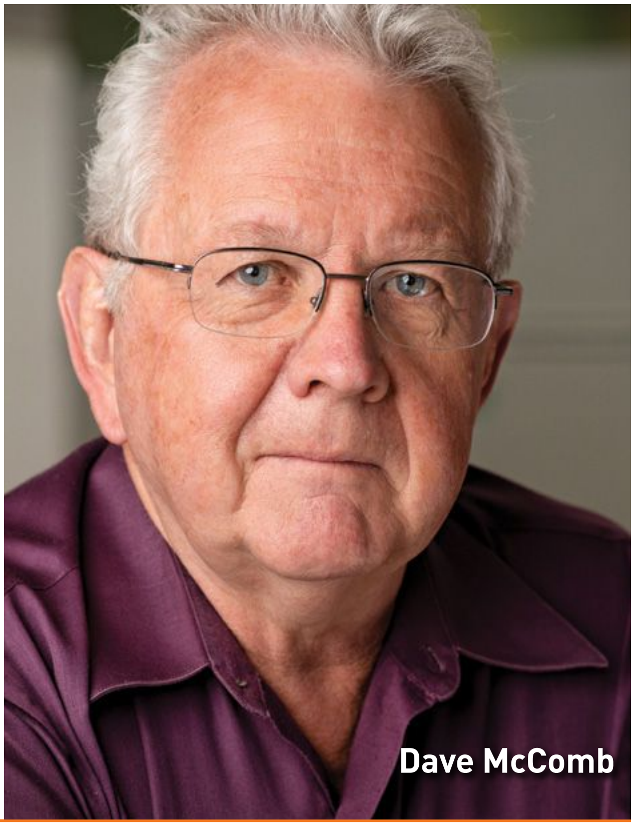
Are You Spending Way Too Much on Software?

Author and technology consultant Dave McComb on how to curb runaway IT spending.

by Alan Morrison

Global spending on enterprise IT could reach US$3.7 trillion in 2018, according to Gartner. The scale of this investment is surprising, given the evolution of the IT sector. Basic computing, storage, and networking have become commodities, and ostensibly cheaper cloud offerings such as infrastructure-as-a-service and software-as-a-service are increasingly well established. Open source software is popular and readily available, and custom app development has become fairly straightforward.

Why, then, do IT costs continue to rise? Longtime IT consultant Dave McComb attributes the growth in spending largely to layers of complexity left over from legacy processes. Redundancy and application code sprawl are rampant in enterprise IT systems. He also points to a myopic view in many organizations that enterprise software is supposed to be expensive because that's the way it's always been.


Dave McComb

Photograph courtesy of Dave McComb

McComb, president of the information systems consultancy Semantic Arts, explores these themes in his new book, *Software Wasteland: How the Application-Centric Mindset Is Hobbling Our Enterprises*. He has seen firsthand how well-intentioned efforts to collect data and translate it into efficiencies end up at best underdelivering — and at worst perpetuating silos and fragmentation. McComb recently sat down with *s+b* and described how companies can focus on the standard models that will ultimately create an efficient, integrated foundation for richer analytics.

S+B: What inspired you to write *Software Wasteland*?

McCOMB: When I started my career, I became a part of the problem without realizing it. I built a lot of enterprise systems and thought I'd done a pretty good job. But the longer I worked with large clients, the more it started bothering me how much waste there really was.

It wasn't until I sat down to write the book that I realized that the information technology industry is now twice the size of the petroleum industry. And unlike the manufacturing sector, which has now had 30 or 40 years of quality and productivity improvement, the IT industry hasn't even started to make improvements.

S+B: Many company leaders complain about the high cost and low quality of software development projects.

McCOMB: We hear our clients complain all the time, but then they turn right around and do things that make it worse. It's not like anybody is intentionally screwing these projects up. I think they just don't realize what they're doing.

Many [executives] are so excited about and proud of the huge amount of data they have now. Yes, it's a great boon; we have more data, and we can do more with it. But that data growth increases the complexity of what we're dealing with. In a lot of ways it's the data complexity that's driving the cost.

S+B: Yet companies continue to spend more and more on software, without stopping to address the complexity problem. What's the root of this problem?

McCOMB: Part of the problem has to do with beliefs that are no longer true, if they were ever true to begin with. I list seven of these fallacies in the book. One of the fallacies has to do with overspecifying requirements. Although it's true you won't get exactly what you want without detailed requirements, the converse is even truer: Your detailed requirements will drive your project costs up 10- to 100-fold, increase your risk, and greatly prolong the project.

Another fallacy has to do with the belief that software development costs way more than it actually does when done correctly. I know so many companies and state agencies that somehow became convinced over the last couple of decades that a fairly ordinary information system, such as a simple inventory system or a customer relationship management system, should cost them several hundred million dollars to implement. Yet when you study the system and what it's designed to do, it's very hard to figure out where that acceptance of high costs comes from, other than habit.

S+B: So the people doing the procurement all think they need to spend this much?

McCOMB: They've become convinced because all their peers spend this much. Let me give you an example. Each of the 50 U.S. states has its own child support enforcement system. About 10 or 15 years ago, these agencies started to replace their old systems, funded by the federal government. The first few systems had contract values of $70 million to $90 million, and then these projects ran over budget.

One of the more recent contracts started out at $130 million, and then grew to $300 million. The state became quite irritated and was trying to sue its contractor, but instead decided to appeal to the federal department — which gave it another $100 million to finish the project. After that, I learned, still another state spent $1.7 billion on its child support enforcement system.

A child support enforcement system isn't complicated. There are only three parts to these systems. First, a simple case-management function tracks the noncompliant parents. There are only tens of thousands or maybe hundreds of thousands of these parents in any given state. Then a very simple accounting function takes the checks as they arrive and distributes payments to whoever is due them. Usually one person gets the check, but occasionally the payments are split between foster care and another party. The third function enables the state to garnish wages, lottery winnings, and other forms of income.

How in the world you spend hundreds of millions of dollars on a system like that is beyond me. In reality, it should cost between $6 million and $10 million. The U.S. Department of Health and Human Services, which ultimately funds these projects, requires states to consider transferring a system from a state that previously implemented one. Thus if software construction were the main cost, each subsequent state would have lower and lower implementation costs. But the reality is that each state adds to the code, increasing the complexity, and the cost of each subsequent implementation goes up.

S+B: What's another part of the software complexity problem?

McCOMB: Companies are allowing their data to get too complex by independently acquiring or building applications. Each of these applications has thousands to hundreds of thousands of distinctions built into it. For example, every table, column, and other element is another distinction that somebody writing code or somebody looking at screens or reading reports has to know. In a big company, this can add up to millions of distinctions.

But in every company I've ever studied, there are only a few hundred key concepts and relationships that the entire business runs on. Once you understand that, you realize all of these millions of distinctions are just slight variations of those few hundred important things.

In fact, you discover that many of the slight variations aren't variations at all. They're really the same things with different names, different structures, or different labels. So it's desirable to describe those few hundred concepts and relationships in the form of a declarative model that small amounts of code refer to again and again.

S+B: How do you make better use of the logic and data you need?

McCOMB: Software is just a means to an end. A business runs on data, and you make decisions based on data. You should be employing software to make better use of that data and create new data.

You'll need to unearth and inventory the rules in your enterprise, then determine which rules are still valid. The rules you keep — the few hundred key concepts and relationships — need to be declared at the data layer so they can be updated, reused, and managed. If you leave them buried in the application code, they won't be visible or replaceable.

In older systems, huge percentages of all of these buried rules are obsolete. They specified something that was true years ago. You don't do things this way anymore, but you're still supporting all that code and trying to manage the data associated with it. That's just waste.

Tools that interpret legacy software help you comb through this code and find these little rules. Once you've done that, you do the same kind of rationalization and then some model-driven integration on the data side. Sifting through that amount of data and organizing it is a chore in and of itself, but incredibly worth doing, because if you don't do it, next year it's going to be worse.

The model-driven integration that ties everything together takes the few hundred rules you've kept and maps them to the data you've rationalized.

S+B: What's left at the application layer after you're done?

McCOMB: If the model- and data-driven approach I'm advocating is well designed and managed, the enterprise can end up with 50 or 100 tiny applets that each do one thing. Kind of like an app store today, but the app store couldn't

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For every $1 billion dollars invested into US businesses in 2016, it is estimated that $122 million dollars were lost due to failed project management practices. It's a statistic that has seen a 12% increase over the past year according to the Project Management Institute.

Michael Mitchel, a retired Aviation Mechanic for the US Navy, serves as both the Commander and Board of Trustees member for Colorado's VFW Post 1. Part of Michael's responsibility is to manage community events as they develop throughout the calendar year. With responsibilities ranging from project development to fundraisers, it is important to have a clear overview of the entire process.

"We have a variety of additional projects and events that we have to plan in addition to the regular yoga and career development meetings we hold throughout the month. For instance, every year we host the Founder's Banquet, which tends to have a global reach due to the historical nature of the post itself. Just last year, Astronaut Scott Kelly was sworn into VFW Post 1 from the International Space Station during the dinner service. So, as you can imagine, there was a lot of project management that went on behind the scenes to make sure it came together smoothly and in conjunction with the other events that we had planned for the year."

Up until just recently, Michael echoed a similar pain with project management, as it was handled directly in the notepad of his cellphone. Emails went unnoticed, projects were left unmarked, and the status of projects was often left in the dark.

After scouring though hundreds of project management alternatives, Michael decided that no other tool offered the same amount of visibility and ease of use as the Magnatag® 52-week Project Tasking Whiteboard.

"I really wanted something that was visual. I'm a very visual person and to be able to have something that I can track multiple projects on while still being easily accessible and readable at a glance was a huge plus for me. Right now we have so many events that are already in the planning stages: there's a WWI art installation which is still a few years out, but in the more immediate future, we received a generous gift from a local company to replace the roof on our building; that's something we're focusing on as we speak. These are two projects that are essentially years apart, but due to the way projects are coordinated, they see a bit of overlap. So add the accessibility of scale alongside the fact that Magnatag® is a veteran-owned company that manufactures everything here in the US, and the decision was a no-brainer for us."

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actually work as an efficient enterprise system. It just isn't robust enough. An app store isn't integrated. It relies on the fact that each human is doing his or her own integration. Maybe it's tied into a calendar or email, but that's about it.

But if you take that same idea and say, "Our data model is self-policing and complete enough that these little applets can read and update the shared data in such a way that any insights are captured and returned to the data repository," then 50 to 100 of them should be sufficient. When those applets are no longer needed, they're just let go. There's nothing about them that forces them to stay in the mix.

S+B: What do you hope readers will take away from *Software Wasteland*?

McCOMB: I'm trying to get people angry, to get them to realize they're spending 10 to 100 times more than they ought to be. I'm hoping they'll go do an experiment or at least check this approach out.

I've actually obligated myself to write a trilogy. This first book is aimed at executives, and it drives home what a mess we've gotten into and what the data-centric alternative should look like. The second book will be more for modelers and designers. It's going to be a data-centric pattern language derived from the classic Christopher Alexander book, *A Pattern Language*. The third book will be for developers and architects. It's literally going to be a blueprint: How would you build an architecture that did this? Because I don't want to leave people angry. I want them to actually do something about the problem. +

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The Future of Artificial Intelligence Depends on Trust

If it is to drive business success, AI cannot hide in a black box.

by Anand Rao and Euan Cameron

Purchasing a home or car is an exciting moment in a person's life. Consumers may be comfortable with and even appreciate data-driven recommendations in the search process, for example, from websites that suggest homes based on properties they've previously viewed. But what if the decision to grant a mortgage or auto loan is made by a machine-learning algorithm? And what if the logic behind that algorithm's decision, especially if it rejects the application, is unclear? It's hard enough being denied a loan after going through the traditional process; being turned down by an artificial intelligence (AI)–powered system that can't be explained is that much worse. Consumers are left with no way to know how to improve their chance of success in the future.

As companies adopt more advanced algorithms, their ability to provide understandable explanations for stakeholders becomes critical.

Elsewhere, for patients and their doctors, the promise of AI programs that can detect signs of disease at ever-earlier stages is cause for celebration. But it can also be cause for consternation. When it comes to medical diagnoses, the stakes are exceedingly high; a misdiagnosis could lead to unnecessary and risky surgery or to the deterioration of the patient's health. Physicians must trust the AI system in order to confidently use it as a diagnostic tool, and patients must also trust the system if they are to have confidence in their diagnosis.

As more and more companies in a range of industries adopt machine learning and more advanced AI algorithms, such as deep neural networks, their ability to provide understandable explanations for all the different stakeholders becomes critical. Yet some machine-learning models that underlie AI applications qualify as black boxes, meaning we can't always understand exactly how a given algorithm has decided what action to take. It is human nature to distrust what we don't understand, and much about AI may not be completely clear. And since distrust goes hand in hand with lack of acceptance, it becomes imperative for companies to open the black box.

Deep neural networks are complicated algorithms modeled after the human brain, designed to recognize patterns by grouping raw data into discrete mathematical components known as vectors. In the case of medical diagnosis, this raw data could come from patient imaging. For a bank loan, the raw data would be made up of payment history, defaulted loans, credit score, perhaps some demographic information, other risk estimates, and so on. The system then learns by processing all this data, and each layer of the deep neural network learns to recognize progressively more complex features. With sufficient training, the AI may become highly accurate. But its decision processes are not always transparent.

Illustration by David Plunkert

To open up the AI black box and facilitate trust, companies must develop AI systems that perform reliably — that is, make correct decisions — time after time. The machine learning models on which the systems are based must also be transparent, explainable, and able to achieve repeatable results. We call this combination of features an AI model's *interpretability*.

It is important to note that there can be a trade-off between performance and interpretability. For example, a simpler model may be easier to understand, but it won't be able to process complex data or relationships. Getting this trade-off right is primarily the domain of developers and analysts. But business leaders should have a basic understanding of what determines whether a model is interpretable, as this is a key factor in determining an AI system's legitimacy in the eyes of the business's employees and customers.

Data integrity and the possibility of unintentional biases are also a concern when integrating AI. In a 2017 PwC CEO Pulse survey, 76 percent of respondents said potential for biases and lack of transparency were impeding AI adoption in their enterprise. Seventy-three percent said the same about the need to ensure governance and rules to control AI. Consider the example of the AI-powered mortgage loan application evaluation system. What if it started denying applications from a certain demographic because of human or systemic biases in the data? Or imagine if an airport security system's AI program singled out certain individuals for additional screening at airport security on the basis of their race or ethnicity.

Business leaders faced with ensuring interpretability, consistent performance, and data integrity will have to work closely with their organization's developers and analysts. Developers are responsible for building the machine-learning model, selecting the algorithms used for the AI application, and verifying that the AI was built correctly and continues to perform as expected. Analysts are responsible for validating the AI model created by the developers to be sure the model addresses the business need at hand. Finally, management is responsible for the decision to deploy the system, and must be prepared to take responsibility for the business impact.

For any organization that wants to get the best out of AI, it is important for people to clearly understand and adhere to these roles and responsibilities. Ultimately, the goal is to design a machine-learning model (or tune an existing one) for a given AI application so that the company can maximize performance while comprehensively addressing any operational or reputational concerns.

Leaders will also need to follow the evolving AI regulatory environment. Such regulatory requirements are not extensive now, but more are likely to emerge over time. In Europe, for example, the General Data Protection Regulation (GDPR) took effect on May 25, 2018, and will require companies — including U.S. companies that do business in Europe — to take measures to protect customers' privacy and eventually ensure the transparency of algorithms that impact consumers.

Finally, executives should bear in mind that every AI application will differ in the degree to which there is a risk to human safety. If the risk is great and the role of the human operator significantly reduced, then the need for the AI model to be reliable, easily explained, and clearly understood is high. This would be the case, for example, with a self-driving car, a self-flying passenger jet, or a fully automated cancer diagnosis process.

Other AI applications won't put people's health or lives at risk — for example, AI that screens mortgage applications or that runs a marketing campaign. But because of the potential for biased data or results, a reasonable level of interpretability is still required. Ultimately, the company must be comfortable with, and be able to explain to customers, the reasons the system approved one application over another or targeted a specific group of consumers in a campaign.

Opening the black box in which some complex AI models have previously functioned will require companies to ensure that for any AI system, the machine-learning model performs to the standards the business requires, and that company leaders can justify the outcomes. Those that do will help reduce risks and establish the trust required for AI to become a truly accepted means of spurring innovation and achieving business goals — many of which have not yet even been imagined. +

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Also contributing to this article was PwC US manager Ilana Golbin.

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The Rise of the Last-Mile Exchange

Keeping up with the growing volume of e-commerce will require delivery companies to disrupt their long-standing business model.

by Tim Laseter, Andrew Tipping, and Frederick Duiven

Illustration by Lars Leetaru

Park yourself at a typical residential intersection in the U.S., and you'll watch a parade of delivery vehicles pass by over the course of the day. Trucks from FedEx, UPS, and the U.S. Postal Service (USPS) crisscross neighborhoods, retrieving and delivering packages, sometimes more than once. Increasingly, they are joined by trucks from regional shippers such as OnTrac or LaserShip, as well as by unmarked vehicles with non-uniformed drivers, who drop off packages for companies including Walmart and online startups such as Roadie, Doorman, and Sidecar. Soon, fleets of vans bearing Amazon's logo, operated by independent companies, will be joining the mix.

The rising pace of activity along what's called the last mile of the retail sales chain reflects the boom in e-commerce. According to the U.S. Census Bureau, e-commerce accounts for about 9 percent of total retail sales, and is growing at a double-digit clip. The number of packages delivered annually in the U.S. is expected to rise from 11 billion in 2018 to 16 billion by 2020, according to estimates from Strategy&, PwC's strategy consulting business. B2C deliveries, generated mainly by e-commerce, account for more than half of today's volume, and will make up two-thirds of volume by 2020. In many ways, this seems like a sunny story all around. Consumers have more shopping choices than they have ever had, and their online purchases are delivered faster than seemed possible just a few years ago. Retailers can reach many new customers, and are better able to serve existing customers with faster and more flexible distribution chains. Transportation companies are riding a powerful wave of new demand for their services.

But all this growth brings some peril. Retailers and transportation companies alike are facing challenges in this fast-changing marketplace. Both sectors are at risk from Amazon. The company is the behemoth of the e-commerce boom, with 100 million Amazon Prime members, and accounts for 25 percent of all U.S. packages today, on track to reach 50 percent by 2020. With a vertically integrated network that provides inherent advantages, Amazon is positioning itself to dominate both the retail and the transportation sides of the business.

A second threat to retailers and transportation providers is more systemic. The traditional ways of managing the delivery of packages — with hub-and-spoke ground networks, massive regional distribution facilities, and fleets of vehicles — were designed to optimize long-distance, intercity shipping. As a result, they are not well suited to the emerging realities of expanded e-commerce, in which the trend is increasingly local (trips of less than 50 miles are growing at a 25 percent annual rate). Furthermore, transportation companies struggle to accommodate fluctuations in last-mile demand. Peak shipping volume in December, for example, is more than 25 percent higher than in September, which causes shippers to scramble to hire tens of thousands of temporary employees and add capacity every year. Daily swings can be far higher; volume on some days in holiday seasons is an order of magnitude higher than the daily average.

Meanwhile, new delivery approaches—such as stores hiring their own delivery personnel and startups crowdsourcing delivery vehicles and drivers — can operate effectively only on a very local basis, and they gain few advantages by building scale geographically.

For all these reasons, devising a better solution to last-mile delivery will be the next major battle in e-commerce supremacy. To compete effectively against Amazon's advantage, retailers and transportation providers will need to develop a way to better coordinate and more accurately match demand for the delivery services they can profitably supply on a given day.

The solution is to build a "last-mile exchange" platform that drives delivery decisions, and, crucially, allows retailers and transportation providers to collectively *shape* delivery demand and adjust continually to the inherent variability of the last mile. Such an exchange could deliver a win for consumers, retailers, and transportation providers. FedEx and UPS are the companies best positioned to disrupt their own business and create this new paradigm. Each could bring a significant share of the overall transactions to the platform. And each has a great deal to gain by evolving from a commodity provider with large fixed costs into a nimbler player that can compete against Amazon, aggressive regional players, or upstarts working out of the proverbial garage.

The Last-Mile Dilemma

The difficulty of delivering merchandise in a cost-effective way on the last mile of the retail sales chain has bedeviled e-commerce from its beginnings. Hazards in the last mile killed off many of the Internet startups in the late 1990s and early

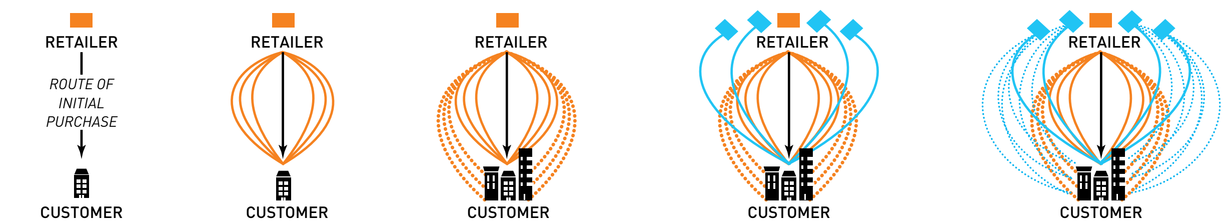
2000s, such as Webvan (see "The Last Mile to Nowhere: Flaws & Fallacies in Internet Home-Delivery Schemes," *s+b*, July 1, 2000). But despite the growth and evolution of e-commerce since then — along with the advent of smartphones, apps, and improved connectivity — the fundamental economics of the last mile haven't changed. Profitability remains highly dependent on two key factors: (1) the transportation provider's route density — how many packages can be delivered on a given delivery run, and (2) the drop size — how many packages or items are delivered at each stop.

Profitability remains highly dependent on two key factors: the transportation provider's route density and the drop size.

Consider your own experience as an e-commerce consumer today. If you receive one package with a new thumb drive from the USPS on Tuesday morning, a package of beauty supplies from FedEx a few hours later, a book delivered by UPS on Wednesday, and a box of groceries from Walmart on Friday, it's easy to appreciate the inherent inefficiencies in these four delivery trips. Imagine, instead, that a transportation provider could deliver all four of those packages from one truck, in one trip, at one time. Efficiency would soar, and per-package shipping costs would be roughly 50 percent lower, which could result in lower costs for consumers and higher margins for retailers, transportation providers, or both.

How a Last-Mile Exchange Might Work

The current system of delivering packages from an online retailer to the customer's home could expand and evolve into a complex network informed by data that would yield improved convenience, transparency, efficiency, and cost savings.



When a customer orders an item online for delivery, the "from" and "to" addresses, which are traditionally instructions for a carrier, are also valuable data points.

The carrier, knowing that a delivery is being made to a certain customer, can offer the retailer a better price for delivery of another item to the same address. A retailer can then encourage additional simultaneous purchases with special offers or discounts.

The carrier can also offer the same retailer a great price for an additional package to be delivered next door. The retailer can encourage the neighbors accordingly.

The retailer or its warehouse might have neighbors as well. The carrier can offer nearby sellers better delivery rates for delivering to the initial customer.

Ultimately, a last-mile exchange will allow a dynamic pricing model open to multiple retailers, targeting a host of consumers, bid on by a host of carriers. Collectively, the "invisible hand" of the marketplace will drive greater efficiency and a win for retailers, carriers, and consumers.

Source: Strategy&

It's clear that traditional legacy couriers such as FedEx, UPS, and the USPS (which is both a public-sector competitor and a partner, because FedEx and UPS, along with Amazon, offload a significant percentage of their last-mile deliveries to the postal service) are being pressured to keep up with demand. Historically, as in manufacturing, building scale was the primary lever for lowering last-mile costs. But today, the rising tide of e-commerce threatens to swamp the biggest commercial ships. The more that big retailers such as Amazon, Walmart, and Target ship, the deeper the per-parcel shipping discount they expect. Legacy couriers have also been slow to utilize peak pricing; their revenue is typically tied to annual contracts with fixed prices. And declining margins make it hard to justify the last-mile investments needed to keep pace with growth.

Most responses to date have been reactive. OnTrac and LaserShip have grown rapidly by targeting smaller retailers (historically the more profitable customers) with offerings in high-volume service areas that are mispriced in a national network. Other players in the e-commerce marketplace are attempting to make the delivery–supply component of the cost equation more flexible. Crowdsourcing personal vehicles and delivery personnel is one way to offset the "fixed" nature of traditional transportation providers by matching delivery demand with more variable supply. Walmart has tested a variety of solutions, including curbside pickup ("click and collect") as well as an "associate delivery" service, in which employees can opt in to deliver consumers' purchases, using their personal vehicles, on their way home from work.

Target was so concerned about the last mile that in late 2017, it paid US$550 million for Shipt, a crowdsourced provider that was less than five years old. Amazon is leveraging its acquisition of Whole Foods to combine grocery with other e-commerce package offerings in order to increase route density. Not to be outdone, Walmart is adding "pickup towers" to 500 of its U.S. stores in 2018 to concentrate demand into a single delivery point. These automated delivery hubs hark back to a concept we profiled more than 15 years ago (see "Oasis in the Dot-Com Delivery Desert," *s+b*, July 1, 2001), in which players developed solutions to aggregate online purchases in secure neighborhood drop boxes instead of individual homes. Most of the startup ideas failed in the United States. But DHL has 3,000 "Packstations" throughout Germany, and about 90 percent of the German population can get to one within 10 minutes. Similar third-party delivery point concepts can be found in countries including Costa Rica and Latvia.

The difficulties of managing demand on a given day — which is especially evident at peak times such as Black Friday and holiday seasons — are built into the current e-commerce ecosystem. Transportation providers typically don't know about a purchase until well after the online shopping cart transaction is complete. (How often have you tried to track a package on the FedEx or UPS website only to be informed that the shipper is awaiting information about the purchase?) Information is often siloed in the retail companies themselves, within order management, inventory management, and shipper transaction management systems — forcing delivery information later in the process.

When retailers have sales campaigns that create shipping surges, they don't necessarily communicate the surging demand to their transportation providers. And even though shipping peaks can be massive for both retailers and transportation providers, the two players are independently guessing what the volume will be. As a result, retailers often place tremendous pressure on fulfillment and shipping resources.

Building a Last-Mile Exchange

The solution to this problem is a last-mile delivery exchange that connects consumers, retailers, and transportation companies via a digital platform. It could solve many of the difficulties challenging the e-commerce ecosystem today and produce benefits for consumers, retailers, and the package delivery providers, yielding improved convenience, transparency, efficiency, and cost savings. Such an exchange would create a path forward through the disruption caused by increasing consumer expectations, advances in technology, the emergence of new entrants, and the rise of the sharing economy (see the 2016 PwC report "Shifting Patterns: The Future of the Logistics Industry").

The exchange would effectively flip the script. Rather than react to demand and respond to others' decisions, transportation companies and retailers could engineer demand earlier in the sales process and dynamically balance supply and demand, much as Uber uses surge pricing to encourage more drivers to work during times of peak needs in peak locations. Such a platform designed for e-commerce package delivery would need to be multisided, involving both retailers and last-mile transportation providers. Instead of passing on information from point to point in a linear fashion, it would need to dynamically share data among all the players. The exchange participants would need to have sophisticated algorithms that help them decide how much to bid to deliver a given package to a particular location on a particular day at a particular time. For example, assume a carrier already has a planned delivery of a dress from Nordstrom to a home in Dunwoody, outside Atlanta. That carrier could offer a great price to deliver an additional package to the house next door (from Nordstrom or another retailer) and an even better price for another delivery to the same customer. Accordingly, Best Buy might be willing to offer a discount on a television with excess inventory in Atlanta.

The last-mile platform would need to connect the retailers' order management and inventory data with package and delivery resource data in real time. Because sending data from mainframe to mainframe will no longer be feasible, a cloud-based ecosystem would be optimal, pooling package data, resource availability data, and analytics with insights, and featuring dynamic optimization of pickup and delivery routes. Drawing another parallel, such a platform would need analytic sophistication comparable to that of the ecosystem that supports Google's AdWords, which auctions key search terms billions of times each month to ensure the maximum value for both advertisers and consumers on Google's search platform. Data security — including consumer privacy, protection of proprietary company data, and transaction security — would be critical. This strategy would pay multiple dividends.

Consumers would benefit from seeing direct shopping incentives and options at the initial point of sale. And they would receive indirect shopping incentives because retailers would pass through shipper offers of lower-cost shipping on days when delivery demand is low. Consumers would generally also have more visibility into, and more interaction with, the entire delivery process.

Retailers would benefit from the power of aggregation, keeping their own online storefronts and identities but offering more and better shipping options through the last-mile exchange that would rival the experience that Amazon provides. Their shipping costs would fall.

Legacy couriers would build more flexible and efficient networks. Supply chains at FedEx and UPS are already highly optimized to deal with the fixed constraints designed into their existing networks. But the last-mile exchange would empower them to meet the challenge of managing supply chain costs despite the inherent variability in e-commerce volume growth. They would be able to see demand fluctuations earlier in the e-commerce sales process and shape demand with incentives, dynamic pricing, and real-time matching of resources. They could, in effect, reframe the problem to better design and utilize their fixed delivery fleets — minimizing the need for multiple trucks delivering packages on the same streets in a given time frame. (They might even create a secondary market swapping packages between networks to eliminate such redundant coverage.)

Disrupt Yourself

Although the proposed exchange may seem theoretical and futuristic, there is every reason for companies to act now to make it a reality. E-commerce volume will continue to boom, and the challenges facing transportation companies will become more serious. Consumer expectations have been reset since 2005, when Amazon introduced free two-day delivery for Amazon Prime customers. And expectations continue to escalate. Consumers now see two-day delivery as the default, and increasingly expect their purchases to arrive the day after they place their orders, or even on the same day. Just a few years ago, transportation companies were delivering packages only five days per week. UPS moved to six-day delivery in 2017. Amazon began arranging Sunday deliveries through a deal with the USPS in 2014 — and it's inevitable that the entire package delivery business will move to a routine seven-day delivery cycle before long. The last mile of the retail sales chain will likely become even more crowded with more competitors.

The current e-commerce trajectory is pointing toward a future in which FedEx, UPS, and other transportation companies become commoditized players in a game whose odds favor other players. But acting now would enable companies to alter this trajectory. Creating a last-mile exchange would fundamentally disrupt the last-mile delivery business by addressing demand in a more sophisticated way. FedEx and UPS, as noted earlier, are best positioned to be the disruptors. Their significant shares of overall transactions, as well as their huge resource bases and highly evolved delivery capabilities, give them the stakes they would need to place such a large bet. It's also possible that a consortium of retailers and transportation providers could band together to create an exchange. The specific details are also likely to evolve as blockchain technology becomes accepted more widely.

Finally, although consumers and retailers will see significant benefits if e-commerce delivery becomes more efficient, solving the last-mile dilemma may well be an existential challenge for transportation companies. Creating a new last-mile exchange would enable them to shape a future that would be more favorable to them. +

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How to Collaborate When You Don't Have Consensus

Three "stretch" strategies can help teams move forward when members can't agree and don't like or trust one another.

by Adam Kahane

Illustration by Lars Leetaru

On a rainy afternoon in 2016, I was leading a workshop to advance local development in Colombia; the meeting was one result of new peace accords that had ended 52 years of civil war. The atmosphere was tense and alert, as you might expect when leaders who bitterly opposed one another have gathered to work on their most crucial and difficult mutual problems. They were there because they knew that if they didn't find a way to work together, the reconciliation and growth the country desperately needed might never take place.

"Haven't I seen you somewhere?" a former guerrilla commander asked a woman sitting near me.

"Yes," she said. "I gave you money to ransom my kidnapped daughter."

Most business confrontations aren't this dramatic. But lessons from extreme cases can be useful in more ordinary situations. Maybe you wouldn't use the term *enemies* to describe the difficult people you need to collaborate with, but you might not agree with, like, or trust them. Circumstances might be veering out of control, and conflicts might be seemingly unresolvable. How do you move forward in situations like these? The conventional model of collaboration in business is to go to a lot of meetings to try to get agreement on five things:

- What is our common purpose?
- What is the problem?
- What is the solution to the problem?
- What is the plan to execute the solution?
- Who needs to do what to execute the plan?

Answering these questions typically involves a delicate dance of managerial authority and employee adaptation. A boss may have a solution in mind, but could face potential downsides by enforcing it unilaterally. Those who disagree may drag their feet in implementing the plan or otherwise sabotage the team's efforts. So instead, teams collaborate: A boss leads everyone to see the problem the same way (probably the way the boss does), and then to agree on a way forward.

But what if the people in the room are working at cross-purposes? What if they can't even agree on what the problem is, much less how to solve it? What if there is low trust among them and no one who can control the situation? What if the only thing people can agree on is that the situation is unacceptable and must be changed?

Those were the circumstances at the workshop in Colombia, as in many other complex and conflicted situations, in politics and business. When people have fundamental disagreements, they can't articulate their mutual interests harmoniously. Getting them to agree isn't a realistic option. Only a few choices are available. You can try to force the issue (and face the repercussions of a backlash); you can try to adapt to the unacceptable situation as it is; or you can try to exit from the situation altogether. If those paths aren't feasible, only one alternative remains: Find a way to collaborate despite disagreement.

In this context, collaboration means something different from — and more difficult than — the standard interpretation. The typical definition of collaboration gives way to the secondary meaning: the fear that if you work with the enemy, you will be seen as a "collaborator," and even your allies will distrust you and maybe punish you. I once asked President Juan Manuel Santos of Colombia, who won a Nobel Peace Prize for negotiating the peace treaty, what had been most difficult for him. "The hardest part was being considered a traitor," he said.

In these sorts of situations — including ones less extreme than civil war — the conventional approach to collaboration will not work. But the good news is *it doesn't have to*. You don't have to give up when people don't agree. You may not be able to control how people understand the situation, or what other people will do. But you *can* get unstuck and make progress, just as the opposing forces in Colombia's civil war are doing today.

Stretch Collaboration

I first learned about collaborating with the enemy 20 years ago while leading the initial meeting to create scenarios for the future of Colombia — long before the more recent workshop I've already described. Santos called that first meeting "one of the most significant events in the country's search for peace." Santos, an opposition politician at the time, was the organizer of the meeting, which included people from all parts of Colombian society and political points of view.

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When we first gathered, a Communist politician saw a paramilitary warlord across the room and asked Santos, “Do you really expect me to sit down with this man, who has tried to have me killed five times?”

“It is precisely so that he does not do so a sixth time that I am inviting you to sit down,” Santos replied.

At the most basic level, the situation was stuck — but every person there wanted things to change. During the meeting we heard from a representative of the Revolutionary Armed Forces of Colombia, or FARC, who was listening to the conversation via shortwave radio from his hiding place in the mountains.

“Do we have to agree to a cease-fire to participate?” he asked.

I didn’t have this on my list of frequently asked questions. “No,” I answered. “The only thing you have to agree to is to participate — to talk and listen.”

Agreement is off the table in situations like these, and it becomes time to attempt what I call stretch collaboration. There are three “stretch” tools you can use to make progress, as an alternative to trying to work through the five questions in the conventional form of collaboration.

Accept the plurality of the situation. Every participating person, team, and organization is a whole, interacting with other wholes, each perhaps with a different idea of what is going on and what should be going on. In conventional collaboration, we imagine we’re one team with one purpose, working in sync. The statement you hear is, “Let’s focus on the whole, or the good of the whole [or the good of the team, or company, or country].” This is almost always illegitimate and manipulative and really means, “Let’s focus on the whole that’s meaningful to me.” There are always many wholes that might have some things in common but are in disagreement on many other things.

In problematic situations, we do not have to agree on what the solution is — or even what the problem is. We can still make progress.

In problematic situations, we do not have to agree on what the solution is — or even what the problem is. We can still make progress. As Antanas Mockus, a former mayor of Bogotá, told me, “Often we do not need to have a consensus on

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or even discuss principles. The most robust agreements are those that different actors support for different reasons."

Experiment to find a way forward. Stretch collaboration requires us to keep moving and trying things with the understanding that we can't control the future, but we can influence it. The definition of success in this kind of collaboration isn't to come up with a solution, but to be working toward it.

For example, I worked on a multi-stakeholder project with the Organization of American States (OAS) to consider the problem of drugs in the region and build scenarios for the future. Scenarios are not forecasts — what *will* happen. Nor are they policy proposals — what *should* happen. Rather, they are a set of stories of what *could* happen. Building scenarios together is a good way to work with people you don't agree with, like, or trust because you don't have to concur on what the problem is. And because everyone works to build each of the stories, you find yourself immersed in the reality of other people's worlds.

The OAS project included 46 leaders from all the countries of the Americas and all the sectors involved in drug policy: politics, security, business, health, education, indigenous cultures, international organizations, the justice system, and civil society. Many points of view emerged. In the end, we created four plausible scenarios. Each reflected a different understanding of the problem:

• The drug problem is part of a larger insecurity problem. Weak state institutions are unable to control organized crime and the violence and corruption it generates. Governments need to be stronger and more forceful and have the necessary resources to combat violent drug-dealing organizations.

• The problem is that the current approach for controlling drugs through criminal sanctions (especially incarceration of users and low-level dealers) is causing too much harm. The justice system needs to be oriented toward decriminalization and more effective regulation.

• The drug problem is a manifestation and magnifier of underlying social and economic dysfunctions that lead to violence and addiction. Drugs need to be dealt with on the demand side, through community-building and health and wellness programs.

• The problem is that the countries where drugs are produced and through which they transit are bearing insufferable and unfair costs. Law enforcement needs to focus on the countries where drugs are used.

These scenarios formed a platform for discussion around the world. Sixteen months later, then secretary general of the OAS José Miguel Insulza said the scenario report had a huge, immediate impact. “It managed to open up a discussion as frank as it was unprecedented of all the options available. It has set a ‘before’ and an ‘after’ in our way of addressing the drug phenomenon,” he said.

The problem wasn’t solved. But it was *unstuck*. This example illustrates that out of this type of collaboration, new solutions can emerge — although there is no guarantee they will. In this case, a change in international drug laws has not happened yet; in some instances, however, individual countries and states have begun to experiment with different pathways in relation to the problem. Changing the conversation is the first step. The *Financial Times* put it this way: “The report’s main use is that it helps to lift the prohibition on discussing drug policy, a ban especially prevalent among those many officials and bureaucrats who have spent their professional lives combating illegal drugs. For the rest, the conversation is about to begin.”

Collaborating this way is a little like working with clay. At first it’s very stiff. You have to knead it before you can do anything with it.

Collaborating this way is a little like working with clay. At first it’s very stiff. You have to knead it before you can do anything with it. Often, exercises in listening or working together on stories of the future “knead” the group so unexpected ideas and alliances can emerge. Then, initiatives can be born.

For example, after Guatemala’s 36-year civil war, I facilitated a project to help the country mend its torn social fabric. No single solution was generated from this meeting of enemies. But many different seeds were planted, including four presidential campaigns; contributions to the Commission for Historical Clarification (which records human rights violations committed during the war), the fiscal agreement commission, and the peace accords monitoring commission; work on municipal development strategies, a national antipoverty strategy, and a new university curriculum; and six spin-off national dialogues.

At the start of the project, none of these outcomes was envisioned. As one member of the team said, quoting from the *Popol Vuh*, an ancient Mayan cultural text, "We did not put our ideas together. We put our purposes together." The distinction is important.

See yourself as part of the problem, not outside it. We must accept that progress is impossible until we recognize that we are part of, rather than apart from, the situation. Leadership scholar Bill Tolbert once told me, "The old activist quip, 'If you're not part of the solution, you're part of the problem,' actually misses a more important point — which is that if you're not part of the problem, then you can't be part of the solution."

I happened to be working with two teams in Mexico at the time of the 2017 earthquake. Many people on each team didn't agree with, like, or trust one another. The difference was that one team had been working together for two months and the other for two years. After the earthquake hit, I watched the private social media chat among members of each group, and their posts — particularly regarding response efforts — revealed an important difference. The group that had been working together for two months

How to Work Together When You Don't Agree

These simple stretch collaboration tools can help your team make progress when trust is low and consensus seems out of reach.

1. **Accept the plurality of the situation:** You do not have to agree on what the solution is — or even what the problem is — to make progress. Different actors may support the same outcome for different reasons.

2. **Experiment to find a way forward:** Keep trying things with the understanding that you can't control the future, but you can influence it. Success isn't coming up with a solution — it's working toward one.

3. **See yourself as part of the problem, not outside it:** You can't make progress until you realize you have a role in the situation. If you're not part of the problem, you can't be part of the solution.

Source: Strategy&

exchanged a lot of polemical messages, such as assigning blame for failures in the response. The group that had been working together for two years posted messages such as, “I’m going to Puebla, and I have 20 tons of roofing — can anyone help me get it to where it’s most needed?”

These people had learned not to waste time pointing out what other people should be doing. They were asking themselves what they could be doing differently to change the situation.

Effecting Long-Lasting Change

Collaborating with the so-called enemy is a practice rather than just an intellectual exercise. Its outcome is unpredictable. Sometimes, in the midst of a group of people who fiercely distrust one another but who have chosen to collaborate simply by being in the same room, something profoundly moving occurs.

During the first meeting of the Guatemala project, Ronalth Ochaeta, a human rights worker, spoke about witnessing the exhumation of a mass grave from one of the war’s many massacres. Once the earth had been removed, he noticed a number of small bones and asked the forensic scientist if people’s bones had been broken during the massacre. The scientist replied that, no, the grave contained the corpses of pregnant women, and the small bones were those of their fetuses.

Sometimes, in the midst of a group of people who fiercely distrust one another, something profoundly moving occurs.

After Ochaeta finished his story, the group was completely silent — and the silence lasted several long minutes. Then, without speaking about it, we carried on with our work. When team members were interviewed five years later for a history of the project, many of them traced the important work they had done together to the insight and connection manifested in those minutes of silence. One said that after listening to the story, “I understood and felt in my heart all that had happened. And there was a feeling that we must struggle to prevent this from happening again.”

By working with people we don't agree with, like, or trust, we can achieve greater purposefulness and agency. There is something we can do about our problematic situations. It is indeed possible for us to collaborate with our enemies. +

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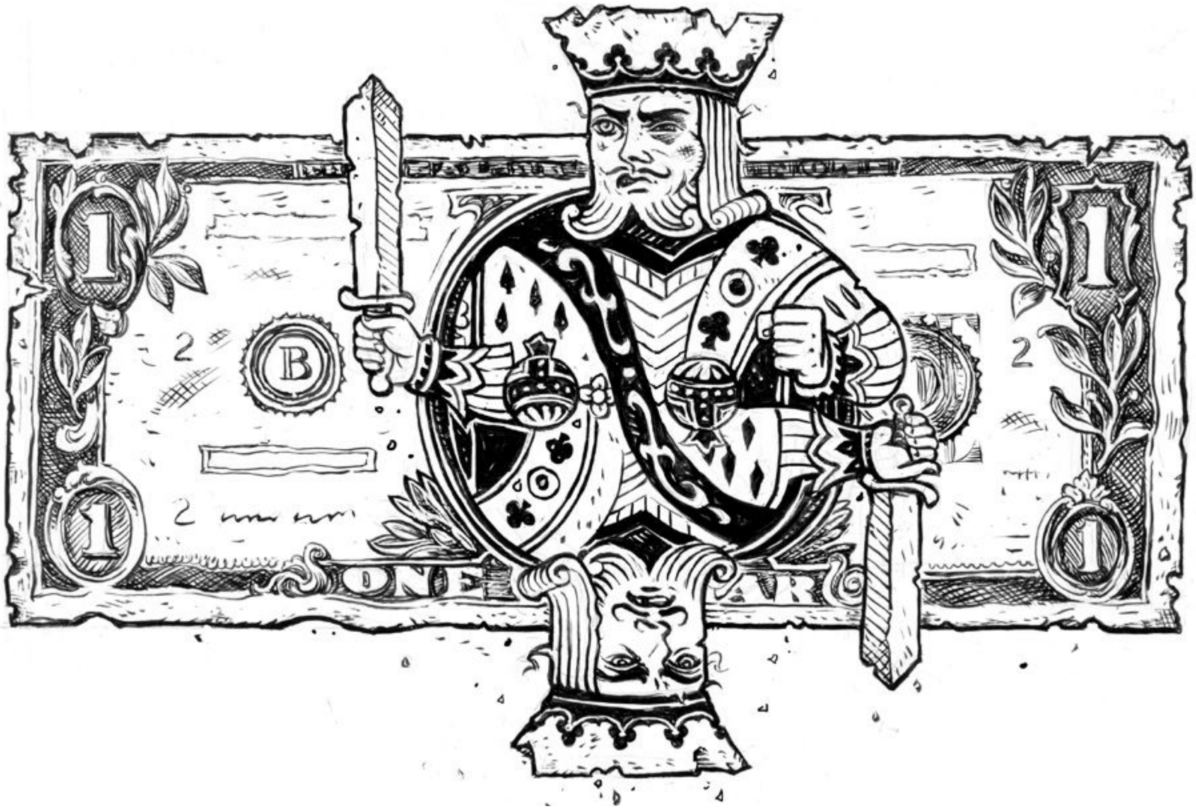
Betty Sue Flowers also contributed to this article.

Note: Parts of this essay are excerpted from Adam Kahane's books, including Collaborating with the Enemy *and* Solving Tough Problems.



If Cash Is King, Why Doesn't It Rule?

With tax rules changing and interest rates set to rise globally, companies need to organize their operations around a new value equation.

by Liz Sweigart

Illustration by Lars Leetaru

It is a truth universally acknowledged by business executives, Wall Street analysts, and investors the world over that cash is the lifeblood of an enterprise.

Free cash flow is a critical business performance metric. It's how we measure successful investment and execution, how profit is distributed to shareholders, and how employees get paid. Without cash, a company folds. Irrespective of their size, shape, or footprint, businesses are on a continuous hunt for cash. At the same time, as the broader corporate goals are broken down into separate key performance indicators (KPIs), the primacy of optimizing organizational cash can get lost. In other words, the metrics provide no insight into how actions taken in one part of the business affect cash generated or held elsewhere. It prompts the question: If cash is king, why is it treated as a by-product rather than a focus?

The most important thing to look at in evaluating business performance is *cash accessibility*, or the ability of a company to use its free cash when and where it needs it. Businesses may have cash tied up in different places for a variety of reasons — often having to do with currency restrictions, banking regulations, and taxes — which can compromise cash accessibility. When money was cheap, there was usually a quick fix for this problem: Take on debt. But two things have changed. Interest rates are starting to rise globally, and tax regulations are shifting worldwide toward dramatically restricting the deductibility of interest expense.

Most companies do not have a handle on how accessible their cash is because their data collection and their reporting functions do not consider it a priority. The good news is that this can be fixed. The fix will require rethinking current performance measurements that optimize the wrong sorts of behaviors, and getting a better understanding of how to collect, analyze, and use data. Companies that are getting this right have a strategic edge because they have more accessible cash for their business. What they do with it, however, is another story.

The New Value Equation

Many companies are using an obsolete value equation. Thus, they have been unable to leverage performance management at the individual and team levels to drive sustainable firm-level success. Typically, current metrics look at the enterprise as the sum of its parts, totting up performance yields of individuals and teams in a way that loses track of their impact on cash accessibility. I propose a new value equation that maximizes accessible cash by optimizing internal and external relationships to focus on better targets. This requires leveraging purposeful data design and implementing performance management measures that incentivize behaviors aligned with strategy. Doing so will give an organization unprecedented insight into where the cash is and how company actions will affect its availability.

For a long time, the value equation for most companies looked like this:

Performance management + cost reduction = firm-level value

Value in this formula can take the form of profitability, return on assets, liquidity, stock price, earnings per share, Tobin's Q (the ratio of the market value of a firm to the replacement costs of its assets), or any number of other (typically noncash) measures. The underlying assumption is that firm-level value is equal to the sum of the performance of the individuals in the organization and that this value can be maximized by eliminating waste in the supply chain. That makes a lot of sense, as long as you're not particularly concerned with cash.

As is well known, it's possible to have a great-looking income statement but lack positive net cash flow. Businesses facing that scenario inevitably fail. I've seen senior executives become entranced by profitability, resource production, asset utilization, top-line revenue, and any one of a number of other measures. As a result, they take their eye off cash. The outcome is predictable: The income statement strengthens while the balance sheet weakens and, ultimately, the company falters because it can't pay its bills.

Cash Accessibility

Cash accessibility, in my view, is the most important thing to look at in evaluating business performance. Companies not only require net positive cash flow to operate sustainably, but they need that positive cash to be visible and as cheap and simple as possible to deploy. Cash accessibility isn't the same thing as free cash flow (i.e., the difference between operating cash flow and capital expenditures), although free cash flow is certainly a component of it. In some situations, a company temporarily lacks liquidity or doesn't have a significant amount of free cash to distribute because it has invested that cash in its business. In other instances, a company's cash inflows outpace its outflows. However, that cash can end up in places where banking laws, export controls, and currency restrictions make it nearly impossible for the business to effectively deploy it. On paper, the company has the necessary liquidity. But in practice, it doesn't. Water, water everywhere, but not a drop to drink.

Historically, companies have managed a lack of accessible cash mostly by borrowing from external sources. That wasn't a bad strategy as long as the company had the capacity to service the debt. There has even been a tax incentive to take this route in the majority of countries, as the interest paid on debt from third parties was fully deductible for income tax purposes. Inspired by cheap money, companies took on record amounts of leverage and went to work growing the economy and rewarding shareholders. In a February 2018 report, Standard & Poor's cited statistics showing that nonfinancial corporate debt as a percentage of GDP reached 96 percent globally in 2017, representing a 15 percentage point increase since 2011. This metric is important because it highlights just how much companies have binged on credit in recent years.

At the same time, though, companies produced record profits. In many cases a cycle has emerged wherein companies have become more and more dependent on easily accessible cash from banks and other external sources to generate the record profits needed to service their growing debt. That's all well and good until interest rates go up while corporate debt matures and companies find themselves unable to keep up. Many companies are closer to this scenario than they may realize. A 2016 refinancing study by Standard & Poor's indicated that more than US$4 trillion in corporate debt will come due through the year 2020, and central banks continue to indicate that additional rate hikes are on the horizon. In its report to Congress earlier in 2018, the Federal Reserve highlighted the vulnerabilities in the U.S. financial system resulting from leverage in the nonfinancial business sector and the recent increase in the net issuance of risky debt.

Traditionally, interest rate increases haven't been a particular concern in a robust economy. This is because high corporate returns generally covered any additional cost of borrowing and international tax laws often allowed for generous caps on interest expense deductions. But, as the result of actions by the Organisation for Economic Co-operation and Development in recent years, as well as new tax legislation in major economies such as the U.S., interest expense deductibility limits are being significantly reduced.

Although cash accessibility should always have been on companies' radar screens, rising interest rates and tax reform initiatives around the world are now forcing greater attention on the issue. But because the focus has traditionally been free cash flow, as opposed to *accessible* free cash flow, no standardized financial reports, ratios, or metrics exist to measure or assess it. Companies in general do not understand that the actions they think are right and accretive to the overall corporate strategy are actually hurting the business — because they are eroding cash. In my experience working with large enterprises, both domestic and multinational, the amount of cash that is potentially accessible is typically in the tens to hundreds of millions of dollars annually. Regardless of whether the market is bullish or bearish, that's a compelling story.

The "Cash Grid"

Every business has places where cash is generated and places where it is consumed (to generate more cash). It's the finance equivalent of the circle of life.

The way cash moves in an organization is analogous to the transmission of electricity. To get the energy from where it is generated to customers, the power company relies on something known as a grid, a network that transmits electricity from one location to another. It's important to note that the total energy delivered to customers via the grid will always be less than the amount generated at the plant. Why? Because it takes energy to move energy. That's known as transmission cost.

If a grid is poorly maintained or spliced together from several different grids that no one ever really figured out how to rewire, it moves energy less efficiently, increasing transmission cost. Over time, less and less electricity gets to customers and the power company loses value literally into thin air. Eventually, the power generator may have to buy energy from other sources. Worst of all, the company may not even realize the full extent to which its inefficient grid is bleeding value because the grid itself is so complex that it offers no transparency into what's really happening.

The same is true for cash. Most, if not all, financial reporting shows neither where cash is really available nor the true cost of getting it where it's wanted.

The Role of Reporting

Broadly, companies have three distinct dimensions to their accounting: financial, management, and tax. Financial accounting (the "reporting" lens) is primarily concerned with the production of financial statements that provide external stakeholders such as investors and banks with insight into a business's operations. Standards and rules for financial accounting are set by international and local bodies.

By contrast, management accounting (the "operational" lens) is not required to adhere to any particular set of conventions, standards, or rules. Its aim is to produce internal-use-only financial reports that give business leaders relevant information so they can make better decisions.

Finally, there's tax accounting (the "legal entity" lens). Tax accounting is focused on producing financial reports that adhere to the statutory requirements for the jurisdictions in which a business must file and pay taxes. Revenue authorities set the rules.

Within each of these accounting disciplines, data exists to give us insights into cash accessibility. Unfortunately, that data is scattered throughout the organization, obscured, and often overlooked. Because of the ad hoc way in which each part of the organization has come to generate and use its data, it's hard to get the full picture.

Let's take a look at just why that is, using a hypothetical company, Obtuse Angle Enterprises, or OAE. OAE is a multinational enterprise that designs, manufactures, and sells an array of industrial products and is traded on a U.S. stock exchange. In total, OAE is made up of four business units (management reporting entities), matrixed across territorial organizations (legal entities) located in different countries. Each business unit has its own profit and loss statement based on OAE's internal management accounting policies. These management reports play a significant role in determining compensation and promotion decisions for business leaders.

The business units buy and sell goods and services internally, buy from external vendors, and sell to external customers; each business unit conducts business in multiple countries. When a product moves from a U.S. factory to a Canadian sales office in the same business unit, leadership isn't concerned about the price charged between the two because it's a wash when it comes to the income statement. However, OAE has a distinct legal entity in the U.S. and another one in Canada, and the transaction has immediate cash impacts for both of them, involving currency exchange, income tax, customs duties, sales tax, and other factors. In the tax accounting dimension, the price matters greatly. By contrast, when two business units in the U.S. transact business, the price of the goods sold may be of interest to the leaders of those two units, and it thus makes a big difference in management accounting. But it is less relevant from a tax accounting standpoint because the entire transaction takes place within a single legal entity.

It gets even more complicated. For example, let's say that a business unit based in Denver has historically purchased all its repair parts from another business unit's factory in Tulsa, Okla., at a price established by OAE for management accounting purposes when the company was first set up more than 25 years ago. Over time the prices charged between third parties in the market drift farther and farther away from the price set for OAE's internal transactions. Incentivized to maximize the business unit's income, the Denver leaders stop buying the repair parts from Tulsa, after finding that they can purchase the same products at half the price from an online retailer in China.

The next year, Denver's financial results improve, thanks to materially reduced cost. The Tulsa unit's results stay close to the same because repair parts are immaterial to its overall business. Yet OAE's bottom-line profitability and cash flow shrink. OAE's management is puzzled. If the business units do the same as or better than before, how can the company overall end up in a worse position? None of management's current KPIs shed any light on the situation. We know that an increase in inventory carrying costs along with a slew of unintended tax and currency consequences related to the purchases from the external vendor in China are to blame, but that's only because we can see what management can't: Relationships and behaviors in the business, driven by well-intentioned but poorly designed incentives, are maximizing individual results to the detriment of the overall company.

In many companies today, the corporate tax and treasury departments are working to identify and mitigate the consequences of the behaviors and relationships that negatively impact cash. However, it isn't enough to manage the outcomes on the back end. To create and sustain shareholder value over the long term, companies must be able to see, intelligently evaluate, and drive strategically accretive behaviors and relationships within and between the layers that directly contribute to positive free cash accessibility. For that to work, companies need to reimagine their approach not only to reporting, but also to performance management and data design.

Maximizing Performance

At its most rudimentary level, performance management is concerned with the measurement, improvement, and enhancement of individual knowledge, skills, and abilities. The discipline is predicated on the belief that managing these factors will result in greater success for the organization. Both human resource scholars and practitioners have long hewed to the generally accepted principle that maximizing individual performance leads to maximum organizational performance. However, little empirical research directly links the performance improvement of individuals to improved firm-level performance.

Companies need to reimagine their approach to reporting, performance management, and data design.

The key assumption in the existing value equation is that individual performance is accretive overall. From this perspective, a company is analogous to a bowling team, in which the individual bowlers' scores are added together and the team with the highest score wins. But in many companies, such as OAE, the scores don't always add up that way. It is possible for one or all individuals or units to maximize their own results, and still produce an outcome that is detrimental to the whole.

And that brings us to the new value equation, one that maximizes accessible cash as a means of creating sustainably increased shareholder value. It looks like this:

Sustainably increased shareholder value = maximum accessible cash = internal and external relationships optimized to focus on cash + purposeful data design and insightful reporting + performance management measures that incentivize behaviors aligned with strategy

To make this new value equation a reality, companies need to master the "subtle science and exact art" — as J.K. Rowling's Severus Snape might put it — of aligning the seen and unseen business relationships in the three reporting lenses. This entails coordinating relationships that create value and drive profit as seen through the management lens with the resulting transactions in which cash can be put at risk in the legal entity lens (and obscured in the reporting lens). It's time to adopt a better approach, one in which the same transaction can easily be tracked, with its implications for management, reporting, and the legal entity visible to all. +

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INSIDE THE MIND OF THE INNOVATIVE STARTUP CEO

THREE ENTREPRENEURIAL CHIEF EXECUTIVES UNDER 50 are launching products and services that change the way people live, work, and interrelate.

What does it take to be the CEO of a truly innovative company? In late 2017, a group of us at PwC and *strategy+business* working on PwC's annual CEO survey began to ask this question. We answered it by initiating an interview series called "Inside the Mind of the CEO." The conversations, which can be found on strategy-business.com, include Q&As with the three leaders featured here, who are at the helm of startups that they founded or cofounded.

Although they work in different sectors — food, electronics and devices, and financial services — these chief executives have one thing in common. Drawing inspiration and ideas from customers' unmet needs, they see their companies as game changers within established industries. Each has a different theory of how innovation can be fostered. Melissa Snover, age 38, the "head magician" at Katjes Magic Candy Factory in the U.K., regards serial entrepreneurship as a necessary attribute of an innovative CEO. This is her third successful startup. For Shin Sakane, age 47, at Japan's Seven Dreamers Laboratories, the key to innovation is developing a product that isn't available elsewhere. Valentin Stalf, age 33, of German financial-services startup N26, began with a vision for banking to be as easy as downloading music.

In these excerpts from the full online interviews, you get three profiles of a new generation of entrepreneurial business leaders who are just beginning to make their mark. Their perspectives may seem unusual or unorthodox, but many incumbent companies' leaders are trying to think the same way.

—ART KLEINER, EDITOR-IN-CHIEF

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Strategy in Three Dimensions

by Deborah Unger

Katjes Magic Candy Factory, based in Birmingham, U.K., does something that no other factory can: It makes customer-designed sweets using a specially engineered 3D printer. The idea came to Melissa Snover while she was in the process of growing her first confectionary startup, Goody Good Stuff, a pioneer in vegan sweets. Her customers kept asking whether she could make candies in shapes they designed. In 2015, as sales at Goody Good Stuff topped US$1.5 million and suitors came calling, Snover decided to sell the company and start something new. She spent months disassembling 3D printers and researching how to produce the ingredients that would not only print edible sweets designed by customers on the spot, but also get the requisite health and safety approvals. She used an online incubator to connect with people who shared her interests, and kept at it, even when her prototype printers failed. Snover launched the brand in 2016 with her partner Bastian Fassin.

MELISSA SNOVER

Photograph courtesy of Katjes Fassin UK Ltd.

Katjes Magic Candy Factory, the trading name of Katjes Fassin UK Ltd., now has three patents and more than 100 printers in the field. The company started with a business-to-business model: leasing the 3D printers, licensing software, and selling the ingredients that would allow customers in stores to design bespoke gummy candy. It has since added two more revenue streams: consulting about 3D food printing and marketing to the entertainment industry (which included an appearance at an after-party at the 2017 Grammy Awards). The company turned a profit by the 18-month mark, revenues are forecast to double annually, and plans are in place to launch a personalized, 3D-printed product for the vitamin and supplement market this year.

S+B: How did you get the business up and running?

SNOVER: I came up with the idea for Magic Candy Factory on the back of my first firm, Goody Good Stuff. Basically, I was making candy in a factory; I could never customize anything. I wanted to allow everyone to enjoy the sensation of creating. I bought 3D printers, took them apart, put them back together (kind of), threw one out of a two-story window, tore my hair out, and finally launched a prototype and went and worked in a shop to see if people liked it.

S+B: How did you overcome the challenges of growing your business and growing your team?

SNOVER: When you start any new business, you are faced with the challenges of limited capital, limited resources, limited time. Finding the right people and also the right funding partners, in order to get you over those bridges, is very difficult.

I was extremely lucky, because I actually found my partner, Bastian Fassin, prior to setting up the business. He shared my passion for creating customized candies on demand and for making people into their own Willy Wonkas. Still today, Bastian is like a mentor to me. His business has been in the Fassin family for more than 100 years.

But I worked pretty much on my own for the first six to seven months of this development. I had sold Goody Good Stuff and had some resources to invest. Then, as soon as I knew that we had a real business, I went out to market. I was also extremely lucky to have found three [employees] who are still with me now who literally made the entire thing possible.

S+B: What has been your biggest challenge?

SNOVER: I think that the Magic Candy Factory concept is unique because no-

"I THINK THAT THE MAGIC CANDY FACTORY IS UNIQUE BECAUSE NOBODY BLAZED ANY TRAIL BEFORE US. IN COMPARISON TO MY PREVIOUS BUSINESSES IN FINANCE AND SWEETS MAKING, THERE WAS NO ROAD MAP."

body blazed any trail before us. In comparison to my previous businesses in finance and sweets making, there was no road map for what we're doing. The biggest challenge, I think, was finding partners in the supply chain that were reliable. When you put your name on a product and it fails in market because someone in the supply chain didn't deliver, the customer will never know this. You need everyone to do what they say they will do.

S+B: **How do you continue to innovate?**

SNOVER: The Magic Candy Factory was born from innovation. We have this thing about "innovate or die; always in beta," and I think that's the life force of the business. The innovations that we drew up for the first-ever printer were super exciting. But we're already on version six printers and we're only a couple of years old. We continually innovate, based on what we learn.

In this case, being small helps. A bigger company might recognize a design flaw or something that could be optimized, but it could take anywhere from six months to several years to action that knowledge. We 3D print a lot of our parts for our 3D printer, and we're able to make changes to the hardware, and also to the actual offerings, that are installed in each printer in the market in real time.

Our software feeds me information on a daily basis that tells me, for example, that strawberry [is popular] because it's a New York strawberry festival. Or, guess what, in the Middle East they don't like selfies, or in China they totally love selfies. We're able to trial different items, different flavor profiles, and different concepts around the machine. Then we're able to actually act on that [im-

Photograph by Tanja Houwerzijl

mediately], which makes Magic Candy able to innovate every day. I think that is the lifeblood of innovation.

S+B: What has been your proudest moment since launching?
SNOVER: I've got to say, probably the proudest moment was when we launched the concept for the very first time at the 2016 ISM [International Trade Fair for Sweets and Snacks] in Cologne, Germany. This is the largest candy show in the world, with about 50,000 to 60,000 people. They give an award for the best new product innovation of the year. It's kind of like the Oscars of candy. The day that we launched Magic Candy Factory, we won that award. Up until that stage, I was still a little bit unsure whether I'd actually be able to make it work. That was an amazing feeling for me to see it pushed over the edge, and to see the response from the public for the very first time.

S+B: What would you tell a young entrepreneur today?
SNOVER: If somebody came to me and wanted to start their own business, the advice that I would give them would be twofold. Find something that you're really passionate about, because you've got to have that passion in order to make it through what is going to be a difficult journey. But at the same time, ensure that you are thinking about the consumer or your end-market user and not yourself.

Don't develop something just because you think it's cool and everybody should want it. Develop something that solves a problem in the market or makes someone's life better, because those kinds of products always have a place. But products being developed for the sake of bragging rights, or because "I like it and everybody else should [too]," don't usually do well, and there's a reason for that. Focus on the customer, focus on serving people and making people's lives better, and you will find a way to get through that path and all the way to success.

S+B: How do you, as a serial entrepreneur, think the business could expand?
SNOVER: A mass market for 3D printers is not yet practical or helpful for us. That would mean 3D printing in the home and we are not there yet, primarily because of cost. But I do have more ideas for the company. "Innovate or die" is

up on our wall. From a technological viewpoint, this business has a lot more [potential] in it, and there are a lot of things that we can explore. We're now working on the concept of personalized nutrition, for example, also based on 3D printing.

Can a Laundry-Folding Robot Improve Your Life?

by Bobbie van der List

Chief executives of highly innovative companies must figure out how to take bold risks while being stable enough to sustain an enterprise over the long term. Achieving this balance is difficult in Japan, where lifelong employment is a strong tradition. Shin Sakane, founder and CEO of the Japanese startup Seven Dreamers Laboratories, has built the company's identity around resolving the conflict between innovative thinking and cultural stability.

SHIN SAKANE

Sakane is the new-generation leader in a prominent Japanese business family, perhaps best known as the founders and owners of the I.S.T. Corporation, a global producer of composite materials made from glass fiber and fluorine resin. After seven years as CEO of I.S.T., Sakane moved full-time to its product subsidiary Super Resin in 2010, and then in 2011 he established a division called Seven Dreamers for innovative products, including the Laundroid, a robot designed to fold clothes. Based originally in Silicon Valley and then headquartered in Tokyo, Seven Dreamers became a separate company in 2014.

S+B: What prompted you to start Seven Dreamers?

SAKANE: Super Resin was a very innovative and even glamorous company. We made satellite parts for the Japanese aerospace agencies. But I was restless there.

Photograph © N26

It is a B2B business, and I wanted to move to consumer products. So I sought financial backing and started Seven Dreamers.

S+B: What was the biggest challenge in getting familiar with consumer products?

SAKANE: The technology development process is the same. But the business development is completely different. At Seven Dreamers, corporate branding, marketing, and sales are very important, and we had to learn them from scratch. But it turned out that B2C is so much more exciting, and it has a lot more potential.

S+B: What have you learned about innovation?

SAKANE: The most important factor is finding a theme to work on. Many Japanese companies manage to make steady profits, but they don't produce the new products or services that they might. Instead of finding a theme, they focus on the technologies they already have, and the value they already know how to create. I think this is one of the core reasons for their not growing.

For example, some electronics companies — active in the electronics world, with global sales and marketing networks — have narrowed their scope to niche categories, like liquid crystal TV. They use the same core materials, and reach for the same resources, each time. It's better to look for a theme based on customer needs. What do people want that they don't have yet and that isn't available elsewhere?

S+B: Like a machine that can fold laundry?

SAKANE: Yes, you could say that. We have three basic criteria for approving an innovation project. First, the product must not yet be available in the world. Second, it should make people happy, giving them something they need and want. Third, it must be difficult to develop in terms of engineering prowess. That makes it harder for competitors to catch up.

For example, the selfie stick — used to take photographs with mobile phones — meets the first two criteria. It wasn't available when it was first introduced, and it truly makes people happy to have it. So of course someone decided to

“WE PICK PRODUCTS WITH LITTLE OR NO COMPETITION, THAT PEOPLE REALLY WANT, AND THAT WE HAVE THE CAPABILITIES TO DEVELOP. WITH THOSE THREE ELEMENTS, WE BELIEVE PEOPLE WILL BUY THEM.”

produce it. But within six months or so, the selfie-stick market was overrun with competitors, because it is a simple thing to produce.

Our business strategy is directly related to our business criteria. We pick products with little or no competition, that people really want, and that we have the capabilities to develop. With those three elements, we believe people will buy them.

S+B: It seems that more companies are going to be competing on trustworthiness and their reputation. Is this something you think about?

SAKANE: Since we're a B2C business, we value corporate branding. We have to do well in that area. Because of the Internet and social networks, we cannot hide anything or trick people. We have learned that the more honest we are, the more our business grows. In December 2016, we had an incident with Nastent — the anti-snoring device that is one of our three core products. That business had been growing fast; sales were going up every month. Then a Japanese woman accidentally swallowed the device in her sleep. She called us, and we told her to go to the hospital. The X-ray showed the device was in her stomach. It eventually came out, and didn't affect her health, and she didn't complain.

Nonetheless, we completely recalled all the products on January 17, 2017, to replace all the information documents. It took us five months to complete the recall; we lost at least $20 million in revenue. That had a huge impact on a startup like us. Also, it happened just before a Series B investment round, and this delayed the signing of the contract for two weeks.

But we knew we had to react quickly and completely, or our reputation would suffer. If there was a problem, we knew we had to be honest and trustworthy. We were afraid that people might say on the Internet, "Medical devices from startups are dangerous products."

It paid off for us in the long run. It turned out that most comments on the Internet were very positive about us. "How can I survive without Nastent? When is Seven Dreamers going to restart the business?" In Yahoo auctions, the price of a box went from $42 to $400. This proved that the product was valuable to our customers. Our investors saw that as well.

How Can a Fintech Company Win Customers?

by Suvarchala Narayanan

How long will it be before the new financial technology (fintech) companies transform the financial-services industry? To startup fintech leaders such as N26 CEO Valentin Stalf, that may be the wrong question. They want to know how long it will take to transform people's everyday experience — in particular, the way they organize their lives and prepare for their financial future.

VALENTIN STALF

A consumer bank accessible only through a mobile app, N26 has been described as offering the most modern bank account in Europe. Based in Berlin, it has more than 1 million users, largely in Germany, Austria, France, Spain, and Italy, and is planning to expand into the U.K. and the United States. It has no branches or ATMs of its own, but customers can get cash at any ATM or more than 7,000 affiliated retailers. N26 is sometimes described as targeting millennials, and Stalf, born in 1985, is a millennial himself. He and his colleagues at N26 believe that people of all ages are ready for digitally enabled simplicity and seamlessness, especially in personal banking. "Why can't we 'Spotify' banking?" he asks.

N26's strategy is to combine all the complexity of an individual's financial life — with accounts and cards from many companies — into a single, relatively simple financial-services platform, using cross-service partnerships and alliances to

“WE DECIDED TO CREATE A BANK THAT PEOPLE WOULD USE, NOT BECAUSE THEY HAD TO, BUT BECAUSE THEY REALLY LOVED TO OPEN THE SOFTWARE AND ENGAGE WITH IT.”

expand the services it offers. Its current partnerships with Mastercard, Clark for insurance, TransferWise for money transfers, and Auxmoney for credit lines represent first steps toward the larger business ecosystem that Stalf intends to create.

S+B: What did you see that led you to launch N26?

STALF: Our starting point was the poor quality of other digital banking products. In e-commerce and entertainment, the experience is mobile-friendly and easy to use. Most banking products are really difficult for customers, and no one enjoys interacting with them.

People’s financial lives are so important because they are the basis for all decisions. If you want to buy something, go on holiday, or plan for the future, your ability depends on your budget and cash flow. But most banking products today are not conducive to understanding your financial lives and making good decisions that build good habits.

We decided to create a bank that people would use, not because they had to, but because they really loved to open the software and engage with it. We got our own banking license because we didn’t want the constraints that would come if we were part of another banking group with partners who would tell us what to do or what rules to follow. If you want to put forward a very simple product that people love to use, you can only do it when you own the technology and govern yourself.

We also looked at the overall technology trends. Cashless payments, which had been the centerpiece of many fintech efforts, were on the decline. But smartphone use was more prolific every year. The quality of smartphones was also continuously improving. This was one of the biggest drivers for our timing. If we had started the company three or four years earlier, the N26 app experience would not have been that great. Today, due to advanced programming languages and more sophisticated devices, you can offer more complex products on the phone and differentiate your app.

S+B: How are these new products different from conventional banking?

STALF: Most people don't want to spend too much time on their financials. About 80 percent of our users just want to have their financial lives set up to be easy to deal with. So, our focus today is on quick wins: easy transactions on the smartphone. People want to save time. They want to do their banking with a couple of clicks. No one wants to spend two hours opening a bank account. No one wants to set up a standing order where you need to type in five different codes that you keep offline, on paper. People also want to lower the barrier of financial literacy so they can make better decisions. And they want a full range of banking products, the best that anyone could find.

In the end, as long as there is trust and quality, users don't care too much where the products come from. So we built a marketplace where we integrate partners from around the world. They include traditional and modern players. We're independent of these partners, and we try to curate the best products for our customers. It's about fair products and transparency. It's not about searching two hours on the Internet to find someone who will give you 0.3 percent lower interest rates.

S+B: Do your customers help determine what products or partnerships you offer?

STALF: Partly, yes. We have a functionality in the app where you can submit ideas or request a feature or product. We try to deeply understand what the user is trying to accomplish with that request. When a user asks for a shared account, for example, a bank will traditionally interpret that as having two account numbers, held by two spouses, where one person signs and the other has access. The bank will come at it from a legal and technical perspective instead of an experiential one. But if you look deeper, you'll find that a shared account is actually about two people wanting a shared space to book things and make financial decisions together.

I think this is why we are acquiring customers at a much cheaper cost than any traditional banks. People are very "sticky" with us. We don't lose them. They don't turn away. They do more transactions each month, and I'm very happy on that score.

S+B: What kinds of people are ready to switch to banking this way? Is it largely millennials?

STALF: I prefer to call our target audience "digital customers." They exist in every age group. We see two trends that justify this behavioral change. First, people want something easy to use that will save them time. Second, they no longer tolerate restrictions. They can shop on Amazon with one click; they get instant access to music with Spotify. But the banking experience is still mostly like it was 20 years ago. You make a request, and maybe two weeks later something arrives. Our customers don't understand why they should go to a bank branch to open an account, or why they need to fill out five forms to make an investment. They want ease of use and they want banks to customize products to their needs.

S+B: How do you see financial services evolving?

STALF: In the future, your banking practices will be driven by your individual profile and the actions you have taken in the past. If you have just recently got

“FINANCIAL-SERVICES FIRMS WILL INCREASINGLY USE BIG DATA TO UNDERSTAND WHAT PEOPLE ARE TRYING TO DO, AND THEN TAILOR THE EXPERIENCE ACCORDINGLY.”

a new job, we know you have different financing needs from someone who has had a job for 20 years. Already, we are categorizing all the transactions of our customers, and creating profiles to understand their life situations. We currently use this for fraud management and risk-scoring. If we see unusual patterns in our transactions that suggest fraud, we can block the crime before it happens. In the future, we will use similar methods to serve each customer’s individual needs.

S+B: Do you mean offerings based on predictive analytics?

STALF: Yes. There will be a thousand financial-services products, all customized to each individual’s portfolio. Individualized screens will result in individual offerings based on your financial behavior.

Financial-services firms will increasingly use big data to understand what people are trying to do, and then tailor the experience accordingly. You want a savings product, and you don’t have €100,000 — but you have €10,000, so you are offered a different product. You apply for credit, and the data is already gathered: You don’t have to type in what you paid for your house. The trend is to reduce complexity, and to save consumers time while offering them comprehensive products that solve problems.

S+B: How will platform-based companies like N26 manage data privacy?

STALF: We will share data for verification — for instance, to make sure, from a regulatory perspective, that we have correctly identified the person who does a transaction. But we won’t give our partner companies full access to data for marketing. For example, we won't give TransferWise a list of people and say, "Select the ones you want to approach, and your offer will pop up in their app." Banks will have to become gatekeepers for their customers.

S+B: What about competition from social media?

STALF: Facebook and Google want to disrupt the way people pay and send money, but they are not yet involved in the management of daily financial life. I think in the end, the technology industry is going more in the direction of WeChat, which combines social media, payments, and broader financial services.

Ultimately, a bank is a place where you securely hold your identity and your money. On the Internet, one of the biggest problems is identity and payment fraud. It makes a lot of sense to have a single identity profile that identifies you, allows you to pay for things, manages your investments, and keeps your assets available. In the future, that could be a profile you manage through N26. Right now we're focused on the simple problems: opening an account, setting up a standing order, and getting credit. In Germany, we already offer most of the products customers expect from a retail bank, and our goal is to expand this offering to all of our markets.

S+B: You've set yourself up as a platform for offerings from other companies. Meanwhile, large banks are starting to partner with fintech companies — or acquire them. Is your strategy competitive or collaborative?

STALF: We don't care. We want to deliver the best product for our customers, which means sometimes we integrate with more traditional banks, and other times with fintech services. It comes down to whoever has the best product. Most of the time that's fintech startups. In the U.S., it's easier to start with a white-label partner [a producer of products and services for other companies to rebrand as their own], because mainstream banking is in a relatively advanced state. There are more competitive fintech offerings to choose from. In Europe, we've found that the terms and products aren't as advanced. In any place, at some point we need to get our own banking license.

When it comes to payments, there is almost a monopoly on card transactions around the world. Visa and Mastercard own a huge percentage of the market. That's why it's very hard to make a marginal profit from card transactions, at least in Europe. On the other hand, this gives us the opportunity to expand globally quickly. I think the biggest problem credit card brands are facing today has to do with their user base. Over the next 10 to 15 years, more users will begin to bypass credit cards and pay directly through systems like WeChat in China, SquareCash in the U.S.—or, eventually, with their N26 app.

S+B: What role will emerging technologies like wearables or virtual reality play in the evolution of banking?

STALF: First, the industry needs to address today's technologies better. Banking is still far away from [being] a good digital product. Beyond that, I think the future of banking will be based not on particular technologies, but on changing the daily transactions people do to make them more meaningful. For example, if the system knows that you are planning a birthday trip to Hawaii, it will automatically suggest savings options, tailored to your lifestyle. What a personal banker did 20 years ago will be completely digitized at a much lower cost base and with much higher quality. And I think if you have an intelligent system, then you will always get the best advice from the system, outlining only the things that are important to you. +

Resources

Art Kleiner, "Optimism and Trust on the CEO's Mind," *s+b*, May 2, 2018: Leaders report feeling confident about economic growth and having greater interest in corporate responsibility.

Bobbie van der List, "Lifelong High Performance, the Japanese–American Way," *s+b*, Aug. 30, 2017: Tokyo companies, including Seven Dreamers, are using U.S. management methods to resolve the trade-off between long employee tenures and global competitiveness.

PwC's 21st CEO Survey, "The Anxious Optimist in the Corner Office," Jan. 2018: A look at what's on the mind of 1,293 CEOs around the world.

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DANNY MEYER'S RECIPE FOR SUCCESS

HOW THE RESTAURANT MOGUL BEHIND UNION SQUARE CAFE, SHAKE SHACK, AND MANY OTHER DINING DESTINATIONS USES CULTURE TO DRIVE SCALE.

BY ANN GRAHAM

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In December 2014, a year shy of its 30th anniversary and as popular as ever, New York City's Union Square Cafe faced a crippling rent increase. The soaring rents around Union Square Park, and the steady revival of the neighborhood over three decades, are in no small part due to the beloved upscale modern bistro Danny Meyer opened at 16th and Broadway in 1985.

After months of consideration, Sam Lipp, the restaurant's general manager, made the case for simply closing the restaurant. "Let's go out with a bang, on top and on our terms," he suggested to Meyer. "Icon restaurants rarely prosper after moving." Within 10 seconds, Meyer shot him down. "No, Sam, you're wrong. It's our heart, our soul, our mother yeast. Let's move." Regardless of the economic logic, and the fact that Meyer operated a dozen-odd other thriving restaurants, closing Union Square Cafe (USC) altogether was unthinkable. He told the team to find a more affordable space in the neighborhood, which they did, reopening a few blocks north, at 19th and Park Avenue South, in late 2016.

Putting soul into all his business decisions — many of which have been similarly counterintuitive — has been Meyer's modus operandi since he started his first restaurant at the age of 27. "I've often wondered whether we have made much more money by choosing the right things to say no to," he noted in his best-selling management memoir, *Setting the Table: The Transforming Power of Hospitality in Business.*

In growing Union Square Hospitality Group (USHG) into an internationally admired restaurant business, Meyer, along with the people who helped him build the company, has relied as much on his management prowess as on culi-

All photographs, unless otherwise noted, by Caitlin Ochs nary creativity to stand out from the intense competition. As founder and CEO, Meyer has made his concept of "enlightened hospitality" the animating factor of the operating model, and has spurred the rise of an artisanal, soulful, and convivial restaurant empire.

Enlightened hospitality drives a virtuous business cycle that revolves around respect, relationships, and revenues. The cycle starts with hiring naturally empathetic people, whom workplace psychologist Adam Grant calls "givers," and continues by investing in their professional and personal growth. Employees share their goodwill with customers, and that positive dynamic drives the repeat business that is so critical to restaurant profitability. "Hospitality is not our end goal. Being essential is," says Meyer. Diners who frequent high-end New York restaurants have a lot of choices — more than 23,000, according to a scan of the reservation engine OpenTable. In general, repeat business contributes 50 percent of revenues, according to the National Restaurant Association. In New York, one of the world's most expensive, tightest-margin markets, Meyer has opened 18 restaurants and closed only two. Tabla, an Indian restaurant known for its spices, closed in 2010. North End Grill, on Wall Street, will close at the end of 2018. Despite their devoted fans, neither weathered persistent economic challenges. Green River, a critically acclaimed foray into Chicago, closed in January 2018 after three years.

Meyer explains, "If one of our restaurants closes, I want people to say, 'Something just went missing in my life.'" Indeed, in 2013, when Maialino, a Roman-themed Italian trattoria in the Gramercy Park Hotel, shut its doors temporarily for a renovation without publicizing it, a curious thing happened. Within a day, an impromptu sidewalk memorial had blossomed, with people leaving flowers and heartfelt condolences that noted how much they would miss the place.

Scaling Slowly

In an era of celebrity chefs and chains, few restaurateurs have achieved their fame, fortune, or scale the way Danny Meyer has done it. USC was profitable in its first year. By the end of its second, it earned a rare three-star review in the *New York Times.* Still, nine years passed before Meyer opened his second restaurant, Gramercy Tavern, in 1994.

“The culture is a key differentiator for us in terms of business strategy,” says Richard Coraine, USHG’s chief of staff. Meyer recruited Coraine, the former director of operations for celebrity chef Wolfgang Puck, in 1996. His role as a leader at USHG from Day One has been to oversee the consistency and vitality of the culture in every USHG operation.

Rather than rolling out replicas of USC in other cities, as is a common tactic for ambitious restaurant empire builders, Meyer employed a different strategy. Sticking close to home, Meyer expanded by replicating his enlightened hospitality, cultivating regulars, and stimulating buzz by endowing each new restaurant with its own memorable menu and décor. Gramercy Tavern is a contemporary interpretation of an American Revolution–era colonial tavern. With Blue Smoke and Jazz Standard, Meyer introduced to New York a novel mix of barbecue styles, including Texas brisket and St. Louis ribs, and then added jazz. A collection of USHG restaurants mixes fine art and fine food associated with New York’s world-renowned museums: The Modern, Terrace 5, and Cafe 2 at the Museum of Modern Art (MoMA), and Untitled and Studio Cafe at the Whitney Museum of American Art. “The fact that Danny has been so successful translating the culture across so many different restaurant brands, and engaging a lot of people to help him, is key to understanding the quality and influence of the culture he inspired,” says Dorothy Kalins, founding editor of *Saveur* magazine, and the producer of the cookbooks of Gramercy Tavern and Shake Shack (which he also founded). “He happens to be in the restaurant business, but if he had been a university president, you would have a different kind of college. When he looks at you, he sees you. He’s not playing the role of an executive. He’s a hugger. He trusts his gut, and his gut is always working.”

Year after year, restaurant critics and journalists praise the behavior of the company’s employees, often more than the food. In 1999, Ruth Reichl, then the restaurant critic for the *New York Times*, described service at Eleven Madison Park, probably the most formal restaurant Meyer ever started, as “personable, passionate, extremely sweet.” In 2002, writer Bruce Feiler stepped into a server role for a week at USC. “Every gesture, every act, in a Danny Meyer restaurant makes the job intensely and unexpectedly personal. In many ways, being in an atmosphere of enlightened hospitality is like going to work inside your

A server at Union Square Cafe helps prepare the restaurant to open for the day's service.

mother's fantasy of how the world should be," he wrote. In 2017, Pete Wells, the current *New York Times* food critic, highlighted the server's demeanor in his three-star review of the reopened USC and a follow-up column. "Another restaurant might try to impress diners by suggesting an esoteric sweet wine.… The servers at Union Square Cafe don't want you to be impressed. They want you to be happy."

And there's more to the complex of businesses than restaurants. USHG's Union Square Events runs the company's catering and venue hospitality business. In 2010, Susan Reilly Salgado, USHG's first director of culture and learning, cofounded Hospitality Quotient (HQ) with Meyer to teach Meyer's management principles to other companies. Enlightened Hospitality Investments is a private equity fund targeting hospitality and restaurant innovators that share USHG's values.

In all, privately held USHG has about 2,200 employees, and annual revenues well into nine figures. That does not include Shake Shack, the multinational burger, fries, and shake chain that USHG started as a single not-for-profit hot-dog cart. Shake Shack was spun off from USHG in 2015, and became a public company. Arguably, the Shake Shack name is better known than its parent. In 2017, Shake Shack had 159 shacks in the U.S., 59 in more than a dozen other countries, and US$358.8 million in revenues.

USHG is smaller than many of the public U.S. restaurant groups. Yet it has an outsized impact on the industry. In 2017, USHG made the second annual *Forbes* Small Giants list of 25 private U.S. companies recognized for their consistently strong balance sheets, profitability, and management. USHG and Meyer have won a host of prestigious industry awards, including five from the James Beard Foundation. Last year, Meyer became the first non-chef to receive the Julia Child Foundation's annual award, which recognizes individuals in the industry who, like Child, are innovators and educators.

Meyer earned a place on *Time*'s list of 100 most influential people in 2015. The same year, USHG announced it would eliminate tipping in all of its restaurants. The initiative, which USHG named Hospitality Included, brought a long-simmering debate to a boil in the media. Enlightened hospitality is not just a business strategy. It is Meyer's existential offensive against restaurant working conditions, and an effort to depart from the industry's low-wage and high-turnover norms without losing any competitive edge. In 2016, the average turnover rate for the hospitality sector topped 70 percent for the second consecutive year, according to data from the Bureau of Labor Statistics. But even with the reported spike in server departures from USHG caused by the transition to no tipping, turnover at USHG restaurants is still significantly lower than the industry average.


Every day the Union Square Cafe staff meets before opening to review important information and the day's specials.

Attention to detail is an integral part of Meyer's concept of "enlightened hospitality."

Meyer and USHG are often recognized for their efforts to elevate the industry's professionalism. "Today's workers are proud of what they do. They're in to stay, and they want to excel. That's one reason I was adamant about making sure I worked with USHG," says Alice Cheng, founder of Culinary Agents, a talent sourcing, job matching, and networking platform serving restaurant and food service professionals and their employers. Adds Cheng: "Not only do they cultivate talent, but they strive to set standards in hospitality which drive the overall industry forward."

Shake Shack is mimicking such efforts in "fine casual," the classier convenience restaurant category that Meyer pioneered and named. Shake Shack CEO Randy Garutti, a Meyer protégé and USHG veteran, speaks with fervor about his intention to lead fast food chains out of the workplace wilderness. "Nothing angers me more than when I hear the term 'flipping burgers.' We're treating this like the real profession that it is," he says. (See "Shake Shack: The Enlightened Public Company," page 94.)

Startups often lose their unique culture as they scale. Meyer's biggest fear in 1994 was diluting the culture he had created at USC when he opened Gramercy Tavern. "Danny knew he was a big part of the success of Union Square Cafe," says Erika Andersen, founding partner of Proteus International, a leadership consulting firm. His fears were allayed when Gramercy Tavern proved to be as successful as USC, with the same kind of culture, and each subsequent expansion helped strengthen that ethos.

In 2011, just after USHG sold a 39.5 percent stake in Shake Shack to an investment bank, Meyer and Andersen revisited the challenge of maintaining the culture — now with thousands of employees. Over breakfast at Maialino, Andersen asked: "What if USHG actually has to grow in order for the culture to evolve and get even better?" Meyer credits Andersen's question with helping him "graduate from wondering how to reconcile growth and culture to visualizing so clearly how the two are inextricably linked," as he reflected in the foreword to a new employee training version of *Setting the Table* (retitled *Our Playbook*) published in 2016.

A Family Business

USHG headquarters, or the "home office," is located in a modest pre-gentrification low-rise overlooking Union Square Park. The vibe feels more like a house where all the neighborhood kids like to hang out than an empire. "When I sit in the waiting area, every USHG employee who walks past me asks me if I've been helped. That doesn't happen at any other company," says Cheng.

Meyer refers to USHG as his business family, and encourages employees to do the same. He met his wife, Audrey Heffernan Meyer, when they both worked in a restaurant in the Flatiron district in 1980s, and they raised four children within walking distance of the first USHG restaurants.

His own family's values and his coming-of-age experiences have always been his most trusted business guides. Meyer was born in St. Louis in 1958 to parents from prominent, wealthy, civic-minded, and secular Jewish families. His moral education was steeped in humanism, a nonreligious philosophy that prizes compassionate behavior, immersion in and enjoyment of diverse human experience and self-expression, and social justice.

His parents were Francophiles. French was spoken at the dinner table in Missouri; the family's French poodle, Ratatouille, was named after Meyer's father's favorite Provencal dish. The elder Meyer was one of the first U.S. agents for the elite boutique hotel association Relais & Chateaux. He took his wife and children on frequent trips to Europe for business and pleasure. Meyer's notion of enlightened hospitality comes from memories of staying in small, rustic, family-run French and Italian bed-and-breakfast establishments where, he writes in *Setting the Table*, "the hugs came with the food."

“DANNY’S BASIC PREMISE WAS ‘I CAN TEACH A NICE PERSON HOW TO OPEN A BOTTLE OF WINE, BUT I CAN’T TEACH A PERSON WHO KNOWS HOW TO OPEN A BOTTLE OF WINE TO BE NICE.’”

Meyer never set out to be a business mogul. He simply wanted to create the kind of homey, unpretentious, and affordable Michelin star–quality restaurant that did not exist in New York in the 1980s. Unlike the dominant, ultra-expensive, and exclusive French haute cuisine establishments, such as Le Pavillon and Lutèce, which oozed effeteness, the place Meyer created would make customers feel comfortable asking their server, or even the sommelier, to pronounce and explain menu items. He wanted people walking in without a reservation to feel welcome ordering a full-course meal at the bar.

In 1985, Union Square, a 19th-century city landmark, was just starting to emerge from years of decline. With a bit of money from friends and family, Meyer took over a cheap lease from the owner of a health food store. Paul Bolles-Beaven, one of Meyer’s first hires on the server team at USC, recalls walking up to a construction site where he “filled out an application and sat down on saw-horses with this curly-headed kid. I thought he was the owner’s son.” Despite his own inexperience, Meyer was sure he could teach people he liked to become the kind of restaurant professional he wanted. Says Bolles-Beaven, “Danny’s basic premise, which is how I got the job, was ‘I can teach a nice person how to open a bottle of wine, but I can’t teach a person who knows how to open a bottle of wine to be nice.’”

Extending Danny’s Reach

To effectively scale a culture, the leader has to accept that he or she can’t be the only champion. “*Sprinkling Danny dust* became the through-line for institutionalizing the cultural values that Danny lived and breathed, and that had made Union Square so successful," says Erika Andersen of Proteus Consulting, who led the company's first strategy and vision off-site.

In order to do this, Meyer has, over the years, identified talented individuals he trusts to embody the culture. He calls them "culture carriers." Bolles-Beaven was one of the first, followed by Richard Coraine. In the early days of USC and Gramercy Tavern, their role was to arrest a cultural schism between the two restaurants that was undermining performance in both. Meyer knew it was challenging to align the cultures at the two restaurants when he could not be in both places at once. As Coraine recalls: "I would go to internal meetings and events with Danny and he'd say, 'This is Richard. He is here to extend my reach.'" Whether they are "sprinkling Danny dust" or extending Danny's reach, the culture carriers' remit is the same: to ensure that all managers, and ultimately all employees, are fully vested in all aspects of enlightened hospitality culture as the company expands.

USHG was incorporated in 1998, the same year that Eleven Madison Park, an opulent Euro-American brasserie, and Indian fusion restaurant Tabla opened next to each other overlooking Madison Square Park. A decade later USHG had opened nearly a dozen other restaurants around the city. (Eleven Madison was sold in 2011 to its executive chef, Daniel Humm, and Will Guidira, the general manager.)

Language is the most revealing and powerful artifact of any culture. Words like *enlightened* and *virtuous* may seem a bit precious to describe the operation of a business, but they are authentic Meyer. "You don't have to work hard to create a culture. You have to work hard to be intentional about what you want the culture to be, and then you have to have language to teach it," Meyer says. That's one reason that in his early 40s he started writing down his thoughts about the business he was building.

USHG language has evolved over the years as a collection of management aphorisms Meyer created in *Setting the Table*. "Skunking" describes people behaving badly out of fear. "Skunks spray when they are scared, defensive, territorial, angry, trapped, or frustrated," he wrote. People are no different. "Writing a new chapter" is a way of helping people get over their mistakes quickly, learn from them, and do better the next time. "Who wrote the rule?" originated as

Shake Shack: The Enlightened Public Company

Photograph courtesy of Shake Shack

One component of Danny Meyer's culinary empire that did scale quickly is Shake Shack, which traces its origins to a temporary hot-dog cart set up in 2001 to generate donations to the revitalization of Madison Square Park. In 2004, the cart morphed into a permanent outdoor kiosk selling hamburgers, fries, and frozen custard, made the way Meyer liked them as a kid in St. Louis. Four years later, Shake Shack CEO Randy Garutti, then head of operations for USHG, scouted a prime spot, across the street from the American Museum of Natural History, to open the second shack. Shake Shack was the first USHG restaurant to replicate a format. In 2015, the year Shake Shack went public, it had 79 locations around the country, and US$190.6 million in sales.

Operationally, Shake Shack is a mass-market chain infused with USHG's management ethos and culinary creativity. Adopting USHG's hiring, culture, and service training practices was a key factor in its early growth under USHG and since its initial public offering. Motley Fool analyst Nicholas Rossolillo describes the chain as having a two-pronged global growth strategy to maintain cultural control by opening company-owned restaurants in the U.S., its largest market, and tightly contracting international franchises.

Garutti grouses about quarterly earnings calls in which analysts pay attention to openings and same-store sales, not the brand expansion strategy. But misplaced analyst priorities aren't a deterrent. "I think Shake Shack was born to be a great public company." So far, so good. According to a May 2018 Motley Fool analysis, Shake Shack has beaten earnings estimates every quarter except one since Q2 2015.

Although Meyer is no longer involved with day-to-day operations at Shake Shack, he is the board's chairman and makes time to be a visible founder — for example, showing up for the first training of a new Shake Shack team in Penn Station.

On average, Shake Shack workers around the country are paid US$12 an hour. The influence of USHG culture is notable in Shake Shack's own "Shacksperience Steppin' Up" career development model. "People who started making $9 an hour are now general managers in our restaurants making very good money," Garutti says. Every full-time employee who had been with the company for a year at the time of the IPO was given the opportunity to purchase stock. The company pays about 65 percent of employees' healthcare premiums and also matches contributions to their 401(k)s.

Shake Shack has increased menu prices in line with rising operating costs several times in recent years. In December 2016, it raised prices on two popular items to help pay for across-the-board wage increases. Customers didn't complain. And neither, says Garutti, should investment analysts: "We're going to pay people what we think we ought to pay them, even if the next quarter doesn't look good on the payroll line." Meanwhile, in 2018, Shake Shack expects to beat many competitors on restaurant-level operating margins and average unit volume, both key indicators of restaurant financial health.

WHO WROTE THE RULE THAT PULLED PORK CAN'T BE SERVED WITH A GLASS OF MOËT & CHANDON CHAMPAGNE? WHO WROTE THE RULE THAT MUSEUM CAFES CAN'T SERVE GOOD FOOD?

Meyer began to think inventively about restaurant formats and has evolved into a more general license to challenge the status quo. For example, who wrote the rule that pulled pork can't be served with a glass of Moët & Chandon champagne (as is done at Blue Smoke)? Who wrote the rule that museum cafes can't serve good food?

The "51 percent rule" describes the personality-based hiring principle Meyer conceived by instinct. Potential employees are awarded a "hospitality quotient" score based on traits such as optimism, warmth, and empathy. When evaluating potential hires, 51 percent of the weighting is given to emotional intelligence, and 49 percent to technical skills. "There's extra percentage points on the emotional side that can't be taught," explains culture and learning director Susan Reilly Salgado. "USHG hires for that."

But hiring is just the beginning. "Culture doesn't happen to people," says Erin Moran, USHG's chief culture officer. "It happens as a result of the human interaction. No one is a bystander." USHG invests in people in multiple ways to get them engaged in their jobs and in the culture.

The culture and learning curriculum, developed by culture carriers Salgado, Bolles-Beaven, and Coraine, launched in 2004. Salgado also brought her New York University organizational behavior Ph.D. thesis on USHG's culture and management model to the process. Today there are 30 required and elective courses. Every employee must take the core culture courses within 90 days of being hired. Moran teaches many of those courses, and is supported by a growing roster of home office team trainers. Meyer also participates in these efforts. Every six to eight weeks, for example, he and Moran lead a book club at the home office for 15 or 20 people to discuss a chapter of *Our Playbook.*

Training and engaging employees isn't only good for retention, it's the sine qua non of scaling through culture. To make retention a priority, USHG sets the expectation that it will support people who want to stay and grow with the company. Dino Lavorini, director of operations for USHG's museum-based restaurants, started his restaurant career at Subway while in high school, and had summer jobs waiting on tables during college and graduate school. He later attended culinary school, and was a cook in Italy for two years, before he was hired at The Modern in 2004. Lavorini rose from maitre d' to floor manager to general manager at The Modern before taking on his current role.

Although yesterday's job-for-life paternalism is out of favor, there is a clear return on investment in good people who buy into the demands and demeanor of the business. "USHG has created an army of people who have chosen the culture, who become educated in the culture, and who are given a lot of rein to live the culture in ways that create a more personal relationship between the employee and the organization than is typical of most companies," says Amy Wrzesniewski, professor of organizational behavior at Yale's School of Management.

Institutionalizing Family Values

In 2013, Meyer persuaded Moran, then an executive vice president with the culture consultancy Great Place to Work, to become USHG's first chief culture officer. "Erin isn't just extending my reach. She's extending the reach of our whole culture so that every person is pulling their weight," says Meyer.

Moran had no experience working in the restaurant industry and had never heard of USHG when she was brought in as a consultant. Although she has lived and worked as a human capital consultant in six countries, she says USHG "is maybe the most complex culture that I have ever tried to assimilate."

"PARENTS BEGIN INSTILLING VALUES WHEN THEIR CHILDREN ARE BORN. WE INSTILL THEM IN OUR EMPLOYEES WHEN WE ON-BOARD."

During her first five months as chief culture officer, Moran worked in various restaurant roles in the kitchens and dining rooms. After her tour in the trenches, she designed and implemented a company-wide culture survey that was more like a "mini interview with every employee." The main concern, she learned, was inconsistency in middle management leadership. "Danny had written the book, but leaders were still doing their own thing," says Moran.

The executive team, led by Moran, decided to refresh the language from *Setting the Table*. The "Family Values and How to Live Them" were introduced in 2016 with four painstakingly wordsmithed USHG definitions of excellence, entrepreneurialism, hospitality, and integrity, each with three statements of behaviors and expectations. The family values are a new addition to the USHG lexicon and a teaching and conversation resource. "Parents begin instilling those values when their children are born. We instill them in our employees when we on-board," says Coraine.

Moran introduced an employee survey called the Trust Index, a tool she used at Great Places to Work, which measures how people, in different positions, are experiencing their work environment, and it collects their ideas to make improvements. "We've mapped out the thoughts and the feelings that we want to invoke during each stage of the employee life cycle," says Moran. "Whether the life cycle is 20 years or 90 days, we want to know what those feelings are at all different stages."

Eliminating tipping may not be for every restaurant, but USHG leaders stand by Hospitality Included. Meyer has long said the tipping system's built-in pay inequities between culinary and server staff are inconsistent with USHG values, and New York City economics. Hospitality Included will strengthen USHG's career management processes. "This is our opportunity to make growth pathways and expectations more explicit for employees at every level," says Lavorini, who led the first no-tipping implementation at The Modern.

Growing with Confident Capital

Unwilling to license franchisees or expand its geographic footprint aggressively, USHG is finding another lever it can use to scale its culture: private equity capital investments in like-minded companies.

Several years ago, Meyer celebrated his mother's 80th birthday at Tender Greens, a farm-to-diner chain that employs professional chefs to prepare locally sourced food at each of its 25-plus restaurants. Meyer and Erik Oberholtzer, Tender Greens cofounder and CEO, got to talking and discovered they thought alike about food and finance. In 2015, USHG invested in Tender Greens, which opened its first restaurant in New York in 2018, on the same block as Gramercy Tavern.

Mark Leavitt, a veteran investment banker and Meyer's college roommate, joined USHG shortly after the Tender Greens investment. In 2017, he launched USHG's private equity arm, Enlightened Hospitality Investments (EHI). The fund invests in culturally aligned companies in hospitality (especially fine casual restaurants) and consumer tech. The fund, which is now closed, has made three investments in the $10 million to $20 million range: Resy, a reservation company that is trying to unseat OpenTable; Joe Coffee, a family-owned West Village–based supplier to USHG restaurants that uses *Setting the Table* to train its own staff; and Salt & Straw, a Portland, Ore.-based artisan ice cream company with multiple shops on the West Coast.

EHI's three "portfolio partners" could also provide career opportunities for USHG employees, says Leavitt. "If you're a USHG employee, you can collaborate with people at one of the companies we invest in." Alternatively, he adds, "someone who hits the ceiling at USHG could go work for a company that has more to offer."

USHG emphasizes excellence, entrepreneur-ialism, hospitality, and integrity with all staff members.

Stewarding the culture in association with every business decision is the main responsibility and passion for Meyer, who recently turned 60, and is not slowing down. Also on his agenda? Creating a few more fine casual brands, similar to Shake Shack and Tender Greens, and making them all as essential to millennials as McDonald's once was to boomers. Despite a setback in Chicago in the finer, full-service category, Meyer is ready for USHG's enlightened hospitality to grow and thrive outside the hotbed of Manhattan. In 2017, USHG committed to creating a Union Square Cafe in Capital Crossing, a five-building, mixed-use development that is scheduled for completion in Washington, DC, in 2022. While the developer of the massive complex promotes USHG and the restaurant as its retail anchor to attract tenants, USHG is keeping the Union Square Cafe DC opening date open. +

Resources

Adam Grant, "Turning the Tables on Success," *s+b*, May 28, 2013: In today's workplaces, what goes around comes around faster, sinking takers and propelling givers to the top.

Daniel Gross, "Shake Shack's Secret Sauce? It Cares," *s+b*, Feb. 11, 2015: The burger chain's business model thrives, despite paying low-wage workers more than it has to.

Jon Katzenbach, Carolin Oelschlegel, and James Thomas, "10 Principles of Organizational Culture," *s+b*, Feb. 15, 2016: Companies can tap their natural advantage when they focus on changing a few important behaviors, enlist informal leaders, and harness the power of employees' emotions.

Pete Wells, "What Hospitality Means to Times Restaurant Critic Pete Wells," *New York Times*, May 3, 2017: How "enlightened hospitality" resonated with one prominent restaurant critic.

Alice Zhou, "How to Harness Employees' Emotional Energy," *s+b*, Feb. 7, 2018: Companies can fuel success by linking their strategic goals to the reasons people are proud to work there.

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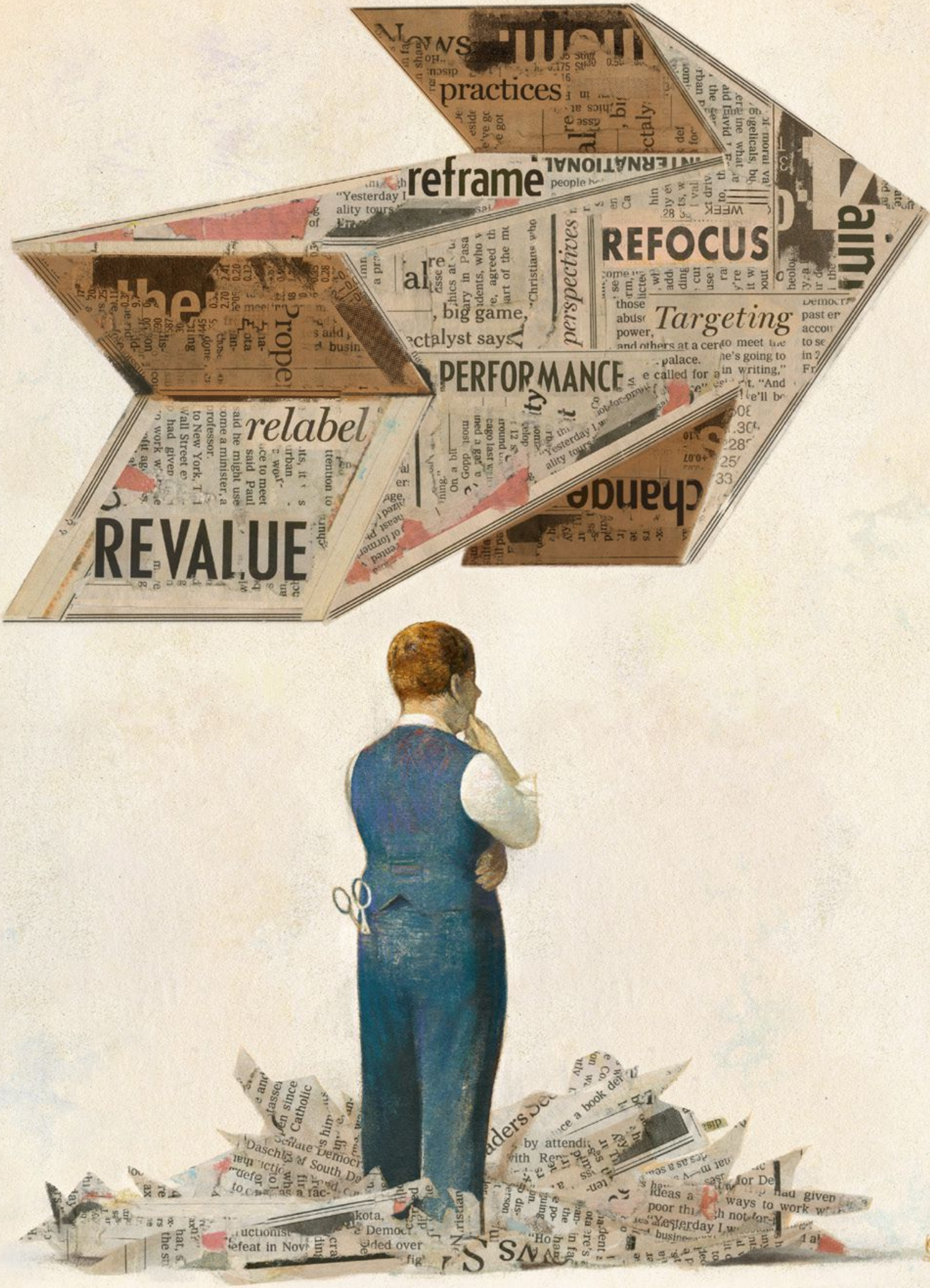
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CONVERSATIONS THAT KILL YOUR CULTURE

Deceptive messages can undermine your enterprise from within. Relabel and reframe them to develop positive narratives.

BY Jeffrey Schwartz AND Josie Thomson

In the early 2000s, Transpacific Industries (TPI) was on a roll. Its founder, Terry Peabody, had built it from a small coal ash recycling company into the largest Australian waste management enterprise, making about 50 debt-fueled acquisitions along the way, and had become a billionaire in the process. Nicknamed the "Golden Garbo," he was a press-shy business leader known for his company's rapid growth and for his idiosyncratic strategies. TPI's expansion culminated in 2007 with the purchase of a waste management business called Cleanaway for A$1.25 billion (about US$1.1 billion) — an extraordinary amount for that industry in that region.

Illustration by Gérard DuBois

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Then came the global financial crisis. The bottom fell out of the industrial waste removal business, one of Transpacific's most vital sources of profit. The share price, A$9.96 (US$8.96) in mid-2007, fell below A$1 (US$.90), and TPI received an A$800 million (US$648 million) bailout from the private equity fund Warburg Pincus. After Peabody retired in 2010, the company went through three chief executives in rapid succession. It fell so close to bankruptcy that in 2011, multiple turnaround and restructuring activities were running concurrently.

In this context, the board of directors approved the recruiting of an outside turnaround specialist named Keith Bailey as general manager of one of TPI's troubled divisions. "I was told, 'Here are the keys. You're on your own,'" he later recalled. "My directive was: Find out the problems, fix them quick, get the business back to profitability, and position it for divestment within nine months."

Rescuing any part of Transpacific was an enormous challenge. As an article in the Brisbane *Courier Mail* put it, the company had "so much debt it almost fell over." TPI had landfills that were running out of room, overdue compliance costs related to new environmental regulations, and a reputation for operational waste and inconsistency. Its division leaders barely communicated, and they often worked at cross-purposes.

But the biggest problem in the company may well have been the stories it told itself: deceptive organizational messages that were embedded in its culture and repeated constantly throughout the enterprise. During the high-flying years, the messages had been exuberant and confident: *We're extraordinary.*

The rules don't apply to us. Now, they were more somber perceptions of value: *No one can save this company. There's going to be a bloodbath. It's everyone's fault but mine.*

None of those messages turned out to be accurate. But the bleak ones would have dominated decision making at Transpacific, and led it to further decline, if Bailey and his fellow leaders in the turnaround had not addressed them directly. During his two years as general manager, Bailey held repeated meetings in which he brought these covert assumptions to the surface. In effect, he shone a light on the invisible rumination of the firm's culture, relabeling this culture as collective mental habits that people happened to hold at this company, not as aspects of reality. And once he had relabeled them that way, people could reframe their situation, choosing a set of more optimistic mental constructs that would move them further along: *However bad this situation is, we can fix it if we don't fight one another.*

This new approach made all the difference. Bailey had tapped into the way people can build and manage their own cognitive habits. The division he oversaw was back to breakeven after nine months and profitable within a year. It was sold as a going concern in the 18th month. This preserved shareholder wealth, and most of the jobs. Transpacific Industries has had its ups and downs since then, but it continues to operate profitably under the name of its former acquisition, Cleanaway; the company won the Turnaround of the Year award in 2016 from the Australasian branch of the Turnaround Management Association (a global group of professionals in Bailey's field).

The Nature of Deceptive Messages

Many companies have the same cultural issue: a constant flow of inaccurate but persuasive messages that take the enterprise in dispiriting, self-defeating directions. Indeed, when business leaders complain about their culture, they're usually complaining about these corporate cognitive distortions. It's as if people throughout the company are deceiving themselves and their colleagues about the business and its potential.

These deceptive organizational messages are unexamined, taken for granted, and strengthened through everyday conversation. When a leader says about a proposed idea, "We tried that in the past and it didn't work," an implicit consensus often follows: *Nothing like that will ever work.* People treat this message as an unquestionable axiom, assume that others believe it, repeat it up and down the enterprise, and avoid any action that would contradict it. There's often a similar pattern of deceptive messages when organizations cover up sexual harassment: *That's not the kind of company we are. Therefore, this must be an isolated case.* Or, *There must be something wrong with the accuser.*

Deceptive organizational messages are larger-scale analogs to the deceptive brain messages that most people have experienced as individuals. These are the thousands of thoughts, impulses, urges, and desires embedded in habitual brain activity. They too are often false or inaccurate, and they tend to distract or dissuade people from important goals and intentions, but they seem so natural that they are regarded as real and irresistible. When you experience a recurring rumination of this sort — *I always screw up,* or, *Nobody appreciates me*; or, conversely, *I'm so special I can get away with anything*, or, *Everyone else sees things the same way I do* — you are experiencing a signal generated by nothing more perceptive than the habitual churn of your brain circuits.

The phenomenon of neuroplasticity — the fact that recurring mental activity tends to strengthen the brain circuits related to it — gives these deceptive messages their power. Habitual thoughts and feelings become stronger, and easier to repeat, over time. They also affect the way you pay attention to the world, making you more likely to notice the events and phenomena that reinforce those thoughts. If repeated enough, messages like these become a consistent way of making sense of the world.

By the time we become adults, most of us learn to resist our own deceptive brain messages somewhat. We recognize that we must step outside our comfort zone to learn and achieve new things. But even resistance carries a cost. As Stanford University psychologist James Gross has noted, the act of resisting or suppressing deceptive brain messages results in a higher level of stress for individuals. For some, this leads to problematic conditions such as depression and some forms of addiction. And in companies, it leads to unexamined, counter-strategic behavior grounded in assumptions and beliefs that no one particularly likes, but that nobody can seem to discard. In that context, the task of a strategic leader is to do what Bailey did: relabel those messages (helping people see that they're simply messages, not reality), reframe them (substituting new, more wholesome, and more accurate messages), and refocus leaders' attention, again and again, on the new and more accurate messages until these, too, become second nature and part of the culture.

This difficult task is made a little bit easier because many deceptive organizational messages are prevalent in multiple organizations. Four of the most common categories are described below.

1. Misperceptions of Risk

"Again and again," wrote economists Carmen Reinhart and Kenneth Rogoff, "countries, banks, individuals, and firms take on excessive debt in good times without enough awareness of the risks that will follow when the inevitable recession hits." The title of their book, *This Time Is Different: Eight Centuries of Financial Folly*, was a reference to the deceptive message voiced during the buildup to the financial crisis of 2008, and before similar crises throughout history: "We are doing things better, we are smarter, we have learned from past mistakes," wrote Reinhart and Rogoff, paraphrasing mistaken assessments of risk. "The old rules of valuation no longer apply."

Overconfident exceptionalism of this sort, in which executives underestimate the riskiness of their activity, has led many companies into complacency, and then to failure. *We don't have to worry about losing customers*, executives say when faced with an upstart competitor. *They have nowhere else to go.* Sometimes this type of deceptive message arises around a narcissistic leader. *Our CEO takes chances and always comes out on top*. If the exceptionalism extends to the entire company, managers get into the habit of overstepping boundaries or fudging numbers, growing bolder and bolder until the risks catch up with them.

The flip side of overconfident exceptionalism is excessive risk aversion. This can be equally debilitating, especially when it becomes a way of life. *We must prevent — or at least prepare for — every possible failure.* Excessive risk aversion often takes the form of accumulating as much support for a decision as possible before granting approval. *It looks OK to me, but we can't take any chances. You'd better ask these other two people as well.* It can also show up as "analysis paralysis" — refusal to move forward without considering every possibility in detail. As a result, decision makers are afraid to make entrepreneurial choices, so they forgo valuable opportunities — including the opportunity to learn from risky situations and build up their own capacity for judgment. Excessively risk-averse companies unintentionally take the greatest risk of all: being left behind because of the time they spend in collective rumination.

As they did at Transpacific Industries, these two types of misperceptions can coexist. Underlying them both is the perception that the decision maker's comfort level is an accurate indicator of risk. In reality, comfort levels are problematic indicators: They are derived from past experience with success (which might not continue) or painful failure (which need not happen again). Though the skill of risk assessment is fundamental to strategy, it is difficult to develop in the face of these deceptive organizational messages, especially when they aren't recognized as such.

2. Misperceptions of Value

Deceptive messages involving value provide a misleading idea of the potential worth of current endeavors. Often, these misperceptions are manifested as perfectionism, or all-or-nothing thinking: *It should be completely flawless, or it won't have any value.* A functional team might decide not to propose an interesting idea because they fear it isn't good enough. A research group might second-guess an innovation, drag it down with extra features, and delay it until it's eclipsed by rival offerings. A supervisor, considering promotions for the staff members, might oscillate between extremes — treating a direct report as a star one year, but a total screwup the next.

The opposite of all-or-nothing thinking is "ticking the box": accepting suboptimal work, as long as it complies with specifications. *It's close enough for government work* is a deceptive message of this sort. This type of message leads people to underpromise so that they can underdeliver without penalty, to dismiss improvement efforts as not worth the cost, and to look the other way when their colleagues cut corners.

Misperceptions of value often reflect a perspective that Stanford psychologist Carol Dweck calls the fixed mind-set. If everyone's basic worth is fixed in place by the time they come of age, limited by the talent, intelligence, and circumstances they have inherited or acquired as children, then static judgments of value are reliable. However, as Dweck points out, a more accurate view is the "growth mind-set," or the idea that people can change habits, transcend limits, and expand their capabilities throughout their lives. Indeed, people continually do this through self-directed neuroplasticity. They focus their attention, over and over, in a way that builds new habits by etching new neural pathways in the brain. If you believe in the growth mind-set, neither all-or-nothing perfectionism nor "ticking the box" makes sense; instead, you regard human activity as an investment worth making if it will lead to genuine learning and consistently improved results.

3. Misperceptions of Proficiency

How capable are you and your company of influencing others and getting things done? Your answer reveals an attitude that psychologist Albert Bandura called self-efficacy, that is, confidence in one's own ability to succeed. People with unrealistically high self-efficacy assume they will prevail at difficult tasks, even if they lack the proficiency to do so. People with excessively low self-efficacy are likely to give up, even when they could actually succeed. Deceptive organizational messages can carry either misperception.

In organizations, low self-efficacy is manifested as entrenched insecurity. Entire groups internalize the idea *We are not effective now, and we never will be.* This misperception often involves the cognitive distortion of discounting the positive. Any good attributed to your company or your work must be false.

Consider the story of Lauren and Majid, two regional managers at an artisanal food company. (Their identities are disguised by request, but the details are real.) Lauren, the product manager for the region, had looked forward to a blossoming career — until Majid questioned a decision that she had made to postpone expansion to a new location. Instead of checking with Lauren, he took his questions back to headquarters, which intervened by taking Lauren's side. But Lauren didn't interpret this support as a victory; instead, she felt that Majid's decision to go around her was itself a sign of failure, because their bosses would fault her for losing control.

Underlying this incident were similar deceptive messages. Unknown to each other, both felt they would never be fully accepted, Lauren because of her gender and Majid because of his background as a foreign national. Meanwhile, their bosses had seen both of them as high-potential managers — until it began to seem like they couldn't work well together.

The flip side, excessively high self-efficacy, tends to take the form of "mind reading," or projecting your own attitudes onto others, assuming that they share your opinion about yourself and the situation, and acting on that assumption. *Everybody wants this deal just as much as I do.* This type of deceptive messaging shows up in complex technologies, when the engineers discount the novices' complaints. *When they get used to this user interface, they'll appreciate the many features we've given them.* In other companies, mind reading leads to underestimating customer concerns, for example, about privacy or security. *Of course they trust us.* Mind reading is also present in many cases of workplace sexual harassment or other inappropriate behavior. *When people say no to me, they don't really mean it.*

4. Misperceptions of Validity

Misperceptions of validity lead us to believe that something is true because of the way it feels, or because of the pure logic underlying it, but not both. It is often a cognitive distortion to split reason from emotion; the most effective, long-lasting decisions bring together the two types of validity.

WHEN YOU BASE THE LOGIC OF A DECISION ON HOW IT MAKES YOU AND YOUR COLLEAGUES FEEL, YOU MAY BE LED ASTRAY.

Messages with the cognitive distortion called emotional reasoning suggest that if you and your colleagues have the sensation that something is true, it must be true. *We feel good about this; therefore, we expect no problems.* Or, conversely, *It doesn't feel right; there is a problem here.* When you base the logic of a decision on how it makes you and your colleagues feel, you may be led astray. This pattern often affects deals, because people tend to evaluate investments with their emotional impression of past transactions. *We were stung by our last deal in this region. Never again.*

Emotional reasoning often leads to self-fulfilling prophecies. For example, if your company is acquired, you may recall a similar experience from the past. *This is just what happened when that other company laid me off.* Whether or not you are actually marked for dismissal this time, you feel the same mistrust, fear, and lack of commitment that you would feel if you were. Naturally, you are self-conscious, stiff, and resentful, thereby increasing the likelihood that leaders will ask you to depart.

The flip side of emotional reasoning is rigid rationalism: *We came to this decision logically, so there will be no disagreement with it.* This is the misperception underlying the "economic rationalism fallacy," or the idea that a rationally defensible outcome will automatically be persuasive. *Everyone supports this downsizing because they have heard the rationale; they agree it will raise the company's performance.* The layoffs may be necessary and justified, but they might not spark the emotions you think they will, much as people have proven not to be purely rational actors in economic situations.

Relabeling Deceptive Messages

The first step in dealing with deceptive organizational messages — or deceptive messages of any sort — is to recognize them for what they are. We call this step relabeling rather than labeling because deceptive organizational messages already have an implicit label: "the way things are." As a business leader, you raise collective awareness of them, under the new label of artifacts. *These messages are not reality. They don't represent us. They are simply things we tell ourselves, and the more clearly we see them as such, the more capable we are of changing them.*

The simple act of relabeling may not seem like much in itself, but it is, in fact, one of the most powerful things you can do as a leader. By abandoning the automatic assumption that deceptive messages are accurate, you assert the agency of the mind. This helps you and others in your organization detach from the automatic churn of messages supporting expedience and short-term solutions, and move closer to more executive function, broader aspirations, and greater long-term awareness.

Inquiry, not preachiness, is the key to effective relabeling. Don't say, "This message is wrong," or, "Why do we even believe this?" Instead, engage in open-ended inquiry, for example, "How did this message become part of our way of life? What problem were we trying to solve?" If no one has questioned the concept, the strategy, or the approach in years, simply asking questions like this will make it clear that these are not unchangeable precepts. They're ideas and practices that were adopted in the past, and that can be reconsidered, once they are recognized for what they are.

Reframing the Message

Keith Bailey's turnaround of Transpacific Industries went beyond raising awareness of existing deceptive messages. It also involved reframing, that is, replacing the old messages with a new conception of the company's potential value.

In November 2011, on the second day of his assignment, Bailey brought together the top 14 managers of his division. Seven were in a conference room, and the other seven dialed in from far-flung cities. He summarized his thinking on a mind-map document, a single schematic page laying out all elements of the turnaround strategy in graphic form.

The map was simple and clear enough to be shared with everyone in the company, from the senior-most levels to the factory staff. It provided the context for a new narrative: *Yes, these problems are serious, but we are capable of fixing them ourselves, if we overcome our internal difficulties and change our practices.* During the next two years, Bailey said, the company would need to undertake many painful measures, including huge cuts in staff and other unnecessary costs, to "stop the bleeding." It would also need major operational changes, applying the "lean thinking" approach that had helped many companies instill quality practices at lower cost. Finally, it would divest some major underutilized assets, in a way that allowed those assets to survive — and maybe do better — in other companies that were better suited to managing them.

Though the holidays were approaching, Bailey insisted they start executing the new approach right away. "I had three weeks to do site audits, meet all the key managers, and conduct the high-level assessment before most sites closed for three weeks," he recalled. "I could not wait until they came back in January." When he asked for their reactions and input, most people were skeptical, and he understood why. "I had not met any of these managers before. I was new. There was low trust and high personal stress. Corporate management could shut down the business any day."

During the first two months of the following calendar year, Bailey followed up with a series of in-depth meetings and training sessions in all eight of the company's main office locations. He reassured people that the pervasive rumors of a "bloodbath" were not accurate, and acknowledged that their ability to come up with new ideas had been impaired by the emotional impact of the past year, including the natural drive for self-preservation, which had led many of them to blame others.

For one pivotal training session with about 30 functional leaders and key managers from all eight sites, Bailey asked participants to prepare in advance short talks about what they personally wanted their businesses to achieve. After the discussion ended, he passed around a statement of his own position and objectives, which he had typed up the day before. "It turned out to be very aligned to what they had just said," he explained. "It blew them away."

They had all believed the deceptive organizational message that they were in competition. Now there was a reframing: *We're in this together*. "We then went into a formal review process," Bailey said. "I asked them to identify the waste and key failure points within their processes that prevented products being delivered profitably and on time, and how they and their teams could address them. Everyone contributed." Within five hours, they had identified more than 130 problems and agreed on the seven that needed to be fixed first. They also agreed on who would drive the corrective actions, with a support team nominated for each. These were all broad common issues that had affected most or all of the eight sites. This reframing brought the group from ambiguity and conflict to a sense of shared purpose.

An equally powerful case of reframing occurred at the food company with Lauren and Majid. Lauren summoned her courage and asked Majid to lunch. This wasn't easy, and when they met, she found that speaking openly about her concerns was even harder. "Majid," she said gently and without rancor, "we have a problem between us, and it's affecting everyone on our team."

Majid, to her surprise, opened up as well. He said he was just as concerned; rather than wishing to undermine her, he had been trying to protect himself. Now they recognized that their success depended on each other. They didn't have to trust each other completely, but they did have to reach out to each other with a problem before escalating it to headquarters.

As Lauren and Majid talked more frequently, they found new ways to collaborate on expanding the business in their region. Each began to regard the other as someone to rely on. Instead of believing deceptive messages that they were at risk of being marginalized, the two of them now put forth a message: *Together, we know how to grow the enterprise.*

Your ability to act as a transformative leader — a catalyst for farsighted action in the organization around you — depends on your continued practice with relabeling and reframing deceptive organizational messages. When you relabel them, identifying them as problems rather than accepting them, you are no longer bound by forces you cannot see. When you reframe them, crafting new messages that take you in the right direction, you trigger higher-level patterns of behavior in the mind, reinforced by similar habits in the brain. Eventually, the messages that people ruminate on in your company — as individuals and as a group — are no longer nearly as deceptive. People understand those messages as not just a way of perceiving reality, but a choice to perceive reality in a more accurate and constructive manner. +

Resources

William Isaacs, "Conversations That Change the World," *s+b*, Feb. 8, 2017: With a well-designed dialogue "container," you can create an atmosphere of shared awareness that can transform an organization — or a country.

Jon Katzenbach, Carolin Oelschlegel, and James Thomas, "10 Principles of Organizational Culture," *s+b*, Feb. 15, 2016: Companies can tap their natural advantage when they focus on changing a few important behaviors, enlist informal leaders, and harness the power of employees' emotions.

Jeffrey Schwartz, Josie Thomson, and Art Kleiner, "The Neuroscience of Strategic Leadership," *s+b*, Dec. 5, 2016: Mental activities can enable leaders to transcend deceptive messages and make more effective decisions.

More thought leadership on this topic: strategy-business.com/organizations_and_people

Digital Champions

The interlinked platforms that make up Industry 4.0 represent a new kind of challenge for manufacturers and other technology-intensive companies. With four key business ecosystems, they can make this new world their own.

BY REINHARD GEISSBAUER, STEFAN SCHRAUF, AND STEVE PILLSBURY

Most manufacturers, energy companies, and raw materials providers know they face a strategic challenge. Industry 4.0 is coming. Dubbed the "fourth industrial revolution" by World Economic Forum founder Klaus Schwab, this orchestrated system of digital advancement has also been referred to as an industrial renaissance (see "A Strategist's Guide to Industry 4.0," by Reinhard Geissbauer, Jesper Vedsø, and Stefan Schrauf, *s+b*, May 9, 2016). It is emerging from a number of different companies and government initiatives, most notably in Germany, the United States, and China.

Illustration by Patrick Hruby

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In all cases, the promise is the same. The last industrial revolution (known as Industry 3.0) involved the automation of single machines and processes. This new wave of operations integrates every aspect of the value chain in one end-to-end digital platform, using sensors and analytics throughout, incorporating the Internet of Things (IoT), with cloud-based software driving the entire process. Companies can use this new shared smart infrastructure to make their manufacturing and logistics more efficient, to offer innovative products and services, and to keep improving their production on the fly, responding in unprecedented ways to customer and consumer demand.

The benefits are immense, and impressive examples of Industry 4.0 have begun to emerge. The connected industry platform at Bosch Rexroth, a global electronics and engineering company, has set a goal of realizing €1 billion (US$1.2 billion) in savings by 2020 and offering similar sensor- and software-based solutions to its customers. GE Digital, the enterprise that oversees GE's industrial Internet platform, set a similar target in 2015, aiming to realize US$1 billion in productivity goals by 2020 — a target it reached in 2017. Daimler credits its "smart production" Industry 4.0 initiative with helping it set seven consecutive annual production records for its Mercedes-Benz cars, with all its vehicle models and drive types rolling off the same fully flexible production lines. Li & Fung, which provides logistics and supply chain services to the consumer products and apparel industries, has dramatically reduced time-to-market. For example, its apparel manufacturing clients use the company's virtual reality environments to see how garments would look on purchasers and rapidly adjust designs. French

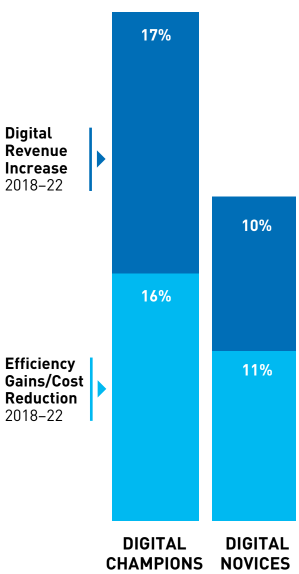
Also contributing to this article from PwC Strategy& Germany were Evelyn Lübben, principal and project lead of the study; Phillipp Bertram, principal; Judith Schneider and Farboud Cheraghi, managers; and *s+b* contributing editor Jeffrey Rothfeder.

aerospace and defense components manufacturer Safran, with its "factory of the future" initiative, is approaching growth rates for its four-year-old LEAP turbofan jet engine that the engine's predecessor, the CFM56, never reached in 20 years of volume production.

Cases like these are noteworthy for two reasons. First, they demonstrate the advantages that manufacturers can enjoy from Industry 4.0: improved pathways for revenue and profit growth, greater customer satisfaction and loyalty, increased operational efficiency, reduced product development cycles, faster scalability, and more gainful supplier relationships (see "Expected Benefits of Being a Digital Champion"). Second, they illustrate the challenges involved in realizing those gains. Industry 4.0 is not a group of technological platforms that can easily be adopted as a purely operational upgrade. It requires a clear strategy and top management commitment; the transformation of key operational activities; and a deep understanding of collaboration, across internal company boundaries and likely with other companies that share the same platforms and technologies.

Expected Benefits of Being a Digital Champion

The range of benefits expected from Industry 4.0–related technologies, when translated into estimates of revenue gain and cost reduction, were 50 percent higher for Digital Champions than for Digital Novices.



ACTIVITIES AND ATTRIBUTES RESULTING IN...

Digital Revenue Increase
- Digitization of product and service offerings
- Market leadership through compelling customer experience
- Management of a multi-enterprise solution network

Efficiency Gains/Cost Reduction
- Exchange-to-exchange platforms for shared transactions and information across multiple portals
- Full vertical integration of operations using manufacturing execution systems that track production in real time
- Production innovations such as AI applications and collaborative robots

Both Types of Benefits
- Road map for digitally oriented strategy and implementation
- Digital experts and dedicated training programs

Source: PwC's Strategy& Global Digital Operations 2018 Survey

In our survey of more than 1,100 global manufacturing executives, we found that only about 10 percent of their companies qualified as Digital Champions.

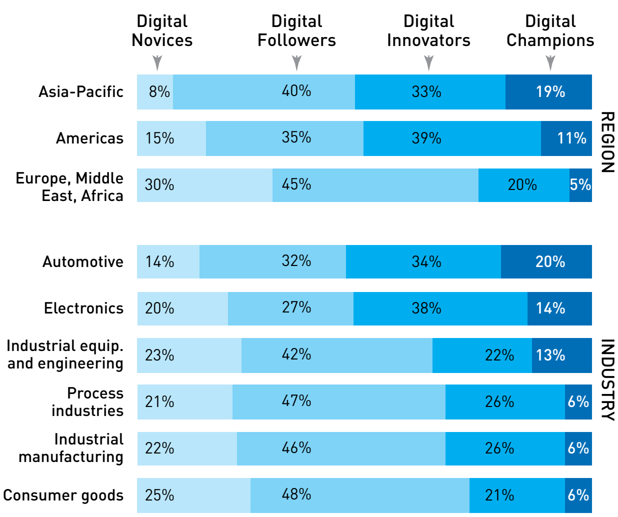
Many business-to-business enterprises claim to have already adopted this concept. Indeed, in the industrialized world, Industry 4.0 is becoming as essential as lean strategy: If you can't claim to have mastered it, you may be out of the game. But of companies in the most relevant sectors — makers of automobiles, consumer goods, electronics, and industrial equipment, along with engineering and process industries — only about 10 percent have mastered the strategic, operational, and cultural changes necessary to make Industry 4.0 succeed. We call these companies Digital Champions. By their account, they have used the technologies of Industry 4.0 in a comprehensive way, to consistently and significantly improve their results.

We saw the power of these champions of the industrial renaissance in the last quarter of 2017, when we surveyed more than 1,100 executives at global manufacturing companies, asking them about their digital operations. By awarding points for specific digital capabilities and strategies — a maximum of 40 points for digital ecosystems, 40 points for implementation of new technologies, and 20 points for fostering a digital culture — we were able to place each company on a digital maturity scale, representing the degree to which they had implemented Industry 4.0 and related technologies.

About 22 percent of the respondents' companies were Digital Novices, employing isolated solutions and applications at the functional or department level only. The lion's share — 42 percent — ranked as Digital Followers. They practiced vertical integration, a hallmark of Industry 3.0, linking internal functions such as sales, manufacturing, sourcing, and engineering. About 27 percent of the companies were Digital Innovators. They connected their operations to those of external partners and customers, using integrated platforms for collaboration and information exchange. The remaining 10 percent made up the Digital Champions category (see "Digital Maturity by Region and Industry"). One measure of their success is the future orientation in their product mix; Digital Champions already generate, on average, 56 percent of their revenues from digital or digitally enhanced products and services, compared with 35 percent for Innovators, 15 percent for Followers, and only 8 percent for Novices.

Digital Maturity by Region and Industry

Roughly 10 percent of all companies are Digital Champions. They are more numerous in the automotive, electronics, and industrial equipment and engineering sectors. The Asia-Pacific region has a higher percentage of Digital Champion companies than either the Americas or EMEA (Europe, the Middle East, and Africa).



Source: PwC's Strategy& Global Digital Operations 2018 Survey

Some Digital Champions are household names, among the largest and most accomplished industrial manufacturers in the world. Others are innovative middle-market companies, or startups at the edge of manufacturing practice. They use advanced technologies to raise their levels of product development, production, supply chain management, logistics, and distribution. This gives them more interactive and intimate relationships with customers. Organizationally, they seek to master four business ecosystems: customer solutions, operations, technology, and people (see "Four Ecosystems for a Digital Champion to Master").

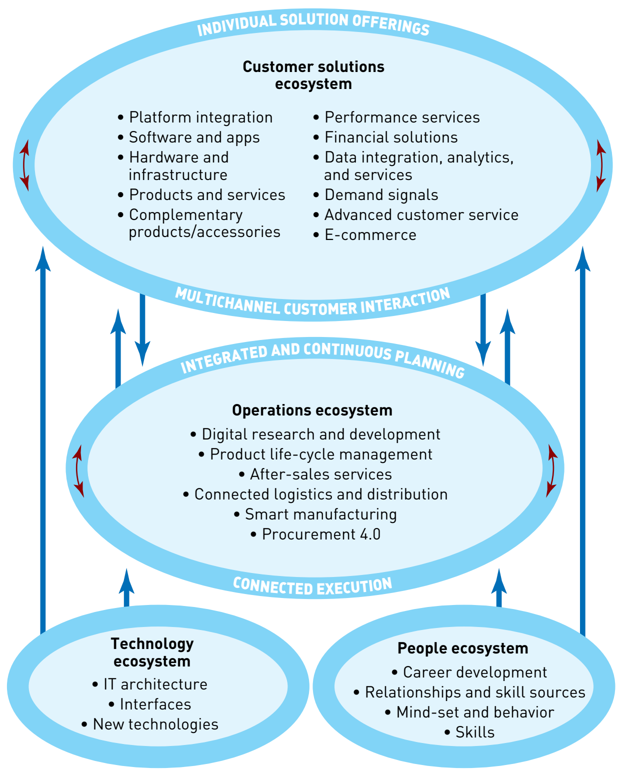
An ecosystem, in this context, is a cluster of vital industrial activities, some inside the organization and some outside, tied together through common digital connections and practices. Each ecosystem is connected to the others through digital pathways that foster sophisticated multifunctional capabilities. Manufacturers that hope to climb the digital maturity ladder can achieve their competitive advantage by orchestrating and integrating these four ecosystems.

Each of the ecosystems is pivotal. None can be ignored. For example, a well-designed customer solutions ecosystem, oriented to understand and respond to market conditions, represents a good first step toward a digitally mature business model. But if that company's operations ecosystem does not have the requisite capabilities, partnerships, and technology, and does not plan to propel efficiency and effectiveness, it won't be able to produce its goods as profitably as its Digital Champion competitors do, and its business model will fall flat. If its technology ecosystem is outmoded, or its people ecosystem is unfocused, it will similarly be unable to deliver and compete.

Each Digital Champion has its own form of Industry 4.0 prowess. Some have highly effective go-to-market strategies. Others excel at im-

Four Ecosystems for a Digital Champion to Master

These four clusters of industrial activity draw on internal and external resources and are deployed for a company's success in its chosen markets.



Source: PwC's Strategy& Global Digital Operations 2018 Survey

Each Digital Champion has its own form of Industry 4.0 prowess. Digital Champions distinguish themselves by a continuous effort to improve in all four ecosystems.

plementing a transparent and integrated supply chain, or at attracting talented people. But on the whole, Digital Champions distinguish themselves by a continuous effort to improve their capabilities in all four ecosystems and by integrating and orchestrating them.

CUSTOMER SOLUTIONS: MEETING THE MARKET

This is the ecosystem with the greatest visibility to the outside world. Its activities include defining digitally enabled product and service offerings, attracting customers, and maintaining relationships with customers, directly or through third parties (such as retailers or online channels). In the customer solutions ecosystem, insights about retail shopping behavior and preferences are linked (with software and data analytics) to the development of products tailored directly to customers. Digital Champions tend to have broad, sprawling customer solutions ecosystems, with links to a range of external companies as well as their own internal groups, which might have been connected in only limited ways before. Now they capture and share relevant customer data, gleaning insights that allow them to develop individualized products and services and offer them through a variety of routes to market, such as third-party vendor platforms, e-commerce, retail outlets, and apps.

These joint ventures and informal partnerships with external companies distinguish a customer solutions ecosystem from a vertical, customer-centric product development function. By adding external expertise — often from other companies with deep experience in particular niche or technology arenas —

Digital Champions can fill important gaps in their go-to-market strategies. Li & Fung, based in Hong Kong, maintains an Industry 4.0–oriented platform for apparel makers around the world, drawing regularly on its participating companies for data and expertise. On its customer portal, clothing makers and retailers enter designs of new fashions. Its vendor portal hosts suppliers and contract manufacturers, which can immediately produce new collections or replenish existing lines, depending on customer demand, for their customer-facing counterparts. Li & Fung's customer solutions ecosystem provides dense digital connections among all the companies that use these two portals, generating real-time consumer purchasing and preferences data from stores and other apparel outlets and feeding it back into the supply chain. This enables designers to change product volume and features instantly, numerous times a season. In turn, manufacturers use this data to anticipate new production runs even before they are ordered.

Another customer solutions ecosystem play is the partnership between GE's Predix — its industrial Internet platform — and Apple. Predix apps are available for iPhones and other iOS devices, allowing industrial customers to write asset tracking and maintenance programs for their handhelds and gain operational mobility. At DuPont, the customer solutions ecosystem enabled a joint venture with Chinese equipment company Hebei Nonghaha Agricultural Machinery Group, created to develop a device that plants one corn seed per mound. General Motors developed a customer solutions ecosystem play around autonomous vehicles and self-driving cars, prototyping a number of experiments with business offerings in this domain, including alliances with ride-sharing companies such as Lyft and fostering a new set of designs oriented toward shared or autonomous vehicles.

Some Digital Champions place themselves at the hub of a customer solutions–oriented platform; all participant organizations communicate directly with the Digital Champion rather than with one another. Apple fits this category, with its huge coterie of app developers creating products and components directly for iPhones and iPads. So does John Deere, which integrates technology and designs from third-party companies into its precision agriculture equipment to help farmers measure the use and performance of water systems, seeds, pesticides, and soil enhancement products. Other companies' platforms, such as Siemens MindSphere and GE Predix, permit their participants to collaborate more easily.

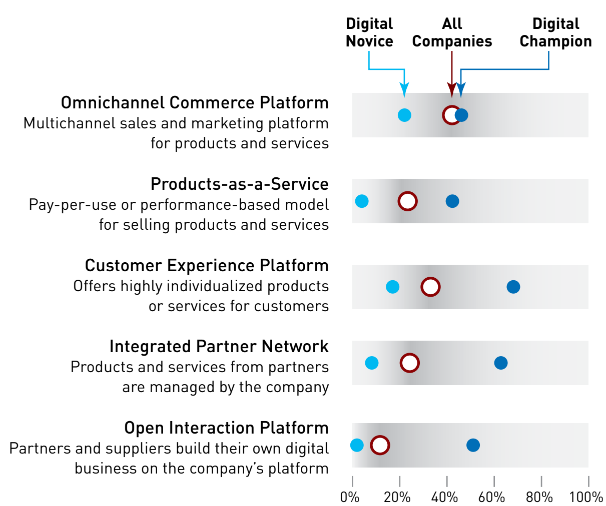
To facilitate collaborative partnerships, drawing on the widest number of companies and individuals at low cost, Digital Champions deploy open platforms with low-friction networks that make it easy for participating companies to link in their own customer solutions ecosystems. For example, they might tailor products directly to one another's customers, cross-branding as if they were one enterprise. These applications can generate huge revenue streams and capture customer loyalty. The survey found that 50 percent of Digital Champions have already implemented open, collaborative platforms, and 68 percent offer individualized products and services through portals with enhanced customer experience. It also found that 63 percent go even further with more intricate, data-enhanced integrated partner networks (see "Platform Business Models Used by Digital Champions").

OPERATIONS: RAPID, RELEVANT RESPONSE

The operations ecosystem is the workhorse for Industry 4.0 activity. It includes the day-to-day inputs and outputs that support a Digital Champion in delivering value to customers. Among its functions are the supply chain, product development, innovation, production, logistics, distribution, and post-sales customer interaction. A highly functioning operations ecosystem can create benefits that have previously eluded manufacturers. For supply chain planning and execution, it can greatly improve efficiency and product customization by adjusting the pace of production to match real-time customer demand. For research and development, it coordinates a network of internal functions, suppliers, academia, researchers, and sourcing and logistics specialists. For manufacturing, this ecosystem vertically links and automates factories (owned by the Digital Champion or contracted out) and connects the shop floor directly to supply chain and customer demand activities.

Platform Business Models Used by Digital Champions

The more advanced the company, the more likely it is to develop innovative business models for selling, delivering, and monetizing its products and services.



Source: PwC's Strategy& Global Digital Operations 2018 Survey

Companies with a high level of digital maturity can design their operations ecosystem to respond more rapidly to the customer solutions ecosytem.

Companies with a high level of digital maturity can design their operations ecosystem to respond more rapidly and interactively to the customer solutions ecosystem. As demand changes for products or services, the operations ecosystem continually adjusts. Suppliers or factories may be needed in new regions; warehouses and parts management may require more flexibility to deliver on accelerated just-in-time schedules; and innovative logistics partners may be added. Even if much of this happens automatically, it is critical to regularly reevaluate the operations ecosystem against performance metrics and capability requirements, drawn from the customer solutions part of the business model.

The Digital Champion Bosch Rexroth has mastered the operations ecosystem for, among other product lines, its hydraulic valves used in agricultural equipment. In one of the company's most advanced plants, in Homburg, Germany, customized orders are assigned to a manufacturing line with a special feature: Products guide themselves through the assembly stations with the help of RFID chips. The nine intelligent stations on the line recognize how the finished product has to be assembled and thus which operational steps are necessary. Displays show workers the corresponding instructions for any of the more than 200 versions of the component that is to be processed. The assembly line integrates the human, the product, and the machine in a system of flexible mass production.

An interactive cockpit oversees the Bosch Rexroth effort, tracking key performance indicators related to the manufacturing process, along with the quality of the assembly. The cockpit collects all relevant data from the connected production facilities, updates them dynamically, and makes them available in real time.

This approach allows the company to match products to customer specifications so that the products are tailored for use in particular agricultural environments, while maintaining the speed, scale, and cost efficiency of mass manufacturing.

With the launch of its Nexeed software and service portfolio for industrial Internet applications, Bosch has pooled all its Industry 4.0 activities to support customers in connecting the value chain from end to end and integrating it into an operations ecosystem. Nexeed represents an entry point into the connected factory, tailored to customers' needs. It allows individual lines to be combined, and interconnects factories and plant networks, including their internal and external logistics. A variety of apps and software solutions support workers in their daily tasks. Relevant manufacturing data is more quickly accessible to employees through their mobile devices; this ultimately leads to greater machine availability in production. Internal transport processes and flows of goods outside the company can be seamlessly monitored and traced back. Workers are kept informed of the location, condition, and delivery time of goods. The result is increased productivity and agility, which boosts competitiveness.

With an operations ecosystem of this sort, a company can gain at least five significant benefits.

- **Transparency:** It has a complete end-to-end view of the value chain.
- **Real-time data sharing:** All the participating departments and companies can see the same information simultaneously.
- **Extended collaboration:** Operational links develop organically with trusted partners (such as suppliers), becoming deeper and more synergistic over time.
- **Responsiveness and flexibility:** Companies can respond instantly to changes in end-user demand; they can shift plans easily and execute those changes promptly.
- **Connectivity:** Product life-cycle management, supply chain management, and customer information are all integrated seamlessly.

We analyze how advanced a company's operations ecosystem is in two ways. First, we assess the manufacturing process, emphasizing the degree to which production is automated and transparently connected across the company's own plants, along with partnering manufacturers, suppliers, and logistics channels. Ideally, all of the ecosystem's elements are exchanging data continually and acting on it in real time. This approach is so advanced that only 5 percent of the companies we interviewed, including only 33 percent of Digital Champions, had adopted it. Digital Champions score better when it comes to linking their factories with some form of integrated digital connection; almost half of them have done this, whereas most of the companies we interviewed — about two-thirds — have just selectively automated single factories.

The second way to assess operations ecosystem capabilities is by measuring supply chain integration. Digital Champions are well ahead of other companies in this respect. More than 80 percent of Digital Champions have at least near-real-time, end-to-end integrated networks with supply chain partners that offer full collaboration and visibility among the companies involved. This customer-driven supply chain lets participating companies quickly assess the impact of potential changes in demand and resolve any constraints that would hinder a rapid shift in production and distribution schedules. Among the companies surveyed, only 27 percent have reached this high level of digital supply chain mastery.

TECHNOLOGY: INCESSANT INNOVATION

Because the customer solutions ecosystem determines the company's business model, and the operations ecosystem organizes its most complex capabilities, many business strategists seem to feel they have their hands full with just those two clusters. They tend to regard the technology ecosystem as being made up of more routine functions, to be delegated to service bureau–style departments. But that is a mistake. The technology ecosystem consists of activities embedded throughout the organization in every business entity, all linked together. They include established enterprise applications such as resource planning, customer relationship management, financial analytics, and cybersecurity, along with applications tailored to new platforms and revenue streams. Digital Champions gain a back-office performance edge from this ecosystem because they incorporate latest-generation technology: advances in cloud storage and

Digital Champions insist that their business strategy should determine which technology they adopt.

collaboration, data analytics, human– machine interfaces, customer and employee experience, and hardware and software integration.

In designing and implementing this ecosystem, Digital Champions are risk takers with discipline. They insist that their business strategy should determine which technology they adopt, while continually keeping up with digital advances that have the potential to enhance strategy, particularly involving speed, flexibility, customization, and efficiency.

Rather than having a "not-invented-here" bias toward homegrown and stand-alone systems, Digital Champions readily form partnerships with outside companies, including vendors and other users of platforms, hardware, and software, to more quickly implement new digital applications without redesigning the wheel. These attributes undoubtedly play a role in their impressive track record as innovators: More than 90 percent of the Digital Champions among our survey respondents said they were planning, prototyping, or already implementing advanced technologies such as robotics, digital twins (real-time simulations of on-the-ground operations), and the industrial IoT. The comparative figures among Digital Novices were below 40 percent.

Intriguingly, Digital Innovators, the group just below Digital Champions on the digital maturity scale, foresee revenue gains of nearly 20 percent, outpacing Digital Champions. We suspect that this figure reflects the fact that Digital Champions have already enjoyed initial revenue bumps from technology investments, whereas Digital Innovators are a step behind and will probably reap these benefits over the next few years if they adopt Digital Champion strategies soon.

One company that has made its technology ecosystem a centerpiece of its business model is Austria's Magna Steyr, which manufactures vehicles for other automakers, often when sales fluctuate and flexible manufacturing is needed. Its portfolio has included Mercedes G-Class, BMW 5 series, and the Jaguar E-PACE and I-PACE. With this product mix, Magna Steyr is the only vehicle contract manufacturer to produce the whole band of powertrain technologies — from the internal combustion engine to plug-in hybrids to pure electric vehicles. Because Magna essentially operates a dozen or so assembly schemes for different vehicles on a single line — an approach that many automakers are still struggling to perfect — the company has had to develop factories that are completely agile. Otherwise, profitability would be impossible, as some original OEMs have discovered with their low-volume models.

Magna has overcome this agility hurdle by introducing a steady stream of Industry 4.0 digital innovations, combining them to continuously upgrade the performance of its plants. Among the technologies is a digital cockpit that produces a digital twin simulation and monitors assembly-line performance for each vehicle. Adaptable robots with AI that can recognize each vehicle and determine assembly steps instantaneously guide the cars through the manufacturing lines. An in-line quality control function checks the assembly operations against real-world expectations in each step of the process so that quality isn't weighed only at completion, when a great deal of time tends to be wasted in the auto manufacturing process. And manufacturing data analytics are adjudged by learning machines that can alter the assembly process on the basis of new conclusions culled from prior vehicle builds.

PEOPLE: CULTURE OF COMPETENCE

As the latest industrial renaissance unfolds, there will be an increasing need for skilled workers. Some will need to configure and operate complex equipment and others to program it. All will need to make quick decisions in response to shifts in product lines, designs, and input from a range of partners. Digital Champions thus invest heavily in training and on-the-job skill development. They have also succeeded in (or at least are moving toward) building a digital culture in which people throughout the hierarchy have a high level of competence. They have mastered not just the tools of Industry 4.0, but the judgment needed to deploy those tools effectively in the service of strategic business goals. They understand the ways in which their own efforts fit into the overarching goals of the customer solutions and operations ecosystems, and thus into the organization's rapidly evolving strategy.

These facets of the business, involving recruitment, training, workplace design, incentives, and a context for collaborative effort, represent the core of the people ecosystem, which is essential to making sure that the other three ecosystems operate at peak levels. Organizations that employ their people ecosystem to the greatest benefit have traits in common in four key categories.

• **Skills:** Workers can handle diverse challenges. They can turn rapidly to new tasks, learning on the job. The organization has strong capabilities in data analytics, human–machine interaction, and technology-supported decision making. There are formal pathways for increasing the workforce's digital IQ.

• **Mind-set and behavior:** The organization has a digital mind-set and vision; it welcomes entrepreneurship and new leadership styles; it is open to new technology; it learns from failure; it is creative, innovative, and generally curious; it embraces a nonhierarchical, "best idea counts" mentality; and it puts a premium on rapid decision making.

• **Talent sources:** The company relies on cross-functional teams to drive digitization and eliminate silos. These teams are highly integrated, made up of people who work for the company mixed with employees at partnering compa-

Companies with effective people ecosystems embed the IT workforce into the customer solutions and operations ecosystems. This is a sharp departure from the traditional approach.

nies; with freelancers from hackathons and accelerators; and with people from digital agencies, research institutes, and universities.

• **Career development:** The organization supports its people ecosystem with a variety of unorthodox appraisal, incentive, and compensation schemes that reward innovative and smart digital ideas; flexible work arrangements and telecommuting when appropriate; free time to support continuous improvement of company operations; career models that reflect the value of digital expertise; and real-time employee feedback.

As the need for skilled labor increases, it will be crucial to develop new ways of acquiring talent — often individuals educated in science, technology, engineering, and math — as well as tailored training programs in digital concepts and capabilities. To some degree, this will result in higher salaries for people with the right skills; high pay provides an incentive for employees to continually refine and improve their skills throughout their career, taking advantage of Digital Champions' strong support for lifelong learning.

Companies with effective people ecosystems embed the IT workforce into the customer solutions and operations ecosystems. This is a sharp departure from the traditional approach, in which IT is made up of a group of isolated specialists, separately owning all technology assets and delivering services, often inefficiently, to line businesses. The people ecosystem model enables the technology ecosystem to deliver IT solutions that address precisely what the business needs when it needs it. It also fosters data-driven decision making on all levels, because people understand how to incorporate sophisticated tools into their work practices.

In our survey, Digital Champions excelled at developing digital culture. Of the Champion respondents, 59 percent have invested heavily in training to upgrade staff for digital transformation; 52 percent regard failures as an accepted part of the development process (an attitude that encourages experimentation with new ideas); and 52 percent have flat hierarchies and quick decision-making processes.

BECOMING A DIGITAL CHAMPION

The relatively small number of Digital Champions suggests how difficult it can be to master the four ecosystems, especially for an incumbent company without a digitally oriented culture. Start by moving in several directions at once: developing ecosystem-specific capabilities while driving integration across all four ecosystems. Here are six proven steps to accelerate your efforts.

1. Conduct an ecosystem assessment. This should look closely at the state of the company's products and services, its customer satisfaction levels, its operational capabilities, the relative value of its technology, and the skills of its people. Assess each as if you were studying a competitor, which can help shine a light on your organization's shortcomings. Consider your external challenges. How equipped are you to meet new market developments, competitors' moves, shifting customer expectations, regulatory changes, and technological advances? Think about the art of the possible: digital strategies based not on past constraints but on new capabilities. What can you offer now that you couldn't before, thanks to changes in technology, better understanding of consumer behavior, and opportunities for collaboration with external partners?

2. Define a vision of what the organization can become in this new world of Industry 4.0. Using the results of the first step, decide where to position your business, which value propositions to present to customers, and how to deliver your individualized products and services. What can you offer that can be tailored to individuals, or that competitors can't match?

3. Develop an integrated operations model. It should span all four ecosystems and enable you to work effectively with external strategic partners. Focus first on the customer solutions ecosystem, identifying the best potential partners and the capabilities you will need (for example, in marketing analytics or product research and development). Determine which are already available internally, which to develop through partnerships, and whether to make or buy the rest. With these choices made, design the operations ecosystem. Then, build out your technology and people ecosystems to enable the first two ecosystems. In your design, specify the interfaces, interdependencies, connections, technology, and data links that will ensure seamless interaction among all the ecosystems.

4. Establish an ecosystem governance, investment, and decision board. This board should set priorities and key milestones, review and approve design and implementation outcomes, make investment decisions, and oversee results.

5. Continue to build out the ecosystems, starting with the strengths you already have. Design and implement ecosystem capabilities through rapid, fluid, project-based team efforts — similar to those used in agile software development. This step should include creating collaboration models for connecting and sharing operations among partners; vendors; organizations such as factories, logistics providers, or contract manufacturers; advisors; ad hoc workforces; permanent employees; and short-term and long-term relationships. These models can be implemented as prototypes and pilots, then adjusted before subsequent ecosystem elements are rolled out. After each successful rollout, link the element to relevant aspects of the other ecosystems.

6. Take full advantage of the new value chain. After the four ecosystems are in place, implement practices to make the most of the changes. These include close monitoring of the new approaches, focusing on the levels of growth, performance, productivity, and continuous improvement. As the ecosystems evolve, reinvest in the continued growth of the four ecosystems model.

These steps can represent a few years' worth of activity in some companies. Even a Digital Champion typically has a lot of distance left to travel before the company can claim to be an Industry 4.0 leader. Indeed, only about half of the Digital Champions we surveyed said they had effective strategies for the full range of fundamental Industry 4.0–related activity. The depth of commitment required to become a Digital Champion can be daunting. But the consequent improvements in efficiency, speed, product development, creativity, customer response, and revenue show that achieving higher levels of digital maturity is worth it. +

Resources

Reinhard Geissbauer, Evelyn Lübben, Stefan Schrauf, and Steve Pillsbury, "Global Digital Operations 2018 Survey: Digital Champions. How industry leaders build integrated operations ecosystems to deliver end-to-end customer solutions," PwC, 2018: The report from which this article was adapted, with in-depth analysis.

Reinhard Geissbauer, Jesper Vedsø, and Stefan Schrauf, "A Strategist's Guide to Industry 4.0," *s+b*, May 9, 2016: Global businesses are about to integrate their operations into a seamless digital whole, and thereby change the world.

Norbert Schwieters, "The End of Conventional Industry Sectors," *s+b*, Jan. 3, 2017: Technology and the Internet of Things are eroding the boundaries that have long classified businesses.

More on this topic: strategy-business.com/operations_and_manufacturing

The Thought Leader Interview: Tim Armstrong

The CEO of Oath, which owns AOL and Yahoo, says the company is investing in content, software, and better online user experiences for marketers and consumers.

BY CHRISTOPHER VOLLMER AND DANIEL GROSS

Photograph by Peter Ross

Tim Armstrong works in an open-plan office that sits at an extremely busy and often cacophonous intersection near Union Square in Manhattan. As the CEO of Oath, the unit of telecommunications giant Verizon that houses AOL, Yahoo, and the Huffington Post, among other brands, Armstrong is a key player in — and theoretician of — the convergence of content, mobile communications, and advertising.

At age 47, Armstrong has played a key role in assembling many of the online world's largest and most significant platforms. He ran the U.S. advertising business at Google when it acquired YouTube in 2006. After joining AOL as CEO in 2009, he acquired the Huffington Post and ultimately sold AOL to Verizon in 2015. In 2017, he engineered Verizon's US$4.5 billion purchase of Yahoo, uniting two giants of the early Internet under a single banner: Oath.

Armstrong is now leading the powerhouses formed in the era of dial-up Internet and flip phones into the futuristic world of 5G, voice- assisted commerce, algorithm-generated advertising, and NFL games streaming on phones.

In the spring, Armstrong sat down with *strategy+business* to discuss the rapid evolution of the media and telecommunications industries and the dawning of a mobile consumer economy.

S+B: There's a new round of convergence that's been happening. And you're obviously at the center of that. Why are telecommunications companies investing more in content and media assets? In the past, that has not necessarily turned out well.

ARMSTRONG: If you go 10 or 20 years back, the consumer had clear swim lanes. If I was reading a newspaper, I was reading a newspaper. If I was watching television, I was watching television. Mobile's been the single largest driver of consolidation, I'm going to guess, in human history. I don't want to be too hyperbolic, but it is the first time consumers have one device and one connection to almost 100 percent of their intake. So the entire swimming pool of telco, content, movie theaters, and newspapers can be put on one connection, one device, one human interface. And by the way, people like it. So I think that's the driver. Looking through the lens of the consumer, we could be in a world where we end up with singular large interfaces controlling the entire experience.

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S+B: So, given that, what's the strategy for Oath, and what does success look like over the next two to three years in that context?

ARMSTRONG: We are building Oath for the mobile consumer economy, and our success comes down to two really basic concepts. One, that we will be able to provide you with must-have mobile services as a consumer. And two, that we'll provide other businesses or other partners access to those consumers on mobile.

S+B: A lot of your monetization is through digital advertising, which, if you read the commentary, is hypercompetitive. Facebook and Google are absorbing all the spending, and Amazon's on the horizon. What's the white space for Oath in a landscape like that?

ARMSTRONG: I think the white space is enormous. The entire world has tilted its head toward Google, Facebook, and Amazon. Those three companies have models that have been built up over the last 20 years now and are very deeply entrenched. But I also see an $800 billion to $1 trillion industry that is still hooked on the linear interactions in that swimming pool with different lanes. If you look at the total amount of head count, dollars, and interactions, mobile accounts for just a fraction of that. So is it likely we're going to end up in a world 10 years from now where there are

> "I believe that the current state of advertising is really poor.… On our side, that's a huge opportunity."

two dominant players and one or two emerging players in a trillion-dollar industry overall? I'd say the chances of that are pretty low. And also, I believe that the current state of advertising is really poor. You watch television, and you see multiple ads from the same company over and over again. That's broken. Print magazines are very thin. Digital advertising I would also describe as broken. On our side, that's a huge opportunity.

S+B: Do you think we're at a moment, too, where ad buyers are prepared to behave differently? And will they actually shift money to those properties that are more premium, more transparent, and more verifiable?

ARMSTRONG: I think there are a lot of pots and pans being banged about it and very clear messaging about what they want in general. But I would say they haven't put their lumber where their messaging is. And I think that's something they need to do. And by the way, the reason they haven't is that they're trying to stay with the consumer.

S+B: What do you tell your sales team in terms of your expectations about organic top-line growth? Or do you tell them to worry more about experience, effectiveness, and metrics?

ARMSTRONG: As we build Oath together, the first thing we're doing is taking out the off-market strategy. That is, in certain parts of the company, there was a mentality that content is commoditized, and ads are commoditized, so we should just dump everything into a giant stream and let all the machines sort it out. The reality is when you look at what the marketers want, what the consumers want, that's not it. So we are refocusing the company around two simple propositions. One, what does the consumer want and need? And two, what are the core needs of a marketer or advertiser? Those questions lead you down a couple of different paths. On the consumer side, some consumers value information without ads more than they value information with ads. So, that means you probably end up in some paid models. On the advertising side, really crappy and repetitive ads that are retargeted don't do anybody any good. We can't afford to have the advertisers have bad results because we're sending crappy and/or non-quality ads to the consumers.

S+B: As you look out on the horizon, how do things like 5G and voice interfaces act as game changers for Oath and Verizon?

ARMSTRONG: The core premise of putting Oath and Verizon together is that we have now built one of the largest mobile consumer membership companies on the planet. We have AOL, Yahoo, 20 other brands, and Verizon — and it fits together cleanly. If you believe the mobile consumer is an empowered consumer who will digest commerce, community, and content at scale, it's really easy to see how our news, sports, finance, entertainment, and advertising systems would benefit a Verizon consumer — and, by the way, other carriers overall. Also, the premise of what we're putting together is not just built on today's mobile consumer. It's built on a 5G consumer. So, if I said to you, "Five years in the future, your connection speed's going to be 100 times what it is today; your phone's going to be 100 times more powerful; the screens in your house are going to be more powerful; you're going to have voice, text, video interfaces; it's going to be more of a magical consumerism world around mobile and 5G," we'd argue on our side that's an exciting future.

S+B: And what's the specific reason it's better to be tied up directly with Verizon as opposed to just working with them as a partner?

ARMSTRONG: One is that understanding a mobile consumer's needs from the inside out rather than the outside in is very strategic. If we want to understand how 5G versus 4G affects the consumer, or how much data people consume and when they consume it — we could be an outside partner to Verizon and understand some of that. But being inside the company, it's essentially forced us at Oath — and this is the reason we did the deal with Verizon — to put a mobile lens on everything we do. Verizon benefits because it gets a business model that's not just wireless subscribers. At Oath, we have a business model that runs across all carriers, all countries. So, for Verizon, it's a way to take its power, data, and information, and supercharge a services company that rides above Verizon from a network perspective to other consumers and other places.

S+B: You've also been able to invest more in content since you've been part of Verizon. Can you talk about the investments, particularly in sports, that you've made with the NFL and with the NBA, and how that comes together both for Oath and also for Oath plus Verizon?

ARMSTRONG: When we were doing the original Verizon deal with AOL [in 2015], we used to carry around at the AOL board meetings a list of five things that you had to have to be successful in the future. One was mobile, two was video, three was data, four was distribution, and five was talent. They had the same needs on the opposite side. Sports are some of the most engaging, high-quality, multiscreen pieces of content that we could do. The deal we just signed with the NFL [a five-year, $2 billion deal to stream games] is predicated on mobile. And then we did a deal with the NBA [which lets fans buy access to NBA games], and we had a bunch of other deals in soccer. Our premise is picking off a human vertical. If you went back to the beginnings of the Olympic Games, humans have always been sports fans. If we're able to take the historical interest in being a sports fan and connect it with mobile, we are superserving a segment of customers. Verizon's a big enough company that it can actually make the investments. AOL or Oath on its own wouldn't have the horsepower to compete for an NFL mobile deal.

S+B: One trend we're seeing, in the *New York Times* or Netflix, is finally telling consumers they're going to have to pay for content. And that is antithetical to the way the Web, including Yahoo, developed. Does being owned by Verizon take some of the pressure off the need to charge for content and services?
ARMSTRONG: This may be old school, but we try to run the company from a profit standpoint. We're not religious about free content or paid content. We're religious about the consumer. So, if there are cases where we should have more paid relationships because a consumer wants that, my guess is you'll see us have more paid relationships with consumers in the future. We tested it at AOL. Outside of dial-up, we sold hundreds of thousands if not millions of subscriptions outside, so we're actively pursuing that at the combined Oath now. The other thing is, when you look at the future landscape of the world, having an inch-deep, mile-wide relationship with consumers is probably not a business model that's going to stand the test of time. If you assume the swim lanes in the pool go away, you have to have a much deeper relationship with your users.

> "We're not religious about free content or paid content. We're religious about the consumer."

S+B: Most media businesses have one dominant revenue stream, maybe two. But now it seems like you may have four, five, six, or seven different revenue models in play around a given brand or an experience. How do you manage around that?
ARMSTRONG: The way I think about it is there's a consumer ecosystem. One piece is content, one piece is commerce, one piece is establishing community, and one piece is service. We have two sides of our business. We have a front-end con-

sumer business and a B2B business. As you get better at understanding the many ways to deal with consumers and monetize them, it creates a big B2B opportunity too. The mobile landscape is forcing us to develop the engineering prowess to be able to understand how to monetize the evolving consumer relationships over time. Half of our revenue, basically, is partner revenue, overall. It's not dissimilar to how Amazon manages AWS [Amazon Web Services] or Google puts search out on other partners' sites. The B2B side of the business over time becomes as important as B2C and vice versa. If you go out 10 years, I think the largest companies will have a robust B2C business but also have a robust B2B business. Alibaba's almost the opposite. It started from a B2B marketplace and then went to the consumer.

"A lot of companies go after spaces. Video is hot. Commerce is hot.... You could probably occupy the next three years of your life space-hopping."

S+B: On the topic of streams, there are many paths that a company can take to develop new revenues. How do you think about that strategically?

ARMSTRONG: This is a struggle. I call it the space problem. A lot of companies go after spaces. Video is hot. Commerce is hot. Amazon affiliates are hot. And if you get the space disease, you could probably occupy the next three years of your life space-hopping. But when we start looking at this through a consumer lens, we have a different viewpoint. We'd ask, What is the actual consumer value proposition and need? And we have to ask whether selling affiliate spatulas on Amazon is meeting a huge consumer need.

S+B: Looking at the market, we're now seeing a fragmentation away from the smartphone, whether it's Alexa or your watch. What complexity and opportunities does this fragmentation create for your business?

ARMSTRONG: On one side, it's fragmenting, and on another side, it's consolidating. So, while you might have voice and video and all the different interfaces, underneath you have people competing to be singular servers. So, if you're on Alexa, you may be shopping on a desktop. You may be watching Prime on your phone. You may be having a voice interface on Alexa, but you may have a single account underneath it. People are going to get smarter about the interfaces that content and services go on. The problem for our business is you have to think about the singularity effect underneath it. Let's say five years from now you might use four or five different types of interfaces. The question is, Do we bet on the interfaces? I could run around the building right now saying, "Everyone do voice, do voice, do voice, do voice." But if we don't understand the software layer underneath — how all those things are horizontally getting connected — we could end up getting boxed out of an entire space.

We have a strategy built for where we think that's going in the next five or 10 years. Having been in the industry for 20 years, I find it incredibly hard to think about the fact that there are going to be twice as many connected consumers in coming years. They're going to be twice as empowered with speed, twice as empowered with the power of the devices they're using. The studies we've done internally show that there are 400 million people who use video content and spend more time on their phone than they do on traditional TV. The average power user now has 31 hours of screen time a day, meaning they multitask. Jump 10 years in the future, where there are several billion people who have had smartphones for 10 years. It's a huge opportunity.

S+B: How do you prioritize the global growth opportunity?

ARMSTRONG: The U.S. is a big market. It's the number one global economy. It's got 4 percent of the world's population. There's a rich opportunity for us still in the U.S., but it's undeniable that if you're not globalized to some degree, you'll miss opportunity. Both AOL and Yahoo were much bigger global players a few years ago. They retrenched into the U.S., and they did joint ventures. And there's a landscape of unsuccessful international deals. In this country it's hard to have a global perspective, because there are a whole bunch of international companies that aren't battling in the U.S.

Now we're going back out. If you go to Indonesia or Singapore, for example, these are the first places in the world where the Chinese, U.S., and Western European companies are all competing. You have to go to those regions to see what the international competition is going to be like and what the world is going to look like in 2030.

S+B: We've seen the whole value chain get reconfigured in the media, particularly around the role of the large ad agencies. Where do all these changes leave the agency?

ARMSTRONG: Historically, ad agencies have provided some key services. One was creative services, which allowed clients to have an outside viewpoint on your products. The second is that they were able to defragment the industry landscape. So, if I wanted to run ads on massive numbers of newspapers or television or radio stations, the media plan services were helpful. And the third piece was buying — the agencies would get you a huge discount for volume.

I think three major things have happened. On the media planning side, software is able to defragment your buying choices at a much faster, higher degree, and in the future, machine learning will allow you to plan media at a nonhuman scale. So the agencies have to look at machine learning. On the buying side, the challenge is this: In the past, if I was a big client, I had massive leverage over the media companies to force them to do what I wanted on measurement, customer research, or custom creative. Now, with these ecosystems in which there may be 4 million advertisers, the large advertisers and agencies acting on their behalf still have power, but it's not the same power. If you played in a soccer league of 200 teams, you'd play a lot differently than if there were 4 million teams in that league. The creative side, I think, is one of the greatest opportunities for agencies. If you were building today's creative agency, I think you'd probably be doing 100 times the amount of creative you were doing previously. It may have one theme or one concept. Distribution's changed so much that creative needs to change.

S+B: You have done a lot of acquisitions — YouTube when you were at Google was probably the most historic. You've sold your company to Verizon, too. What have you learned about what it takes for acquisitions to be successful, particularly when they involve people and technology?

ARMSTRONG: If you have a solid core thesis about what the M&A is going to do for the core relationship with a consumer or advertiser, your chances of success are much, much higher than if you're doing things that are motivated by financial engineering or done just to get into a space. And it's much harder to keep the teams together when you don't have a core thesis. We use this term all the time internally: The first 5 percent of strategy matters the most, because if you get off in the first 5 percent, you're going to end up someplace you don't want to be during the next 95 percent of the journey.

And the other piece is people. Every company I've been to has a beautiful-looking strategy deck, and most of the time it makes a ton of sense. Here's the problem with this: people. In many cases, if you change your strategy, you may have to change your people. But I don't know many companies that do that. If Verizon woke up one day and said we want to be a consumer packaged goods (CPG) company, I would hope the first thing it would do is fire me. I have no idea what's going on in the CPG landscape. I would say, in some cases, the companies we've bought, we've had their people run things. We have a bunch of the senior Yahoo people running a huge piece of the Oath business and strategy, and that's because some of the Yahoo people were better at some of the things than the Oath people. My experience is, again, people spend 90 percent of the time on strategy and 10 percent of the time on people. My guess is if you reversed it, you might have a better outcome.

"In many cases, if you change your strategy, you may have to change your people."

S+B: Another people question. A lot of tech and media gets criticized for being too male, and too homogeneous, particularly at the leadership level. You've had a pretty strong focus on diversity. How has it benefited you as a leader and CEO?

ARMSTRONG: I'm the chairman of the Internet Advertising Bureau (IAB) Diversity in Leadership Council. If I'm being really direct about it, I'd say: Just like everybody has a strategy presentation, everybody has a diversity presentation. And one of the things I've done here is say that we're going to treat diversity like a business model. My colleagues brought me a diversity memo to sign in September from a giant study, and we were getting the IAB award, and they said, "Can you sign this? You're going to be the co-presenter of it." And I said "Nope, not unless 50-plus percent of the VPs we're going to hire in the next three or four months are women." Seven out of the nine vice presidents we hired at the company in the following six months were women. That's a sea change from where we were a year ago.

When I go to the Makers women's events, I'd say 60 percent of the time I'm the only guy there. We had a Makers dinner at Diane von Furstenberg's apartment in New York. While I was going up in the elevator, I realized I might be the only male walking into this dinner. And I was. So, during dinner they went around the tables and asked how people could move women's diversity forward.

I had strong viewpoints I wanted to share. But I gave 50 percent of them in general, because I had no idea what the reaction was going to be in the room. Then I started thinking of our internal meetings and looking at how many meetings had one woman, or one minority. And I thought to myself, If I gave 50 percent of my viewpoint in that meeting, does that mean every room I go into where there's one person of one type of background, they are only giving 50 percent? And I'm thinking, Would you pay me fully if I showed up to every meeting and only gave 50 percent? And on top of that, half of our consumer population is women. So you can imagine the product and engineering meetings you go to where it's 100 percent male. One of the things I'm trying out next week is I'm going to be canceling meetings I walk into that don't pull insights and perspectives from diverse backgrounds.

S+B: In the portfolio of activities you have going on right now, what are you most excited about in terms of growth, in terms of products, services, brands?

ARMSTRONG: It is in our DNA to understand what consumers want in their lives over a long period of time. A lot of people from the outside might look at this as a negative, saying that we have these big, historic, giant brands. If I look at all the startups in the world, most of them don't know what we know about consumers. I'm excited that we have access to a billion consumers and that we have companies that have been around for 20 years that have made it through all the trials and tribulations in the industry and are backed by one of the world's best mobile companies. We have scale, and we know a huge amount about consumers and know how to take care of them. And if we improve that slightly, we're going to have a big thing. +

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How to Make Property Work Better for Society

by Mark Gimein

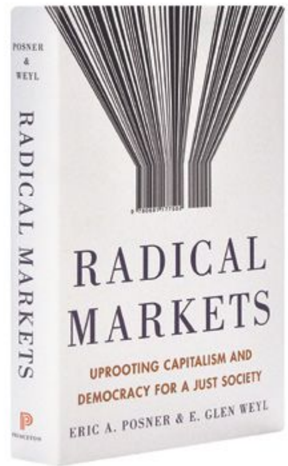
Radical Markets: Uprooting Capitalism and Democracy for a Just Society,
by Eric A. Posner and E. Glen Weyl, Princeton University Press, 2018

"Property," French anarchist Pierre-Joseph Proudhon famously wrote, "is theft." For this, among other radical political statements and beliefs, Proudhon was jailed — albeit rather gently, with regular furloughs from his Paris prison.

Each era gets its own version of "property is theft." And now University of Chicago legal scholar Eric A. Posner and political economist E. Glen Weyl, a researcher at Microsoft, have delivered one for the era of markets. *Radical Markets: Uprooting Capitalism and Democracy for a Just Society* is an original and inventive effort at what you might call "market socialism." It's worth reading both for the practical ideas that can be repurposed for the current U.S. economy and for the interesting ways in which the authors' more extreme ideas go wrong.

Posner and Weyl take the "uprooting capitalism" part of their title seriously. Although they seem leery of socialism or anarchism and don't precisely follow Proudhon's formulation, the first chapter, "Property Is Monopoly," comes awfully close to it.

Illustration by Noma Bar



Property for Posner and Weyl involves two sins. First, it's inefficient. Why have things when you are not using them? It's the Shel Silverstein theory of property: "If I die before I wake, I pray the Lord my toys to break / So none of the other kids can use 'em." Second, property lets you make money without labor. Open a riverfront restaurant, and while you spend all day and evening gutting fish, the owner of the waterfront property keeps most of the gains.

The setup is not dramatically different from the complaints that have been made about property for generations. The twist — the "radical markets" part — comes in the solutions Posner and Weyl advocate for the problem of property. Everyone who tries to find other ways of organizing things and uprooting capitalism runs into the very foreseeable difficulty that the obvious alternatives, starting with confiscation and proceeding to management by centralized five-year plans, are terrible. Bureaucrats, dictators, technocrats, and politicians all tend to come up with methods of allocating resources that are dramatically suboptimal.

Posner and Weyl want to find a way to have goods owned in common — or, in their words, make possessors "lessees from society" — without turning to central planners. They want to distribute goods in a way that's fairer than "let the government decide" or "what's yours is yours." Their solution is something they call the common ownership self-assessed tax, or COST, which lets citizens express how much they value something and pay annual taxes based on that value. Investors can choose not to pay the COST on, say, a plot of land, but are then required to sell it to anyone who is willing to pay a price higher than its declared value.

That last part takes a lot of getting used to, and you'd need to spend a lot of pages (as Posner and Weyl do) to fully explain how it works. If you don't want to sell something like the watch you inherited from your grandfather, you can pay a very low tax. But you can't then change your mind and sell it for a lot if the price rises or your mood changes. On the other hand, if you're an investor and want to profit from your possessions, you have to either pay a high tax to hold on to the assets or give them up for a reasonable price to buyers who can use them efficiently.

The interaction of these COSTs and the prices buyers are willing to pay is the "markets" part of *Radical Markets.* The book makes some fairly extreme claims for the benefits of the COST. Each chapter comes with a little science fiction introduction, in which everyone from hyper-speed train operators (those will exist) to garbage pickers (yes, those too) would make decisions about what they value to maximize the use of social resources. These are fun to contemplate, but setting the examples in the future largely lets Posner and Weyl skim over the limitations of the theory in the here and now.

As a general rule, the perception that property is a problem is not one that is shared outside academia.

Those are significant. As a general rule, the perception that property is a problem is not one that is shared outside academia. The book largely dismisses the aspirations that motivate the poor — aspirations of attaining middle-class status and, yes, ownership of property. Nor does it deal with the icky awkwardness of what happens when you forget to pay the COST on your house.

Radical Markets also shows a great degree of confidence in the ability of government to collect high taxes through COST assessments and then redistribute them in a way that makes everyone happy. This is a problem with many utopian economic models. In theory, you can tax Paul for the pollution he emits on Peter's land, then give the money to Peter. Or you can tax Peter and Paul and give them back social goods equal in value to what you collected. In real life, it rarely works out that simply.

Still, *Radical Markets* is a useful exercise because it also reveals public goods that are perhaps best not turned into property. The authors are aware that many of their readers will be looking for more immediate and less radical uses for their COST system for assets that are held by the government and need to be distributed; Posner and Weyl point to grazing rights, Internet domain names, and radio spectrum as examples. Here, alternatives to current approaches are useful. Around the world there have been some major successes in privatization — and some mixed results and failures. In general, the privatization of ex-Soviet enterprises may have been one of history's great screwups. In the U.S., although spectrum auctions have raised a great deal of money for the public, they've also resulted in telecom markets that have a surprisingly small number of players.

You don't have to buy *Radical Markets'* exhortations to make property common to accept that access to coastal beaches or broadcast spectrum shouldn't simply be sold to the highest bidder. There may be few takers for the radical position that all private property should be made public and leased back from the government. But it is not radical at all to say that some things we hold in common should be kept that way. +

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Back from the Brink?

by David J. Lynch

Crashed: How a Decade of Financial Crises Changed the World,
by Adam Tooze, Viking, 2018

The United States is not having a very good century. So far, the 21st has witnessed terror attacks, an ill-conceived war in the Middle East, the worst financial collapse since the Great Depression, and a populist presidency that has left Americans deeply polarized.

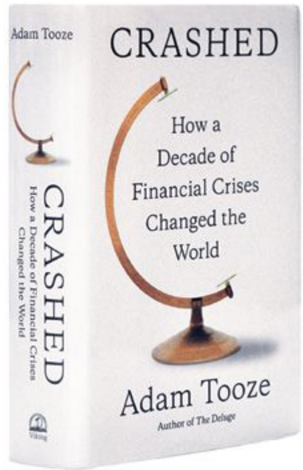
Given this litany, it may not be surprising that, according to a recent Gallup survey, the world's view of U.S. global leadership is at a record low. But in *Crashed: How a Decade of Financial Crises Changed the World*, Adam Tooze shows that the United States actually cemented its role as the indispensable nation through its handling of the 2008 financial crisis. In fact, it emerged as the only state "capable of meeting the challenge it posed."

That is one of the several unconventional verdicts Tooze, a prolific historian at Columbia University, delivers in this intelligent and persuasive account of the global economy since the U.S. mortgage market exploded into a border-jumping financial conflagration.

Tooze shows that the U.S. cemented its role as the indispensable nation through its handling of the 2008 financial crisis.

Tooze contrasts the image of the crisis as an emblem of American decline with the reality that the U.S.'s role in leading the world out of crisis was clearer than its responsibility for causing the global recession in the first place. "The idea that was so prevalent in 2008, the idea that this was basically an American crisis, or even an Anglo-Saxon crisis, and as such a key moment in the demise of American unipolar power, is in fact deeply misleading," he writes.

The standard account of U.S. crisis-fighting efforts places at center stage the Obama administration's US$800 billion stimulus and the Federal Reserve's monetary easing. But Tooze makes a convincing case that it was the Fed's (often overlooked) 2008 establishment of an unprecedented currency swap arrangement with other central banks that actually prevented the crisis from metastasizing in a more devastating way.



"The US Federal Reserve engaged in a truly spectacular innovation," Tooze writes. "It established itself as liquidity providers of last resort to the global banking system. It provided dollars to all comers in New York, whether banks were American or not."

European banks that had gambled on investments in U.S. mortgage-backed securities found themselves desperately short of dollars when the crisis struck. In October 2008, the Fed organized a crisis-fighting team of central banks that ultimately funneled a staggering $10 trillion into the European banking system. Tooze calls this move "the decisive innovation of the crisis" and notes that it occurred with precious little public disclosure and even less public understanding. More than half of the financial firepower that the Fed unleashed to quell the crisis found its way to European banks, he says.

What's striking is that the crisis that blew up in 2008 was not the one that so many smart people had anticipated. In the years leading to the crash, American experts from across the political spectrum warned that excessive U.S. government borrowing would inevitably end with bond market vigilantes fleeing Treasury securities and sending the dollar plunging.

Tooze presents two alternative ways of viewing the global economy through trade patterns and financial flows. The focus on the former led many to expect that unbalanced trade between the U.S. and China would precipitate a public finance crisis, and thus to overlook the larger and more dangerous private financial links between U.S. and European banks, which ultimately short-circuited.

Focusing on trade flows between nations, he writes, proved misleading. "An economy with a strong trade surplus, ample foreign currency reserves and an appreciating currency might well have banks, corporations and private citizens accumulating debts in foreign currencies."

In the event, Tooze demonstrates that the U.S. policy response to 2008 proved far more successful than the piecemeal European effort to counter the subsequent

2010 crisis. The eurozone crisis, which featured the near splintering of the single currency, was not a discrete episode, in Tooze's retelling, but emerged directly from the U.S. meltdown and was ameliorated only by U.S. action and the eventual adoption by European officials of American-style policies. Those included European Central Bank chief Mario Draghi's July 2012 pledge to do "whatever it takes." Writes Tooze: "The eurozone was saved by its belated Americanization."

Tooze, the author of prior works on the economy of Nazi Germany and the post–World War I period, is unsparing in his verdict on Europe's approach. He calls it "a train wreck, a shambles of conflicting visions, a dispiriting drama of missed opportunities, of failures of leadership and failures of collective action." Millions of Europeans in the smaller economies of Greece, Ireland, and Portugal were driven into a 1930s-style depression "for no good reason."

On both sides of the dollar-based North Atlantic financial system, he finds political parties to have failed at a historic moment. Both left and right disappoint Tooze, who expresses understanding, if not sympathy, for the "populist" reaction to the great unraveling.

But American exceptionalists shouldn't be too smug, Tooze warns. In the U.S., he draws a straight line between Republican grandstanding over the 2008 bank bailout, the rise of the Tea Party, and the general dysfunction that plagues Washington and inhibits legislative compromise. Today's GOP "is incapable of legislating or cooperating effectively in government," he writes.

And in the end, his analysis leaves us with an unsettling question. Global finance continues to rely upon the dollar as much as ever. If a new crisis were to explode, could the world likewise rely on American leadership? +

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The Enthusiasms of Tom Peters

by Theodore Kinni

The Excellence Dividend: Meeting the Tech Tide with Work That Wows and Jobs That Last, by Tom Peters, Vintage, 2018

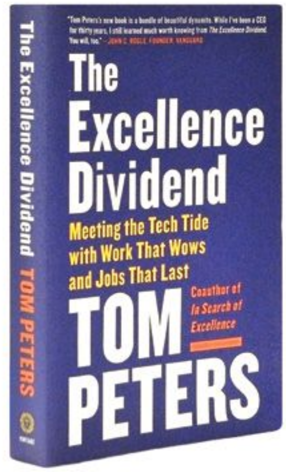
A couple of years ago, prior to an interview with Tom Peters, I visited his website to see what he was up to. I found the answer in a gargantuan 4,000-slide PowerPoint deck that Peters titled, with his trademark typographic hyperbole, **"THE WORKS."** By way of introduction to the deck, he wrote, "Make no mistake…**THIS IS A 17-CHAPTER BOOK**… which happens to be in PowerPoint format."

The Excellence Dividend punctuates that claim almost as well as the ! that Peters adopted as his corporate logo after two years of noodling 25 years ago. The paperback is an annotated version of "The Works" — a fleshed-out outline that frequently depends on fonts to make its points.

The CEO's first commandment, per Peters?

> **CEO Job #1 is setting — and micro-nourishing, one day, one hour, one minute at a time — an effective people-truly-first, innovate-or-die, excellence-or-bust corporate culture.**
>
> The key words in my declaration are…
>
> **one day, one hour, one minute at a time.**
>
> The best way to keep up in a fast-changing world?
>
> **READ! READ!! READ!!! READ!!!!**
>
> The world's most underserved market?
>
> **W = >2 x (C + I) = $28T**
>
> **Women's Market Size = More Than Two Times China Plus India Combined = $28 Trillion**

As you may be starting to suspect, *The Excellence Dividend* is a 450-page boldbardment of ideas, facts, figures, memes, and manifestos. Peters calls it the sum total of his 50-year career, more than half of which he's spent as a leading light of management thought.



Swallowing such a book whole is exhausting, mainly because it is delivered with such brio and packed with enough insight and advice to keep you busy for the next 50 years. When I review a book, I fold page corners, underline in ink, and scrawl marginalia. I folded so many pages in *The Excellence Dividend* that its top right corner is half again as thick as the rest of the book. I ran a new pen dry while reading it; at first I thought the pen was defective.

If you've read Peters before or if you're one of his 159,000 Twitter followers, you'll recognize that the new book's six sections and 496 pages represent his ongoing and undiminished enthusiasms. People management — the focus of the third section, which leads off with: **"ONE MORE (DAMN) TIME: PUTTING PEOPLE FIRST"** — is the greatest of these.

Peters traces his passion for people management back through his work at McKinsey with Bob Waterman, which resulted in the publication of *In Search of Excellence* in 1982, all the way to his stint as a Seabee in Vietnam during the war. "I arrived in country with civil engineering tools aplenty, but I was soon given a detachment to command in a rather unpleasant setting," Peters writes. "Overnight, I discovered that 99 percent of my concerns were 'people concerns' (so-called/mistakenly called soft concerns). And I was totally unprepared for 'soft-stuff leadership' in a setting where bad guys were shooting at us and the roads were intensively mined."

Whether the subject is culture building, treating employees like customers, performance appraisals, or training, *The Excellence Dividend* is shot through with advice on the soft stuff — some of which is pretty radical. In his discussion of the job apocalypse that may occur as AI and robotics spread through out companies, for instance, Peters declares "people first" as a leadership imperative:

> **Your principal moral obligation as a leader is to develop the skill set of every one of the people in your charge — including semipermanent and temporary — to the maximum extent of your abilities and consistent with their "revolutionary" needs in the years ahead. (The bonus: This is also the premier profit maximization strategy!)**

Another notable enthusiasm of Peters is his predilection for action, which tracks back to the Seabee's "can do" mind-set. "Forget that glossy strategy," he says.

> **JUST BUILD IT.**
> **NOW.**
> **CAN DO.**

Likewise, although he has been preaching the gospel of excellence for decades, Peters has never been one to wait around for the perfect application of it. He declares:

> **EXCELLENCE *is* the ultimate short-term strategy.**
> **EXCELLENCE *IS* THE NEXT FIVE MINUTES.**
> **(Or not.)**

Underlying all of Peters's enthusiasms is his enthusiasm for the ideas of other people. I can't think of any business writer who uses other people's ideas as freely as Peters, or who is as openly generous with crediting his sources. More often than not, he uses quotes, concepts, and stories of other people as the bulk of a section and then just adds a few sentences to drive the point home.

Not many authors could get away with this narrative approach. But Peters carries it off with aplomb.

For instance, after several pages of quotes and statistics on the "oldies" market, Peters writes, "I have offered very little commentary in this section. This, I believe, is one of those times when the collective statistics really do speak for themselves.

"Or, perhaps more accurately: These stats outline in incontrovertible terms an incredibly large opportunity in an incredibly large, incredibly underserved market.

"Sooooo?

"Please get off your bloody millennials high horse and get on the horse that will take you straight to the bank."

Not many authors could get away with this narrative approach. But Peters carries it off with aplomb because it accurately reflects his personality and modus operandi. "I consider myself, in effect, a red exclamation mark," writes Peters in the epilogue of *The Excellence Dividend*. At the age of 75, he still looks at business, with all of its inequities and foibles, and then argues passionately — as he has done for decades — that this thing of ours can be an "emotional, vital, innovative, joyful, creative, entrepreneurial" endeavor. Peters's enthusiasm is exclamatory indeed. +

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The Unfunny Side of Wisecracking Bosses

Although humor can boost workplace morale, some jokes can leave employees feeling disengaged and more apt to break the rules.

BY MATT PALMQUIST

Opening with a joke is Management 101. But what kind of joke is best has somehow gotten lost in the curriculum.

Using humor to lighten up the office has long been seen as a way to boost employee performance, engagement, and satisfaction. It can help employees feel closer to their bosses, and sometimes it simply breaks the ice. To that end, some leaders have taken improv classes to hone their witty repartee. But the "funny boss" might want to think twice before starting the next meeting with a zinger, according to a new study that weighs the pros and cons of leaders' use of humor.

The authors of this study examined the issue through the lens of benign violation theory (BVT), which helps explain what makes us laugh. According to BVT, we find things funny when they violate a norm in a nonthreatening way.

For example, "What do dinosaurs and decent lawyers have in common? They are both extinct!" is lighthearted, and it mildly violates the norm of respecting the legal profession. However, it would lose its charm if it were accompanied by pictures of dead lawyers.

When executives crack jokes, the authors posit, they send a signal that violating norms is OK. They're also implying a willingness to engage in less formal, more permissive relationships with subordinates, which, ideally, can lead to more candid talks, quicker conflict resolution, and more creative brainstorming sessions. But, the study finds, humor has drawbacks.

To explore the ways in which leaders' humor may affect employee attitudes

Illustration by Elwood Smith

and behavior, the authors conducted separate studies in China and the U.S., which have different workplace cultures. The same results were found in the two locations.

Participants were surveyed about the extent to which leaders employed humor at work, and about their perceptions of what was and was not acceptable. They also reported their own norm-violating behaviors, such as poking fun at colleagues and pilfering office supplies.

The authors found a distinct link between how much humor was used by leaders and how much their employees both thought it was acceptable to violate workplace norms and actually did so. Bosses are role models; when they make a joke about, say, padding an expense report, employees are more likely to think it's OK for them to actually engage in such deviant behavior, the study found.

The style of humor also matters. Although the supervisors' use of humor generally contributed to increased engagement at work and more meaningful leader–subordinate exchanges, aggressive humor — such as ridicule or teasing — had the opposite effect, leaving employees feeling disheartened.

The authors are quick to point out that their advice is not to abandon humor. But too much joking around, criticizing the company, or making fun of colleagues sends the wrong message. And when jokes fall flat in the workplace, it's no laughing matter. +

Source: "The Mixed Blessing of Leader Sense of Humor: Examining Costs and Benefits," by Kai Chi Yam, Michael S. Christian, Wu Wei, Zhenyu Liao, and Jared Nai, *Academy of Management Journal,* Feb. 2018, vol. 61, no. 1

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