

# Think:Act

Leading thoughts, shaping vision

# FASTER

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**TAKING YOUR  
PERFORMANCE  
TO A NEW LEVEL**



**Tony Fadell talks**  
The serial entrepreneur  
shares his vision

**Rock this city**  
The unlikely US town that  
stages stadium shows

Roland  
Berger 



**"We need  
transformative  
technology to help  
dig us out of the  
hole we're in."**

**TONY FADELL**  
Engineer, designer and  
serial entrepreneur

→ PAGE 66

PHOTOS: WILLIAMSON ADAMS, HARRY KIKSTRA



**"No business  
executive is ever  
going to say that  
complacency is  
a good thing."**

**ALISON LEVINE**  
Mountaineer and  
leadership consultant

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**"Let's not assume that because a company is doing well, it must be innovative."**

PHIL ROSENZWEIG  
Author of *The Halo Effect*

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PHOTO: JÉRÔME SESSINI / MAGNUM PHOTOS

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**PERFORMANCE**

**FASTER**

IT'S 2023. We have made it out of the worst years of Covid-19. Now it's time to get back to basics. Performance lies at the core of a successful business.

**HIGHER**

But in a world of changing values and ideas, do we need to reassess what we mean by performance? We, at *Think:Act*, have taken some time to step back and look at the big picture – as well as challenge a few ideas.

This issue of *Think:Act* issue drills down on what performance really is and what it means in terms of the capabilities an organization needs to hone. Beyond that, we distill lessons from the team dynamics in Formula 1 and show you why climbing Mount Everest (literally) offers you valuable lessons in why making the summit is not the only measure of success. And in a world of increasing automation and AI coming to the fore, we ask whether the CEO's days are numbered in the boost to achieve top performance.

From the individual to the team, from metrics to management, we want to give you a new lens to view performance with so you can thrive in the post-pandemic business landscape.

**STRONGER**



# Think:Act 40

In focus

# FASTER HIGHER STRONGER

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— Kelly Richmond Pope, PAGE 82

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ILLUSTRATION: CRISTINA DAURA | PHOTOS: KELLY RICHMOND POPE, GETTY IMAGES / APP / ANDREJ ISAKOVIC, GETTY IMAGES/RED BULL/MARK THOMPSON, PELLE CASS

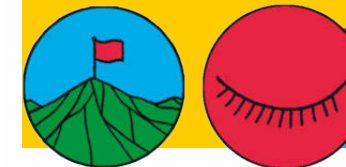
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Digital

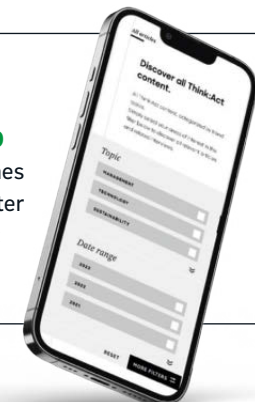


### Think:Act Ideas for Action

Sign up to read this issue's Ideas for Action online with insights on how to boost your margin by collaborating smartly along your value chain: [rolandberger.com/subscribe-ifa](http://rolandberger.com/subscribe-ifa)

### More food for thought with the Think:Act Hub

Get an overview of the top themes covered across *Think:Act* and filter your way to your favorite topics: [rolandberger.com/en/tam](http://rolandberger.com/en/tam)





Think in numbers

Putting a figure on ... ENERGY PRICES

1.5% DECLINE

The forecasted impact on corporate profits across Europe in 2023 as a result of rising energy costs, which would amount to \$27 billion in Germany alone.

14x HIGHER

The average increase in wholesale gas prices across Europe between the third quarter of 2019 and the third quarter of 2022. US gas prices tripled during the same period.

3.8% INCREASE

The median estimated rise in global household expenditures driven by total per capita energy cost increases in the range of 62.6% and 112.9%.

2.1% OF PEOPLE

The highest projection of the global population that could enter extreme poverty as a result of direct energy price increases coupled with indirect price increases.

SOURCES: REUTERS, IMF, NATURE

PHOTOS: GETTY IMAGES / SEBASTIAN ISRAEL, PATRICK BEAUDOUIN | ILLUSTRATION: JULIA ZIMMERMANN

Food for thought

For breakthrough innovation, how does the quantity of ideas drive quality?

by Jeremy Utley

RESEARCH BY OUR COLLEAGUE Dr. Bob Sutton and his PhD student, Andrew Hargadon, illuminates a fact that few realize: It takes thousands of ideas to have a commercially successful innovation. This accords with Dr. Dean Keith Simonton's famous "equal-odds rule" - to produce quality ideas, one should generate a large quantity of material. Therefore, we advocate a shift in focus from quality to quantity: from "a good idea" to "lots of potential solutions." What's the best way to come up with "lots"? It turns out it's all about

input. I've learned from world-class designers and breakthrough thinkers that they have honed the instinct to seek out fresh inputs to drive fresh thinking. And the practice of innovation is really about honing that instinct: new input, information and inspiration. Seeking new input doesn't always feel efficient, but then, innovation isn't really efficient. The present obsession with efficiency causes many to overlook more effective tactics. Breakthrough thinkers wage war against "the tyranny of efficiency" by creating space for what's effective instead.



AVAILABLE ONLINE Read more about Jeremy Utley online: rolandberger.com/en/utley



JEREMY UTLEY is the director of executive education at the Stanford d.school and adjunct professor at Stanford's School of Engineering. An expert on innovation, leadership, creativity and lateral thinking, he co-wrote the book Ideaflow: The Only Business Metric That Matters together with Perry Klebahn.

Think:

AT A GLANCE

Thoughts to live by

"You cannot rectify every real or alleged wrong immediately. Time must enter into the picture."

— Arthur J. Goldberg

US statesman and former member of the Supreme Court of the United States

Re-thinking buzzwords

Get to grips with new industry lingo in a flash with our stripped-down explanations of the latest jargon.



"GOAT (the greatest of all time)"

If you've ever wondered what the goat emoji is doing on your social media feed, wonder no more. The goat acronym began with Muhammad Ali who adapted his title of "The Greatest" to include the timestamp "of all time." Rappers followed suit. Now it's applied to athletes, musicians and often to one particular business leader and owner of Twitter, but you be the judge ...

ACT



The  
redacted  
read



## Build ideas using the process of creative giants

Sheena Iyengar, a professor of management at Columbia Business School, argues that creative individuals from Isaac Newton to Paul McCartney have all followed six steps.

**MEMORY SCIENCE** suggests that most of what you think about creativity is wrong. The good news is that coming up with original ideas isn't magic, but rather a process:

**Step 1:** Spend time choosing what problem it is that you really want to solve. One study found that over 20 years, half of the decisions made by 358 companies failed because the company tackled the wrong problem.

**Step 2:** Any major problem is made up of multiple, smaller problems. Make a list of these, then pare it down to five to seven key sub-problems.

**Step 3:** Consider what needs your idea should fulfill for you, your target market and important third parties.

**Step 4:** Search for solutions to your sub-problems, both in and out of your field.

**Step 5:** Write out possible solutions to each of your sub-problems and choose the combination that best meets the needs outlined in step 3.

**Step 6:** Tell others your idea and ask for their response. What they see in your idea will often help you see it better yourself.

**Think Bigger: How to Innovate** by Sheena Iyengar. 248 pages. Columbia Business School Publishing. 2023. \$25.

Chain  
Reaction

## A new kind of space race

Covid-19 turned working from home into a common practice and "Zoom call" into a household phrase. And while early predictions foresaw 32% of the global workforce engaged in some form of remote work by the end of 2021, it only took a few months before a new

word entered the lexicon: Zoomtown, or an area experiencing higher housing costs ascribed to an influx of remote workers looking for more space. Here's how the pandemic and changing work models helped blow the roof off housing markets around the world.



**2020:** While labor shortages and supply chain disruptions continue to slow new home construction projects, workers able to work remotely look for more space away from urban centers. In the US, employees in full-time remote positions increase from 17% to 44% and median house prices grow by 18.7% by the end of the year.

**EARLY 2021:** In April, US housing supply is 53% lower than just before the pandemic. The US 30-year fixed interest rate drops to a historic low of 2.65%, resulting in an average mortgage rate of 2.96%. The median existing home price reaches a record high of \$363,300, a year-over-year increase of 23.4%.

**LATE 2021:** UK housing prices rise 13.2% by the end of the year. The Bank of England credits 38% of that growth to a premium for houses over flats. Among OECD countries, home prices rise by 13% on average. Investors buy 24% of single-family homes sold in the US.

**2022:** An NBER paper estimates that housing prices increase 0.93% for every 1% increase in remote work, accounting for over 50% of housing price inflation and similar increases in rental prices. In Mexico City, rent increases of up to 40% since the start of the pandemic are largely attributed to foreign remote workers.

**LOOKING AHEAD:** With 57% of remote-capable workers willing to quit if their company won't offer remote work options, the race for more residential space is set to continue. Yet high inflation and rising interest rates are setting the stage for a correction. In March 2023, the IMF reported two-thirds of OECD economies saw inflation-adjusted housing price declines.

SOURCES: BLOOMBERG, STATISTA, FORBES, NPR, BANK OF ENGLAND, PEW, NAR, NBER, THE NEW YORK TIMES, IMF

Best  
practice

## How to cope with being laid off

**IT'S BEEN A BAD TIME** for cutbacks. So what do you do if you find yourself in the firing line and out of a job? There is nothing wrong with leaping into action right away, but you might first want to take a pause: look after your body, write a journal and let trusted friends know what is going on. If you feel anxious or depressed, seek medical help. Remember: Losing your job does not reflect on your skill set – it reflects on how your former company messed up. Now you can build a new story for you. That starts with knowing what you want. Create a hit list of must-haves for your future role – it will help you target companies that will fit you and vice versa. It might feel bleak right now, but remember these golden words from Steve Jobs: "Getting fired from Apple was the best thing that could have ever happened to me."



PHOTO: GETTY IMAGES / CONSTRUCTION PHOTOGRAPHY / AVALON | ILLUSTRATIONS: JULIA ZIMMERMANN

Economic  
impact

## A surge toward cleaner energy

**THE WAR IN UKRAINE** delivered a shock to global energy security that sparked a rush to renewable energy. Following its March 2022 Versailles Declaration to phase out Russian fossil fuel imports "as soon as possible," the EU in particular faced the threat of energy supplies running on empty. Before the war began, 27 member states of the EU sourced nearly 40% of their natural gas from Russia – a supply that was cut by 80% between May and October 2022. As part of its commitment to grow its renewable share of electricity to 69% in 2030, the EU installed 41.4 gigawatts (GW) of solar in 2022 – up 47% from 2021 – a figure set to reach 484GW by 2026. Outside the EU, the UK reached a renewable record in 2022 with 40% of its electricity generated by renewable sources while global renewable energy investment was estimated at \$2.4 trillion. But despite these strides, the International Energy Agency forecasts the EU will only reach 55% renewable electricity by 2027 and less wealthy countries are reverting to coal in response to soaring natural gas prices, increasing coal CO<sub>2</sub> emissions by 2% over 2022. Factor in that China's share of all key manufacturing stages of solar panels is set to reach more than 95% in the coming years and it's clear that the world needs to step on the gas to diversify energy supply chains and avert another potential crisis.

SOURCES: INTERNATIONAL ENERGY AGENCY, WORLD ECONOMIC FORUM

# ACT

AT A GLANCE



# In focus



In this issue we take a look at performance and how to achieve the best results.

PERFORMANCE

**WORLD-CLASS**  
Belgian heptathlete Nafissatou Thiam is a European, world and double Olympic champion and an inspiration for organizations competing across many fronts.



# BE LIKE

What does business have in common with a decathlon? The winners in both see **THE ART OF SUCCESS** as being able to reach peak performance in multiple disciplines.



BY Detlef Gürtler

PERFORMANCE

# AN ATHLETE



C

**ITIUS, ALTIUS, FORTIUS.** Faster, Higher, Stronger. That's the Olympic motto, coined in 1894 by Pierre de Coubertin, (re)inventor of the Olympic Games. We usually see this as the exact description of what the athletes aim at when they compete for the gold medal. But few actually achieve it – besides the decathletes.

All of the other Olympic disciplines specialize in just one of those three qualities.

Sprinters run fast, but aren't concerned about height or strength. Shot-putters are strong, but they don't take the high jump. The upcoming 2024 Summer Olympics in Paris are scheduled to feature 329 events, yet only two of them will cover all three parts of the Olympic motto at the same time: the women's heptathlon and men's decathlon. In a decathlon, athletes meet 10 very different challenges in two days and have to master all of them – including the 100 meter sprint (citius), the high jump (altius) and the shot put (fortius). Ten demanding events that help explain why decathletes are called the "kings of athletics."

**HOW DOES THIS RELATE TO BUSINESS?** Performance is mostly about being the best in your specific market. Especially in a winner-takes-all field like software or social media. It doesn't matter how good you are – if someone's better than you, you're out. The premium for the best is high, and so is the incentive for specializing in exactly what is needed to succeed: a niche focus. It also explains why measurements have come to the fore. The focus on key performance indicators (KPIs) amplifies specialist bias. In today's data-flooded world, almost everything can be ranked, from price-earning ratios to customer retention rates. Often, improvement in those rankings is set as a target from the boss or the board: "Hey, let's be first in our industry! Or, at least get a better ranking than our competitor!"

But is this good for business? Is it desirable to get to the top in one or some special disciplines? Or is it better to focus on a more general target – like being faster and higher and stronger? From biology, we know that there's usually a trade-off. When you're a world-class sprinter, like the cheetah, you're not cut out to be very persistent. Either you succeed in the first minute of your hunt, or you fail.

PERFORMANCE



**BEING THE BEST IS A MULTI-EVENT COMPETITION**

Nafi Thiam set the world record for the high jump within the heptathlon in 2019, but her back-to-back Olympic gold medals in the event required excellence across a breadth of disciplines.

After becoming the youngest ever heptathlon gold medalist at the 2016 Olympics, she shot to third on the event's all-time winners list in 2017, securing her victory with the 800 meter race. In 2023, she raised the world indoor pentathlon record to 5,055 points.



When you're good at reaching like a giraffe, you're not good at digging like the mole, and vice versa. The more specialized you are, the more you depend on the invariability of the ecological niche you're in. A major disruption means game over.

**THAT'S NOT JUST A BIOLOGICAL STORY** of evolution and extinction – it's also human and economic. Many successful silent movie era actors couldn't adapt to the "talkies" and many phone producers went out of business when the smartphone arrived. Specialized professions like wood carvers, copper engravers or typesetters were swallowed up by technological progress.

Still, it can make sense to be a highly focused specialist. Let's get back to the sports analogy. A small company can be a specialist like sprinter Usain Bolt, who always performs in the same discipline better than anyone else. As long as the rules and/or the markets stay the same, this pays off. But the more you are out in the wild – in different markets, industries, technologies and cultures – the more your performance mindset has to change. You have to excel in different disciplines, adapt to

PHOTOS: GETTY IMAGES / DAVID RAMOS, AFP / ANDREJ ISAKOVIC

**IT DOESN'T MATTER HOW GOOD YOU ARE – IF SOMEONE'S BETTER THAN YOU, YOU'RE OUT.**

**2.02 METERS**

The height of Nafi Thiam's world record-setting high jump within a heptathlon competition in 2019, just seven centimeters short of the women's high jump single-event world record.

**2.13 MINUTES**

Nafi Thiam's personal best in the 800 meter race. Although not a record, the win helped her reclaim her world championship title in 2022.

SOURCE: OLYMPICS, WORLD ATHLETICS, REUTERS

different environments and challenges. You can't be an Usain Bolt in all fields at the same time.

Sometimes, two out of three ain't bad. Take the metaphor of the tanker and the speedboat. The speedboat is faster than the tanker and is also more flexible. When your target is close-range and navigation is challenging, the speedboat always wins. But when your task is to cross the Pacific Ocean, the speedboat will eventually run out of fuel. And when there's a storm coming, the tanker is likely to be the more reliable option. But that's only a competition between two specialists – one fast and flexible, the other very strong and able to endure. In a long-term contest in unknown waters, the best-performing vessel should have a combination of strength, flexibility and stamina. It's a vessel that doesn't exist. So let's go back to the Olympics. To be stronger, higher and faster as a company, you have to be more like a decathlete. More like a king of athletics.

**THINK OF THE WINNERS:** Daley Thompson (UK), the best decathlete of the 1980s, Dan O'Brien (USA, 1990s), Ashton Eaton (USA, 2010s) or today's competing athletes Damian Warner (Canada), Kevin Mayer (France) and Nafissatou "Nafi" Thiam (Belgium), the latter of whom is a two-time gold medalist in the Olympic heptathlon, the women's seven-event championship that nonetheless requires the same endurance and approach.

They need to be almost as good as specialists, but in lots of different areas. This enables them to rise to ever new challenges in ever changing environments. To perform and to endure. Are there corporations that fit this picture? They are hard to find, since we do not have decathletic KPIs that measure overall business performance. And you can't →

PERFORMANCE





identify them just by looking at their numbers. To bring it to an even more challenging level, from the outside you can't know whether a corporation belongs to the kings class unless it has gone through a major disruption. Only then do endurance and resilience really pay off, and they are the essential ingredients of a decathletic business.

When Covid-19 struck, Microsoft seemed caught off-balance. The leading provider of office software was not really prepared for WFH or out-of-office requirements. A multitude of workarounds, shortcuts and formerly fringe apps were tried and used to keep companies going during lockdown – Zoom and Google Meet, Slack and WhatsApp – and none of them belonged to the Microsoft empire. Skype for Business had never gained traction. Its successor, Teams, performed at a rather low level in comparison with the

↓  
Thiam's indoor pentathlon record win included her personal best of 15.54 meters in the shot put. While her goal is to "do personal bests everywhere," what she loves about combined events is "that you try to be the best in everything and find the balance."

## SPECIALISTS VS. GENERALISTS

*Is it better to focus on one discipline or try to excel in many? Sports science offers some insights.*

### What is the best way to succeed in the decathlon?

The answer should be easy as there are huge and easily accessible data sets: the results of decathlon competitions. And there should be an easy way to measure this data: compare the best result in one discipline with the overall results.

Some researchers have done exactly that – but with very different outcomes. In 2002, biologists from Antwerp University found a negative correlation between specialists and generalists among 600 world-class decathletes: Athletes who excel in one discipline reach

comparatively poor overall results. Yet in 2005, British sports scientists used the same method for the results at the Olympic Games – and found a positive correlation: The medalists had better peak specialist results.

One possible explanation is the difference between the good ones and the best ones: To become a good decathlete, you have to perform in all disciplines or you'll be dropped early in your career. But once you are at the top (e.g., the Olympics), you're only able to become the best decathlete when you have a special trait that differentiates you from the others.

skyrocketing Zoom or Slack. But the empire struck back and Microsoft was able to capitalize on its main asset: convenience for the IT department. Embedded into Microsoft's broader Office package, Teams could reduce communication breakage and data security concerns. Employees could not only work from home – the employer could also control their performance as if they were in the office. The early 2020 highfliers had to retreat to the fringes.

**HOW DO YOU MAINTAIN PERFORMANCE** even in the most disruptive times? The decathlete's solution is generalized training. Implementing that in a company, however, can be a challenge. You may struggle to convince a division leader to train for the high jump when its success is measured in speed. So you have to translate multidimensional performance challenges into a language digestible for division managers and team leaders. One proposal for that translation was coined by the Irish innovation consultant and former rugby professional Aidan McCullen: permanent reinvention.

Reinvention is often viewed as something of a once-in-a-lifetime transformation – you were a runner and reinvent yourself as a high jumper. But this approach, McCullen argues, falls short in "a world that is changing at breakneck speed. What can we do to minimize the impact of disruption on our careers, in our organizations and on our lives? The answer lies with a mindset of permanent reinvention." So you don't do just one transformative event – you prepare yourself to become anything from a high jumper to stone-thrower.

One such testing ground for the reinvention approach was one of the highest-tech industries in

**YOU DON'T KNOW WHICH QUALITIES MAY BE NEEDED IN A MARKET ENVIRONMENT.**



PERFORMANCE

the first years of our century: mobile phones. It was an arena where some of the world's fastest and highest-performing companies competed. Some names we barely remember: BenQ, Palm, Psion. Highly specialized and once highly successful in one business, they ran out of steam when the environment changed. But two others that disappeared from the market persisted: Nokia and Motorola.

**ONCE EUROPE'S MOST VALUABLE CORPORATION**, Nokia lost the race to Apple's iPhone. From 1998 to 2011, Nokia was the number one producer of mobile phones. In 2012, the phone division wrote heavy losses and in 2013 it was sold off completely. The division – not the company. Nokia became one of the world's leading players for network technology, with more than \$20 billion of revenue and more than 80,000 employees. Motorola took a similar turn. The mobile phone division was sold to Google in 2012, but the remaining businesses, mainly communications and surveillance systems for first responders and law enforcement, continued to flourish. Today, Motorola Solutions employs about 20,000 people, with annual revenues of \$10 billion.

**LANDING STRONG**  
Nafi Thiam was named the female IAAF World Athlete of the Year in 2017 for excellence across seven disciplines.

Sure, Apple emerged as the biggest winner of the mobile phone market transformation. But even though Nokia and Motorola completely went out of that market, they did not go out of business.

You don't know in advance which qualities may be needed in a specific market environment. It may be speed like Moderna's Covid-19 vaccine development. It may be a superior technology like Google's page rank. But to stay afloat in all the storms of today's and tomorrow's business, you should train at least some of your other qualities also. One day you'll need them.

The rise of digitalization and the acceleration of innovation, competition and disruption means that businesses have to prepare better for rapid and unforeseeable changes. Just like humans, as this was one of the most important reasons for our species' evolutionary success. We're fast, though slower than a cheetah. We're strong, though weaker than an elephant. We can adapt, though not like a chameleon – but we are flexible and able to learn. So, let there be companies like Usain Bolt or like a cheetah. And let there be corporations like Dan O'Brien or like the human species.



# MAKING YOUR NUMBERS



BY **Bennett Voyles**  
PHOTOS BY **Felix Schöppner**

PERFORMANCE

PERFORMANCE

Watching your performance improve is all about measuring the numbers, right? But maybe **THERE'S MORE TO IMPROVING PERFORMANCE** than simply analyzing the figures and managing them.

*NOT TO SCALE*  
Representations of complex schemes, such as the solar system, through numbers alone can present a number of inadequacies.

**T**HE CONCEPT OF MANAGING by metrics is simple: set your strategy, find a key ratio to help you execute it, focus your team on moving that number, then stand back and watch performance improve. The metric is such an accepted management tool that people often quote Peter Drucker as saying, "If you can't measure it, you can't manage it." But there are problems with this idea, which may be why Drucker, in fact, never actually said that.

Metrics can definitely be useful. "CEOs need marching songs," says Eric Abrahamson, a professor of management at Columbia Business School and an expert on business fads. Often, he says, a new methodology is a good way to focus an organization on a particular concern. The CEO might say: "The problem is that we haven't been stressing →





quality in this firm." Such initiatives don't have to be a bad thing, Abrahamson says – focus on quality in the 1980s and 1990s, for example, really did help raise the quality of American products. But metrics also have limitations, he notes.

**THE BIGGEST LIMITATION** of metrics is confusing the numbers as absolute truth, Abrahamson says. "A firm is a rich array of different performance elements – potential future clients, and so on – but it gets reduced to a few metrics," he says, adding that in turn may move the price of the stock. "The number is supposed to measure something, but it actually shapes the thing it's measuring." Such myopia is one of Jerry Z. Muller's gripes with metrics. A professor emeritus of history at Catholic University of America in Washington, D.C., and author of *The Tyranny of Metrics*, Muller likes to quote an old teacher of his, the sociologist Robert K. Merton, "A way of seeing is also a way of not seeing: If you focus on Object A, you miss Object B."

One case in point: General Electric's adoption of Six Sigma. In the nineties, CEO Jack Welch became extremely enamored with this methodology for increasing efficiency by reducing errors. At first, the program worked and when Welch retired in 2001, GE had outdistanced other nineties giants. But by then it was a new millennium – and the competition would soon be Google and Apple. Six Sigma seems to have blindsided other companies too: A 2006 study noted that of 58 large companies that followed in GE's Six Sigma footsteps, 91% trailed the S&P 500 in stock performance after adoption.

This isn't unique to Six Sigma. Popular metrics often wear out, Abrahamson notes, and if you have been focusing on the same numbers as everyone else, you're less likely to create a competitive advantage. Other times, metrics are used as a way to avoid a judgment, according to Muller. For example, when Elon Musk took over Twitter, he told all his engineers to send him the number of lines of code they had written over the past year and he would lay off the least prolific. "The fact that there are other elements of human relations and learning and so on that might be relevant to one's professional task doesn't seem to register with him," Muller says.

**IT'S EASY TO BECOME SO FIXATED** on a particular ratio that you lose sight of the original goal. Wells Fargo, for instance, saw the numbers of accounts held by a single customer as a key proxy of customer stickiness – a conviction that became so strong that

# 91%

The percentage of a sample of 58 large, Six Sigma-adopting companies that had since trailed in the S&P 500 according to a 2006 study.

## SETTLING SCORES

*How can you get the benefits of metrics without the pain?*

**Try following four or five metrics at once.** Having to follow several numbers seems to keep the brain from becoming too focused on one, according to Tayler.

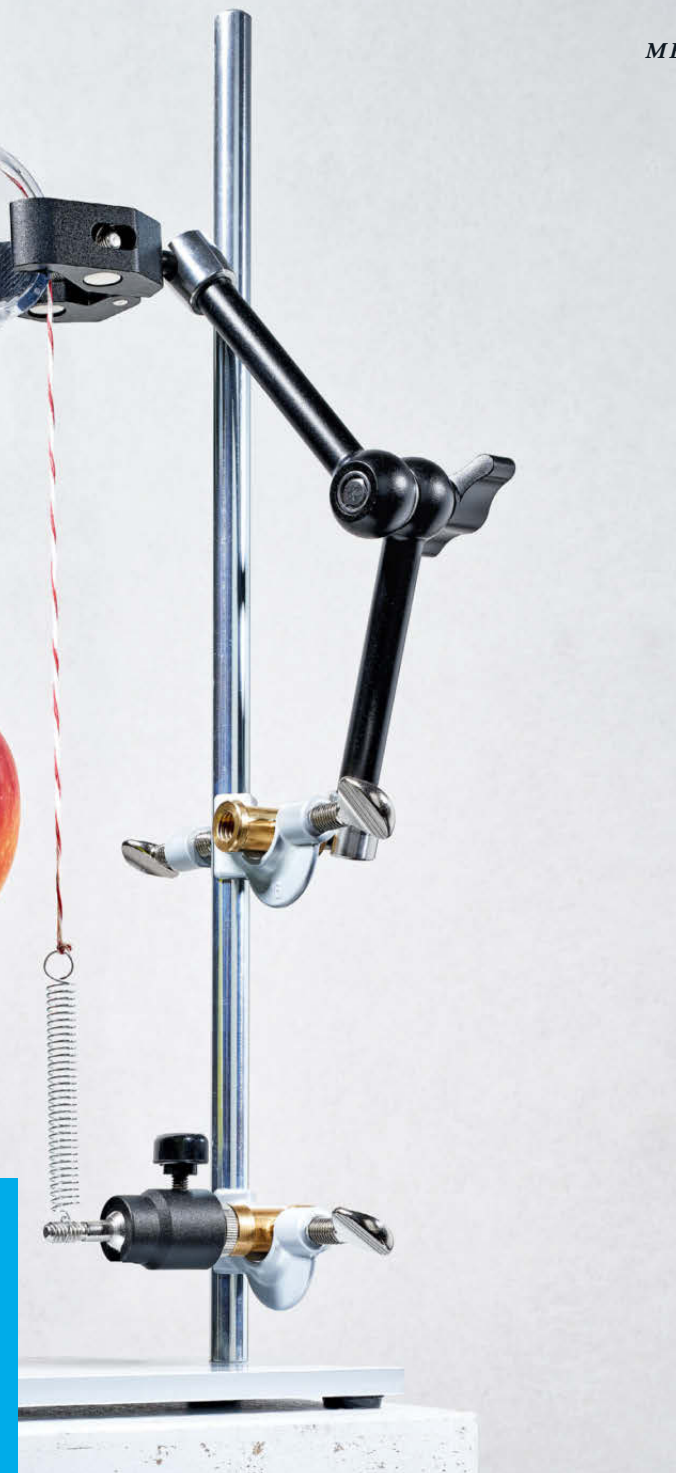
And when it comes to metric fads, Abrahamson says that executives can go one or two ways: either surf the trends, changing the names as the styles

change, or take the less risky approach and adapt the methodology to fit your firm's idiosyncrasies.

You can also get your co-workers involved in strategy development and ask them what measurements are missing, suggests Muller. "What sorts of things do you think our current measurements

are not measuring or assessing that we ought to think about more?"

Look for metrics that are being adopted slowly but steadily. Abrahamson says ideas that are adapted very quickly tend to be overhyped at first only to lose support just as fast when people find out they are not so great after all.



some bank employees began signing up customers to new accounts without their permission, a transgression that ultimately cost the firm \$3.7 billion in fines, and a lot of credibility with consumers.

Bill Tayler, a professor of accounting at Brigham Young University's (BYU) Marriott School of Business, calls this kind of number idolatry surrogation: a human tendency to focus entirely on the metrics rather than the strategy the metric was supposed to help support. "Once we put a label on it, I started to see surrogation everywhere," Tayler says. "I'll have a kid come home with straight As and I'm really excited. When in fact, if you look a little closer,

# “A FIRM IS A RICH ARRAY OF PERFORMANCE ELEMENTS, BUT IT GETS REDUCED TO A FEW METRICS.”

*Eric Abrahamson,  
Professor of management at Columbia Business School*

**SET CLEAR TERMS**  
*Keep focused on the objective your metrics are meant to support to avoid falling into the trap of comparing the size and weight of an apple with, say, that of an orange.*

it might be that a straight A student is taking classes that are too easy and I should be excited for a B student because they're being pushed."

**PEOPLE SEEM HARDWIRED** to focus so much on their numbers that they forget about the objective the original metric was supposed to support. Tayler says his research has also shown that while incentives exacerbate this effect, surrogation doesn't depend on it entirely. In fact, later research showed that even when there was no incentive connected to the metric, people will still focus on the number once they understand it's being collected.

Tayler and his team experimented with BYU neurologists who conducted scans to see if surrogation could be observed in the brain. The electrical activity they observed supported Tayler's theory: The part of the brain where people focus on numbers turns out to be different from where they think about strategy – which he says also explains why it's so hard to talk people out of a political position even when you have the facts on your side. The brain needs more electrical activity when people don't surrogate than when they do. Simply: It takes less energy to watch the number move than to think about why you want it to move.

Yet despite metrics' potential for abuse, Tayler isn't entirely opposed to managing by numbers. "I'm a big believer in the use of metrics," says Tayler. "You won't hear a good accountant say measures are bad. But it is important to understand how measures can lead to problems – predictable, systematic problems."



“THE THINGS THAT WE THINK DRIVE PERFORMANCE ARE **NOT THE DRIVERS:** THEY’RE THE

Fifteen years after his book **THE HALO EFFECT** was first published, Phil Rosenzweig is still advocating for a more critical approach to performance evaluation.

# REFLECTIONS

PERFORMANCE

PERFORMANCE



BY *Farah Nayeri*  
PHOTOS BY *Jérôme Sessini/Magnum Photos*

# OF PERFORMANCE

**S**OME WORDS or expressions effortlessly take up a very special place in the corporate vernacular: "The halo effect" is one of them. The phrase refers to the tendency to assume that because a company has done well in one or two areas, it has done well in others, too. Phil Rosenzweig – who spent six years on the faculty at Harvard Business School, then taught for more than two decades at the IMD Business School in Lausanne, Switzerland – popularized the term in his 2007 book of the same name. He joins *Think:Act* for a conversation about his book's ongoing relevance – with a particular emphasis on performance. →



**AS THERE** something in particular that you came across that provoked you to write *The Halo Effect*?

Teaching in Switzerland for years, I became very aware that a lot of the executives who came to IMD were not very good at critical thinking, and were, in many ways, quite gullible and willing to believe what they were told by people who stood in front of them

with a PhD after their name. It was our fault, because we weren't teaching them to know the difference between what's valid and what's not valid. So I began to collect examples of what I saw as bad thinking in the business world, and eventually collected them into what became this book called *The Halo Effect*.

I wrote it in a deliberately irreverent tone – partly to make it a bit of fun, but partly also to tell the reader that these people who are telling you all this very serious stuff – the thought leaders – they don't know as much as they might claim to. And you can use your critical thinking and take them down a peg.

**Could you sum up the message of the book in a few sentences? And what do you feel has remained the most relevant for today's leaders?**

The broad message is to exercise your critical thinking when people make claims in the business world, especially about business performance. There are any number of people who try to impress you by saying: "I've spent this many years gathering this much data about these many firms. Therefore, I must know more than you." What I'm trying to tell people is, don't get fooled by that. There are ways that you can use your critical judgment and your powers of discernment.

I talk about a number of what I call delusions. The central one is the halo effect. A lot of the things that we think drive performance are not the drivers of performance: They're the reflections of performance. Show me any company that has been very "successful." Let's say revenues are growing, profit is up, the share price is going through the roof. What do we naturally say about that company? They've got a brilliant strategy, they've got a

**A DISCERNING EYE** Phil Rosenzweig was joined in February 2023 on a walk around Paris by Magnum photographer Jérôme Sessini for a photo shoot exclusive to *Think:Act*.

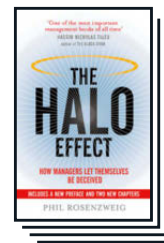
visionary CEO, they're wonderfully listening to their customers, they're great at execution, etc.

When that same company has a downturn, we then say: That strategy wasn't so good after all, the leader became arrogant, the people became complacent and they ignored the customer. There's a natural tendency to make inferences about a lot of specific things. The halo effect is how the overall impression leads you to make a lot of specific judgments.

It pertains to individual performance as well. Many companies evaluate employees on a host of categories – teamwork, creativity, drive for excellence, customer orientation, etc. The danger is that these ratings may be little more than an inference based on an overall impression, which in turn is based on whether the department or the individual met quantitative targets. When something causes performance to drop, we then make the opposite attributions.

**So the halo effect works both ways, leading to more negative as well as more positive perceptions?**

Exactly right. Edward Thorndike, the man who coined the phrase the halo effect in his original



**The Halo Effect**  
by Phil Rosenzweig,  
256 pages.  
Free Press,  
2007. \$18.



**“THE BROAD MESSAGE IS TO EXERCISE YOUR CRITICAL THINKING WHEN PEOPLE MAKE CLAIMS IN THE BUSINESS WORLD.”**

**Phil Rosenzweig,**  
Author of *The Halo Effect*

**ALL DIRECTIONS**  
*Rosenzweig points out that the halo effect can have both a positive and a negative influence on our perception.*

study – 100 years ago – called it the horn effect, i.e. the devil's horns. Somehow, that expression has fallen by the wayside.

**In the past three years, the global economy has been hit by two curveballs: the Covid-19 pandemic and Russia's invasion of Ukraine, with catastrophic consequences. How has that affected company performance?**

Covid-19 has obviously been catastrophic for some individuals. A lot of people have died. And anytime there's a major disruption, you'll probably see overall profitability suffer. But the bigger story is that there are differences by industry. At the beginning of Covid-19, if you were in airlines or hotels or lodging, you got hurt. On the other hand, if you were Peloton home equipment, your sales went through the roof. Now, a few years later, it's all turning back.

As for the war in Ukraine, energy prices have gone up. If you consume energy, then it has hurt you and hurt the cost of living. On the other hand, energy companies are recording astronomical profits. To me, the biggest story is that the effects, while overall a bit negative, are uneven across industries.





**To go back to the halo effect, doesn't it rise out of a human tendency to look for heroes and villains? For good-versus-evil, straightforward, binary narratives?** I don't disagree with that at all. And we do tend to overshoot in both directions. When you're good, we think you're really good. When you're not good, we think you're really not good.

There are some aspects of performance that are absolute in nature. They speak to what you do, and you alone. And there are others that are fundamentally relative in nature. Many of the most important metrics of company performance have a very important relative dimension: It's not enough to do things – you need to do things better than your rival. I have an example in the book about Kmart, which was a great company for a long time, then fell upon hard times and went out of business. What I showed was that by many absolute measures of performance, they actually got better: better at inventory turnover, at point-of-sale scanning, at a lot of things. The reason they went out of business is because their rivals – companies like Walmart – got even better. Or take the example of major American automakers. Compared with two generations ago, their cars are infinitely better. The failure of the big US auto companies is not an absolute failure: It's a relative failure, because of competition from Asian and European automakers.

**Let's say you're the CEO of a company and you want to measure its performance. How do you go about that?**

One of the things that I do with companies is ask them the following question: What made it a terrific year? Is it about revenues and profits? Is it

*ONE STEP AHEAD*  
*Rosenzweig warns that even if your performance is the best it's ever been, a competitor may already have its foot in the door.*

about bringing products to market? Is it about customer satisfaction? Some of those are absolute. Some of them are maybe a bit more relative. Then you ask the next question: If those are performance outcomes that we want to have, what are the things we need to do?

We need to position ourselves to have some distinctive difference relative to our rivals – what sometimes is called a unique selling proposition, or USP. If everybody knew what the best USP was, and everybody did it, it wouldn't be unique anymore. So there are certain chances that we have to take to help us achieve those outcomes.

**What you're saying is that there is no straight, single answer – that you have to figure out your USP and what works best to deliver it?**

Yes. If you have a great year, it's tempting to say, "We did all of these things well." And I'm saying maybe, maybe not.

Let's not assume that because the company is doing well, it must be innovative. Let's measure innovation on its own. Let's not assume that because the company is good overall, it must be good at execution. Let's measure that directly. Then we have a variable which could be shown, or not, to have some causal effect on performance.

What are some key variables that can help performance? That totally depends on the industry. I could be in an industry where delivering face-to-face customer service is essential, either in hotels or in lodging. I could be in an industry where customer service has nothing to do with it, but innovation of new products could be really big. What are the components that are most important for how we compete with rivals?

**If you were to write your book today, which company or companies would you say are benefiting the most from the halo effect?**

On *Fortune* magazine's World's Most Admired Companies ranking list, Apple has been the most admired company for 16 years running. Apple has done really well. I have Apple products and they're immensely profitable. But not only are they overall admired: They are in the top 10 of all companies in eight of the nine categories in the ranking.

I find it not credible – not believable – that just because they are wonderfully successful from a profit standpoint, they are in the top 10 of eight of those nine categories. Are they really good at all

**“IF YOU HAVE A GREAT YEAR, IT'S TEMPTING TO SAY, 'WE DID ALL OF THESE THINGS WELL.' AND I'M SAYING MAYBE, MAYBE NOT.”**

*Phil Rosenzweig, Author of The Halo Effect*

of those? Or does the overall impression let us say: They must be good at this, or at that?

When I wrote the UK edition [of *The Halo Effect*], they asked me to write a foreword that speaks to the British audience. There was a similar poll in the UK. I found that Marks & Spencer, a long bastion of retailing in the UK, had fallen on hard times. In 2005, they were ranked 124<sup>th</sup>. Then they brought in a new CEO. Two years later, they were not only the most admired: They were in the top 10 in every one of the nine categories. A couple of years later, when things slipped, they not only fell overall, but they fell in almost all of those categories. The rise in performance led to an improved perception that affected many of these individual judgments. And when things declined, the same thing happened.

When you see that a company that is overall rated is thought to be good at all things, then there's a very strong likelihood that we are seeing a halo effect, where the overall impression bleeds across all of these individual judgments. What we need to do is be skeptical of that. ■

*FACE TO FACE*  
*When it comes to figuring out your USP, Rosenzweig recommends taking an honest and direct look at the key variables.*





# TRY, TRY, AGAIN

Taking a cue from science and **EXPLORING EXPERIMENTATION** could open up exciting new prospects and even profits. But how do you organize a company to embrace a new culture of trial and error?



BY **Geoff Poulton**  
PHOTOS BY **Pelle Cass**



BOSTON COLLEGE

RETIRE JERSEY  
JOHN "SNOOKS" KELLEY '28  
MEN'S HOCKEY  
1922-42, 46-72  
HEAD COACH

RETIRE JERSEY  
RAY CHAISSON  
MEN'S HOCKEY  
1940-42

RETIRE JERSEY  
BERNIE BURKE  
MEN'S HOCKEY  
1946-49

RETIRE JERSEY  
ED "BUTCH" SONGIN  
MEN'S HOCKEY  
1946-50

RETIRE JERSEY  
JOHN SILK  
MEN'S BASKETBALL  
1949-53

RETIRE JERSEY  
LEON CEGLARSKI  
MEN'S HOCKEY  
1948-51 PLAYER  
1972-92 COACH

RETIRE JERSEY  
MICHAEL ADAMS  
MEN'S BASKETBALL  
1981-85

PERFORMANCE



**F**ROM ARCHIMEDES jumping up to shout "eureka" to Fleming's discovery of penicillin and Mendel uncovering genetics – the history of science is full of experiments that have demonstrated our most fundamental laws and vital innovations. Without these experiments, some may have gone undiscovered or simply dismissed as nothing more than speculative theory.

And yet, too often, hunches, theories and opinions are the driving forces behind important business decisions about products, employees, resources or customers. This overreliance on intuition over evidence gained from rigorous experiments is holding us back; it limits performance and restricts innovation. As acclaimed management thinker Gary Hamel says: "The way you create the future is not to predict it but to find it. And you find it through experimentation." It's a notion echoed by Stefan Thomke, professor of business administration at Harvard Business School and author of *Experimentation Works: The Surprising Power of Business Experiments*. Instead of relying on experience or beliefs, he says, it's time for business leaders to start thinking and acting like scientists.

**FOR CENTURIES, WE'VE BUILT** and organized scientific and technological knowledge through testable explanations and predictions, which has powered innovation. This approach, known as the scientific method, dates back to the 16<sup>th</sup> century and the likes of Francis Bacon, Galileo and Isaac Newton. The method has six steps: It starts with a question, leading to research that helps form a hypothesis, which is tested with an experiment, followed by an analysis of the results and then a conclusion.

Adopting these principles and implementing large-scale experimentation can "revolutionize" the way all companies operate and how managers make decisions, says Thomke. Most are yet to fully realize this, but a growing number are embracing its efficacy. Online travel platform Booking.com, for instance, runs more than 1,000 experiments simultaneously and tens of thousands each year. The same goes for Facebook, Microsoft and Netflix as well as non-tech firms like P&G, Gap and Nike. Experiments are a crucial way of exposing judgmental errors, something to which we are all →



### KEEPING ALL THE BALLS IN THE AIR CAN PAY OFF

By taking over a thousand pictures of each event, artist-photographer Pelle Cass follows the ebb and flow of a competitive match, reshuffling time to create "still time-lapse" images. "I change nothing – not a pixel," says Cass. "I simply select what to keep and what to omit." It sounds simple, but it is anything but.





## FINDING CALM IN CHAOS

"My complicated, chaotic compositions in *Crowded Fields* reflect my own feelings of turmoil and confusion. The world is a confusing place, and most of the time, I don't know which way is up. So perhaps this feeling informs my compositional goals." His compositions might seem busy and chaotic on the surface, but they are actually quite rhythmic and structured underneath.

susceptible, whether due to cognitive biases or a lack of information. "Acting like a scientist is difficult for leaders because it can challenge their humility," Thomke says. Instead of personal insight, it focuses on an objective, evidence-based process to frame and address decisions.

The harsh reality is that most experiments will fail – something plenty of organizations struggle to accept, says Ron Kohavi, who has run large-scale experimentation at Microsoft, Amazon and Airbnb, and is the author of *Trustworthy Online Controlled Experiments: A Practical Guide to A/B Testing*. "When I came to Microsoft and pitched the idea of A/B tests, I told them that at Amazon, more than 50% of ideas tested failed to move the metrics they were designed to improve. The response was: 'We have better program managers,'" Kohavi says. "Several years later, we knew that two-thirds of ideas at Microsoft evaluated in A/B tests failed to move the metrics they were designed to improve. At Bing, a mature domain, that rate was about 85%."

**IF THAT'S THE CASE, WHY BOTHER** experimenting at all? Kohavi tells the story of a Microsoft employee working on its Bing search engine who had an idea about changing the way it displayed ad headlines. Considered a low priority, the idea lay dormant for months before finally being tested. After a few hours, results showed the change had boosted revenue by an impressive 12% without impacting user experience – a potential annual gain of more than \$100 million in the United States alone.

Even if they 'fail,' experiments often still prove valuable. Experimentation is an iterative process – failure will often lead to insight, which will enable the experimenter to modify the hypothesis, adjust the experiment and try again. To do this effectively, an organization needs a certain type of culture as well as organizational and technical infrastructure. "Companies need to make experimentation an integral part of everyday life," says Thomke. That means creating an environment to nurture curiosity, prioritize data over opinion and democratize accessibility to testing.

One company that does this better than almost any other is Booking.com. Behind the many thousands of experiments and billions of simultaneous landing page permutations is a corporate culture that embraces transparency and accepts failure. Around three-quarters of Booking's 1,800 technology and product staff regularly use the company's internal experimentation platform, →





### TAKING THE RIGHT SHOT IN TIME

Cass' process is careful and time-consuming. "I put my camera on a tripod and take thousands of pictures over an hour or two," he says. "Then I begin by finding an empty scene as a kind of blank canvas." He then builds a composition, frame by frame – choosing what to include and what to leave out. "It can take a week or even two. And a single image can include as many as 1,500 layers," he says.



where ideas are discussed, results analyzed and hypotheses scrutinized.

As the former director of experimentation at Booking, Lukas Vermeer said in 2019: "We don't just experiment because we like running experiments, but because experimentation is a great way to make sure that when we think we're fixing something, we're actually fixing it. Change is constant, we have to keep updating our products to make them better, but we also have to make sure those changes really work." Which they typically do. After a Covid-19-induced downturn, Booking returned to posting record revenues in 2022.

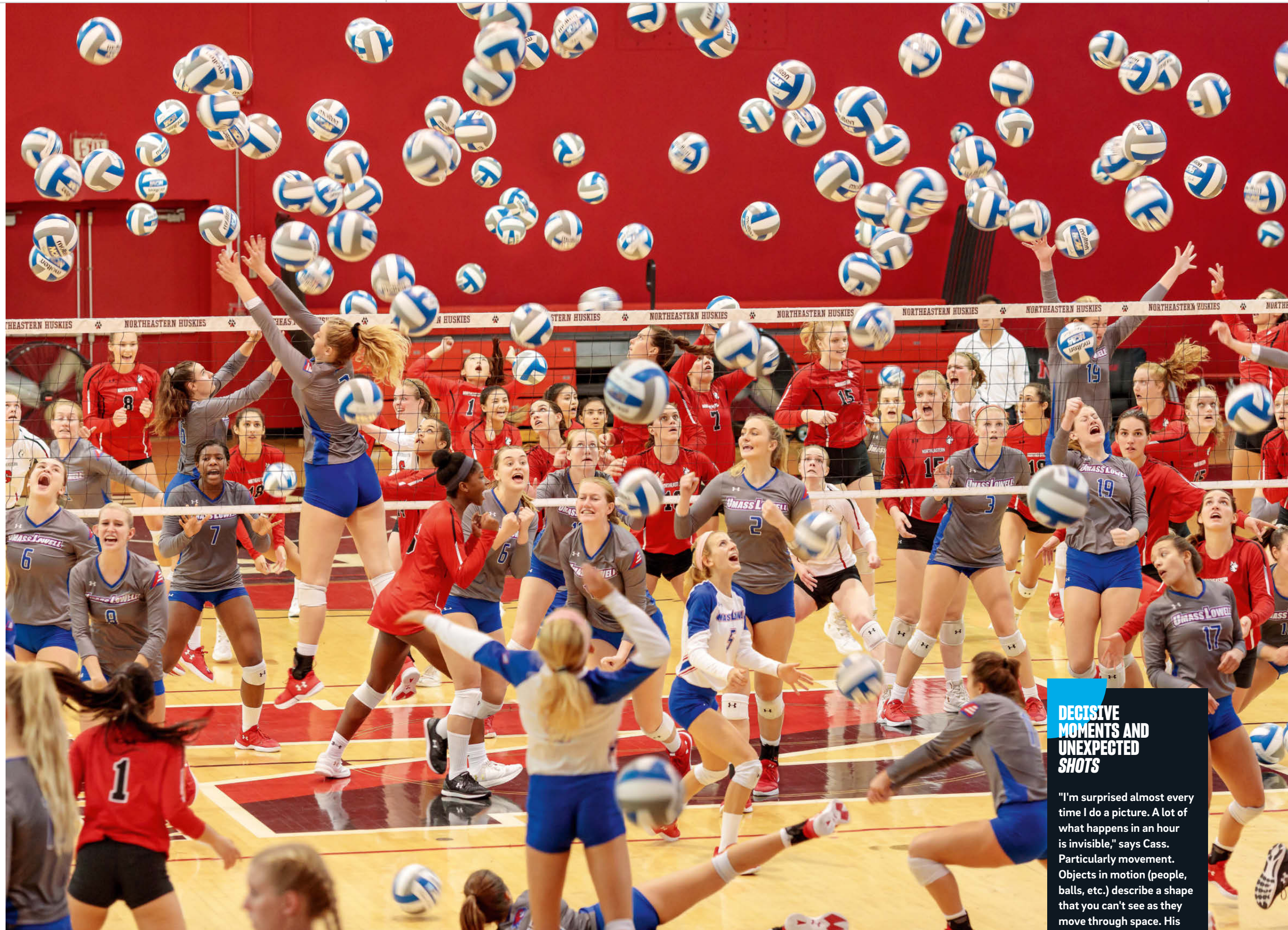
**THERE ARE THREE MAIN MODELS** for any organization seeking to embrace experimentation according to Thomke, each with their own pros and cons. A centralized setup can focus on long-term projects, but may encounter conflicting priorities among business units and feel disconnected from a company's daily business. In a decentralized model, experimentation experts can immerse themselves in a particular business area, although this may impact their own development and limit peer feedback. A center of excellence model combines the two, but any organization following this approach should be wary of confusion about where responsibilities lie between the central unit and product teams.

The latter is a fundamental part of Netflix's approach to experimentation. The streaming giant uses A/B experiments to improve performance →

PERFORMANCE

**CHANGE IS CONSTANT, BUT WE HAVE TO MAKE SURE THOSE CHANGES WORK.**

Lukas Vermeer, Former director of experimentation at Booking.com



**DECISIVE MOMENTS AND UNEXPECTED SHOTS**

"I'm surprised almost every time I do a picture. A lot of what happens in an hour is invisible," says Cass. Particularly movement. Objects in motion (people, balls, etc.) describe a shape that you can't see as they move through space. His pictures record some parts of these paths.





**PLAYING WITH TIME**

Regular photography captures a millisecond, whereas Cass' photos cover a few seconds. A cinematographer films a continuous timeline, but, as Cass says, these pictures "slip away as you are looking at them, just as in life, where it's impossible to remember exact visual images for very long." Cass collides the here and now – and amplifies the result.

in a wide range of areas, including payment processes, advertising, streaming infrastructure and user recommendations and messaging. Even the artwork for each film and TV show is rigorously tested, sometimes resulting in 20-30% more viewing for a particular title. It's incremental gains like these, made by running large numbers of experiments, that are at the heart of improved performance for most organizations. "People tend to glorify big, disruptive ideas, but in reality, most progress comes from implementing hundreds or thousands of minor improvements," says Thomke.

**WHILE IT MAY BE EASIER** for online firms to conduct large volumes of experiments, both Kohavi and Thomke say almost every organization should be looking to implement experimentation into its daily business. "Whether you're a bank, a grocery store or a health care provider, it's becoming easier and more affordable to run tests on many different areas," Kohavi says. Supermarkets like Walmart in the US or Sainsbury's in the UK regularly experiment with things like store layout, marketing, offers, or even the use of new technology such as till-free stores. One experiment at Gap stores found that bringing more stability to employee schedules improved both sales and productivity.

Does all of this mean we should throw human opinion, experience and judgment out the window when it comes to decision-making? Not exactly. As Ron Kohavi points out, technology may make it easier to experiment, but software can easily spit out wrong results, "something I've seen over and over and over again. We always need to question results and double-check things." And, ultimately, it's people who make decisions – even at an experiment-led company like Netflix. For every significant decision, a single 'informed captain' makes a judgment call based on input from colleagues and, of course, any relevant data – test results are expected to play a part in the process, wherever possible.

Stefan Thomke calls experiments the "engine of innovation," which is becoming increasingly powerful thanks to technology. Taking advantage of this requires a different kind of organization, one that takes a more scientific approach to decision-making. As technology-driven companies embrace the power of experimentation more openly, the gap between good experimenters and those who aren't is growing, he says. "And we need to figure out how to get organizations who don't practice it to do it more."

PERFORMANCE



8,850M

Climbing Mount Everest, the world's highest peak, is something only a few will accomplish. Surviving a round trip **THROUGH THE "DEATH ZONE"** doesn't just make for a riveting story, though. It can also serve as a guide for leaders and teams to successfully scale their own mountains.



BY Steffan Heuer

7,000M

PERFORMANCE

# THE SUMMIT STRATEGY

5,000M

BASE CAMP: 5,334M

BASE CAMP: 5,182M



NORTH ROUTE

SOUTH ROUTE

*A HARD-WON VIEW  
Looking down from the summit of Mount Everest is the reward for the demanding psychological and physical preparation needed for the climb.*



8,850M  
8,000  
7,000  
6,000  
5,943M  
6,400M  
8,850M

**LAWING YOUR WAY UP** an icefall and climbing the corporate rungs of an investment bank have a lot in common. Just ask extreme mountaineer Alison Levine, who worked at Goldman Sachs before making her way up Mount Everest in May 2002. As captain of an all-women team, she came within a few hundred feet of the summit but had to turn around due to a storm.

As she likes to tell it, the experience of almost standing on the world's highest peak makes for interesting reception conversations. Take the banker who asked her what she did and then commented: "Oh, so you didn't climb Mount Everest." Her question to him: "What do you do?" "I work at J.P. Morgan." "You are the CEO?" "No," her counterpart demurred. "Fixed income trading." To which Levine shot back: "Then you don't work for J.P. Morgan, really, do you?"

**IT'S FEISTY VIGNETTES LIKE THESE** that have made her a sought-after speaker at conferences, company gatherings and adjunct faculty at the West Point Military Academy—especially since she did finally make it to the summit of Everest in 2010. Levine makes a convincing argument why the hard lessons she learned while climbing the Seven Summits—or the highest peaks on each continent—and skiing to both Poles are not just thrilling tales of hardship and adventure, but apply to the business world as well, laying out how to become an effective leader,



**ALISON LEVINE**  
Visibility was poor on the day that Alison Levine finally reached Summit Ridge.

Everest was a yearslong process that involved a lot more than just physical preparation. Much more important than training climbs in extreme environments, lugging weights around or going days with little food or sleep was what Bagley calls a "mental packing list." As she explains, "you have to be really clear on why you want to do something. Your purpose will start creating the attraction that draws resources, people, ideas." Next comes assembling a team of mentors and advisors. Equally crucial is taking an honest inventory of your skills, "the ones that you need to have mastered or will be called upon to demonstrate." Bagley credits introspection and addressing shortcomings early on with giving her the courage to take five more steps because she felt she had it in her. "It was that five more steps that took me all the way to the summit."

**CLIMBERS, NOT UNLIKE EXECUTIVES**, have big egos. Yet contrary to common management wisdom, those are exactly the people you want on your team, argues Levine, who also serves on the board of the Coach K Center on Leadership & Ethics at Duke University. When picking your team, Levine writes, "you want people who are good and who know they are good—because that gives them the confidence to know they can win." She distinguishes between performance ego or justified confidence and team ego or the pride to be part of something. "Timing, proximity, and a common goal are not enough to form a cohesive team."

A vital network effect is also something to be reckoned with. To make it out of a towering challenge alive, you need to make connections beyond your immediate circle of climbers or colleagues. That's why Levine makes it a habit to introduce herself to everybody in a camp, including total strangers, long before the ascent starts. Having met someone face to face, she reasons, increases the chance of her not being left to die somewhere on the mountain while another group trudges past. It's about "taking the time to connect with people at every stage of your career, people who will support you and maybe even save your life."

There are many routes to the goal, but one thing is certain for Mount Everest: Climbers like Levine, who took the southern approach via Nepal, and Bagley, who opted for the less crowded northern approach via Tibet, mostly climb up to come right back down. Acclimation around the so-called "death zone" above 8,000 meters demands that you

CAMP 5  
7,803M  
SOUTH COL  
7,925M

PERFORMANCE

forge a team that doesn't crack and above all remain adaptable enough to reach seemingly unattainable goals. As Levine says: "No business executive is ever going to say that complacency is a good thing, that building relationships is not important, that clarifying goals is not important, that keeping your people out of harm's way is not important."

Levine is not alone in preaching about the intrinsic value of preparing for a daunting climb. Her 2014 book *On the Edge* was preceded in 2010 by *Summit!* by Laurie Bagley, who also turned her Everest slog into a resource that's highly relevant at sea level. Taken together, both books define the skill set, mindset and packing list of processes and gear to make it up and down alive, providing a toolkit to conquer any imaginary mountain that leaders and organizations set their sights on.

In the business world, it might be called a roadmap or go-to-market strategy. For climbers like Laurie Bagley and Alison Levine, getting ready for

**WITH BLESSINGS**  
Alison Levine received a good luck blessing from 79-year-old Lama Geshe in 2010, a 20-minute ceremony he performed for climbers before their Everest approach.



PHOTOS: ALISON LEVINE, GARRETT MADISON

## THE PACKING LIST

*Whether you're aiming for the top of Mount Everest or your own field, reaching a big dream requires the right tools.*

- 1** Define the big Why to center your purpose and attract people, ideas and resources
- 2** Seek out mentors and coaches
- 3** Honestly assess your skills and address deficiencies
- 4** Pick your mantra and keep it with you
- 5** Assemble a team based on experience, expertise and ego
- 6** Build a network that goes beyond your inner circle
- 7** Realize that progress will sometimes mean going backward
- 8** Define your red flags to know when to turn around
- 9** Don't push the river and waste time and effort
- 10** Consider your failures as lessons for the next attempt





Laurie Bagley

During her successful Everest summit climb, Laurie Bagley stopped to make camp at many bases along the way.

“**YOU HAVE TO DEFINE THE WARNING SIGNS AND WATCH FOR THEM. I HAVE MY THREE RED FLAGS.**”

**STEP BY STEP**  
With the time to ascend Everest averaging at two months, base camps become a temporary home to climbers.

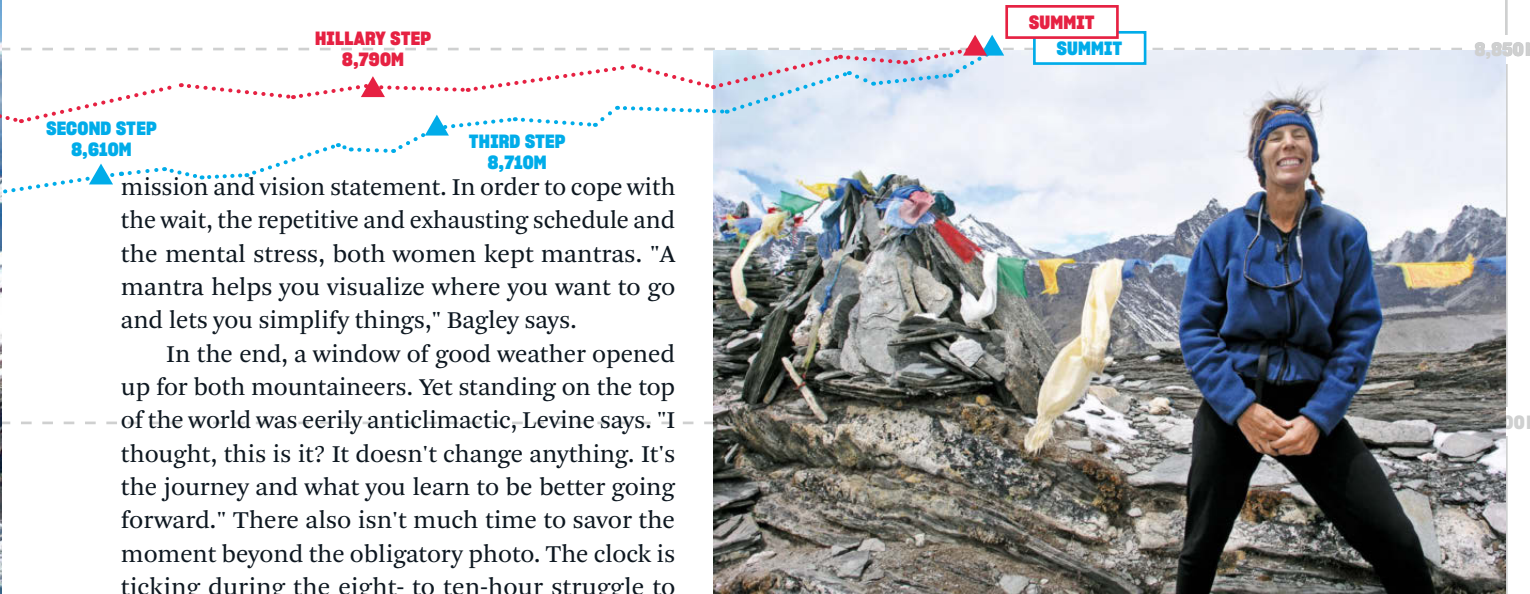
advance to higher camps in intervals only to return to lower altitudes to survive and regain strength.

**BACKING UP TO STAY STRONG** or to avoid hazardous weather is different from backing down, as Levine has stressed in talks over and over again. “It’s challenging and psychologically super frustrating,” she admitted at an appearance at Google headquarters. “You are going backward but still making progress. Progress doesn’t happen in one particular direction. Backtracking is not losing ground: It’s an opportunity to regroup so you are better next time.”

Bagley sees it as a game of patience that applies to every project. “Climbing Everest is a two-month commitment, going up and down and hoping for a window of four or five days of good weather to make a summit attempt. That experience taught me to wait. If you don’t take shortcuts, if you do the work and have all skills in place, chances are it’s going to happen, just not in the time frame you had in mind. That’s when it helps to have a high-altitude

PHOTOS: SCOTT WOOLJAMS (2), GETTY IMAGES / DIGITALGLOBE

Laurie Bagley, Climber and author of *Summit!*



mission and vision statement. In order to cope with the wait, the repetitive and exhausting schedule and the mental stress, both women kept mantras. “A mantra helps you visualize where you want to go and lets you simplify things,” Bagley says.

In the end, a window of good weather opened up for both mountaineers. Yet standing on the top of the world was eerily anticlimactic, Levine says. “I thought, this is it? It doesn’t change anything. It’s the journey and what you learn to be better going forward.” There also isn’t much time to savor the moment beyond the obligatory photo. The clock is ticking during the eight- to ten-hour struggle to reach the summit, and coming down again is the most dangerous part of the whole endeavor, as exhaustion, brain fog and a false sense of accomplishment combine for an often fatal mix. Since the first successful ascent in 1953, at least 310 people have died on Everest, most of them on the descent.

**THE NAME OF THE GAME** is not slipping up. “You have to define the warning signs and watch for them,” explains Bagley. She called hers the “three red flags,” shorthand for events that could potentially be life-threatening. Only if she was able to resolve such a problem quickly enough, would she push on, as when she got her boots and crampons entangled in old ropes on a ladder at the second step, a notoriously steep rock wall at 8,610 m. “I couldn’t

**STAYING POSITIVE**  
After her Everest climb, Laurie Bagley believes that commitment to the experience can help you reach any goal.



bend over to untangle the ropes from my feet. I knew if I took one misstep at this point it was a 10,000-foot drop off the side of the mountain.” With her sherpa already over the ledge and out of sight, Bagley says she managed to calm herself down and tried to breathe normally to conserve oxygen, while waiting for the next climber behind her to eventually catch up and free her.

This mishap was a red flag that solved itself. “With every project, there will be outcomes we didn’t want. The difference is knowing whether you are persevering and overcoming adversity or if you are pushing the river,” she says, referring to the futile attempt at solving a problem that’s beyond one’s control.

**REACCLIMATING TO NORMAL LIFE** is a descent in and of itself that can require taking some time to reflect and reevaluate. “It’s a bizarre shift. You’ve achieved this massive goal that was years in the making, and then all of a sudden, you’re back at your desk,” Levine summarizes the blues that befell her after each expedition. Yet that feeling ought to be channeled into the next undertaking, she argues: “If you’re thinking something can’t be topped, you need to adjust your mindset. There is always something more, something different. There is always something that will make you stretch and grow, you just have to think big.”

While Bagley has since decided to retire from mountaineering, it hasn’t changed her approach to tackling tough goals. “Whatever comes next, there’s always the initial Why,” she says. “Whether you tell people you’re training for Everest or work in a company, others sometimes feel threatened by a big dream. I’m not saying this won’t affect you, but with purpose, it won’t stop you.”

PERFORMANCE

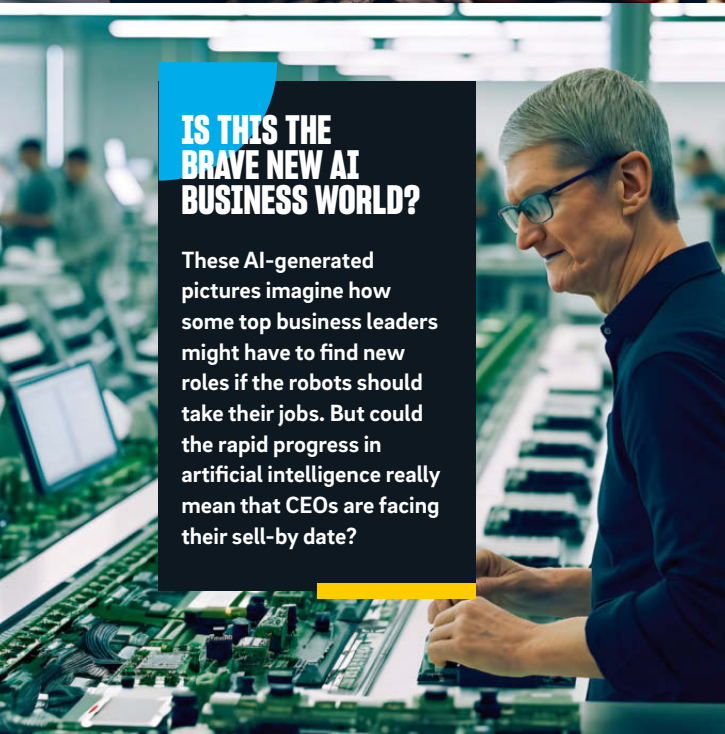




Artificial intelligence is already making waves in the world of work, threatening many long-established roles. Does this advance in computer power and the drive for company performance mean that **AI IS COMING FOR THE CEO** too?

# BOTS REPLACING BOSSES

PERFORMANCE



## IS THIS THE BRAVE NEW AI BUSINESS WORLD?

These AI-generated pictures imagine how some top business leaders might have to find new roles if the robots should take their jobs. But could the rapid progress in artificial intelligence really mean that CEOs are facing their sell-by date?



BY **Bennett Voyles**  
AI EXPLORE BY **Oga Mendonça**



**T**HERE IS A LOT OF TALK now about artificial intelligence disrupting many white-collar occupations. Copywriters, journalists, consultants, accountants, lawyers – you name it, and you’ll find any number of forecasters who say that a variety of professions are going the way of the bowling pinsetter. Goldman Sachs predicts that as many as 300 million people will be directly affected.

The reasoning behind why CEOs should be considered

immune to this disruption is not entirely clear. For one thing, as a historical matter, humans have had a mixed record on corporate leadership. Pick a great CEO and you can transform the world – pick a lousy leader, and you might blow up your company and maybe even the economy. And average performance is decidedly average: A typical S&P 500 company now has a life span of less than 20 years, according to Statista.

For another, CEOs tend to be expensive: The typical US large cap will spend about \$27.8 million on its CEO this year, according to the Economic Policy Institute, a Washington think tank. And that’s just for an average leader. For an above-average candidate – and strangely, also for a below-average one – you may pay a whole lot more. You also don’t get a lot for your money: Your \$27.8 million investment amounts to 62.5 hours of work per week, according to a 2018 study by Harvard Business School professors Michael E. Porter and Nitin Nohria. The remaining 100+ hours are squandered on the time-consuming task of being human.

**IT’S NOT THE VERY TOP** that AI will affect first, but middle management, according to startup investor and long-time technology observer Esther Dyson, who believes top leadership roles should remain focused on uniquely human interactions. “The real thing a senior manager does is manage people; motivate them; reduce their uncertainty, anxiety, and get them to collaborate,” she says – not write memos, set policies, or respond to customers – the kinds of work AI can do best now.

Richard Watson, futurist-in-residence at Judge Business School at Cambridge University, agrees that AI’s current applications are more limited than advertised. “I personally see no sign whatsoever

*A NEW REALITY While customer-facing jobs may be some of the first to face obsolescence due to advances in AI, the traditional role of the CEO may not be far behind.*



**“PEOPLE NEED TO BE TOLD THEY’RE GREAT. IT’S NOT IMPOSSIBLE THAT A MACHINE COULD DO THAT, BUT I THINK IT’S HIGHLY UNLIKELY.”**

**Richard Watson,**  
Futurist-in-residence at Judge Business School

of broad AI or strong AI emerging at the moment – it’s just narrow stuff, useful for very specific tasks,” he says.

On the other hand, like any job, the CEO’s work consists in part of very specific tasks. GE CEO Jack Welch, for example, admitted that in addition to “the vision thing,” he spent a lot of time selling his ideas. To sell the company on his strategy that the conglomerate needed to be first or second in every one of its business lines, for example, “I repeated the No. 1 or No. 2 message over and over again until I nearly gagged on the words.”

**CONSIDERED FROM THAT PERSPECTIVE,** the outlook for autonomous business leadership starts to look more like that of autonomous driving: While 100% hands-free autonomy may be years away, the C-suite equivalents of cruise control and parallel parking are almost ready. If you’re a CEO (or even

**\$28**  
MILLION

The projected annual compensation of a CEO at one of the top 350 firms in the US in 2021.

**399**  
TO ONE

The ratio by which the average CEO was compensated compared with the typical worker in 2021.

**20**  
TO ONE

The estimated historical ratio by which the average CEO was compensated compared with the typical worker in 1965.

SOURCE: ECONOMIC POLICY INSTITUTE

a senior manager), your digital twin can already be put to work in all kinds of ways. For example, Porter and Nohria’s study found that the average CEO spent less than two hours a week with customers, four hours with rank-and-file employees, and eight and a half hours with lower-level managers. Imagine, for a moment, what a charismatic CEO – a Jack Welch, say – might have achieved if he hadn’t had that boring human limitation of having to be in one place at a time. We will never know if things would have worked out better at GE if Welch had had more time for strategy, but we do know that in 2023, a state-of-the-art jack-in-the-bot could handle a wide range of chief executive chores – and at scale.

Most CEOs are great salespeople, and their digital twins could be too, thanks to some solid AI support, such as Salesforce’s recently unveiled Einstein GPT or Persado’s Motivation Platform. Dyson sees sales as the sphere where AI will make the biggest inroads in business. “In some ways, it’s going to be scary,” she says. “There’s going to be so much more content out there that’s going to be more personalized.” Some of these systems know us pretty well already. Over the past 10 years, Persado, for example, a company based in New York and Athens, has composed 15.5 million messages, sent them to 1.2 billion customers, with iterations “built and refined with the equivalent of over 645 years of A/B testing.”

**EVEN TODAY, AI-DRIVEN SERVICES** can do everything from coach people on how to sharpen their presentation skills to how to improve their project management. Even “managing by wandering around” is possible – Amber by Infeedo, an Indian startup, checks in periodically with client companies’ 500,000 workers at key moments in their career to make sure they are happy and staying that way. Watson, however, doesn’t think that anybody will be better at managing people than another person anytime soon. “If you’ve got companies that are full of people, you need people to manage them, because people are kind of weird ... They’re illogical, they do weird things. They need to be told they’re great and be motivated and inspired and told stories,” Watson says. “It’s not impossible that a machine could do that, but I think it’s highly unlikely.”

On the other hand, he notes that some mental health services are being delivered today not by psychologists and psychiatrists, but with apps – and younger people especially seem to →

PERFORMANCE

PERFORMANCE



**“THE DANGER IS IF WE’RE EXPECTING THIS STUFF TO BE FAULTLESS, BECAUSE IT WON’T BE. IT’LL MAKE MISTAKES.”**

**Richard Watson,**  
*Futurist-in-residence at Judge Business School*

prefer dealing with an app to dealing with a person. One case in point: Woebot, a chat app trained in cognitive behavioral therapy, interpersonal psychotherapy and dialectical behavioral therapy that has been downloaded over 500,000 times. Studies of the bot have found that people form attachments that are as strong as with human therapists, with positive outcomes. The apps are also more sensitive than you might think: Developers of another program, Mimosys, claim it can identify mental health problems by voice alone 90% of the time.

**MEDIA RELATIONS PROFESSIONALS** craft plenty of quotes for CEOs already – though they usually have to say the actual words themselves. But now, there are options: For example, with just a photograph and some random talk, Ethan Mollick, an associate professor of management at the Wharton School of the University of Pennsylvania, cloned himself online. On his Substack blog in March, Mollick detailed how for a bit more than \$10 he was able to get OpenAI’s ChatGPT language engine to write a lecture for him, used a service called ElevenLabs that could clone his voice based on two minutes of random speech and then synched it with a photo-realistic video produced by D-ID, one of a growing number of services that will create a video on the fly based on a script and a single photograph.

The result is a Metaverse Mollick who looks unnaturally serene, a bit like the Body Snatchers got to him. But actual Mollick writes that this is



**\$11 INVESTMENT**

The price paid by Wharton School professor Ethan Mollick for online AI tools that enabled him to create a clone of himself giving a fake lecture according to his March 2023 blog post on the experience.

just the state of the art today – and the technology is moving quickly. “I don’t have any deep insights into what all of this means,” he writes. “The bad news, or at least some of it, is immediately obvious. You probably shouldn’t trust any video or audio recording ever again. There are some good use cases for this as well: Realistic AI-run avatars could serve as customer support agents, personal tutors and more. Hopefully, the positive uses will outweigh the negative, but our world is changing rapidly, and the consequences are likely to be huge.”

So should you start building your CEO’s digital twin? Asked to comment, OpenAI’s ChatGPT engine notes that the company would gain from continuous availability, reduced workload for the CEO, greater consistency and better risk management. On the downside, there might be ethical concerns, problems with a cultural fit, lack of a human touch, and a significant investment. “Overall,” it warns, “creating a digital twin could potentially

**TODAY’S ROBO-CEOS**

*Some companies are feeling out new roles for AI; others are already testing its leadership potential.*

It might sound like science fiction, but two companies – NetDragon Websoft, a Hong Kong gaming company, and Dictador, a Colombian spirits brand – claim they already have silicon in the C-suite.

Developed by iFlytek, the software firm that recently launched China’s answer to ChatGPT, Tang Yu was appointed CEO of NetDragon Websoft in 2022. She seems to be a circuits-on algorithm whose duties include acting as a real-time data hub, streamlining processes and managing

risks, according to company promotional materials.

Dictador’s CEO Mika, on the other hand, is a more outward-facing executive. Also appointed in 2022, the progeny of Hanson Robotics of Hong Kong, the petite, platinum blonde robot appears to spend most of her time as a brand ambassador. Her recent priorities have included hawking special edition bottles associated with NFTs and appearing on panel discussions of the future of AI at a Salzburg, Austria, startup conference.

**AT YOUR SERVICE**  
*If AI is able to break through the “silicon ceiling,” those at the top may well need to reimagine their own vision of the future of work.*

bring benefits to a company, but it would also present some significant challenges and risks.”

As algorithms improve and production values rise, the big risk from the human CEO’s point of view is that your jack-in-the-bot decides he’s ready for the next level. Legally, there is a silicon ceiling at the moment: As far as the C-suite goes, non-humans need not apply. Jingchen Zhao, a professor at Nottingham Law School, however, has argued that although UK corporate boards must include at least one person, that law could – and should – be changed. “If the participation of an AI entity would promote the effectiveness and accountability of the board and enable more informed, balanced and sustainable decisions, limiting the scope of directorship to natural persons is inconsistent with rapid advancement of AI application in a corporate setting,” he wrote in a recent article.

**WHILE THE LARGELY PRO-ROBOT ZHAO** acknowledges that there are accountability and liability issues to resolve before we have what he calls “self-driving corporations,” in another recent article, he and a co-author argue that AI could restrain companies from bad actions by identifying acts of discrimination, fraud, conflicts of interest and recommending preventive measures to mitigate social and environmental risks.

Others are also wondering about what happens when executives meet their Deep Blue vs. Kasparov moment. Watson says he can imagine companies that have no human employees at all, only human investors. Stanford Business School strategy professor Robert Burgelman and his co-authors recently wrote that “looking forward, it seems appropriate to ask whether a new and more powerful nonhuman technostructure is now truly on the verge of reducing the role of managerial agency from substantive strategic decision-making to mere ratification.”

But even if the yes man is the last creature standing in the corporate jungle, Watson argues that a critical human eye will still be important. “I think AI will improve how organizations are run. The danger, though, is if like autonomous vehicles, we’re expecting this stuff to be faultless, because it won’t be. It’ll make mistakes – we will give it too much agency. I mean, this is why people drive into rivers because they’re following their satellite navigation,” Watson says, recalling AI theorist Neil Jacobstein’s line: “It’s not artificial intelligence I’m worried about. It’s human stupidity.”

PERFORMANCE

PERFORMANCE



# THE WINNING

In the **TOP-FLIGHT WORLD OF FORMULA 1**, performance means a combination of bravery, fitness and strength of mind.

# FORMULA

PERFORMANCE

PERFORMANCE



BY Gary Rose



**I**T'S A PIVOTAL MOMENT on the track. Your team's driver is battling for a crucial win in the Formula 1 world championship – but with tire conditions fading, they are going to have to make a pit stop. When they do there can be no margin for error, because even a fraction of a second wasted could mean defeat.

The call is then made over the radio: "box, box." Twenty people, all with vital jobs, get ready as the driver "pits." The goal: get the vehicle back out on the circuit within seconds. Millions of dollars are resting on your skills. The future career of everyone in your team and the reputation of the driver rely on you doing your job perfectly. It all comes down to milliseconds. The peak performance of every hand on deck goes without saying. Here on the pit stop it is almost like a life-and-death situation. In fact, a few years ago the stakes were quite literally that high too. "When your wife and kids are watching you on TV and you are on fire," muses Kenny Handkammer in a rather matter-of-fact way, "you have to ask yourself: Is it really worth it?"

**THE MOST DISARMING THING ABOUT** Handkammer's storytelling is not the content of what he is saying, but the detached and clear way that he tells it. No drama. The former Formula 1 chief mechanic who helped Michael Schumacher and Sebastian Vettel win world championships is describing being engulfed in a ball of flames during a refueling stop – but he tells the story as if it was just spilled coffee on a work shirt.

The incident is a famous one. Jos Verstappen – father of current world champion, Max – was making what should have been a routine pit stop at the 1994 German Grand Prix. "I was the front jackman," continues Handkammer. "I lifted the car and saw this spray of fuel. It ran down to the rear brake, which was something like 800 degrees, and the fuel ignited. I think the hardest thing was after that Michael Schumacher was still on the track and would have expected to do a fuel stop, but there were so many people burnt and equipment messed up and people just didn't want to do it again."

While this is an extreme incident and refueling has been banned in F1 since 2009, it underlines some of the dangers those working in the sport can face, not to mention how clear chains of command,



**ALWAYS PREPARED**  
*Speaking to drivers like Sebastian Vettel (above) ahead of a race is routine for Kenny Handkammer, who has seen firsthand how pit accidents like the one at the 1994 German Grand Prix (right) can occur.*

**“WE WOULD LOOK AT THEM AND THINK HOW COULD WE DO BETTER THAN THAT, HOW CAN WE SET THE STANDARD?”**

**Kenny Handkammer,**  
*Former Formula 1 chief mechanic*

PHOTOS: RED BULL / VLADIMIR RYS / GETTY IMAGES, PICTURE ALLIANCE / DPA / BERND WEISSBROD

team roles and solid analysis impact on performance. Taking it seriously not only delivers the best results, it also can save your life. But how do you reach that level of ability in such a brutally competitive sport and how do bring it out of your team?

**IT TAKES A CERTAIN TYPE OF PERSON** to want to work in an environment that has an element of danger, punishing hours and includes thousands of miles of travel throughout the year and long spells away from home. Add the pressure to be always performing at your peak and it's perhaps easy to see why it's not a career path for everyone. But the learnings are rewarding and can apply to many things beyond the racetrack. For Handkammer it has taken him from the starting grid into Elon Musk's electric vehicle orbit. More on that later.

It began for him in the 1980s when he entered the sport. He gathered experience and progressed to become widely regarded as one of the best chief mechanics in Formula 1, winning 13 world championships during a 25-year career in the



#### TRACKING THE TIMING OF THE PIT STOP

Pit stops take place once or twice during a Formula 1 race. Replacing tires can be done in seconds, while other repairs take longer. But one goal is clear: When every second counts, record pit stop times also help break records on the track.

1950



67 sec

1965



45 sec

1970



27 sec

sport. And he was particularly adept at helping teams initially viewed as underdogs before becoming a dominant force. As part of the Benetton team, he worked closely with Schumacher as he won world titles in 1994 and 1995 before later joining Red Bull, where he helped Sebastian Vettel become a four-time world champion. "When I started at Benetton there were a bunch of us the same age and we all had the same ethos. We were always the underdogs but we were determined to see how we could move it forward," Handkammer continues. "We used to always look at McLaren and Ron Dennis in the early 1990s – they set all the standards. We would look at them and think how could we do better than that, how can we set the standard?"

**SETTING THE STANDARDS** is certainly something that the teams and crews Handkammer was a part of did. He pioneered how to improve performance at a very sharp competitive edge. And his focus was the pit stop, one of the most crucial moments in a Formula 1 race where speed and efficiency is key to ensuring no time is wasted. Any second lost in the stop could be the difference between victory and defeat on the track.

Handkammer was part of a Benetton crew that produced a 3.2-second pit stop in 1993, a record that would not be beaten for 17 years. In 2013 he was part of a team that broke the two-second barrier for the first time with a stunning 1.92-second stop. "It is a huge team effort," says Handkammer, who would later be hired by Elon Musk's Tesla company to bring that speed to road car production. "You have to train 22 people to do it in two seconds or under and when we achieved it, it was obviously hugely satisfying. We obviously practiced a lot back at the factory, but there can be negatives about doing a lot of practice – people get bored and lose motivation." →





## THE HIGH-SPEED CREW

More than 20 people make up a team's F1 pit crew and they each have specific roles that must be performed flawlessly to execute a quick and perfect stop.

**A**

### JACK GUYS

Using a special piece of equipment called a jack, the front and rear "jack guys" enable the tires to be removed while the side jack crew is there if the front wing or nose of the car needs changing.

**B**

### WHEEL TEAM

In a crucial role to ensure an error-free stop, a team of "tire gunners" loosens the nuts on each tire before another team removes them. Then another team places new tires before the tire gunners secure them back to the car.

**C**

### WINGS

Two people adjust the aerodynamic flaps on the front wing of an F1 car by using a drill to turn a screw. They communicate with the driver and help get the car performing as the driver prefers.

**D**

### TRAFFIC LIGHTS

The chief mechanic once stood in front of the F1 car with a large sign and would signal to the driver when it was safe to leave the pit lane. This system has been now replaced by one similar to traffic lights.

**E**

### PIT LANE SPOTTER

While these other pit roles are essential, a pit lane spotter is something a team may or may not deploy. Their role would simply be to provide a second pair of eyes with regard to any traffic or incidents.

### FAST WORK ON AND OFF THE TRACK

WINNING IN FORMULA 1 is all about fine margins both on and off the track and fractions of seconds lost or gained during a pit stop can prove crucial. The team of 20 or so personnel has to perform in near-perfect

synchronization to get a car out on fresh tires in no more than a couple of seconds. A stop of more than 2.5 seconds would be considered long and potentially leave a driver playing catch-up on the track.

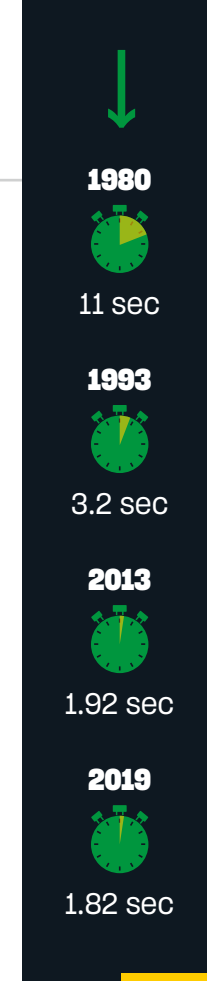
“IT’S A HUGE TEAM EFFORT. YOU HAVE TO TRAIN 22 PEOPLE TO DO IT IN TWO SECONDS OR UNDER.”

**Kenny Handkammer,**  
Former Formula 1 chief mechanic

He quickly learned that if you wear people out, they get injuries, and their mindset, he says, is not right if they are tired or unmotivated. His solution? Give them goals that they get rewarded for. An added learning was to build the team in different directions so that all parts of the "team machine" are in contact. As well as working closely with those whom they share a garage with every day, he saw the value of building a relationship with the drivers. Vettel in particular was very good at forging friendships with those who work behind the scenes. In 2013, moments after winning the world championship, he paused his celebrations to help the crew to pack up.

IT'S MORE THAN THE CLICHÉ of teamwork makes the dream work, though. There's hard work, of course, with analysis to up the performance pitch. Handkammer has observed that process firsthand. "When you get a very intelligent driver who knows how to process all the data, knows how to adjust his driving, it is great," he says. "I don't think every driver completely understands that and knows what to change, but most do want to learn and see what they can improve."

Better performance has also come from a changed mindset – focusing on the body. In the early decades of Formula 1 it wasn't uncommon to see a driver celebrate with a smoke and an alcoholic



READY TO RACE  
Electric lights have replaced the previous manual signage system to tell a driver when to depart the pit.



drink. These days, drivers are more like athletes, employing physical trainers and following strict diets. "When Schumacher came in, he changed so much in Formula 1 to being more focused on fitness," Handkammer says. "That's what makes a difference. It is complete commitment and focus where some of the others at that time would go to the gym for an hour and eat some pasta and that's all they'd feel they'd need to do."

THERE'S BEEN A TREND toward conditioning the mind as well. Dr. Phil Hopley, a mental health expert who was the lead psychiatrist for the London 2012 Olympics, was brought in by the McLaren F1 team in 2020 to act as its performance coach during the height of the Covid-19 outbreak. The initial idea was to assist the team's drivers and personnel with their mental well-being during the pandemic as they had to adapt from working as one whole unified team to being split into smaller 'work bubbles' of three or four people to limit the impact of a positive case within the team.

But a positive impact on the team's results, despite those uniquely difficult conditions, has seen him continue in that role to this day, focusing on fine-tuning drivers and team personnel's minds. "The challenge for drivers is the same as for other elite athletes competing solo over an extended period of time and most people working in high-demand business roles – namely to not

PERFORMANCE

PHOTOS: RED BULL / MARK THOMPSON / GETTY IMAGES (2)



overthink," says Hopley. "These guys are incredibly experienced in driving while processing communication from their race engineers and giving real-time feedback on track that informs the vast system of engineering trackside and back at base. When the pressure is really on their ability to trust their judgement, taking the critical information from engineering and executing strategy is key. Helping them to develop their ability to ignore unhelpful thoughts, or white noise, when under intense pressure is essential."

Three seasons ago, in 2020, McLaren finished third in the Formula 1 Constructors' Championship – their highest since 2012 – and the following season the team's two drivers secured a first and second finish at the Italian Grand Prix – their first podium wins in over a decade. "Since 2020, when the pandemic had a massive effect on the well-being of our trackside team, Dr. Phil has transformed our mental fitness, effectively developing both mental health and performance psychology," says Tom Stallard, race engineer and head of human performance at McLaren. "Often sport psychology may feel insufficient on the days a person is struggling and psychiatry feels excessive in eking out the last 2% of performance, but Phil's ability to understand and support both at an extremely high level has enabled the team to maintain resilience and deliver consistently great performance over the last two seasons."

PERFORMANCE

**“THE CHALLENGE FOR DRIVERS IS THE SAME AS FOR MOST PEOPLE – NAMELY TO NOT OVERTHINK.”**

*Phil Hopley,  
Mental health expert*



**MEET THE CHIEF: KENNY HANDKAMMER**

Formula 1's top mechanic since 1989, Kenny Handkammer started at Benetton before leaving in 2002 to take up the same chief mechanic role at Renault and then at Red Bull. He left the sport in 2015 when he was recruited by Tesla.

For anyone working in Formula 1 it is clearly a very demanding but rewarding sport to be involved in, but for many it has a time limit. Some drivers, like Fernando Alonso and Kimi Räikkönen, keep going into their 40s but that's the exception rather than the norm, while many engineers and technical crew "retire" in their 30s to pursue something that allows for a more even work-life balance.

**HANDKAMMER LEFT THE SPORT** in 2015 when he was recruited by Musk's Tesla company to "apply Formula 1 techniques to revolutionize servicing mainstream cars." Handkammer, who now works for all-electric vehicle company Lucid Motors, adds: "There are lots of technical similarities between commercial car production and working in Formula 1, certainly in the service and logistical aspects. But in other ways it is still much slower – there are things that hold things up like approvals and signoff periods."

After almost three decades of living life in the fast lane, that slower pace suits Handkammer for now. "I am having more family and home time, and I have been able to pursue other interests," he says. "Working in Formula 1 was a fantastic period but I am enjoying the life that I have now."

PHOTOS: RED BULL / JOERG MITTER, RED BULL / MARK THOMPSON / GETTY IMAGES

CLOSING THOUGHTS ON PERFORMANCE

**“A PERSON CAN PERFORM ONLY FROM STRENGTH. ONE CANNOT BUILD PERFORMANCE ON WEAKNESS, LET ALONE ON SOMETHING ONE CANNOT DO AT ALL.”**

*Peter Drucker,  
Austrian-American management consultant,  
educator and author*



## Wide angle



Read on for diverse insights into the wider world of business and ideas.



**BUILDING ON A SOLID BASE**  
Gary Ferenchak became Rock Lititz's studio manager after 25 years of touring with acts from Gwar to Selena Gomez.

# We built this city on rock and roll

*A sleepy town in Amish country is an unlikely hotbed for the big business of rock'n'roll touring. Yet a certain expertise has zeroed in on this location over the years and transformed Lititz into a one-stop shop where the world's best performers prepare to take the stage – and then tour around the globe.*

BY **Michael Hann** PHOTOS BY **Fredrik Broden**

**T**HE NONDESCRIPT buildings about a half mile north of Lititz's pretty little town center look especially boxy and unwelcoming against the gray earth and dirty snow of the Pennsylvania countryside in late winter – just another out-of-town industrial complex. Warehouses, maybe, or logistic centers. It's the name of the complex that suggests this might be something rather different: Rock Lititz.

Here in the town of Lititz, dreams are made between people browsing the

antique shops and stopping along the way for afternoon tea. Or, perhaps more accurately, dreams are constructed from the bottom up, one bolt and electrical connection at a time. For if you are a musician, and you want to tour with a spectacular show that's guaranteed to be the talk of social media, Rock Lititz is where you come to make it happen.

The dozens of companies based on its 96-acre campus provide everything you need to put a big tour together: lighting manufacturers, video tech companies, one that makes temporary

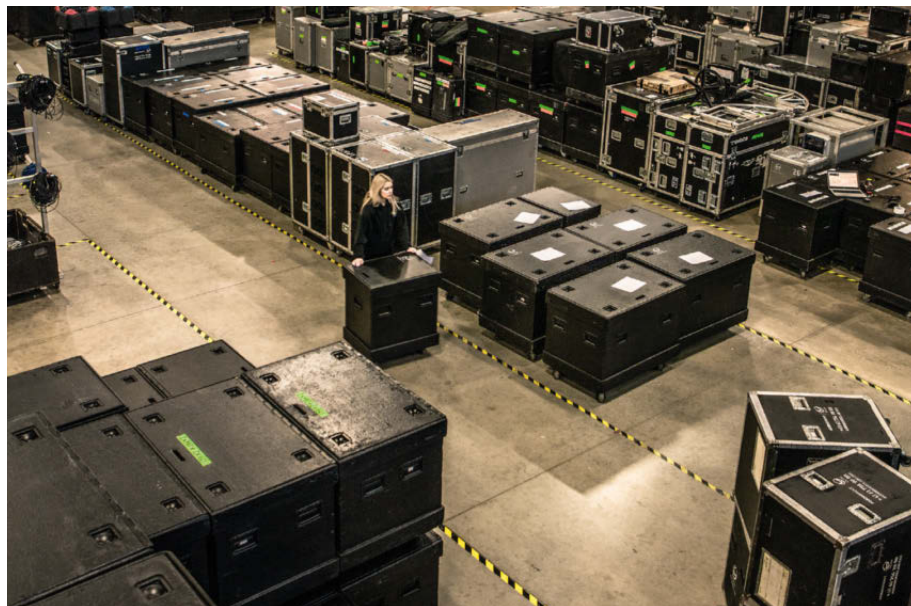
flooring for arenas, another that makes motors for the mechanical hoists that pull lighting rigs into the rafters. There are even two giant rehearsal spaces to make sure it all works together – one for arena-sized shows and one for stadium shows – and a hotel for those who come here to rehearse. And at the center of the campus you'll find two giants of the industry, Clair Global and Tait Towers. The former began by supplying the public-address, or PA, systems, the latter by designing show lighting, and between them, they founded the campus. →



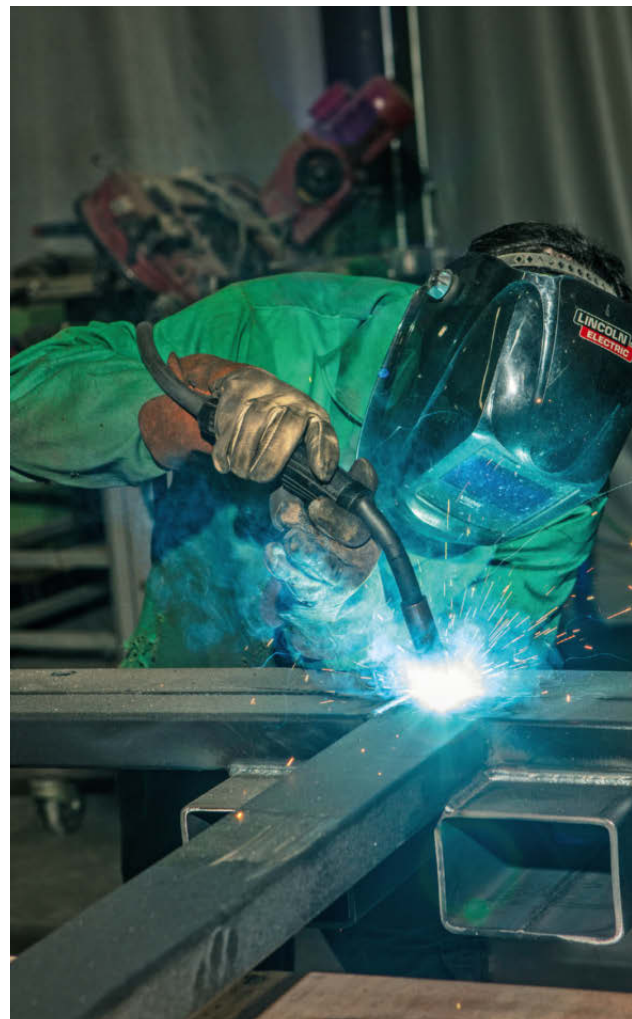
**THE ORIGINS OF THIS MARVEL** lie with brothers Roy and Gene Clair, who had a PA system they rented out to acts visiting the area in the 1960s. Among them, in 1966, was Frankie Valli and the Four Seasons, playing at the Franklin and Marshall College in nearby Lancaster. "The Four Seasons did the show, everything was great," says Gene Clair's son Troy, now the CEO of Clair Global. "They moved on to the next town and their wives asked, 'What was wrong with you this evening?' And they said, 'We'll call up those guys that did sound in Franklin and Marshall. Let's use them in Atlantic City.' So they did. The show sounded great again, according to the wives, and there you go, that was the beginning of a sound company traveling with the band." And all for the bargain fee of \$90 a night.

Other artists began to make use of the Clairs and they soon set their minds to revolutionizing concert sound. On-stage monitors for musicians so they can hear what the audience hears? A Clair invention. The speakers that hang from the roofs of arenas and project the sound upward and outward? Another Clair invention. By the end of the 1970s, their reputation was so great that an Australian lighting designer by the name of Michael Tait had moved to Lititz so his company, Tait Towers, could work alongside them. Come 2014, they transformed their mutual understanding into Rock Lititz, a campus which continues to grow.

Lititz is by no means overshadowed by the campus and its vast list of famous visitors – recent and current clients have included Elton John, Coldplay, Taylor Swift, Beyoncé, U2 and Roger Waters plus Superbowl half-time shows and scores more. The day this writer visited Rock Lititz, Clair Global was working on Dua Lipa's tour – and they monitor every aspect of the production, to the



**BASE CAMP FOR A GLOBAL BUSINESS**  
Covering a total of almost 400,000 square meters, the Rock Lititz campus includes rehearsal spaces, warehouses and workshops for the more than 30 companies working to custom-build sets for shows that will travel around the world.



extent of knowing the ink levels in the backstage printer, even from several thousand miles away. But while music might be the most star-studded business in town, it's not the biggest. Rock Lititz CEO Andrea Shirk reckons all the businesses on campus – around 35 – employ some 1,500 people between them, yet points out that both health care and a financial institution employ more. Those businesses don't offer the particular thrills Rock Lititz does, however – like the teenagers who got a shock when they realized they were queuing at the CVS pharmacy behind the five members of the K-pop group BTS.

There were some concerns about the campus and the noise and disruption it might bring among locals. Complaints do arise, but for the most part, real Lititz and Rock Lititz coexist peacefully. The

town was founded in 1756 in southeast Pennsylvania by devout members of the Moravian Church, who forbade non-Moravians from living there for the next hundred years. The outlying countryside, however, was – and remains – strongly Amish and Mennonite, giving visiting drivers on empty country roads the sense that their vehicles have become time machines and transported them back 150 years as they pass horse-drawn buggies.

**LITITZ'S LOCATION** and local population proved to be crucial to the success of Clair and Tait – and then to Rock Lititz. The town might sit in the middle of rolling farmland, but it's an easy drive to a bunch of the major cities in which a big tour might start – Pittsburgh to the west and Philadelphia to the east; Baltimore and Washington DC to the south; New York and Boston to the northeast. And the Amish farmers proved to have more in common with the rock and rollers than one might have suspected. Tait Towers, for example, made its name with its willingness to make as much bespoke equipment as necessary to make its clients' visions come to life; the Amish farmers had expertise in both metalworking and improvising tools for their own equipment, and provided vital help to Tait.

You get no sense of those DIY days now in the vast spaces of Rock Lititz. Not in its two huge studios, designed to accommodate full production rehearsals of shows designed for arenas (in the smaller of the two spaces) and stadiums (the campus' other space). Nor in the colossal warehouses Clair and Tait maintain to store all the equipment from past shows or the huge floorspace given over to manufacturing and assembling the elements that, when slotted into place and dotted with musicians, become a show. →

**"The show sounded great again, and there you go, that was the beginning of a sound company traveling with the band."**

– Troy Clair  
CEO of Clair Global



**ROCK LITITZ WAS FOUNDED** at a time when the industry was faced with a collapse in revenues from recorded music – and that translated to a need for artists to concentrate on making money instead from playing live. That, in turn, spurred a production arms race among the superstar acts, each desperate to take the biggest, most spectacular show on the road. "I should be sending royalty checks to Steve Jobs for the iPod," says Adam Davis, CEO of Tait Towers, "because it definitely all changed with the MP3."

But Davis also says music streaming services changed everything again because music was available anywhere, anytime. "That disintermediation of the record labels has also driven global demand for our artists. So it's almost like a double bow wave, right? The first wave was with the death of record sales and touring revenue becoming the primary source of income – that was a huge boost in what we do. And now [because streaming has spread music further than ever before] what we're doing every day is opening up more and more territories to these artists, whether it's the Arabian Peninsula or across Asia."

**IT'S NOT JUST STREAMING** that has opened up new territories – smartphone photos now also play a role. These days, the marketing of a show isn't just down to promoters: A big part of its success will come down to its reception on social media. This means that shows are extensively computer modeled before any building takes place – the designers will want to know how the stage will look in a shaky TikTok video shot from the back row of the top tier, not just in the official photos. "What the advent of social media has done is that it's judge and jury [of the success of a show] at the same time," says Ray Winkler, CEO of

## "I should be sending royalty checks to Steve Jobs for the iPod – it all changed with the MP3."

– Adam Davis  
CEO of Tait Towers

the London "entertainment architects" Stufish, which design stage sets for superstar artists such as Adele, Elton John and the Rolling Stones, working in tandem with Tait in Lititz. "It delivers the evidence and the verdict at the same time. There's no separation between the two because it's so instant. And when you monitor Instagram and Twitter [during a show], it's extraordinary how they just spike at a given moment – and then the cat is out and the genie's out of the bottle. You can't put it back in so you better make sure that it does look very good, and we definitely design with that in mind."

Live music is one of the most competitive markets in entertainment: a huge number of shows, competing for a finite amount of money, operating often on margins so slim that many big tours only start going into profit on the last 10-15% of ticket sales. They need somehow to make dreams come true, and that's why they come to Rock Lititz, a field of dreams. ■



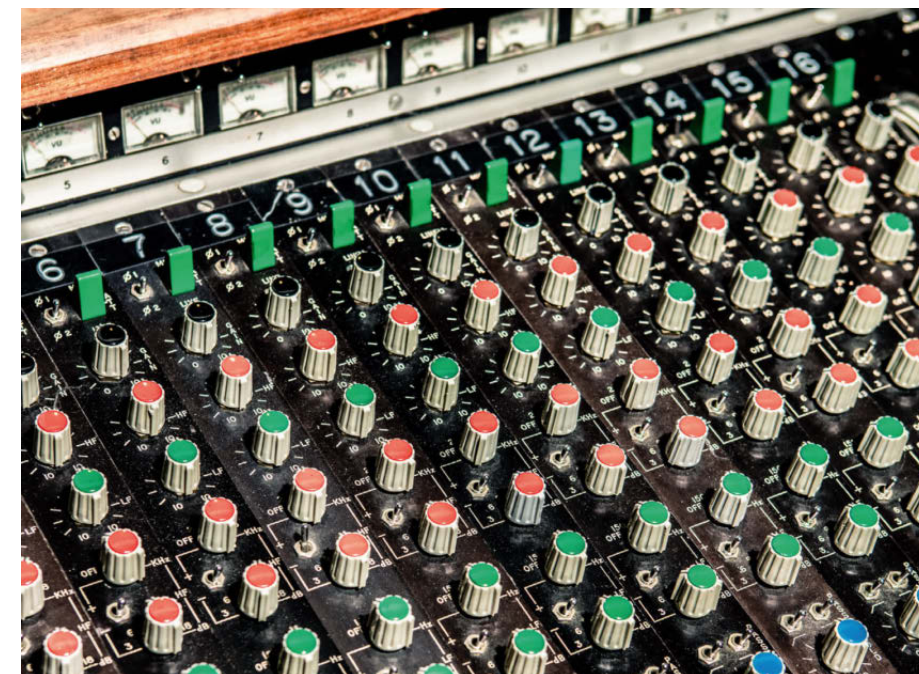
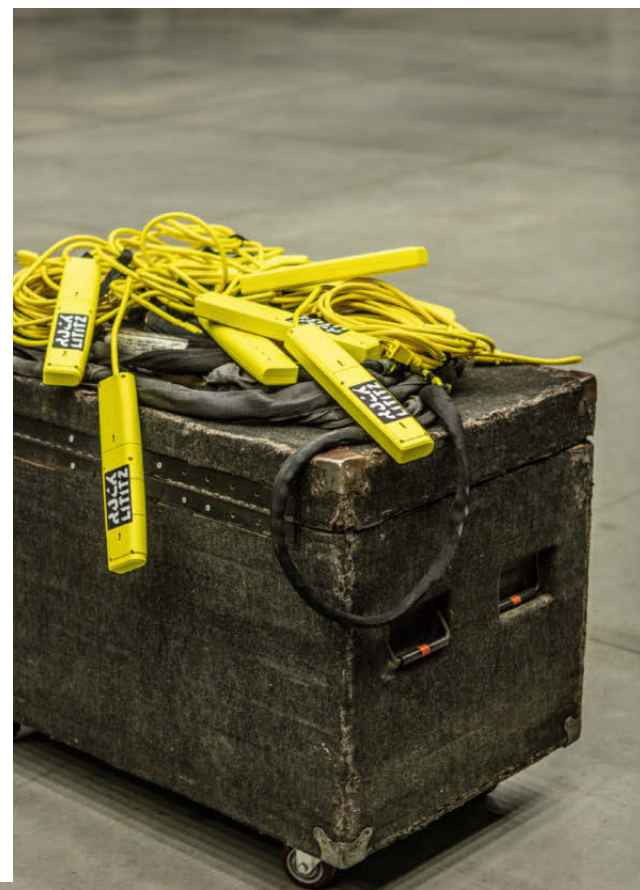
## How to put a giant rock show on the road

The kind of shows Lititz specializes in are an inexact science. Stufish Entertainment Architects' Ray Winkler says it can take as little as three months from the conception of the idea to opening night; but it might be as much as 12. Adam Davis of Tait Towers says four months is typical.

But the point of touring is not to spend as long as possible preparing the show – it's to get it on the road, making money. As Winkler puts it: "You're not asked how long it will take, you're told how much time you're given." And the key to a successful show is making sure it can be assembled and taken down every night without trouble and packed into the smallest number of trucks to move on to the next venue. Everything has to be right because of the sums at stake – Davis says the very

biggest tours will need investment up to \$100 million – not just in the production, but in venue hire, publicity, security, travel and so on – before they hit the road. "These tier-one artists," he says, are "standing up a rather spectacular organization that is going to travel around the world for years. And it requires every function from scratch: from security to catering."

The irony of it all, Davis says, is that he never saw the current boom in live music coming when he took over as Tait's CEO. "At the time we thought, 'Oh wow, here's a problem,' because our clients were Elton John, Bruce Springsteen, Billy Joel and the Rolling Stones. We thought we were gonna go out of business, right?" He laughs, contentedly. "I mean, who would have thought the Rolling Stones would be touring in their 80s?"



### READY TO ROCK

From custom pieces like the "Elvis Board," the console Clair Global built for Presley (above), to providing basic technical infrastructure, Rock Lititz enables artists like Elton John (top) to concentrate on their performances during extensive international tours.



# Giving people superpowers

*He helped Steve Jobs develop the iPod and iPhone. He followed that with his own startup Nest, sparking a smart home revolution before Google acquired it. Think:Act talks to serial entrepreneur Tony Fadell about the challenges of building things that people truly want.*

BY **Steffan Heuer** PHOTOS BY **Julien Faure**



**C**ONTINUALLY LEARNING and hustling for the next opportunity seem to be second nature to Tony Fadell. From selling eggs door-to-door as a 9-year-old to designing custom computer chips in college and finally talking his way into legendary startup General Magic, Fadell always managed to follow up ideas for products and businesses with the next big thing. These days, the serial entrepreneur devotes his time to funding and mentoring startups with his Paris-based venture firm Build Collective.

**You argue that great products do a few things that give customers superpowers: They take on a life of their own and create new economies and even new ways of living. Aside from the iPhone, in whose development you were instrumental, what are some other examples of such powerful products?**

A new product has to solve a certain pain. At Nest, that pain point was heating and cooling your home.

## Tony Fadell

**was the senior vice president of the iPod Division at Apple, where he oversaw all development for seven years. An active engineer and investor with over 300 patents to his name, he went on to found Nest Labs before it was acquired by Google and write the 2022 New York Times and Wall Street Journal bestseller Build.**

People didn't like the thermostats they had – they just bought whatever was available, or an installer told them what they should get. No one asked the customer what they wanted. At least in the Western world, a thermostat controls 50% of your home energy spend. If you're going to spend between \$1,000 and \$2,000 a year on energy, shouldn't you have a product that you understand, that can teach you about your consumption patterns and also looks nice on the wall? That product also gave you a superpower because it was easy to use from anywhere with your smartphone or computer.

**What do you consider transformative technologies today? Do innovations like domestic service robots, the Metaverse and satellite broadband address pain points, or are they driven by other factors?**

I think there are a lot of things that we're working on today that don't solve pain – or they only solve it for a very narrow set of people. But if we →







look at agricultural technology, new materials, clean energy, battery technology – those are real pain points. We have a climate crisis on our hands and we need transformative technology to help dig us out of the hole we're in. I'm not talking about convenience products that give us more time as individuals, but products that give us collectively more time as a species on this planet. We don't need home robots or the Metaverse to help solve our existential crises.

**It took 10 years between your first idea for a smart thermostat to actually starting Nest. Does the spark for launching a product always take that long?**

That was unusually long. One, I was busy at Apple, doing the iPod and iPhone. But the technology also didn't exist yet. If we look back at General Magic, which was developing the iPhone 15 years too early,

*A VALUABLE ASSET Tony Fadell has recently teamed up with Paris-based firm Ledger to design the Ledger Stax, which he envisioned as the iPod of hardware wallets for cryptocurrency.*

I learned there that you have to make sure you've checked off three boxes: You need to have a great vision; you have to make sure society is ready for that vision; and you need to have the technologies available to realize that vision. At General Magic, we were a big failure because those things weren't aligned yet. We had the great vision – it was just too soon. The internet didn't even exist yet. I tried to do [Nest] in the early 2000s. But the technology didn't exist ... there was no WiFi yet, no smartphone until 2007. All of these things had to come together and you needed a society that wanted to do things like use a mobile phone as a remote. I was watching and waiting for that to happen, but none of the incumbents were embracing it because they were maintainers, not innovators. And I thought if we have these big, dumb, slow companies doing nothing, we're going to go in and shoot the gap.

**"You need to have a great vision, make sure society is ready for that vision, and the technologies available to realize that vision."**

— Tony Fadell

**How does a founder and entrepreneur who has an idea and is waiting to check those three boxes know if the time is right to keep going or to move on?**

You should always be a little bit ahead of your time. Because then you make sure you're beating out the competition. There are lots of smart people around the world who have access to technology and money. But you can't be too early, either. The way to understand that is by making sure you have mentors around you, people who have done it before and who can see clearly what you're trying to do.

**Every product needs a story. Why is storytelling so important and also needs to precede the product?**

If you're an engineer, a scientist, researcher or a designer, you'll have all these bits and pieces of technology. That's how most people start. They see something and think: "Oh my God, if I put these things together, that seems like it's really cool." But that doesn't address the Why, it only addresses the What. You have to switch your mindset to why would a customer be compelled? You're not impressing the other geek next to you, you're trying to get people to buy or try things.

**Great engineering feats don't make good stories?**

You need what I call a press release. Let me give you an analogy. When you create a movie, you don't just go out and start shooting things. Instead, they

do a treatment to understand the audience, the plot and subplots, the settings and the arc of the story. Only then do you write a script, create the movie. You know the saying the movie has lost the plot? Many technology companies do! I'm an investor in over 200 companies around the world and I see so many of them say: "Oh, we know what we're doing." But they don't ever have the plot. They need something equivalent to the movie treatment – and that's the press release. You write that at the very beginning as a compelling nonfiction story. Too many times, people build something and at the end they say, let's do marketing. But marketing is not congruent with the actual product that is delivered. You have to describe what you're imagining at the beginning and then deliver on that. People need to start off by envisioning what you're creating and use that as the fundamental guide.

**Your former boss Steve Jobs was known as a master storyteller. Can you describe how he liked to employ a trick called the "virus of doubt"?**

The virus of doubt is something that I created as a shorthand way of explaining how we can get people interested in the story you're telling. What you are creating should be a painkiller, so you want to very clearly reiterate to people the pain they're suffering today with the products they already have. Because over time, humans keep habituating away the problems they experience with a product or service. With the virus of doubt, you're shaking them awake. And then you say there is a new way to do it – you're tearing away their habituation. Why have a phone, a music player and a computer, when you can have it all in one device?

**Nobody builds great things alone. What are some of the key insights you have learned about finding the right people to work with you or for you?**

When you're starting out, you have to build a team. First you need to find your seed crystals. In chemistry, a seed crystal is a small molecule or element that allows other elements to come together and create some structure very quickly. A seed crystal is a person who has a deep network of talent. They have worked with good people and they're highly respected. You hire those seed crystals in →



AVAILABLE ONLINE  
See the Short Takes  
video interview with  
Tony Fadell  
[rolandberger.com/  
en/fadell](https://rolandberger.com/en/fadell)



**"Large organizations often don't want to take that risk of competing with their own successful product."**

— Tony Fadell



whatever function and they're able to pull in more people who can then pull in many more people. It lets you achieve much faster and trusted growth. Second, you can't just hire all experienced people. You have to hire new grads who are coming into these careers for the first time because you want a multigenerational team. Why is that? Experienced people can teach the younger people. They usually like to be mentors, and the younger people like to work with older generations because they can learn something when they work with their heroes or experts. So it becomes very much of a relationship-based organization with a blended culture of learning and doing.

**Is there some kind of a magic number for team size beyond which it gets complicated?**

Organizations start to break down between 40 and 50 people. Not everyone can report to everyone and know everything going on. There are more breakpoints as you grow, and you need to level up your organization and your communications for that next phase. These are natural breakpoints that I've

*A CLEAR VISION*  
*The Ledger Stax, designed by Tony Fadell, features an E Ink touchscreen that was designed to display NFTs as well provide top security for crypto keys.*

seen, time and time again, on every continent and in every type of business.

**Do you see an effect on the quality or the speed of innovation as a company grows in size, let's say from a few hundred to several thousand people?**

I've seen very successful companies with tens of thousands of people, but you have to break down those numbers into smaller teams of 120 or fewer than 300 people. They all have to be properly organized, properly communicated to, and you also need a dedicated team for innovation. Innovation is not going to happen spontaneously like it did when it was a smaller organization and you might have to innovate differently at different levels. So, you need to make sure you protect that at all times and be sure that you understand that you're going to have to fail. Most organizations that are growing really fast and think they're successful, or are indeed successful, have to remember to eat their own. They need to cannibalize what they do. Yet large organizations often don't want to take that risk of competing with their own successful product, and

they stagnate. That will cause the innovators to leave for another company where innovation is actually happening. You have to embrace those true innovators and keep them happy and engaged.

**Do people need to come back to the office to build things and spin great stories?**

A lot of companies have processes that can be done remotely. But innovation happens when there's creative tension – and that only happens when people are together physically. There's some that can happen virtually, but you can't easily test or try things, find those serendipitous moments where two different ideas come together because people ran into each other in the hall.

So, if you're building a culture of innovation, you don't have to be in the office all the time – you need to have hands-on work together. Leaders who want people to come back to their organizations physically need to make it about FOMO for them – not tell them they need to be at work. The really innovative teams should want to be with those incredible people who they can learn from.

PHOTO: LAIF / REDUX / JOSEPH SEIF



**A path of innovation**



**APPLE:** Originally joining Apple as an outside contractor in 2001 to help develop a portable music player, Fadell became the lead of the Special Projects group and oversaw 18 iPod iterations.



**NEST LABS:** In 2010, Fadell founded Nest Labs with former Apple colleague Matt Rogers to bring digital technology to the home. He continued to run Nest as a Google division for one year after the merger.



**BUILD COLLECTIVE:** Fadell now oversees a team under the name Build Collective to invest early, advise and grow portfolio companies that are "making things worth making."

**Your company Nest was acquired by Google in 2014 but it didn't work out, prompting you to leave just two years later. Why do mergers and acquisitions usually fail – despite all the money, talent, due diligence and integration teams?**

Most acquisitions fail because of cultural mismatch. It's the way the teams work and communicate together. It's kind of like languages. We're putting this team in, and they speak French. But this team only speaks English. And they can't communicate, they have different ways of thinking. You have to understand what you're buying and make sure everybody sets expectations on what integration or lack of integration means. You have to get in there and work the culture, embrace the culture, and see if you're really buying them, or are you acquiring them just for the business or their technology?

**You have since moved on and run an investment firm called Build Collective, which you describe as a "mentor with money." How does that differ from traditional venture capital firms?**

We don't have limited partners. That's where all venture firms get their money from. VCs have a boss and they have to deliver returns. They have to make decisions that are best for their bosses, not necessarily what's best for the company. Maybe a startup needs to go on five more years and needs more money, but the fund needs to return the money now so it's forced to sell the company before it comes to fruition, or shut it down. The things we're doing take a long time so you need a different mindset.

**What sectors or world-changing innovations are you focusing on?**

I care about the things that are really hard to build, that are transformative, disruptive and help with our climate crisis, our societal needs and improve our health. At the end of the day, we work on the things that are really hard that most VCs won't do, because it's still somewhat of a science project. Companies are doing something very hard in those first, formative years before they have customers – they need people by their side who really believe in them and help them, not just to build something but also help them communicate in a big way to get the world to pay attention. ■





A TÊTE-À-TÊTE WITH

# Bill George

*Former Medtronic CEO Bill George thinks uncertain times call for a new generation of executives, leaders who value inclusivity, adaptability and flexibility – and aren't afraid to get their hands dirty on the front lines.*

BY **Steffan Heuer**

ILLUSTRATIONS BY **Nigel Buchanan**



**You stepped down as CEO of Medtronic in 2001 after 10 years. Do leaders have an expiry date?**

I made the decision to limit my tenure as CEO before I took the job because my studies show that CEOs who stayed more than 10 years didn't do as well in the next decade. And Medtronic is a very innovative high-tech company. I feel that, for creativity, you need a new leader every decade.

**You've updated *True North*, your widely acclaimed book about finding one's path, with an "emerging leader edition." Why do we need new leaders now?**

We need a whole new generation to take over. We've had the baby boomers in charge for the last 30 years. The order of the day has been command-and-control, as General Electric's CEO Jack Welch and many disciples practiced. That's not going to work today because millennials will not work for someone like that. They want to be empowered and have an opportunity to show what they can do in their 20s and 30s. Also, we have gone from areas of relative stability back in the 1990s to one crisis after another.

That means we need a different kind of leader who can be very adaptable.

**What's your definition of "authentic leadership," a phrase you coined?**

I've always felt authentic leadership is about competence, capability, knowledge and, most of all, the ability to empower people – not exerting power over them. You have clarity of purpose. Authentic leaders are genuine. The most challenging question is knowing who you really are. A lot of leaders don't and they try to change the world before they've figured out what they want out of life.

**The leader's journey you detail in your work encompasses introspection and experiencing a crucible to finally mature into a servant leader. That sounds a lot like the classic hero's journey ...**

Joseph Campbell wrote extensively about the hero's journey. I've →



AVAILABLE ONLINE

Watch the video and read the full interview with Bill George [rolandberger.com/en/billgeorge](http://rolandberger.com/en/billgeorge)



**Bill George** is the author of four bestselling books including *True North* and *Authentic Leadership*. He is a professor of management practice at Harvard Business School, where he has taught leadership since 2004, as well as serving as the faculty chair of the school's Executive Education program Authentic Leadership Development. He has served on the boards of Goldman Sachs, ExxonMobil, Novartis, Target and the Mayo Clinic.



read his work and admire it. But I think the leader's journey is somewhat different because the hero thinks the journey is all about himself or herself. That's classic Greek literature like the *Odyssey*. An authentic leader today, by contrast, is primarily a servant of the people that work with him or her. That's the key. You have to flip the switch and go from being an "I" leader to a "We" leader. It's quite different. A lot of people start out on the hero's journey – no doubt I did that too in the early days. You think you will conquer the world, but you have to realize it's really all about serving the people, your customers, your employees and, ultimately, your investors.

**Can you elaborate on the distinction between the "I" and "We" leader? What are some of the key steps that somebody needs to learn along the way?**

A typical "I" leader focuses on himself, his power base to exert power over as many people as possible. He is more focused on money, fame, position and title. They expect people to follow them and follow directions. When things go well, they take the credit and when things don't go well, they blame someone else. A "We" leader is trying to empower other people to become their best selves and perform to their full potential. If there's a problem, the "We" leader takes responsibility. If things go well, they give credit to their team. That lets them build great teams of people who are really inspired around a central purpose. Instead of being money-driven, they're purpose-driven.

**You also talk about anti-leaders, people who you argue don't have this internal moral compass. You specifically call out Facebook's Mark Zuckerberg, WeWork's Adam Neumann, former Uber CEO Travis Kalanick and the disgraced founder of Theranos, Elizabeth Holmes. Where and, perhaps more importantly, why did those people go astray?**

Many of these leaders, like Zuckerberg, started young and never solidified their

values and their clarity of purpose. They were successful, became wealthy early and got too caught up in this. We see this happening with other leaders as well. People like Elizabeth Holmes were fraudulent from the beginning while Zuckerberg created a very real thing, but he's having real trouble now deciding what he wants to be because there's no clarity of values. I think the key is having clarity of values and putting the institution's interests before your own.

**How would you characterize Elon Musk's type of leadership? He admitted after the messy Twitter takeover that he's in over his head and can't seem to catch a break.** Musk is a brilliant person. I would say he's the greatest inventor of our time, going back to Thomas Edison. What he's done with Tesla is spectacular. Every automobile company in the world is trying to catch up with Tesla – and that also applies to what he's done in the battery business to get costs down.

**To find your clarity of purpose, peel back the onion**

**1.**

**The outer layers**

*Knowing yourself is the center of your compass to your "true north." Understand your outer layers in order to find your core.*

**2.**

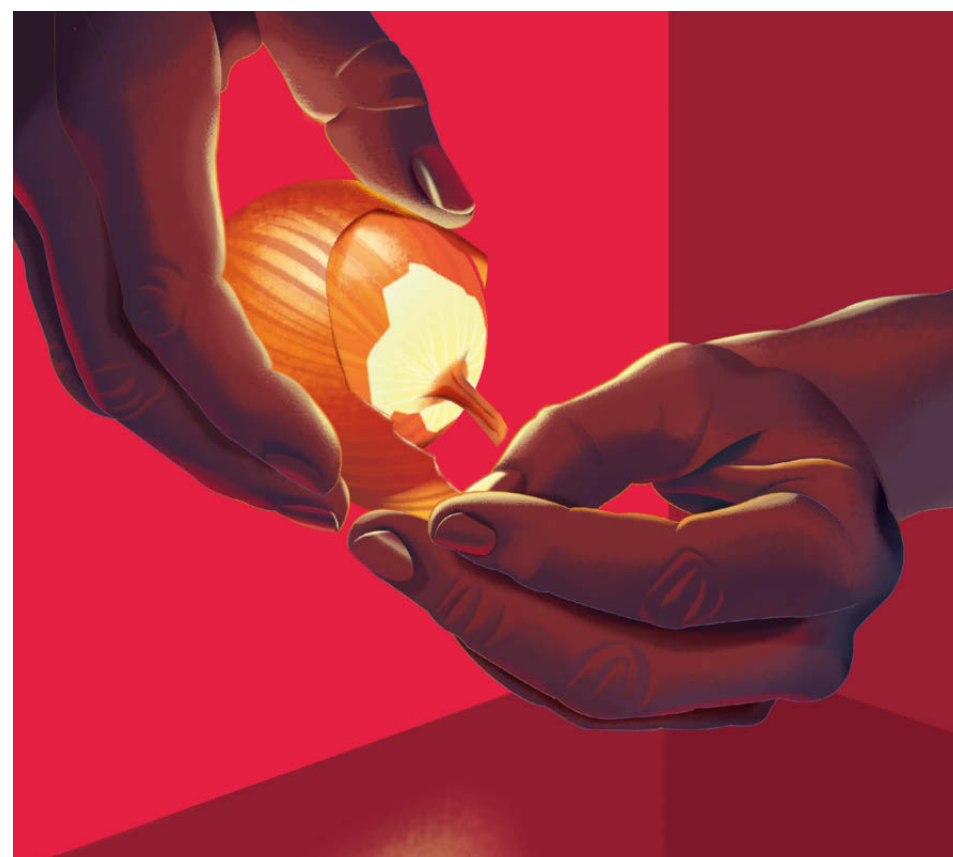
**Go a little deeper**

*Your strengths – and particularly your weaknesses – may not be the first things you show, but it is vital that you understand them.*

**3.**

**Find your center**

*What you value the most – and what drives you – will lie at the core of the proverbial onion and guide your purpose as a leader.*



And look at what he did with SpaceX. So, I give him huge credit. Now, why is he fooling around with Twitter? I think he's got too caught up in his public image and stepped into the charisma trap. He can't manage four enterprises.

**Most of these leaders going off the rails are fairly young. You were 46 when you found your sweet spot, the place where personal purpose and company purpose clicked. Is great leadership simply a function of aging and becoming more mindful of our surroundings?**

There's a lot of truth in that. I should say that I was given an opportunity at age 27 to become general manager of Litton Industries' microwave oven business when there was no market. I had to create something as an intrapreneur inside the company. It was a great learning sprint and I surely made mistakes. But we have to have those experiences and rub up against the world before we can fully take charge. Many of us will get them by the early 40s.

**On the other side of the equation, there's the people you serve in that role. Have employees changed as new generations have entered the workforce?**

Every employee post-Covid is wondering: Do I want to work here? Is there a purpose? Does your company have a plan for climate change? And, ever since the murder of George Floyd, do you have a diversity, equity and inclusion plan? For 30 years, we have devalued the role of front-line employees. Their compensation has gone down relative to executives, not just CEOs. This is a disaster. We need to flip the organization chart, put front-line employees on top and have the CEO and all the corporate staff supporting them so they can do their job. Think of any service industry. Whom do you see on an airline? The front-line employees. Who is it that's so concerned about the quality of a Mercedes or a BMW? A well-trained front-line employee. In Medtronic, I could learn more about quality talking

**"We need to put front-line employees on top and have all the corporate staff supporting them so they can do their job."**

to front-line people than I could from the quality department. Because they were the ones making the products, they knew the problems of the equipment. They knew what the issues were.

**What needs to change with corporate culture and leadership styles to address this imbalance you just described?**

First of all, I think corporate executives need to get out of their offices and be with their customers and employees. We did a survey of CEOs at Harvard and we found that they spent 72% of their time in meetings with their direct reports. You really aren't learning the business when you do that. They only spent 5%

with their employees and even less – 3% – with customers. If you're running a large retailer, how do you know what's going on unless you're walking to the store floor every day? At Medtronic, I witnessed over 700 procedures, going in there and just watching doctors. I didn't do anything, but I learned a lot. That's the front line. I think it's important to be in the R&D labs with your scientists and engineers, not just getting reports on what's happening in innovation. That's key if you want to stimulate people to do great work and learn what's going on. A lot of the best ideas are at the front line but get depressed because of budgetary reasons, bureaucracy or approval levels. Creative companies are the ones where the CEOs are out there all the time.

**Have we changed the way we train future leaders from what's taught at business schools to how companies handle their internal talent pipeline?**

Business schools are behind in teaching leadership. They've turned out a million managers in the last 25 years, so we now have too many managers and not nearly enough leaders. Now, companies have made a big change in the last five years, shifting almost entirely to authentic leadership and away from power-based leadership, away from the mantra of maximizing shareholder value and just training a bunch of people that are financially very savvy. Today, the focus in corporations is how you lead people, not just how you manage numbers. ■



**Confront your blind spots**

*Growth will add layers of complexity to your "onion" as you develop new ways of interfacing with the world. You may still uncover some blind spots between the layers, however, so never hesitate to ask for feedback from someone who cares about your success.*





# Gut instinct

*Some of the best business decisions were based on a gut feeling or instinct. But where does this intuition come from? And how can you leverage it to your advantage?*

BY **Natasha D'Souza** ILLUSTRATIONS BY **Cristina Daura**

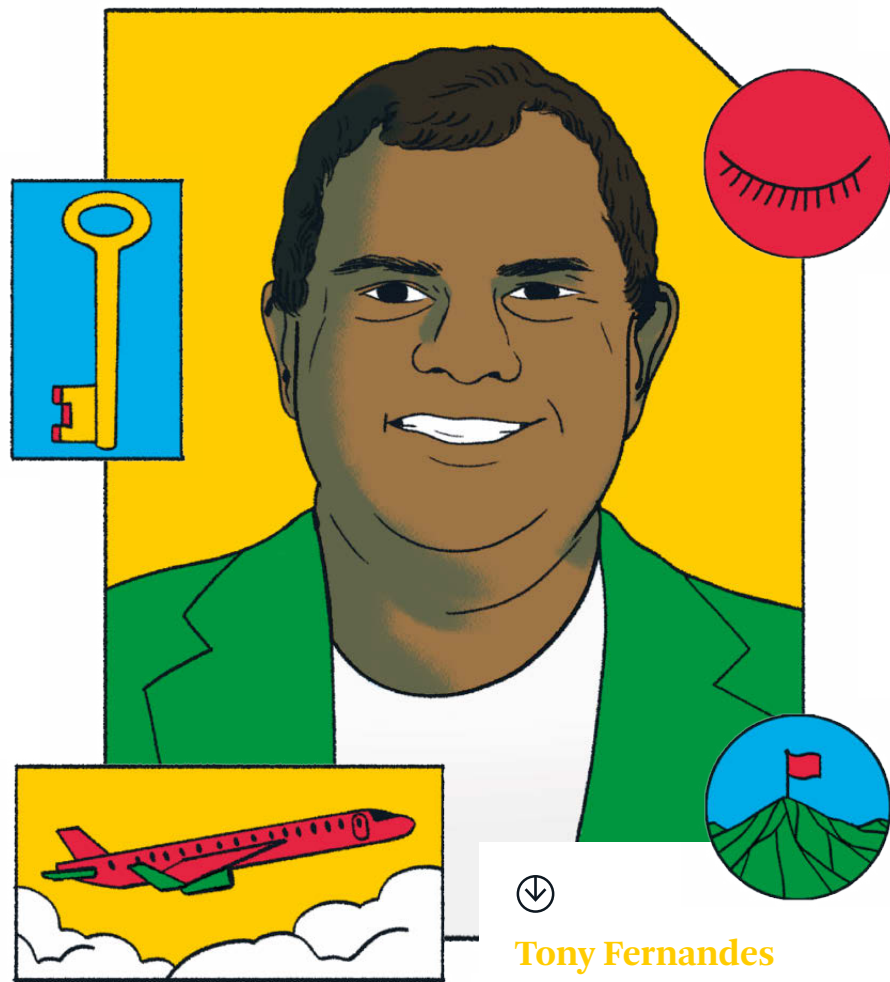
**A**FTER RESIGNING from a plum position at Warner Music, and with no new career prospects lined up, Tony Fernandes found himself sitting in a London bar when a TV segment featuring EasyJet came on. "Instinctively, this realization hit me: If I launched an airline that made flying in Asia cheaper and more accessible, that'd be a winning product right there," recalls Fernandes. In 2001, with the same maverick spontaneity that became his trademark, Fernandes together with his business partner promptly purchased an ailing Malaysian government airline for a token \$0.25, agreeing to take over the carrier's nearly \$10 million in debt at a time when the aviation industry was rocked by the 9/11 attacks.

Despite an extremely challenging environment, Fernandes stayed true to his intuition and proved industry naysayers wrong when AirAsia emerged profitable from day one. "Intuition drives my decision-making. Ninety percent of my decisions are based on gut feel," says Fernandes who is now CEO of AirAsia's parent company Capital A.

**FERNANDES ISN'T THE ONLY** business leader who believes in intuitive decision-making. Business lore is replete with stories of industry titans who followed unexplainable "instincts" despite meeting with skepticism by their peers or the wider public – from automotive leadership legend Robert Lutz, who conceptualized the Dodge Viper in a dramatic redirection for Chrysler in the 1990s, to Apple co-founder Steve Jobs, who steered the struggling computer company from bankruptcy to billions with the launch of the iMac later that same decade.

Gerd Gigerenzer, world-renowned psychologist, behavioral scientist and director of the Harding Center →





### Tony Fernandes

for Risk Literacy at the University of Potsdam, considers intuition the highest form of intelligence and that those who actively work on developing their intuition are capable of making better, faster decisions.

But what exactly is intuition? And where in the human body does it originate? Sometimes dubbed "gut instinct," this uncontrollable sense of "knowing" – without any deliberate analysis or data gathering – has fascinated psychologists, scientists, philosophers and management gurus alike.

Several scientific studies reveal that intuition operates not only through the entire right side of our brain and the brain's hippocampus, but also across the enteric nervous system – the over 100 million nerve cells lining the gastrointestinal tract – in essence, the gut. This system houses neurons that outnumber those in the spinal cord and contain tremendous processing capacity and the potential for storing memories. Neuroscience research also indicates some crucial differences between women and

men's brain function: specifically, in the connective tissue between the left and right sides of the brain which allows in women quicker access between the two. This implies a better ability for making quick decisions, drawing upon intuition in the process. For men, the thicker connective tissue dictates a less fluid thinking and reduced ability to move between methodical, logical thinking and the more intuitive or instinctive approach.

**EXPERTISE ALSO HAS A ROLE** in enhancing intuitive power. In 2008, Qantas Flight 72 between Singapore and Perth averted a horrific fate thanks to the swift and sage instincts of its pilot, Kevin Sullivan. When the plane malfunctioned, Sullivan chose not to forcibly steer the plane's controls despite its uncommanded sudden and rapid descent toward the

Indian Ocean. In an interview with Australia's 7News, Sullivan recalled instinctively reverting to his early career training as a top gun fighter pilot in the US Navy: "My military training had ingrained in me that in an out-of-control situation, the directive is to release, to neutralize control." Friederike Fabritius, neuroscientist and bestselling author of *The Brain-Friendly Workplace*, calls it "expert intuition," adding: "The value of intuition in decision-making directly correlates with the degree of expertise." For Fabritius, the ability to rely on deeply held patterns of learned experience to make quick and efficient decisions is the hallmark of a savvy leader.

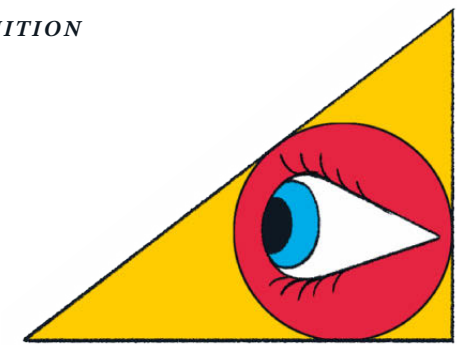


### Friederike Fabritius

is a pioneer in neuroleadership programs and the author of *The Brain-Friendly Workplace*.

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Fernandes' decision to leave Warner Music, despite his meteoric rise, was also purely intuitive. "I had this unsettling feeling that (Time) Warner was heading in the wrong direction in choosing to merge with America Online (AOL). They were fundamentally very different companies and I could foretell a huge clash of cultures down the road once the merger happened. I sensed it wouldn't be the kind of company I'd want to work for anymore even though logically, I knew it would be a huge pivot for me because I saw myself as a record guy for life," he recalls. Fernandes' gut instinct proved true in the coming years as the merger, once billed as the largest in American business history with a value of \$350 billion, led to the unraveling of both companies and is



taught as a cautionary tale in business school curriculums.

**THE EXPERTISE POWERING INTUITION** can take many forms well beyond traditional management education, commercial experience or deep industry know-how. Fernandes, for instance, was an aviation amateur. For Mikael Hajjar, his intimate familiarity with Africa – where he was born and raised and where his family built businesses – provided the cultural lexicon that became a vital part of his expertise, inspiring him to establish one of the continent's first and few early-stage venture capital (VC) firms – P1 Ventures – just months after graduating from Stanford Graduate School of Business in 2019.

Although Hajjar began his angel investing journey a few years prior and had completed a summer stint at Nio Capital, a Chinese investment fund led by William Li (China's "Elon Musk" and the entrepreneur behind the Nio electric

car), he admits that as a beginner in the world of venture capital, "raising a blind pool fund and managing a portfolio of companies for investors is an entirely different endeavor." He recalls relying heavily on his intuition in the early days of P1 – given that the pandemic-induced travel restrictions made it incredibly difficult for him to travel to Africa and personally meet with potential investees, relying instead on his advisors and venture partners based on the ground to navigate the local nuances.

As a young VC firm, Hajjar runs a lean operation and still finds himself relying on his intuitive judgment from time to time. "When I'm presented with an investment opportunity where the product has minimal data points but is based on a proven model, that's when pattern recognition kicks in, where you consider how similar business models have performed globally. In addition, I perform an intuitive assessment of the founding team; evaluating their critical

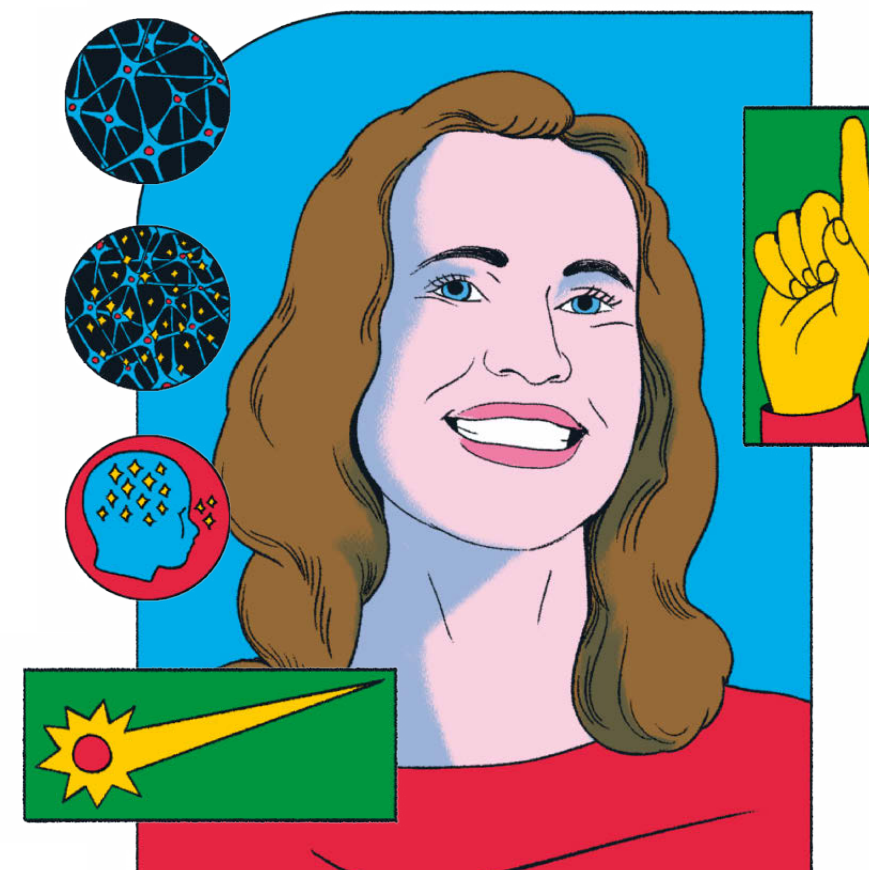
**"Have the courage to follow your heart and intuition. They somehow already know what you truly want to become. Everything else is secondary."**

– Steve Jobs

thinking skills, resilience, discipline and focus. All in all, only a few of our investment decisions missed the mark, mostly because we misjudged the product adoption cycle, market demand or the team's execution capability," says Hajjar.

**SUBSTANTIAL RESEARCH** and anecdotal evidence shows that intuitive thinking can be an advantageous human skill, sometimes even a life-saving one. The United States Office of Naval Research has worked with researchers to understand and measure the use of intuition on the battlefield as well as creating virtual simulations to help train and develop soldiers' intuitions in high-pressure combat situations. In the business world, however, rational thinking – thinking that can be explained and supported by data or a series of steps – is still considered the de facto and more superior approach.

Gigerenzer, widely regarded as "the heuristics revolutionary," (the process by which humans use mental →







shortcuts to facilitate problem-solving and decision-making) dubs this need for explainability as "defensive decision-making." It is this ingrained corporate bias that impedes agility and the ability to creatively respond to market dynamics, according to Gigerenzer, who has explored the concept of defensive decision-making in several books including *Gut Feelings* and *Risk Savvy*.

**DEFENSIVE DECISION-MAKING** increases the possibility of suboptimal decisions, however. "When executives are expected to make data-based decisions because they can't justify gut-based decisions, there is a tendency to go for the solution that can be explained, not necessarily the one that is in the company's best

**"Don't forget about human instinct. Trust your intuition, stay curious and always put your people first if you want to thrive in the long term."**

— Richard Branson

interests. This often leads executives to make decisions that first and foremost safeguard their careers, not necessarily advance the company," Fabritius notes.

Deepa Purushothaman, corporate inclusion leader, executive fellow at Harvard Business School and author of *The First, The Few, The Only – How Women of Color Can Redefine Power in Corporate America*, remembers feeling pressured early in her career by a former employer's data-driven approach. "It was a very intense corporate culture where the emphasis was on facts so even if my gut guided me toward a certain direction, I'd wait for the actual data to back my choice before proceeding. Sometimes I'd have to forego my gut choice because the data wasn't there. Looking back, I wish I'd listened to my gut more, it might have allowed me to move faster," recalls the former senior executive with over 20 years' experience.

**CREATING A CULTURE** where leaders are encouraged to talk about and follow their expert intuition is one important way to mitigate the trust deficit toward intuitive decision-making within mainstream leadership ranks, says Fabritius. "Senior executives should feel confident about their gut decisions and encouraged by the organization's leadership to follow their intuition, with the caveat that giving experts too much time or information to make a decision actually impairs their decision-making capability," she adds.

Hajjar is of the view that intuitive decision-making is sometimes the only way to operate, especially in frontier markets such as Africa. "Both Silicon Valley and China have an abundance of available data, with some VC firms even having in-house data science teams that help investors pick up the signal from the noise. However in Africa, one of the



**Mikael Hajjar**

*is a pan-African tech investor and founding and general partner at P1 Ventures.*



**Deepa Purushothaman**

*is a corporate inclusion visionary and an executive fellow at Harvard Business School.*

least data-rich geographies in the world with a nascent yet fast-growing venture capital market, the only way forward is often intuition-based investment decisions," he says. Although P1 invests a significantly smaller amount in these cases, "to hedge against the increased risk," Hajjar and his fellow investors treat it as an opportunity to learn more about the company and the respective vertical while simultaneously boosting the firm's "intuitive confidence."

For Purushothaman, leaning into her intuitive intelligence enabled her to make difficult decisions as she rose through the ranks. "The chairman of the board of a major US telco company once told me that as a CEO or chairman, decisiveness is of utmost importance," she recalls. "Sometimes making a clear-cut decision was difficult for me. More so, as a woman and a person of color, the going was harder for me because there was little room for error. That's when leaning into my gut and trusting my instincts gave me comfort and allowed me to cross the threshold." Purushothaman eventually went on to become one of

**"I've trusted the still, small voice of intuition my entire life. And the only time I've made mistakes is when I didn't listen."**

— Oprah Winfrey

the youngest individuals and the first Indian-American woman to make partner in the firm's history.

**WHEN LEADERS TAKE THE TIME** to tap into their intuition as freely as they do their rational thinking, the organization and ecosystem stand to reap the benefits. Still, corporate bias toward evidence-based decision-making – quantitative or qualitative – consistently disregards the role of human creativity, imagination and intuition. "Intuition will have a big moment at some point," says Fabritius, noting increasing appreciation for the "softer yet integral human aspects of work life such as mental health, empathy, psychological safety and emotional intelligence in the business world."

Gigerenzer believes it's time for the business world to shed the myth that only analytic perception can yield precision and that a systemic recognition and adoption of intuitive decision-making can only happen with an overhaul in business schools. "We need to cease this polarity between intuition and deliberate

reasoning and the valuation attached to both," he says, adding: "Our culture as a whole needs to embrace intuition and the unconscious mind as a resource, not a source of error."

Fernandes unequivocally agrees. "When Covid-19 struck, I felt like [I was] out at sea navigating an unknown world with no idea when I'd see land. Through it all, I had to trust my instincts even when I made decisions that went counter to everything we were seeing in the industry, such as mass layoffs." In playing the long game, he led AirAsia's parent company Capital A to a profit in the fourth quarter of 2022.

It's a reminder of the power of expert intuition that Richard Branson shared with Virgin Group employees in a blog post: "While data and analytics present us with many opportunities to take more calculated risks, increase efficiency and guide decisions – don't forget about human instinct. Trust your intuition, stay curious and always put your people first if you want to thrive in the long term." It's time to trust in that power. ■





# THE FACTS OF FIGHTING FRAUD

White-collar fraud cost \$4.7 trillion in losses over 2022. *Kelly Richmond Pope* dissects fraud schemes for a living and offers some practical advice on how companies can protect themselves.

INTERVIEW BY **Steffan Heuer**  
ILLUSTRATIONS BY **Sasan Saidi**

➤ **Forensic accounting helps discover fraud, but often too late. Are there any protective strategies to adopt?**

Sound internal controls. If you are in the C-suite: Who is the layer on top of you to oversee what you're doing? If you don't have that layer, that could be a problem. Companies also should establish a culture where reporting is celebrated and embraced.

➤ **What are the fraud scheme archetypes we should know?**

I differentiate between the intentional, the accidental and the righteous perpetrator. Intentional perpetrators are the Bernard Madoffs of the world. We see them in movies and tend to not identify with them. The accidental

**Kelly Richmond Pope** is a professor of forensic accounting at DePaul University in Chicago and the author of *Fool Me Once: Scams, Stories, and Secrets from the Trillion-Dollar Fraud Industry*.

and the righteous perpetrator could be amongst your employee population – or it could be you. I say that because the accidental perpetrator is the team player, the people pleaser. The righteous perpetrator is a little bit different, because they tend to be somebody that has reached a level of power and privilege within an organization and uses internal resources to help somebody outside of their company.

➤ **What are we up against with things like generative AI that are capable of creating material to trick people?**

Artificial intelligence allows a form of identity theft that we've never seen before. That means we have to update our toolkit quickly. I don't think we'll be able to detect fakes and lies with human eyes only going forward. We need to integrate algorithms into fraud investigation and the review of clients. ■

PHOTOS: KELLY RICHMOND POPE, NATASHA D'SOUZA, PELLE CASS, DENNISON BERTRAM

## A few of our contributors



**NATASHA D'SOUZA**

is a journalist, coach and speaker. Her insights on careers and entrepreneurship have been featured in *Fast Company* and *The Harvard Business Review*.

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**JÉRÔME SESSINI**

became a full member of Magnum Photos in 2016. After years working in conflict zones, he is now taking distance from current affairs in favor of more introspective stories.

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**PELLE CASS**

is a photographer from Brookline, Massachusetts. His work is held in a number of US museum collections and has been featured in publications including *The New York Times*, *Die Zeit*, *The Atlantic* and *The Economist*.

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### **Publisher**

Stefan Schaible  
(Global Managing Partner)

Roland Berger Holding GmbH & Co. KGaA  
Sederanger 1,  
80538 Munich  
+49 89 9230-0  
[rolandberger.com](http://rolandberger.com)

### **Head of Global Marketing & Communication**

Kerstin Hoppe

### **Creative Director**

Christine Brand

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### **Editor in Chief**

Neelima Mahajan  
[neelima.mahajan@rolandberger.com](mailto:neelima.mahajan@rolandberger.com)

### **Editorial Support**

David Born  
Emanuele Savettiere

### **Digital Team**

Daniela Rieder  
Dinh Lam Tran  
Gaia Bessone  
Nina Reetzke

*Axel Springer*  
Corporate Solutions

### **Project Managers**

Thuy Lan Mai  
Miriam Heintl

### **Editor**

Mark Espiner

### **Sub-editor**

Melissa Frost

### **Design Director**

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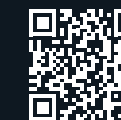
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TO PERFORMANCE,  
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*THERE IS NO MIDDLE  
GROUND.* OR YOU DO  
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