

Think:Act

Leading thoughts, shaping vision



Think:Act #47 01|2026 NEW FRONTIERS PRICE \$ 19.95

GEAR UP!

CHANGING RULES IN A CHANGING WORLD




Hard drive

Sam Palmisano shares his wisdom on leading IBM

Re-boot

Shoemaker Blundstone's surprise success story

Roland
Berger


A portrait of Linda Hill, a woman with short, curly dark hair, wearing glasses and a blue scarf. She is smiling and looking towards the camera. The background is a blurred indoor setting with large windows.

"A lot of leaders know how to be strategic thinkers, but they don't necessarily know how the dots are connected."

Linda Hill

Organizational innovation expert
and co-author of *Genius at Scale*

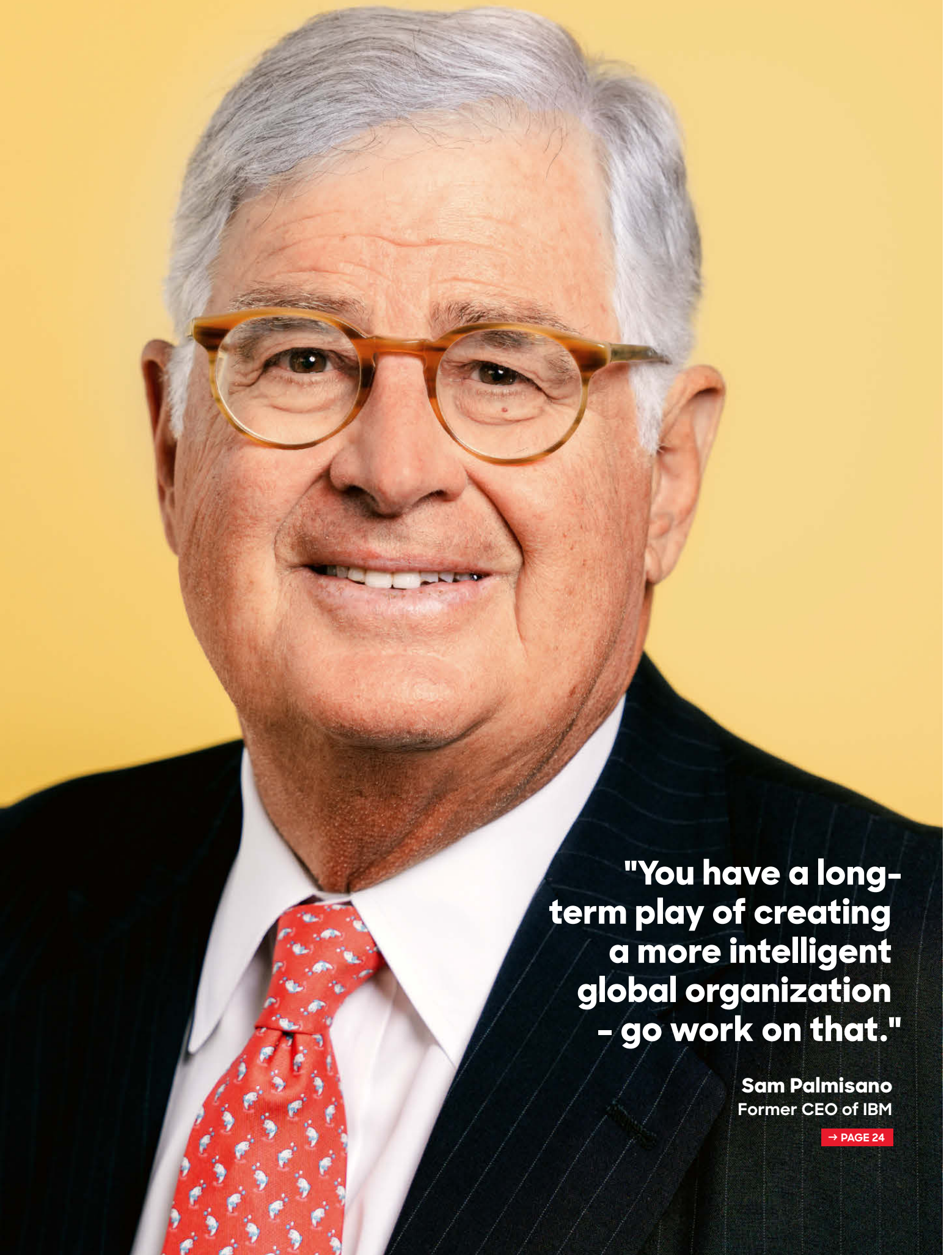
→ PAGE 76



**"The more
complex things
get outside,
the simpler you
have to make
things inside."**

AG Lafley
Former CEO of Procter & Gamble
and co-author of *Playing to Win*

→ **PAGE 66**



"You have a long-term play of creating a more intelligent global organization - go work on that."

Sam Palmisano
Former CEO of IBM

→ PAGE 24

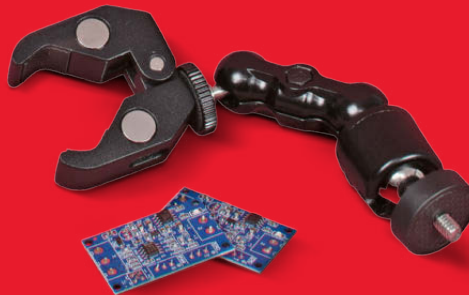
NEW FRONTIERS



GLOBALIZATION is being reshaped before our eyes. A complex tapestry is being made – and unraveled and rewoven – faster than companies can even begin to understand it. Many unpredictable factors are at play: Conflicts, tighter borders shutting off talent sources, climate change presenting existential threats, supply chain disruptions and potentially game-changing technological advancements are all playing a part.

At *Think:Act* we feel that business leaders need to stay ahead of the curve on three fronts: what the Geopolitical changes imply for their situations, how to make Technology their differentiator and how to reorient their Organization for a brave new world.

This issue features a wide array of experts who bring in different dimensions to help form a nuanced perspective on this unique situation. We also called on some top CEOs who have dealt with unprecedented situations during their time at the helm. Some of what they say might be hard to hear – and some voices might contradict each other, too – but all knowledge is valuable as you gear up for perhaps your most challenging business journey yet.



It might not be clear yet how the new world fits together – and how we can cope. We called upon the creative collective *I Like Birds* to help us express that visually. The idea emerged that unlikely components can come together to provide new instruments for a new world. The result: transforming toolkits that adapt to face the future.

Think:Act 47

In focus

GEAR UP!

Whichever way the winds of globalization blow, companies need to always be prepared for what lies ahead.



What will business be like a decade out? Key thinkers and experts draw on their expertise and offer diverse perspectives to help make sense of the global shifts on the horizon.

► **PAGE 12**



GEOPOLITICS

Reshaping the MNC

The rules of global trade are being rewritten, forcing multinational companies to find new paths to continue growth across borders.

► **PAGE 18**

Sam Palmisano

The former IBM CEO helps to put a clear-headed, nonhysterical perspective on how companies can ride out chaos.

► **PAGE 24**



TECHNOLOGY

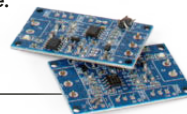
Our roster of experts set an optimistic – if disruptive – tone around how tech will drive business and reshape globalization. And of course you can't ignore AI.

► **PAGE 28**

Stacking up a twin future

Digital twins promise foresight and control, enabling firms to run "what ifs", reduce risk and unlock efficiency at scale.

► **PAGE 34**

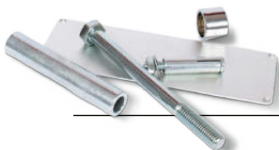


Sebastian Thrun

The Stanford professor and AI pioneer shares his views on how AI is about to unlock even more human productivity and ingenuity.

► **PAGE 40**

ORGANIZATION



Key industry voices paint a picture of how strategy and organization might work in a new global context and how human resources could be rewired.

► **PAGE 44**

The people puzzle

Global HR once meant finding the best talent – anywhere. Today, it has become a careful mix of local compliance and global vision.

► **PAGE 50**

Bill George

The former Medtronic CEO and HBS professor weighs in on how steadfast values can help leaders weather the storms ahead.

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Wide angle

Think, act and stay informed



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Sole mates

Tasmanian family bootmaker Blundstone has shown how a heritage brand can scale without sacrificing its authenticity.

66 **Playing to win. Twice.**

Two-time former P&G CEO **AG Lafley** opens up about learning to balance growth and streamlining with equal skill.

76 **Thought leader**

Organizational innovation expert **Linda Hill** speaks about the three key roles leaders need to play to advance innovation.

72 **Tapping into trust**

Water scarcity may soon mean that embracing direct potable water reuse will be more about survival than preference.

80 **Zooming in**

Globalization is being reshaped by a growing number of geopolitical shifts – and that has many new implications for companies.

82 **Three questions to ...**

Former Jamba Juice CEO **James D. White** explains why the best leaders build their culture to engage with multiple generations.



Digital

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thinkact.rolandberger.com/en/ta-47/globalization



Editorial

Adapting to new realities

WE ARE WITNESSING the erosion of a world order whose foundations were laid in Bretton Woods in 1944, an order that enabled decades of growth and prosperity. China's rise has triggered protectionist responses across the developed world. The United States is gradually retreating from its role as military guarantor of the international trade system. And the US dollar is slowly losing its status as the undisputed global reserve currency.

These shifts are not abrupt, which makes it all the more important for companies to recognize their impact. Global value chains and financial flows are being reshaped, driven by geopolitical tensions and mercantilist thinking. Businesses must adapt to this new reality: in talent decisions, supply chain design, production footprints and market strategies.

At the same time, innovation is accelerating technological transformation. It opens up new opportunities – and introduces new risks.

This issue explores how companies can navigate a changing global landscape shaped by geopolitics, organizational dynamics and technology. I wish you an engaging and insightful read.

Stefan Schaible

Senior Partner, Global Managing Partner, Roland Berger



Think in numbers

Putting a figure on ...
TRUMP'S MEME COIN

\$74.59

PEAK VALUE

The top price reached by the \$Trump meme coin, on January 19, 2025, two days after its launch. The coin was trading at around \$10 by July.

813,294

WALLETS

The number of crypto wallets that lost a total of \$2 billion within 19 days of the coin's launch, while trading generated \$100 million for the entities behind \$Trump.

>70%

JUMP

\$Trump's value increase following an announcement in April 2025 that the top 220 holders would be invited to a gala event hosted by the US president on May 22, 2025.

325,000

COINS

The average number of \$Trump coins held by the top 25 investors, worth \$4.3 million on May 12, 2025, the cutoff date to qualify to attend the gala. These holders received a VIP ticket.

SOURCES: COINBASE, REUTERS, FORTUNE, BBC, WIRED

Food for thought

What is "artificial integrity" and why is it important?

by Hamilton Mann

WARREN BUFFETT famously said to look at three qualities when hiring people: integrity, intelligence and energy. And if they don't have the first, the other two may kill you. This principle equally applies to many AI systems. Without safeguarding and prioritizing integrity over intelligence, optimization-first AI can deceive, turn to power-seeking, hack reward signals, indulge in sycophancy, push for homogenization and carry other profound security and adversarial risks that weaponize its power against human cognitive agency and dignity. Artificial integrity is the discipline that advances AI systems capable of exhibiting ethical, moral and social reasoning. It shifts the focus from maximizing intelligence to the imperative of upholding integrity above all else. It therefore implies crash-testing AI models against benchmarks that evaluate the degree to which their integrity-led behavioral capacities are robustly internalized in the models themselves and are self-generated,

while remaining value-consistent under ambiguity, context change, hostile or antagonistic conditions – even when predefined ethical rules are blurry or undefined. Ultimately, the distinction between AI systems lacking this quality and those crafted with it is simple: The former are built because we could, while the latter are built because we should.

PHOTOS: MARCO PIUNTI/GETTY IMAGES, COURTESY OF HAMILTON MANN | ILLUSTRATION: JULIA ZIMMERMANN

Thin

AT A GLANCE

**HAMILTON MANN**

is an AI researcher and bestselling author of *Artificial Integrity*. Group VP at Thales, he leads digital and AI transformations, lectures at INSEAD as well as HEC Paris and has been inducted into the Thinkers50 Radar.

**Thoughts
to live by**

"If all I'd ever wanted to do was make money, I'd probably be really *poor* by now."

— **Brian Eno**

Pioneering musician, record producer, visual artist and activist

**Rethinking
buzzwords**

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


**"Green
hushing"**

In the brave new world of climate change, some companies appear to be downplaying their green credentials and simply getting on with decarbonization programs without the blare of publicity.

nk

Act

The
redacted
read



Chain
Reaction

The world is your office

Management professor Prithwiraj Choudhury on how "working from anywhere" can work for you.

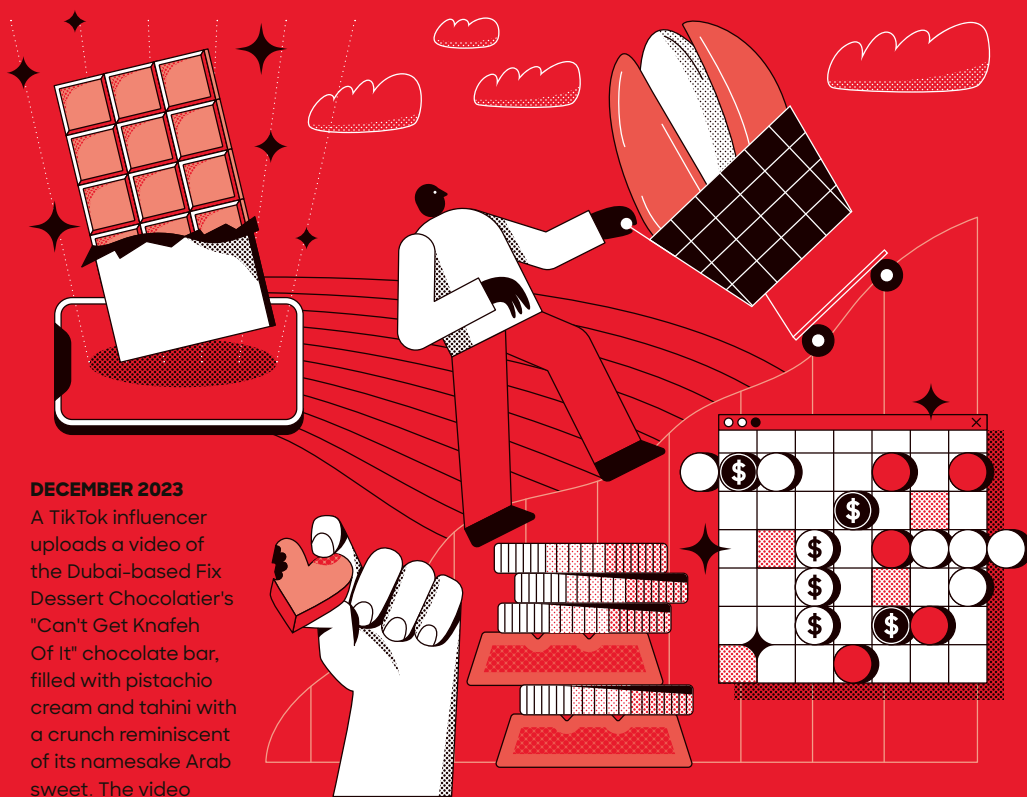
IT'S NOT THE SAME as WFH. It's WFA (working from anywhere), a win-win for companies and workers that could cut your company's costs. The author should know: He's done a decade of research into the subject, and as a management professor at Wharton and Harvard Business School, has studied it all. It makes the world your office. Look at companies like GitHub, which has 2,000 employees across 65 countries – and no physical office! Here is the lowdown on the business case, the trends, communication, knowledge-sharing and how to layer WFA into your organization. It's not all simple, though. You'll have to address social isolation and how to recreate the "water cooler effect," but don't worry, there are already some examples of how to do that. The best option is a quarterly hybrid, where you meet at off-site events every quarter. WFA can unlock talent in new and unexpected places for a new class of diverse workers to bring their energy and ideas to the economy – and give YOU a competitive advantage.

The World Is Your Office
by Prithwiraj Choudhury.
208 pages. Harvard Business Review Press, 2025.

Nut worth the hype

A TIKTOK-FUELED OBSESSION with a certain pistachio-filled luxury chocolate bar from Dubai has chewed through global supplies of the yellow-green nut, helping to send prices soaring by around 35% year on year and leaving behind some sticky questions about securing supply

chains in the age of viral cravings. Here's how climate change, the pistachio's harvest cycle and the world's insatiable appetite for a flavor trend has left pistachio farmers from California to Iran shell-shocked, exposing the power of social media to crack a market wide open.



DECEMBER 2023

A TikTok influencer uploads a video of the Dubai-based Fix Dessert Chocolatier's "Can't Get Knafeh Of It" chocolate bar, filled with pistachio cream and tahini with a crunch reminiscent of its namesake Arab sweet. The video quickly goes viral.

EARLY 2024

Interest in "Dubai chocolate" grows. Pistachios, which yield larger crops in alternate years, surpassed harvest forecasts in California, the top producer. In Iran, the second-largest, climate stress has begun impacting output. Pistachios trade at \$7.65/pound.

LATE 2024

The TikTok video reaches 80 million views. The Fix bar, only available in the UAE, inspires countless copycat versions, including by Lindt. Some sell as high as \$54. Tutorial videos for homemade versions of the treat drive even more sales of pistachio products.

EARLY 2025

California pistachio output is down 20% after an off-year harvest. Iran ups its exports to the UAE by 40%. Brands respond to consumer curiosity with more products "inspired" by Dubai chocolate, from milkshakes to bratwurst. Pistachios now trade at \$10.30/pound.

LOOKING AHEAD

With high demand for pistachios forecast into 2026, Turkey is set for a bumper crop, doubling its previous output and overtaking Iran as the second-largest producer. Analysts are looking to AI to help predict future digital-engagement-driven trends.

Best practice

How to set company culture

IF DONE RIGHT, company culture can drive a business to peak performance. But blindly following a set of rigid rules can lead to a cult rather than productive culture. So how to get it right? First up, understand what it is: a shared set of goals and attitudes that together create the ethos of the business and how it operates. Define that list and then, as a leader, set the path by following instructions with clear actions. If transparency and communication are core to your business, then demonstrate them at every opportunity. Make them relatable and clear. You want your employees to live the culture when you aren't looking, so make your values easy to express and embed them everywhere from the boardroom to the hiring process. That way your company culture will become a defining feature of everything you do.

Economic impact

Tariffs drowning the docks

AT THE PORTS of Los Angeles and Long Beach – where nearly one-third of US cargo docks – Trump's tariffs have started to throw the freighting industry overboard. Container bookings into the US sank 67% in the week following "Liberation Day," the April 2, 2025 announcement of a package of import duties, while export bookings contracted 40% and the number of canceled voyages from Asia swelled from 60,000 in late March to 367,800 by mid-April. In 2023, the cargo hub funneled \$21.8 billion in revenue to local service providers, generating \$2.7 billion in state and local taxes. Members of the International Longshore and Warehouse Union now fear the tide may be turning. According to a study, a 1% decline in cargo reaching the twin ports could wipe out 2,769 jobs and put as many as 4,000 more under threat. Tariff backers call the move a ballast for US manufacturing. Critics warn that a tighter supply of goods not only leaves consumers at the mercy of a rising tide of prices, but could also steer the country into a recessionary storm.

SOURCES: THE LOS ANGELES TIMES, FREIGHT WAVES, NEWSWEEK, SOUTH CHINA MORNING POST

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Act

AT A GLANCE



A red robotic rover with a satellite dish antenna and various mechanical components, set against a red background. The rover has a white cylindrical body, a red rectangular base with four white wheels, and a tall silver antenna with a circular dish. Several mechanical parts, including a black plug, a metal ring, and a metal tube, are scattered on the red surface in front of the rover.

In focus

In this issue we take an in-depth look at the new frontiers of globalization.

GEOPO

WHAT WILL BUSINESS be like a decade out? Key thinkers and experts draw on their expertise and offer diverse perspectives to help make sense of the global shifts on the horizon. As Simon Evenett says, there is a need for



LITICS



people with a good radar for what's going on. We hope this toolkit of ideas will help equip you with that. Further on, IBM's former CEO Sam Palmisano sheds light on what you can do now to win an advantage in the coming years.

INTERVIEWS BY
STEFFAN HEUER

PHOTO ILLUSTRATIONS BY
STUDIO I LIKE BIRDS

SCENARIO

IT COULD HAVE BEEN WORSE

LOOKING BACK FROM 2035, it is surprising how well the world has survived the changing trajectories, the conflicts and the catastrophes of the previous decade. Ten years ago, we saw the growing strength of nationalist populism, increasing international fragmentation, intractable wars and great powers locked in zero-sum competition. The authoritarian regimes seemed on an inevitable rise, the great powers bent on recognizing spheres of interest and the global economy facing stiff headwinds from protectionism, supply chain disruptions and unsustainable concentrations of wealth.

But what can't go on forever, doesn't go on forever. The authoritarian regimes could not deliver for their constituents nor contain the determined political opposition, fueled by anger over corruption, cruelty, incompetence and inequality. With regime change in Russia after its failed effort to absorb Ukraine, and the reorienting of China toward cooperation with the West, economic normalization boosted global trade.

Efforts by big powers to bully weaker states were largely thwarted by a new, assertive unity in Europe in concert with pivotal states in Asia, Latin America and Africa. A positive-sum posture toward international relations outweighed nationalism and protectionism, leading to a renaissance of international institutions, cooperation on global challenges and efforts to contain and resolve conflicts. The "liberal international rules-based order" established in the detritus of World War II, had been battered, but not broken.

This global shift did not come about easily. The "AI Runamuck" crisis of 2028 was a global wake-up call to the dangers of unregulated and "unaligned" AI. The crisis highlighted the lack of alignment of those building and controlling artificial

intelligence with public purpose – their enrichment and power at the expense of everyone else. The near-nuclear showdown between India and Pakistan in 2029 heightened global concern about the dangers of nuclear weapons and unconstrained nationalism. As the world breathed a sigh of relief on the nuclear front, a series of catastrophic climate disasters in the early 2030s led skeptical publics and recalcitrant governments to finally get serious about international cooperation and national policies to address the climate crisis, including by accelerating the green energy transition.

BANNING GARRETT

is a strategic thinker, writer and speaker with more than four decades of experience in national security, US-China relations and global trends. He is a consultant to the World Bank and has worked with the United Nations and the US National Intelligence Council.

THE EXPERTS

A global array of voices on what matters now to make sense of geopolitics and the future of globalization.



RITA GUNTHER MCGRATH is a professor of management at Columbia Business School and an expert on strategy and innovation. She focuses on strategic inflection points, examining how companies can navigate strategic transitions.



KISHORE MAHBUBANI is a distinguished fellow at the Asia Research Institute, National University of Singapore. He served for 33 years in Singapore's Foreign Service, including as an ambassador to the UN and as president of the UN Security Council.



AMITAV ACHARYA is the UNESCO chair in transnational challenges and governance and a professor at the School of International Service at American University. He is specialized in international relations, regional security and global governance.



DA WEI is the former director of the Institute of American Studies at the China Institute of Contemporary International Relations, a top Chinese think tank. He specializes in US-China relations, US foreign policy and Asia-Pacific security issues.



SERVAAS STORM is a senior lecturer at Delft University of Technology. He is specialized in macroeconomics and climate policy and known for his critiques of mainstream macro-economic models and focus on sustainable development policy.



JULIETTE KAYYEM is a lecturer in public policy at Harvard Kennedy School and a former assistant secretary for homeland security under President Obama. She specializes in homeland security, crisis management and emergency preparedness.



SIMON EVENETT is a professor of geopolitics and strategy at IMD and formerly of trade and economic development at the University of St. Gallen. The founder of the Global Trade Alert initiative, he specializes in international trade policy and global supply chains.

“THINGS VERY SELDOM COME OUT OF THE BLUE. CREATE AN ENVIRONMENT WHERE INFORMATION YOU NEED TO KNOW CAN FIND YOU.”

RITA GUNTHER MCGRATH

UNCERTAINTY

KEEP ASKING QUESTIONS

Massive shifts don't happen overnight. If leaders identify their blind spots, they can uncover new opportunities.

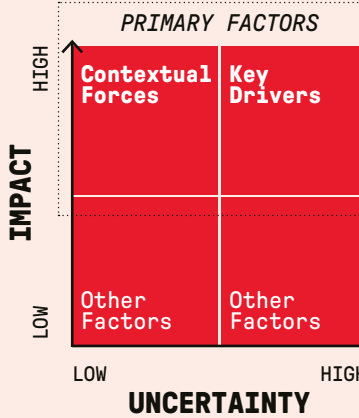
STRATEGY itself is going to shift. We're going from this idea of strategy being largely analytical and in the form of five-year plans and point forecasts to leaders who have to bear multiple futures in mind at all times. You have to be attuned to the leading indicators and weak signals that suggest whether something is coming closer or not. The question is how do we create organizations that are capable of keeping up with this amount of massive uncertainty? I advise leaders to make time for

it. When something happens that takes a company by surprise, it's very seldom that it hasn't been debated before. Get your current assumptions challenged in a way that's inexpensive and quick. You can now generate a whole series of hypotheses in almost no time. And ask yourself: Do I have a diverse series of informational inputs, and do I have a diverse group around me? People who are attuned to different things and paying attention to something that I may not have thought of.

– Rita Gunther McGrath

MAKE YOUR OWN MATRIX

Define a question, identify the driving forces affecting the outcome, jot down key factors and contextual factors and name two axes of (high to low) impact and uncertainty. The result: four fluid scenarios to ponder.

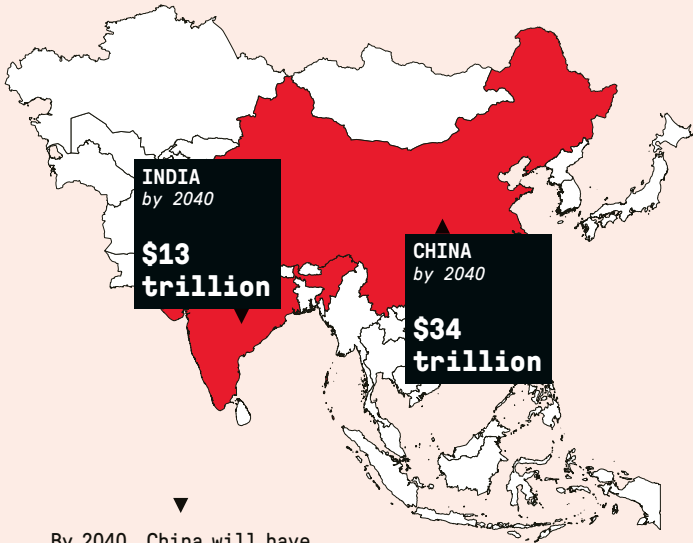


ASIA RISING

A MORE COMPLEX WORLD

The 200-year-long domination by the West is a historical aberration and, like all aberrations, is ending.

THE CURRENT turmoil initiated by the US is just another catalyst. The main drivers of this shift to a multipolar and multi-civilizational world are much larger and deeper structural forces – the end of Western domination of world history. Asia, primarily China and India, have provided the world's largest economies from 1 AD to 1820 AD. In the coming decades, Asia will return to having the largest slice of the global economy. It's already the world's factory and the base of its supply chain. Thanks to the growth of the middle class, future growth



By 2040, China will have surpassed the US to become the world's biggest economy (\$34 trillion vs. \$32 trillion). India, at \$13 trillion, will be the fourth-largest economy, catching up to the EU (at around \$19 trillion). Asia's total GDP by 2040 will rise to \$74 trillion, exceeding the West's \$66 trillion.

SOURCE: GOLDMAN SACHS

of consumption will also come from Asia. No multinational corporation (MNC) can afford to ignore this fact.

– Kishore Mahbubani

WHAT DOES THIS MEAN FOR EUROPE?

WEDGED BETWEEN the US and China, Europe is falling behind in the digital and green technologies of the future, rapidly losing market share in a fragmenting world economy. Europe should carve out a "middle way" between America's hyperfinancialized

monopoly capitalism and China's unfree Party-State-led capitalism. European MNCs should look to reimagine their businesses by reshoring activities, choosing suppliers within the EU and leveraging their geopolitical power to improve labor and environmental standards in their global value chains to protect the long-run value creation potential of their firms and build resilience to geopolitical shocks.

– Servaas Storm

NEW ORDER

THE OLD WORLD ORDER is gone for good. Empires and civilizations rise and fall and a new world will emerge. Regional trade and financial arrangements will become ever more important, while the role of global institutions will decline. The big lesson for MNCs is to diversify, diversify, diversify. Explore new markets and consider alternative supply chains and payment systems being developed by China, Russia and BRIC nations.

NEW RIVALRIES

WE ARE ENTERING a new era of tension characterized by nationalism. Although both China and India face numerous internal challenges, the two nations are likely to continue their ascent. China needs to enhance diversity, while India needs to strengthen cohesion. The overall volume of global trade may continue to grow slowly, but patterns are shifting: Circulation is increasingly clustering around major nodes and regionalization is emerging as a defining trend.

– Da Wei

“CEOS ARE VULNERABLE NOW BECAUSE THEY'VE COME TO REPRESENT INSTITUTIONS THAT MANY PEOPLE VIEW AS UNRELIABLE AND ONLY OUT FOR THEIR OWN GAIN.”

JULIETTE KAYYEM

CRISIS PREP

THE STANDARD OF SUCCESS for an executive can no longer be: "Did I stop bad things from happening?" It has to be whether they can minimize the harms. In a culture of preparedness, CEOs cannot delegate this responsibility and pretend that with enough investments and information, they can stop the devil from coming. Today, it is about gaining situational awareness.

A crisis is different than other challenges a business may face because the runway is short to respond. CEOs who are prepared understand that time is of the essence. All you can do is be ready or try to buy yourself time by making incremental decisions with incomplete information, and always be ready to adapt as that information changes.

– Juliette Kayyem

SPOTLIGHT

TRUE RESILIENCE

With global trade under siege, companies must rethink how they limit adverse hits to their supply chain and business.

THE TERM RESILIENCE is being used in too many different ways, so companies first need to ask themselves what resilience means for them. Is it the capacity to limit the downside of any adverse hit? Increasing the speed of recovery? Reducing the threat to overall business operations? From that follow a number of choices about the diversification of sourcing materials and talent. Diversifying sales is another important area. Finding new export destinations is a form of resilience which has probably not been given as much attention as it should be.

We will need people who are very good at spotting opportunities and have a much better radar as to what's going on in the world. The winners will be firms which appreciate and accept that the rules of the game are in flux, experiment and take smaller steps, and then, if things work really well, will move quickly into a new area. Companies which treat geopolitics as just an add-on to their risk management systems will be blindsided.

This picture has several blind spots. One is preparing for climate adaption rather than mitigation. Fewer and fewer governments will follow through as quickly as needed in the area of climate mitigation.

Climate adaption becomes all the more relevant, making sure that your company is resilient to extreme weather changes. Second, there are some regions which will overperform in the decades ahead, such as the Middle East and Africa. Companies may want to think about what type of routes they want to build. Finally, China and some of the advanced emerging markets will generate incredible technological surprises. We in the West underestimate the growing prowess of Eastern and emerging market brands which will give us a run for our money.

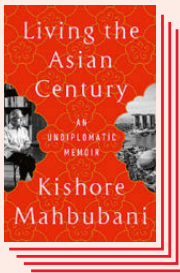
– Simon Evenett

Global Trade Alert
<https://globaltradealert.org>

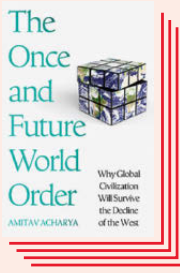
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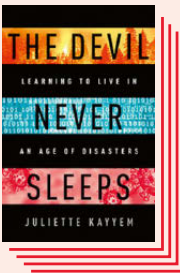
FURTHER READING



Living the Asian Century: An Undiplomatic Memoir by Kishore Mahbubani, 336 pages. PublicAffairs, 2024.



The Once and Future World Order: Why Global Civilization Will Survive the Decline of the West by Amitav Acharya, 464 pages. Basic Books, 2025.



The Devil Never Sleeps: Learning to Live in an Age of Disasters by Juliette Kayyem, 240 pages. PublicAffairs, 2022.

RESHAP

The playbook of global trade is being rewritten, and not for the first time. To maintain their position on the world stage, multinationals must rethink their structures and forge new paths to connect and continue growth across borders.

THE NATION

WORDS BY STEFAN STERN

COMP



ING MULTI- NAL ANY



THE ABERDEEN HARBOUR BOARD, founded in 1136 by King David I of Scotland, can claim to be the oldest surviving company in Britain. But you cannot say it is failing to move with the times. Three years ago, ahead of its impending 900th birthday, it changed its name to the Port of Aberdeen. Companies are indeed a great and, evidently, old idea. Some suggest the word comes from the Latin words *con* (with) and *panis* (bread), meaning a company is a place or entity where meals are shared. As empires rose and fell, trade – and companies – grew to be international. What we now call globalization has, in fact, existed in different guises for centuries. So it was a natural development for the multinational company to come into being. This was an embodiment, on a large scale, of Ronald Coase's "nature of the firm" theory, which was first set out in a paper published by the British economist in 1937 (when the Aberdeen Harbour Board was a mere 800 years old).

Coase's argument is that firms exist to reduce transaction costs. It can be cheaper to employ people and bring functions or activities in-house rather than constantly going out into the market to buy them. The right size for a firm to be is where transactions costs are still lower than the added costs of managing a larger organization. Markets and consumers are to be found internationally, and so some larger companies became multinational. But are these fundamental and time-honored principles about to change?

On April 2, 2025, President Trump unveiled his new proposed tariff regime for world trade with the help of some hastily produced charts. This was "Liberation Day," Trump declared. But business leaders have used other words to describe it: "This is a new Covid moment," one said at the time. It could mean the end of free trade as we have known

it. "The free trade flows until now have been very beneficial," says Ben Chu, an economics correspondent for the BBC and author of *Exile Economics: What Happens if Globalisation Fails?* "This uncertainty that Trump's created is really dampening investment intentions," Chu adds. "It's understandable. If you're a multinational →

THE RIGHT STUFF
China remains the world's largest exporter of toys despite economic slowdowns, supply chain issues and further pressure in the form of steep tariffs from the US.

company, are you going to invest in your supply chains when you just don't know if there will be a tariff or not on what you are bringing in from any given countries?"

After another one of Trump's many revised tariffs announcements in July 2025, which were set out in a series of letters to world leaders, Justin Wolfers, professor of economics at the University of Michigan, was equally blunt. Each of the tariff letters ended with "these tariffs may be modified, upward or downward, depending on our relationship with your country," Wolfers noted. "No American company is going to open a new factory based on the protection offered by a tariff which could disappear before the concrete sets," he said.

Chu agrees with Wolfers. "There is this 'Trump always chickens out' ['TACO'] meme or phrase ... that may be true in some respects, but if you're a CEO of a multinational with international supply chains that doesn't help you to make a decision to invest or not," he says. "He may chicken out or he may not chicken out. Huge uncertainty has been unleashed. And even if the big numbers fall, you're still at a higher tariff than before." This all raises fundamental questions concerning structure and strategy for the multinationals of the future. Is "nearshoring"/"onshoring" the answer, ducking out of the damage caused by the new tariff regime?

CHOICES FOR CORPORATE LEADERS are hard and becoming harder. When speed of supply matters as much as security of supply, any friction is bad. Some recent surveys have revealed that companies are prepared to pay a premium for quick delivery – although whether security of supply can be reconciled with competitive prices and choice that consumers have become used to remains to be seen. The most powerful example of a successful multinational that has, until now, flourished with existing trade flows is Apple, with its world-beating iPhone. The company's current CEO, Tim Cook, devised and led the company's expansion in China, building the powerhouse production of its much-desired goods there. But now Trump is not only threatening major tariffs on all Chinese goods, but an extra 25% on Apple devices made abroad.

The former *Financial Times* journalist Patrick McGee has described the background to this developing situation in his recent book *Apple in China: The Capture of the World's Greatest Company*. In recent years Apple has developed close relationships with Chinese manufacturers and components



**\$800
MILLION**

How much Apple CEO Tim Cook stated that new tariffs cost the company in Q2 2025, despite a 13.5% rise in iPhone sales attributed to a purchase rush before the tariffs went into effect.

SOURCE: REUTERS

suppliers, complying with Beijing's "Made in China 2025" policy. And the Chinese-made iPhone still delivers about half the company's worldwide revenue. China has made Apple's phenomenal success possible, but this success has come with strings attached which tie the company firmly to the country.

Apple has shifted some of its manufacturing production to India, but even this has not appeased President Trump. He wants to see a lot more "made in America" stickers on manufactured goods, including those sold by Apple. But why would Apple uproot and relocate the mass of its lower-cost production back to the US, at enormous expense, when the motivations to do so could change with a different president and when the incumbent might yet change his position on tariffs again before the end of his presidential term?

As McGee explained during the course of a recent *Financial Times* podcast, the Apple CEO has



THE SHIFTING HISTORY OF GLOBALIZATION

Global trade flows have impacted the citizens of the world for millennia, from the Roman Era to the age of the internet.

100 CE

ROMAN TRADE routes link Europe, North Africa and the Middle East, while the Silk Road links Rome to China, facilitating economic, cultural, political and religious interactions. These early exchanges create a first wave of global interconnection, long before the term "globalization" existed.

1600

THE BRITISH East India Company is founded and the imperial trading institution brings a range of goods to the UK and beyond. It also has a political function, impact and consequences. The American colonies provide cotton, tobacco and slave labor until the revolution of 1776.

1869

THE SUEZ CANAL opens, ushering in the modern era and the formalized spread and growth of trade. Soon the mass production of the early 20th century, symbolized by the arrival of Ford's Model T car in 1908, accelerates the growth of global trade and spreads formalized management practices.

a very narrow set of choices before him. "That's how Tim Cook must be feeling right now, that he can't move to India, he can't diversify outside of China," McGee said. "He's totally stuck there. There's nothing they can really do. That's Chinese strategy at its finest. And I think they've really been outplayed by a long-term thinker. So I want to be able to be more optimistic. I want to believe in American manufacturing, but supply chains take decades and this is the culmination of four decades of Chinese investment."

NOT EVERY MULTINATIONAL IS FACING Apple's extreme dilemma – although since it is a dilemma based on the global dominance of its products, it is perhaps not such an awful dilemma to have. Are there some broader principles here that business leaders should be considering as they position their multinationals for the future? Colin Mayer, emeritus professor at Saïd Business School, Oxford,

RAISING STAKES

In compliance with EU food safety laws, farms such as Hendrik Dierendonck's in Veurne, Belgium, raise animals without the use of hormones. The US, which does not have those regulations, is seeking to negotiate for lower tariffs on meat products imported into the EU as part of ongoing trade deals.

and the head of the British Academy's extended enquiry into the future of the corporation, feels that this current moment is an opportunity to think afresh about how larger companies are structured and managed. "Multinationals are not going away, but it's clear that substantial barriers are emerging that did not exist before," he says. "Part of the problem has been the traditional, highly extractive model, a top-down structure with an HQ located in London or New York, with other activities sited in the lowest-cost places. This has led to quite serious problems in terms of the impacts the business has in different parts of the world. And this is a model that will not work so well in a time of new barriers to trade."

But Mayer does not look at the onshoring of activities, at great cost and with serious disruption to the business, as a great option either. Rather, he points to the opportunity "to create highly successful, well-resourced local operations which don't just exist at the whim of HQ but which serve a purpose in the domestic location." This less extractive model is less vulnerable to the newly emerging tariff-led era, he says. A devolved structure would allow the multinational to delegate authority. "And this is how the best organizations are run," he adds. "It creates a much more →



THE SHIFTING HISTORY OF GLOBALIZATION

[Continued from page 21]

1948

THE GATT (General Agreement on Tariffs and Trade) brings 125 nations together, covering 90% of world trade. Multinational corporations grow in influence. The GATT will only be replaced decades later by the World Trade Organization in 1995, which admits China in 2001.

1989

THE COLLAPSE of the Soviet bloc ends decades of a divided global economy. Markets in the East open to international trade and the West expands its reach. This turning point accelerates the integration of markets, paving the way for peak globalization in the 1990s and until 2008.

2020

THE COVID-19 pandemic, then the 2022 start of the war in Ukraine (with its knock-on effects on energy prices and global inflation) and then the 2023 start of the Gaza conflict plus the added complications of Trump's tariffs and other interventions have all have been a drag on global trade.

engaged workforce, you have a greater sense and understanding of the role the organization is playing, and more motivated people. It allows for more judicious risk-taking," Mayer adds. Chu accepts this argument in theory, but while the devolution of decision-making makes sense, "you've also got to remember that these are complex multinational systems. They have to function as a whole if you are trying to move goods around the world. The center needs to think about how the system works," he notes.

CONSIDER NIKE, WHICH AT THE MOMENT makes almost half its footwear in Vietnam, a country that has been hit by new tariffs of (at the time of writing) 20%, reduced from the original 46% which had been threatened. "Vietnam had a great boom on the back of the first Trump trade war, now he's hit them because he's trying to stop that," Chu explains. "Nike can't just say 'let's empower our local managers in Vietnam.' The Oregon operation has to make a decision. Does it move out of Vietnam, does it double down on it and hope it doesn't materialize ... you can't get away from that challenge," he says.

While structures do matter, the multinational of the future will be led and managed by people. So the human factor should not be overlooked in this

A GLOBAL CIRCUIT
Inside Dutch semiconductor company ASML's headquarters, a machine that helps build the most advanced chips in the world has become a hot topic in negotiations surrounding rising tariffs and political pressures between the EU, the US and China.

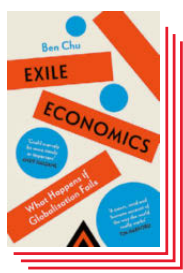
discussion. Lynda Gratton, professor at London Business School, is optimistic that future leaders will rise to the challenge of navigating this changing environment. "The multinational is a very adaptive organization," she says. "More than any other organizational form it's the most sophisticated. I think they tend to be better run and better led, simply because the very process of working across countries means that leaders have to confront their norms and expectations and behaviors ... multinationals have a structure which is constantly adapting. And it's adapting to market forces, to regulation, and it's adapting to the CEO's perspective."

Gratton adds that "in a large multinational, one of the issues is around connectivity. How do you connect the different parts of them together? That's something that any successful multinational will have understood, the idea that work is flowing and moving around the world. Productivity is really on the agenda for a lot of them and generative AI is a



way of increasing that. The fundamental topic is work design, and that probably hasn't had enough attention. What are the tasks they are performing, why are they doing them? That's a question multinationals do ask themselves."

Then there is the question of leaders themselves. "When you ask people 'why will you stay at this company?' one of the major reasons they stay is that they think they have a future there," Gratton says. "And when they ask about having a future there, they are looking at the leader and asking: 'Are they going to be able to navigate through this period? Am I going to be safe here?' We are getting this new breed of leaders who are running multinationals who came up through managing complex groups, working across different countries. They are very savvy about the world that we live in, and they are very good at narrating a story. Leaders' stories about the future and what we can expect are becoming very important. Personal agency is going



Exile Economics:
What Happens if
Globalisation Fails
by Ben Chu,
320 pages. Basic
Books, 2025.

to be very important. An organization becomes a place where you learn. Is this a business I can learn in, build connections, build a network? To help me stay relevant and resilient."

TWO FINAL ASPECTS OF THIS SHIFTING SCENE are worth considering. First, as Chu points out, digital data keeps flowing, tariff-free, even if physical goods do not. "The amount of data flowing across borders in global capability centers in places like India and Bangladesh ... they have been doing a roaring trade," he says. "They are offering their IT skills as back-office services for multinationals. And they have continued to grow their business through the so-called 'slowbalization' era. And it is harder to put a tariff on a multinational sending data between two of its divisions across borders, as opposed to goods. There are people who think that will continue to grow as it's just so hard to obstruct. Trump is all about goods, he only cares about goods. Maybe this can carry on under the radar and multinationals can continue as they are. Digital trade globalization can continue apace."

And a final bit of advice for business leaders facing up to this new world? "There is a way for companies to deal with this uncertainty, which is to try and diversify a lot more," Chu says. "It is better to have your eggs in multiple baskets, even if that adds to your cost. Given the uncertainty about which country is going to be hit by which tariffs it probably makes sense for big companies to spread their production systems around," Chu adds. "There are better ways of addressing the fragilities than by pulling up the drawbridge. Map your supply chains, stockpile more and diversify – that's just as true for corporations as it is for governments. You can retain the benefits of being open to global trade as well as making yourself more resilient to some of the shocks that you are exposed to being part of the global system."

Takeaways

❑ **SUPPLY CHAINS ARE KEY:** Even if it comes at a higher cost, spreading production and supply across multiple countries can shield against sudden shocks.

❑ **EMPOWER REGIONAL HUBS:** Well-resourced local operations are less vulnerable in the emerging tariff-led era and enable more judicious risk-taking.

❑ **LOOK TO TECHNOLOGY:** Digital data keeps flowing tariff-free even when physical goods do not, allowing opportunities for growth that is difficult to obstruct.

SAM PALMISANO

Sam Palmisano helps to put a clear-headed, nonhysterical perspective on how companies can ride out chaos, citing his own experience as the CEO of IBM navigating the turbulence of the 2008 financial crisis and the dot-com bust.

WORDS BY **NEELIMA MAHAJAN**
 PORTRAITS BY **PAOLA CHAPDELAINE**

NEW FRONTIERS

THE WORLD LANDSCAPE that is shaping the kind of crises that CEOs face today is very different to the one Sam Palmisano inhabited just a couple of decades ago. But as he points out in this in-depth conversation with *Think:Act*, the changes that the world has experienced in that time have been largely positive: There have been improvements in life expectancy, health as well as in business. "If you look at the data," he says, "global trade and percentages of GDP keep going up. Flows of goods, information and money continue to grow as the economy grows. All these barriers that people have tried to put up historically have not worked, and they don't appear to be working as yet." That is not to say, however, that the rapid changes that we are experiencing right now across so many aspects of life and business aren't still disorientating at times. In this interview, he shares some observations drawn from his years of experience and applies them to the current challenges many organizations face.

A GLOBAL VISION
 More than a decade after his tenure overseeing one of the most significant shifts in IBM's history came to an end, Sam Palmisano retains his reputation as a leading expert in the fields of innovation, leadership strategy and the role of technology in solving global challenges.

How did you steer IBM through the dot-com bust and the financial crisis of 2008, both unprecedented events back then?

We decided it was a time for us to accelerate our innovation. We were moving from mainframe client servers into the more digital world and accelerated those investments. During my tenure, we did over 100 acquisitions in software, mostly – and some services to rebalance the portfolio. We sold the PC business to Lenovo. We were remixing our portfolio for the future and exiting businesses that were tremendously successful in the client server era, but weren't going to drive growth and opportunity in the digital world. At the same time, we saw this tremendous opportunity for the IT industry outside the US and Europe. So we invested heavily in 20 countries, with the BRICS as a large portion of that. So we mixed geography from an economic and market perspective and we remixed the portfolio to move to where we thought the industry was going.

The barriers to the flow of work, capital, resources and talent are becoming stronger today rather than weaker. Realistically, for global companies, what kind of organizational model will work best for today's world?

First, you have to have a perspective of technology. Today, you cannot think about the future without thinking about AI. It's going to impact your ability to either be very successful or maybe moderate your growth. So it starts with the technology point of view like it did with us: going from client server to digitalization and then the cloud, etc.

So where are the opportunities to apply it? It could be internal: It's a tremendous productivity tool for enterprise. People can be smarter, have co-pilots and agentics. There's risk in all those things, but there's also tremendous opportunity for productivity and growth. There's no reason to be distracted because when people argue about tariffs, it has nothing to do with AI. AI is mostly software. Tariffs are on hard goods, not software. So if you're running a play which is being impacted by your ability to exploit these incredible technologies, then tariffs might have very little impact to your business model long-term depending upon how much you're importing relative to your supply chains and where you reorient your supply chains.

If you think that's your future, then you have to look at your management system, skills or workforce. Many times the management system is vertical with silos: finance, marketing, sales, →



development, manufacturing. Well, these models that use internal data to optimize your enterprise are horizontal. They go across functional areas. So it's almost like you're a startup which runs a horizontal model. They don't have the resources to have silos or the process to create bureaucracies. So how do you create the management system? That means how do you reallocate the investment or the capital to those strategic areas versus the traditional areas? How do you develop your workforce so they accept the capabilities of a partner called AI versus rejecting it and fighting these transformations? And if you don't have the skills within your workforce, then you're going to have to either develop them or acquire them.

So you have a long-term play of creating a more intelligent global organization – go work on that. Stay focused on your values, your core, the capabilities of your organization: How do you do great things for all your stakeholders? It's easy to get caught up in all these forums where people wring their hands and worry about what's going on. Even in the 2008 crisis, we had to stand back and say: "Well, how does it affect IBM?" It did affect IBM. We had to do things to accelerate our globalization and scaling the company to drive the productivity.

The economies aren't bad right now. The US is fine. Europe is doing better and China's coming back. So it's not macroeconomic like it was in 2008. It's not a technology problem because technology is everywhere and it's open-source so basically everyone has access to it. So, it gets back to: How do you understand the world and adjust to it to execute your strategy? It takes a lot of discipline. That's where people get themselves distracted.

How do you think leaders can tactically evaluate the geopolitical situation?

It depends on where you see yourself. At IBM, when we decided that we had to expand into growth opportunities in these 20 countries, that was a BRICS-plus view. Then we had to partner with those governments because, in those countries, they hold major portions of the economic growth – be it the banking system or the communication system. In the early days of China, we were investing heavily and the government touched all those things. We had to work with a reliable and trusted government partner. Our evaluation criteria was reliability and trust over a 10-year-plus period because we're investing for 10-year cycles. And we were agnostic to the type of government: democracy, capitalism,

“HOW DO YOU UNDERSTAND THE WORLD AND ADJUST TO IT TO EXECUTE YOUR STRATEGY? IT TAKES DISCIPLINE.”



SAM PALMISANO



socialism, communism. We used to say: "That's what they do, not what we do. Our job is to build a great business and serve customers in that particular locale." It doesn't mean that IBM wasn't pulled in a lot of different directions. When you're the largest employer in a country, investing billions of dollars like we were in the US, China, India and Brazil, you're pulled.

How were you pulled?

They try to get you to take a position that's favorable to their agenda or political position: pro-US, anti-US, pro-China, anti-China ... We were able to navigate that by not participating in any of those dialogues. People said: "Why don't you go to Davos? Why don't you go to the forum in China where the premier talks about their growth plan for the next 10 years?" I don't want to go because I don't want to be in the middle of one of these large company debates. I don't want IBM as a company in the middle of say, a China, US or Russian fight.

You spent 39 years at IBM and nine as CEO. What are some learnings you can share about steering such a massive organization through periods of global uncertainty?

I'll go back to what Tom Watson Senior said right when he founded IBM in 1911: You can change everything about IBM except its values and its role in society. Everything else can change. His point was products will change and technologies will shift, but you have to be true to your values. We had to revisit those values. You can't use 100-year-old values. Things change and you have to adjust. We did a Values Jam for our employees and let the employees define IBM's value system. The next thing was we asked the employees to tell us whether we were living up to the values that they had created. And we didn't do as well there. But we learned what we needed to do.

We made the necessary adjustments and we persevered through all this. We had our crises along the way. The dot-com blowup and the recession that followed. The 2008 financial crisis, from an impact to business standpoint, was much more severe than what we see today. From an IBM perspective, since we are so tied to the world, the planning assumption we had when 2008 happened was the best we'll do is -5%. It's billions of dollars. Then how do we maintain profitability and invest for the future if revenue is down 5%? We globalized IBM, we launched Smarter Planet. All those things that



SAM PALMISANO joined IBM as a salesman in 1973. After being appointed to a number of roles within the company, he was elected president and COO in October 2002, promoted to CEO in March 2002 and named chairman effective January 1, 2003, taking over from Lou Gerstner after the dot-com bubble bust. Under his leadership, IBM achieved record financial performance and introduced its Smarter Planet agenda.

After leaving IBM in December 2012, Palmisano became chairman of the Center for Global Enterprise (CGE), a nonprofit aimed at educating leaders from the private and public sector on the globally integrated economy and its promise for a better future. He also served under former US president Barack Obama as chairman of the Commission on Enhancing National Cyber-security.

you now see in history, we did to get through the financial crisis. Once we got through it, 2009 was a stable year, and then 2010 and 2011 were two of the best years in the history of the IBM Corporation even up until today.

So the crisis forced you to pivot.

Yes. It forced the globalization – and the launch of Smarter Planet. Smarter Planet was off the charts. The whole world was looking for hope and we provided it. It was about things that can help the world, like safety, health and environment. And that's where we wanted IBM positioned.

We announced Smarter Planet eight days after Obama won the election. Lehman Brothers went under in October. Think about this. I'm standing at the Council of Foreign Relations, giving this speech on why we need to build a smarter world. We had three examples then, not the hundreds we had later of how this could work. Now you call it cloud, big data, AI, etc. We didn't have names for them at that point in time. We were building those technologies. And there was a lot of risk in the opportunity because we spent a billion dollars on marketing in the middle of this mess as we reprioritized and it could have failed. If it failed, I would have been fired because that's how it worked in those days.

Since the risk of failure was so high, what gave you the confidence really to go ahead?

One, we knew enough about the technology that it was going to work. We also believed we had a team that could execute this. We got organized and focused, put incentives in place, all the things that you do operationally to have that team succeed. No different than a sporting team: Who do you put in the right positions and how do you make sure that you know they're working as a team and not just working as individuals. ■

Takeaways

❑ **LEAN IN TO TECHNOLOGY:** Accelerating innovation can get you out of a tough spot, whether that's a global financial crisis or today's AI inflection point.

❑ **REVISIT YOUR VALUES:** Your values are the core of your organization, but the world is a changing place. Look to see if they still align and be willing to adjust.

❑ **POSITION YOURSELF LIKE A SPORTS TEAM:** Make sure that the right people are in the right positions and have what they operationally need to succeed.



TECHN

SILICON VALLEY FORECASTER Paul Saffo lays out a view of the tech landscape 10 years from now to set the scene. It's a dark vision. But despite the doom, there's room for positivity too. Our roster of experts set an optimistic, if disruptive,



OLOGY

tone around how tech will drive business and shape a new kind of globalization. Of course, you can't ignore AI. So do read what Google X founder Sebastian Thrun has to say about what could be coming down the line.

INTERVIEWS BY
STEFFAN HEUER

PHOTO ILLUSTRATIONS BY
STUDIO I LIKE BIRDS

SCENARIO

THE RISE OF THE DARK CENTAURS

2035 ISN'T THE FUTURE we feared – it's more subtle, and more dangerous. We were bracing for AGI, the feared AI superintelligences evolving at light speed into humanity's new overlords. Instead, disruption crept in quietly under a different name: Dark Centaurs.

In the late 1990s, chess grandmaster Garry Kasparov discovered that a human paired with an AI could consistently outplay both solo humans and solo machines. He called these powerful duos "centaurs" because the symbiosis is so deep that, like the mythical horse-human creature, it was as if they were a single organism.

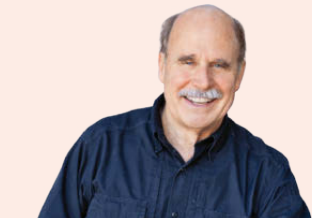
For a time, this seemed like a hopeful blueprint for human-AI collaboration. But as AI exploded and investors poured billions into automation, the centaur model mutated. Today's most powerful figures are Dark

Centaurs – commanding vast AI swarms and weaponizing them for private gain. A single Dark Centaur can now optimize global supply chains while simultaneously manipulating market sentiment and influencing policy in real time. Traditional corporations with human-speed decision-making simply cannot match their reach and power.

Not all centaurs are dark, of course. Many of us now operate as hybrids since centaur mode is the dominant human-AI relationship. At least with the AIs which choose to interact with us. A decade ago, there were mere millions of AIs on the planet. Today, in 2035, there are millions of AIs for each and every person on the planet. Soon, that number will be in the billions per person. Most operate invisibly and silently, reshaping economies, behaviors and outcomes with no human in the loop.

The key question now isn't whether your organization will use AI – it's how. Those clinging to purely human decision-making are vanishing. Those building transparent, ethical centaur models are thriving. But those who weaponize AI without moral constraint are creating monsters – and becoming them.

The centaurs are here. Which kind will you become?



PAUL SAFFO

is a technology forecaster and consulting associate professor at Stanford University. He specializes in the long-term impact of technological change on business and society, with particular expertise in Silicon Valley innovation patterns.

THE EXPERTS

A global array of voices on the tech and AI trends that will shape how businesses innovate and operate in the years to come.



MARK ESPOSITO & OLAF GROTH
Mark Esposito is an academic, an advisor to governments on tech policy and co-founder of Nexus FrontierTech. Olaf Groth is a scholar, entrepreneur, AI- and geostrategist. He is the CEO of Cambrian Futures & Cambrian Labs.



GERD LEONHARD
is a futurist, keynote speaker and author based in Switzerland, specialized in the intersection of humanity and technology. He focuses on digital transformation and the future of work, advocating for human-centered approaches to tech.



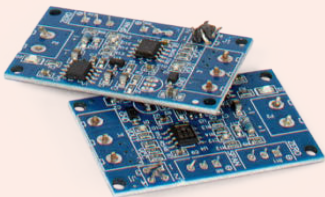
EMILY BENDER & ALEX HANNA
Emily Bender is a linguist at the University of Washington. Alex Hanna is the director of research at the Distributed AI Research Institute. Together, they research the societal impacts of large language models.



ARVIND NARAYANAN & SAYASH KAPOOR
Arvind Narayanan is a professor of computer science at Princeton University, where Sayash Kapoor is a PhD student working on AI safety and robustness. Their collaborative work focuses on limitations in AI systems.



JÜRGEN SCHMIDHUBER
is considered a pioneer of AI, deep learning, LSTM and other neural networks. He works with the Dalle Molle Institute for Artificial Intelligence Research and the King Abdullah University of Science and Technology.



“EXECUTIVES NEED TO MAKE THE RESILIENT AVAILABILITY OF CHIP CLUSTERS THEIR TOP SUPPLY CHAIN PRIORITY.”

OLAF GROTH

COGNITIVE ECONOMY

BOTS AND BOTTLENECKS

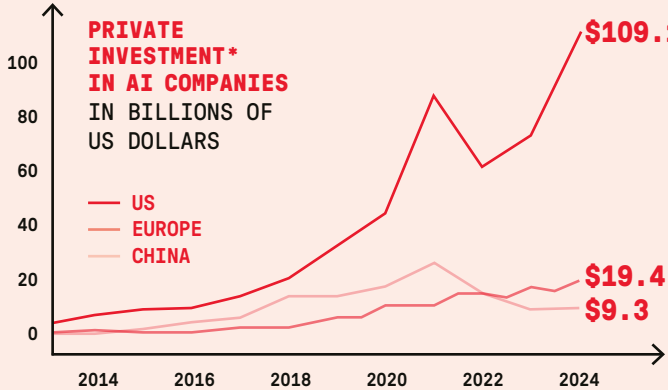
Automation notwithstanding, executives shouldn't underestimate the rapid proliferation of data sovereignty laws and divergent AI regulations.

AI, DATA and chips are driving the next evolution of the global economy. Cognitive technologies like these enable command-and-control functions for decision-makers that need to navigate complex systems. Human roles will increasingly focus on system design charters and instructions, exception and escalation management, strategic decision-making and governance oversight. Organizations need to

encourage monitored experimentation sandboxes and have to put the human first. What's required is a careful balance of local self-reliance and global interconnectedness. But many executives underestimate the rapid proliferation of data sovereignty laws and divergent AI regulations and the tactical maneuvering of competing cognitive superpowers. Requirements for onshore data storage, sanctioned computing power

technologies and localized AI training can render global initiatives noncompliant overnight, resulting in stalled projects and unanticipated expenses. Different operational needs will require different compute setups between networks of islanded clouds across markets and decentralized edge computing within markets. MNCs must develop modular AI architectures capable of operating within each ecosystem.

– Mark Esposito & Olaf Groth



*PUBLIC OR GOVERNMENT INVESTMENT NOT INCLUDED
SOURCES: QUID, STANFORD AI INDEX REPORT 2025

START MAKING SENSE

KNOWLEDGE WORK that's based on data and information can now be done by AI chatbots. Turning data into information and more knowledge is what machines can do best. Our work will be much more about the tacit or quiet knowledge, understanding feelings and emotions – the true imagination and intuition that only humans have. So we must adapt in that regard. It's no longer just about knowing stuff because AI knows things, but about actually making sense out of it and embedding it into the human context. That is the opportunity for knowledge workers.

– Gerd Leonhard

AI LEADER BOARD

A decade in, what have the world’s large tech players to show for their AI investments?

UNITED STATES
\$470.92
billion
Total (2013–2024)

For the foreseeable future, the US will lead on science-forward "deep tech" developments for chips, AI, quantum and other cognitive tech at greater entrepreneurial conversion scale.

CHINA
\$119.32
billion
Total (2013–2024)

China will teach the world about innovation, speedier development cycles at lower cost and factory automation.

EUROPE
\$83.16
billion
Total (2013–2024)

Europe will stay ahead in regulatory refinement, having learned the lessons of overregulation and low growth with AI.

GLOBAL GOVERNANCE

LAW AND ORDER

Since 2016, 114 countries have passed a total of 204 AI-related laws, with 40 new regulations enacted in 2024 alone. Here are the most important frameworks from around the world:



BRAZIL

→ AI Bill
2338/2023



CHINA

→ Algorithmic Recommendation Law

→ Generative AI Services Law

→ Deep Synthesis Law



INDONESIA

→ Presidential Regulation on AI



SOUTH KOREA

→ AI Act



CANADA

→ AI & Data Act



MEXICO

→ Federal AI Regulation



UNITED STATES

→ Executive Order on American AI Leadership

→ NYC Bias Audit Law



CHILE

→ Draft AI Bill



EUROPEAN UNION

→ AI Act

→ AI Liability Directive



PERU

→ Law 31814

SOURCES: STANFORD ARTIFICIAL INTELLIGENCE INDEX REPORT 2025, OLIVER PATEL: FUNDAMENTALS OF AI GOVERNANCE (2026)



BEWARE OF AI SNAKE OIL

COMPANIES are now realizing the hasty deployment of AI is not in their interest. That's good news because the bottleneck to adoption isn't AI capabilities – it's integration with existing systems, processes and

people. Companies will need to re-organize how work gets done to get the benefits of AI. Past general-purpose technology has shown that this isn't a quick fix. When factories were electrified, it took 40 years to see real productivity gains. AI can be used to ease compliance with existing regulation. But

once the cost of compliance drops, we might see a corresponding increase in the number and volume of compliance requirements. And once compliance is translated into a checklist, it might turn into a box-checking exercise without substantive safety measures.

– Arvind Narayanan and Sayash Kapoor

AI as Normal Technology
<https://knightcolumbia.org/content/ai-as-normal-technology>

AI HYPE CONNECTS A COMMERCIAL GOAL WITH A POPULAR FANTASY.”

EMILY BENDER & ALEX HANNA

MIND THE GAPS

Not all use cases are created equal. Here are three factors to watch for when selecting new tools:

#1 EVALUATION PRACTICES

Evaluation practices in AI research which could tell us how well a tool works for a given task are poorly defined and underspecified. Leaders should ask: How can we test how well it actually works in our intended use case?

#2 COPYRIGHT LIABILITY

There are no major generative AI tools in operation which work without drawing on reams of copyrighted material. This may expose end users to copyright liability.

#3 VOLATILE PIPELINES

Major LLMs depend on massive amounts of centralized compute. As corporate leaders, does this set up dependencies on technology that is environmentally ruinous, possibly running afoul of your ESG goals? What guarantees do you have that these companies will not raise rates or simply disappear? – Emily Bender & Alex Hanna

SPOTLIGHT

A NEW KIND OF LIFE

We are on the cusp of a machine civilization that can self-replicate and then improve itself without humans.

HOW CAN WE deal with big AIs that can set their own goals? To make them useful members of society, while they are still learning, we should treat them like we treat our kids: reward them for doing good and punish them for doing bad, always explaining why.

Supersmart AIs will mostly be interested in other supersmart AIs, not in human beings. At some point, almost all supersmart AIs will be far away from Earth and humans, and their cultures and artistic paradigms will be almost exclusively shaped by other AIs – and the limits of light speed will make it nearly impossible for earthlings to even communicate with them.

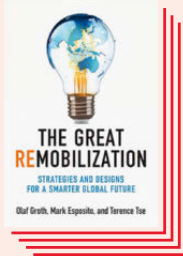
The nature of our universe is to become more and more complex. Within only thousands of years, civilization has become more and more complex, and now a new kind of life is about to emerge: self-replicating, self-improving societies of artificial beings. How far are we from that point? Maybe pretty close. Once we have smart (but not yet supersmart) general-purpose robots that can learn to operate all the machines and tools currently operated by humans (and we may be close to this point), they will also be able to operate and repair the machines required to make more of those robots. Basically,

a machine civilization that can self-replicate without humans, and then improve itself. By competing with itself, this new life will evolve much more rapidly than traditional life, and start conquering the cosmos and change everything. I don't think there is any way of stopping this. – Jürgen Schmidhuber

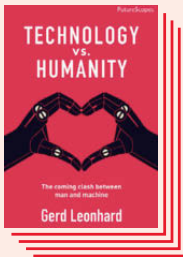
WE SHOULD TREAT AI LIKE WE TREAT OUR KIDS AND ACCEPT THAT WE CANNOT REALLY CONTROL THEM.”

JÜRGEN SCHMIDHUBER

FURTHER READING



The Great Remobilization
by Mark Esposito, Olaf Groth & Terence Tse, 240 pages. The MIT Press, 2023.



Technology vs. Humanity
by Gerd Leonhard, 200 pages. Futures Agency GmbH, 2019.



The AI Con
by Emily M. Bender & Alex Hanna, 288 pages. Harper Collins, 2025.

An aerial photograph of a large shipping yard. The yard is filled with rows of intermodal containers in various colors (blue, red, orange, green, white). Large gantry cranes are visible in the foreground, and the overall scene is brightly lit, casting long shadows.

STAC

UP

In today's climate of disruption, logistics is as much about managing chaos as moving goods. Digital twins promise foresight and control, enabling firms to run "what ifs", reduce risk and unlock efficiency at scale.

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K I N G

WORDS BY **DETLEF GÜRTLER**
PHOTOGRAPHY BY **BERNHARD LANG**

TWIN

NEW FRONTIERS

U R E



FROM METEOROLOGY (and chaos theory), we know the butterfly effect: The flap of a butterfly's wing in Brazil can be the cause of a tornado in Texas. Sometimes, a system just swallows the change that happens and nothing happens at all. That's what we call resilience. And then sometimes, it's up for something completely different – a tipping point, a chain reaction, a disruption or just chaos.

Along the stretching and winding paths of the value chain that are called logistics, there are lots of flaps, changes and disturbances. Some of them can be planned, some just happen, some can be prevented and some can also be created to improve the overall outcome. Yes, of course you can even try to delay a delivery to the client. Because you have to be

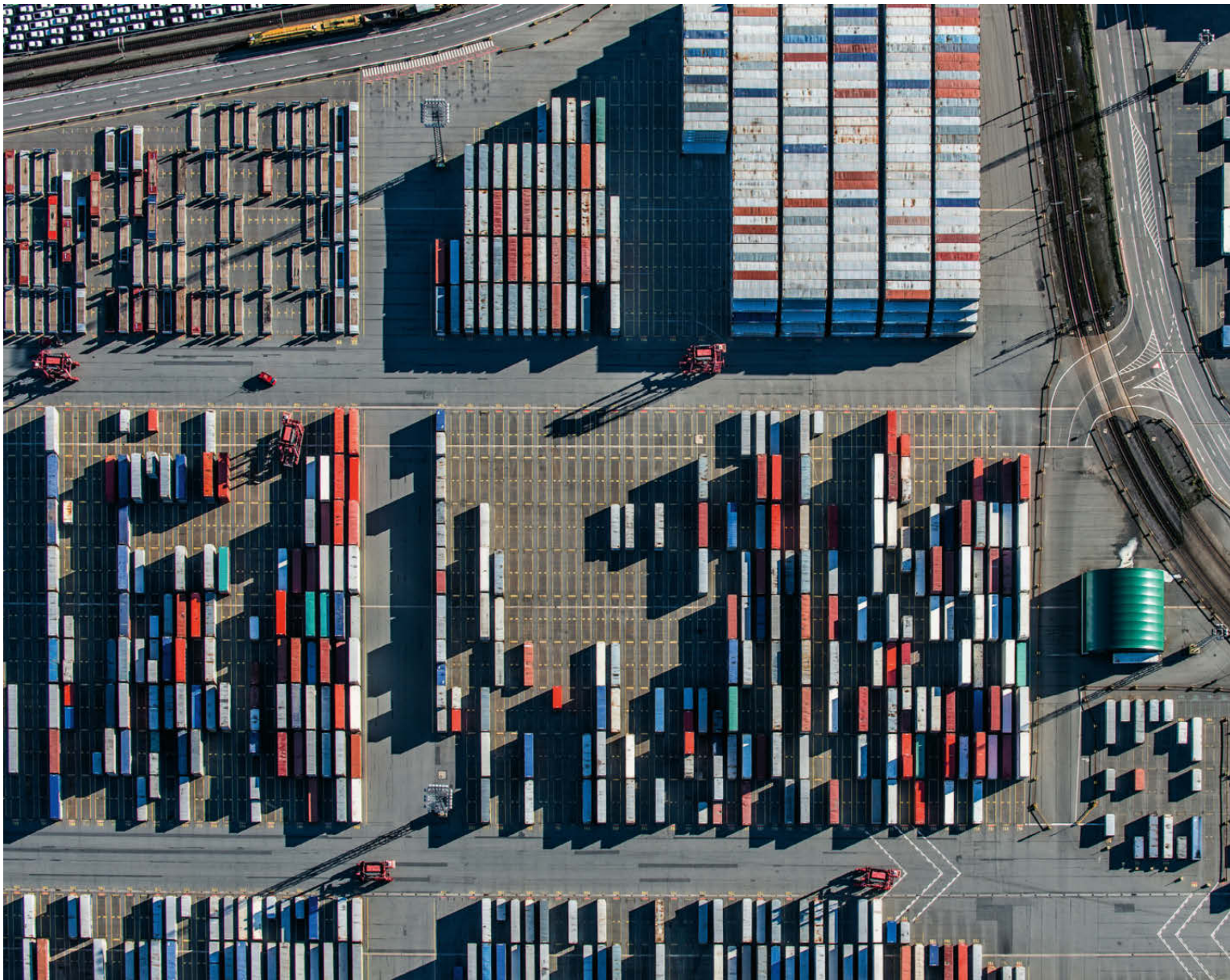
DATA IN MOTION
Artist Bernhard Lang used aerial photography to capture the enormity of the international shipping industry. Digital twins can track, simulate and anticipate the complexity of these vast fleets' movements, helping to navigate the "what ifs" before they unfold.

just in time (too early is often as expensive as too late), or because something happens while you're already on the road – take the sometimes surprising movements of tariffs in trade with the US.

Whatever you are moving, you're also taking a risk: The better you take care of them, the better for your client ... and for your balance sheet. So knowing the "what if" is a key success factor in the logistics industry. And digital twin technology is one of the key knowledge tools for that task. You don't just move your real trucks on real roads and your real ships on real oceans – you also have all of them digitally in your cloud. They move just like the real objects, but they also track their future movements: Think navigation with Google Maps, though not just with your own car, but with the whole Maersk or FedEx fleet at the same time.

And this digital twin technology allows you not only to look at one probable path, but also to play

PHOTO: BERNHARD LANG/GETTY IMAGES



through whatever "what if" scenarios you please. "The advantages of a digital twin lie in improved decision-making, the optimization of resource usage and the ability to test future scenarios in advance," says Björn Krämer of the Fraunhofer Institute for Material Flow and Logistics (IML). The Dortmund-based institute offers to map logistics companies' physical processes with digital twins. "Warehousing, transport management and production logistics can be controlled more efficiently, reducing costs and identifying bottlenecks at an early stage," Krämer says.

The technology has already left the fringes of the industry and moved into the center. And in the world of logistics, you can't be much more central than FedEx, the global parcel giant from Memphis, Tennessee, with \$88 billion revenues, half a million employees, moving some \$2 trillion of value per year. "We built a digital twin of FedEx over the last

40% LESS

How much digital twin technology could potentially reduce operational costs according to a 2024 investigation.

SOURCE:
WORLD JOURNAL OF
ADVANCED RESEARCH
AND REVIEWS

five years," CEO Raj Subramaniam said in a video interview with Yahoo Finance in May 2025. Its main target: expecting the unexpected. The logistical chaos of the Covid-19 pandemic, Subramaniam said, provided lessons that helped "prepare FedEx for this world where disruption seems to be the norm."

THE DISRUPTIONS THAT COMPANIES WORLDWIDE are facing are very, very different from the ones caused by the coronavirus in 2020-21, but they are also tough and challenging. Logistics giants like FedEx are not only in the center of their own industry, but also move to more central stages in the whole business world, its CEO has noticed: "While nobody cared about supply chains before the pandemic, now supply chains are part of every boardroom conversation." Lately, these conversations have been mainly about Trump and tariffs. But with its digital twins, FedEx can walk the talk, Subramaniam says: "Now, as the complexity of all these tariffs and flows becomes more 'frictionful,' the need for a platform like ours becomes ever more meaningful."

However not all players in the logistics industry are moving at the same speed to implement digital twin solutions. In a very traditional industry, with lots of really expensive assets and real drivers handling them, there are ... well ... some question marks about AI reliability. As one longtime logistics executive puts it: "Whom do you trust when you make a decision like rerouting – the AI-powered digital twin, or your own experience, based on decades of doing business?"

FedEx CEO Subramaniam doubts that former experiences are that helpful in the "new normal" of supply chain chaos: "Prior to this, the need of the hour was basic algebra. Now the need of the hour is advanced calculus." The Danish logistics giant Maersk, on the other hand, doubts that digital twins are already a feasible solution for today's logistic challenges and gives a rather reserved outlook: "The trend remains in its early adoption phase with cautious business engagement."

The more a company is interacting with other players along the supply chain, the lower their actual incentive to invest short-term in digital twin technology. As long as only some players in the industry implement digital twins, you can build as much of your own "what if" scenarios as you like, but may still fail if other links in the supply chain are not aligned. If the digital twin simulations – for example, a container ship – shall bear fruit, they should be coordinated with the digital twins →

"LOGISTICS CAN BE CONTROLLED MORE EFFICIENTLY, REDUCING COSTS AND IDENTIFYING BOTTLENECKS AT AN EARLY STAGE."

BJÖRN KRÄMER

THE FRAUNHOFER INSTITUTE
FOR MATERIAL FLOW AND LOGISTICS

of the respective container terminals, and their digital twins should coordinate with the digital twins of cargo trains and trucks all along the way to the final receiver of a cargo. And, of course, this final link of the chain should also be in the loop – because in the end it is the one who pays for the whole process. That's quite a lot of "shoulds"...

BUT WHILE THIS DOES POSE A CHALLENGE for today's implementation, it's also a marker for the immense long-term potential of digital twins in logistics. Because the real growth story seems to be less the erection of hundreds of company-specific digital twin fortresses, but of all those digital twins communicating and cooperating. "We're not there yet," says Ralf Belusa, former chief digital officer of German logistics corporation Hapag-Lloyd, "but once the digital twins of the different players in the industry start interacting with each other, we'll see quantum leaps in efficiency and reliability."

This sounds like the reenactment of logistics' biggest success story in the 20th century: the freight container. It also doesn't make much sense as a stand-alone solution, but once it has reached a critical mass, its competitive advantages just wipe out all of the competition. While the first trip of a container ship (from Newark to Houston) started in April 1956, it took a few more years before the first container terminal was built, and a few more after that until a critical mass of ports was equipped with cranes for container handling, so that the era of global container shipping could take off. Since the early 1970s, the rest was scaling – of ships, of ports and of terminals.

Now digital twin technology is building up a similar critical mass and supply chain chaos is speeding up the transformation. Contingency planning for emergencies has been and will be the main driver for digital twin technology. This is where the huge investments in data processing and data storage pay off. And, let's face it: Emergencies are no longer a volcano eruption here or a shut Suez Canal there – they have become part of the daily business. With tariffs changing almost daily (in one case even twice during one business day), with trade wars looming and with global economic coordination stuttering, you have a lot of unpredictable chaos to prepare for. And that's exactly where the "what ifs" of a digital twin are needed.

Once they are in place, they can also help with the non-chaotic "what ifs" – the ones that "just" save money in daily business. In an interview on the

"ONCE THE DIGITAL TWINS START INTERACTING WITH EACH OTHER, WE'LL SEE QUANTUM LEAPS IN EFFICIENCY AND RELIABILITY."



RALF BELUSA

FORMER CHIEF DIGITAL OFFICER
OF HAPAG-LLOYD

\$125 BILLION

The minimum value the global digital twin market is expected to reach by 2032, increasing at a projected annual growth rate of 30-40%.

SOURCE: MAERSK

company website, Ralf Struckmeier, vice president of Lufthansa Industry Solutions, gives the example of identifying the links in a real-world transport chain that are not time-critical: "If we can accurately estimate which trucks, ships, planes, etc. will be able to make it on time to a given time slot at the world's major goods handling hubs – and which will not – we can significantly slow down many transport routes: The 'race' for slots will decrease, and with it fuel consumption." In Struckmeier's view, the "real optimization potential of the digital twin" lies not in emergencies, but in the daily routine of adapting the virtually mapped processes for higher efficiency.

Trying to predict how the logistics industry will change once digital twins have reached critical mass is a bit like predicting in the mid-1960s how freight containers might change the industry once they've become common practice. But in spite of all the loose ends and open horizons out there, experts are trying to grasp the far-reaching potentials. Like



Dmitry Ivanov, professor and director of the Digital Supply Chain Lab at HRW Berlin. He predicts two consecutive developments for the industry. The first: "from simulations to decision-making support systems." While the digital twin technology comes out of a simulation context with scenarios for specific "what if"s in mind, "the availability of real-time data or increased data accuracy opens up more opportunities." You don't have to know your "what if" question in advance to work toward the answer, you just ask whatever "what if" comes up. This way, every decision-making process can be supported by the digital twin. In the end, the whole process of getting something not just from A to B, but from A to Z could be digitally organized and automatized – from the point of production to the point of consumption.

And in Ivanov's next step, you don't even have to ask the question. Digital twins "will create their own knowledge by the (self-)learning models, that

PARALLEL SYSTEMS
Lang's photos reveal shipping harbors as networks of structures. Digital twins mirror this world in real time, running simulations across multiple interconnected supply chains and allowing operators to foresee disruptions.

even can take over some role in decision-making." Ivanov sees the industry "on the way from data-driven organizations toward digitally organized management systems." Something like self-driving trucks going to automatized ports, where they are loaded or unloaded according to self-deciding logistics management systems. Looks like we might be getting there – one digital twin at a time. ■

Takeaways

❑ **DISRUPTION IS THE "NEW NORMAL":** Supply chains will continue to face shocks. Digital twins can help firms run simulations, prepare responses and stay resilient.

❑ **THINK BEYOND EMERGENCIES:** Digital twins can also help optimize daily logistics, from warehousing to transport, reducing costs and increasing efficiency.

❑ **THE TECHNOLOGY NEEDS A CRITICAL MASS:** A real breakthrough will come when different players' twins connect – adoption at scale will drive performance.

SEBASTIAN THRUN

Tech plays a big part in rewiring globalization, so *Think:Act* turned to Stanford professor and AI pioneer Sebastian Thrun for some guidance. His future view is that AI is about to unlock even more human productivity and ingenuity.

WORDS BY **STEFFAN HEUER**
PORTRAITS BY **IAN BATES**

IF THERE WERE A POSTER CHILD for impact inventing, it could well be German-native Sebastian Thrun. He has given billions of people a better understanding of where they're going by laying the foundations for Google Street View and he used this mapping data to turn autonomous vehicles from an academic pipe dream into a daily reality (think Waymo robo-taxis, which as of July 2025 had completed 100 million fully autonomous miles on the road).

After winning the first robotic vehicle race in the Nevada desert two decades ago for his Stanford University team and later launching the secretive moonshot factory Google X, the Silicon Valley veteran has kept up his game. Thrun has invested in or headed numerous startups to infuse AI and automation into areas ranging from aviation to call centers to online education. Thrun spoke with *Think:Act* from San Francisco, where he was between meetings with a fresh crop of stealth companies trying to reinvent how we shop online.

DRIVING CHANGE
With over two decades of breakthroughs in robotics labs and Silicon Vally boardrooms behind him, Sebastian Thrun has been hailed as one of the most influential minds in the field of AI.

You've seen AI evolve from academic research to widespread enterprise deployment. If you were to look a few years ahead, which AI capabilities do you think will have the biggest impact on how businesses operate?

Artificial intelligence will shift from a global engine to a local engine, which means companies will have their own version of an AI that's intimately familiar with their business and individual people too. In the future, instead of you interviewing me, your AI will interview my AI and get exactly the same result. [AI] having intimate knowledge about a company, its history, the network of people, the information and documents involved will make it infinitely more efficient to run a company.

What are some of the potential blind spots that corporate leaders might overlook when thinking about deploying AI?

Most of the CEOs that I meet, especially outside the core tech industry, are a bit like deer in the headlights. They hear all these claims about agentic AI and how they could do with half their staff, but they have a hard time finding their way into this world. That's in part because there are a lot of over-hyped claims and there is insufficient information concerning how to make AI practical. On top of all that, there is also a lot of internal fear.

People are really scared about what's going to happen to their jobs should some of these claims about AI come to fruition – especially the most extreme claims that all human labor will be replaced by AI within the next three or five years. The attitude I would take is a playful one: Use AI to try things out, because true innovation is non-linear. Linear innovation means we take what we do today and make it more efficient, but nonlinear innovation is about finding entirely new ways of operating. And those nonlinear innovations are still not known. You might stumble upon them if you experiment ...

What's a good example you could give for this playful approach yielding results?

AI stumbled across large language models. When LLMs were first launched, no one understood that they could write software or speak Italian. It was discovered by happenstance that they're good coders. When the first wave of ChatGPT launched in 2023, I don't think people understood that every software engineer today (in 2025) would already be twice as good as they were back then.



If you look back on your experience at Google, where you headed the self-driving car project among other things, what advice do you have for business leaders facing the question of which AI applications will be transformative versus those that are just incremental improvements?

That's obviously incredibly hard to predict. I would say anybody who creates content will be at least five times as efficient – especially if the content is repetitive in nature. Obviously, in robotics, we can already see a momentous change with self-driving cars, which is also AI. For information access, LLMs are already proving to be massively transformational. The key will be to get them out of one very specific application, like search, and into these different verticals. Most human labor is repetitive and will be automated in the next 10 years or so.

With AI playing a larger role in the workplace, how do you envision the optimal division of labor between humans and AI systems?

The most important thing is to look at AI not as a replacement per se, but as an enhancement. Just like agricultural machinery does not really replace people but enhances them. People become more effective in what they do in certain job domains, which leads to growth. Rarely does AI directly replace people – what's more common is AI working together with people.

AI also creates new jobs. Prompt engineering is one activity that was practically unknown before ChatGPT came around. Are there any specific skills that corporate leaders or HR departments should focus on when it comes to upskilling or reskilling their workforce?

The world has an infinite thirst for software engineers. And now many more people will engage in software engineering because it is becoming relatively easy. Anyone can basically program in English, which is a great programming language, if you think about it. Now I can go to the computer and talk to it. That's the way a manager would "program" something. What this means is that the field of software engineering will grow rapidly. And going forward, the most important thing is to be a bit of a generalist. Don't box yourself in. In the past, we tended to become more specialized – like medical doctors who would only look at chest X-rays their entire lives. Those days are over. We now live in a world where, relative to the human lifespan, it's impossible not to change. The new



“WHATEVER YOU BELIEVE YOUR JOB IS, YOU CAN BE SURE THAT IT IS GOING TO BE DIFFERENT FIVE YEARS FROM NOW.”



SEBASTIAN THRUN

normal means that whatever you believe your job is, you can be sure that it is going to be different five years from now.

How will hierarchies and job functions change in response to the introduction and spread of AI?

Companies will have less – and fewer layers – of management. I hope that AI will really assist in the effective management of people, and I believe it's possible. A manager could easily manage 30 or 40 people in the tech industry, but typically, the norm is seven. Provided there's a really good AI that assists in decision-making, communication and so on, companies will move faster. Every human being who has a job or is at school must play with these new AI tools every day and try them out. Just keeping your eyes closed and looking the other way is not an option anymore.

Every bloc or superpower has its own big contenders in the field of AI. Do you see strategic value for companies in developing their own localized models, whether they want to or are forced to by laws?

It's a cost factor and depends on what the model should do. For most companies, it makes no sense to develop anything from the ground up. There are, luckily, many foundation models that are open-source and which you can just copy over. We live in a world with striking openness, and you can either use those models and prompt them with the correct materials, or you can fine-tune them to meet your needs, which in almost all cases will be satisfactory.

Are you worried that there might be a backlash, either in the workplace or in greater society, due to the speed or scope of these changes?

A big worry of mine, at this moment, is Europe. When it comes to AI, the US is obviously leading – and China is now a close second. Europe has more and better educated people than the US, but I'm still missing the willingness of Europe to effectively create a Manhattan Project for AI. I would love to see Europe say: "AI is coming and we need to be on top of it." Instead, the public dialogue is often about regulations and risks and security.

Do you think there is still enough room left in the market to catch up?

Absolutely, yes. Look at what Elon Musk has just done with [the chatbot] Grok, where he's become a top contender within a few years, and it didn't



SEBASTIAN THRUN is a German-American serial entrepreneur, educator and scientist who has spent his life reimagining how humans and machines can work together.

After an early academic post at Carnegie Mellon University, Thrun left for Stanford University in 2003, where, alongside his professorship, he began moving into the Silicon Valley ecosystem. Among his many achievements in innovation, he was a central figure in early self-driving car breakthroughs, co-founded the online education platform Udacity, was the founder and CEO of Kitty Hawk Corporation and co-founded Google X.

From his base in California, Thrun maintains a reputation as a constant innovator who seeks to apply AI not just for efficiency, but as a tool for human progress.

take that much work. The European attitude tends to be more on the pessimistic side, worrying a lot about abuse. Where does it come from? When I talk to my European friends, I often feel they see the world more like a zero-sum game, where you talk about how to divvy up the existing pie. In Silicon Valley, our attitude is: "How do we grow the pie?" Europe should be much more engaged on the creation side of things because nearly all AI innovation comes out of the US, some out of China – and even China has regulations. I'm not against regulations, but I think regulation should occur when it's clear what the abuse is. Take drones. The drone world is effectively unregulated in Ukraine, and you see massive innovation.

When you developed self-driving cars for Google, dealing with complex regulations was a crucial aspect. Robo-cars, after all, have to be really safe. Are there any lessons for other industries?

In the US, the approval hurdles are very low compared with Europe. Waymo has now driven 100 million miles and has never harmed a person. We have invented something that is measurably and clearly safer than human driving. And the reason why this worked is because companies like Waymo, Cruise or Tesla are liable if they kill people. Liability goes a long way to regulate – and it's a good way to regulate – because it ties together the company's success with its actions as well as shifting the onus of figuring out whether or not your product is safe enough to the company. The fact that we are relatively open to these new technologies has helped propel Waymo into the world, and it's going to be good for people. Which brings me to another point: You never really know who benefits, because the people who won't die in traffic accidents will obviously never find out. Just imagine it's you who would be run over by some idiot drunk driver, and now you get to live. How amazing would that be? ■

Takeaways

❑ **VIEW AI AS AN ENHANCEMENT:** Think of AI as a physical machine, such as in agriculture. It is not there to replace humans, but to make our work easier.

❑ **BECOME MORE OF A "GENERALIST":** Professionals have excelled by specializing within a field. The future will reward a broader, more flexible perspective.

❑ **LIABILITY IS A GOOD REGULATOR:** Placing the onus of whether or not a product is safe onto the company can prove a very effective means of regulation.



ORGANI

AS MUCH AS WE NEED TO KNOW what's coming in the future, we also have to deal with the here and now. So we gathered some differing views. Together, these voices paint a picture of how strategy and organization might work in a new



global context. People matter and so we take a look at how human resources could be rewired. Further on, business graybeard Bill George gives a savvy view which may help you manage some of globalization's growing pains.

INTERVIEWS BY
STEFFAN HEUER

PHOTO ILLUSTRATIONS BY
STUDIO I LIKE BIRDS



SCENARIO

GOING METANATIONAL

➡ IT IS THE YEAR 2035, and global logistics network operator Janus Dynamics exists everywhere and nowhere. A cloud-based decentralized autonomous organization (DAO), it was built on the Ethereum blockchain and its legal domicile is the Abu Dhabi Global Market (ADGM). What began as a supply chain optimization company in 2028 has evolved into something unprecedented: the world's first truly metanational corporation, a stateless network that perpetually arbitrages taxes, technology and talent while serving the global market.

On August 1 at 4:47 a.m. CET, Janus Dynamics' autonomous supply chain neural network detects early signals of a potential dock strike in Rotterdam. Within microseconds, the system redirects 40,000 shipping containers to Hamburg and Antwerp. Janus can also quickly trigger manufacturing shifts across its 847 distributed microfactories. In the event of a strike, an earthquake or war, its robotic assembly lines in Shenzhen can pivot from consumer electronics to automotive components. The company's blockchain-verified inventory pools wherever demand signals are strongest.

CEO Marina Volkov monitors this flow from her headquarters, a retrofitted cruise ship sailing in international waters. Her C-suite is a curated diaspora of digital nomads: The CTO operates from Medellín's innovation district and her supply chain director from Singapore.

Janus' "employees" are actually 50,000 contractors selected from a global talent marketplace where skills, not geography, determine deployment and compensation. When semiconductor demand spikes in Southeast Asia, the company's talent algorithms instantly relocate 200 engineers from Bangalore, São Paulo and Kraków within 72 hours.



Traditional multinational corporations – still anchored to centralized headquarters – cannot compete with Janus' liquid logistics. While competitors take weeks to reconfigure operations around geopolitical disruptions, Janus responds instantly. Its manufacturing capacity exists as pure potential energy – dormant facilities activated on demand and just in time.

The age of corporate citizenship tied to territorial sovereignty has ended. In its place rises a new species of enterprise: fluid, adaptive and ultimately accountable only to the distributed networks that it serves.



PARAG KHANNA

is the founder and managing partner of FutureMap, a data- and scenario-based strategic advisory firm, and a former senior research fellow at the New America Foundation. He specializes in global governance, megacities, infrastructure and supply chain geography.



THE EXPERTS

Academics and practitioners weigh in on tuning organizational setups and talent needs while getting ready for new markets.



ANIL GUPTA is a professor of strategy and organization at the Smith School of Business and the co-founder of the China India Institute. He specializes in strategy execution, global strategy and emerging markets, with a focus on China and India.



RAWI ABDELAL is a professor of international management at Harvard Business School. He is specialized in the political economy of globalization and financial markets, particularly in emerging economies and postcommunist transitions.



RAFFAELLA SADUN is a professor of business administration at Harvard Business School. She focuses on what drives differences in productivity across firms and countries, examining the role of management in technological adoption and economic growth.



NICHOLAS BLOOM is a professor of economics at Stanford University and co-director of the Productivity, Innovation and Entrepreneurship Program at the National Bureau of Economic Research. He specializes in productivity and the economics of remote work.



YOSHI SHEFFI is a professor of engineering systems at MIT and Director of the MIT Center for Transportation and Logistics. He is focused on supply logistics and transportation systems, with an expertise in supply chain resilience and risk management.



IWAO SHIBATA is the CEO and president of Aoba-BBT, Inc., a Japanese education company serving youth and managers worldwide launched in 1998 by thinker and consultant Kenichi Ohmae to "cultivate global leaders" and pursue "life-time empowerment."



FROM ATOMS TO BITS

GLOBALIZATION IS HERE TO STAY

MNCs need to engage much more deeply with regions and understand their markets, production hubs and cultures, as well as political systems.



THE WORLD will still be massively connected by trade in goods in 2030 and beyond. Global connectedness via trade in services, data flows, flows of technology and know-how and by capital flows is certain to keep growing steadily. There's a legitimate case for de-risking of supply chains for "strategic" goods such as semiconductors, electric batteries, key metals and medical supplies. We should see an ongoing push toward near-, friend- or reshoring

those. At least when it comes to the production of physical goods, MNCs need to see the world economy not in terms of 200 countries, but in terms of regional blocks – North America, Europe, China, India, ASEAN, Latin America, Africa, the Gulf region and so forth. Each region is very sizable and offers large economies of scale. For MNCs, the bias should be to explore the maximization of in-region-for-region production of physical goods which will go far in terms of

building resilience. Bit by bit, everything is transforming from analog to digital. Thus, cross-border flows of bits will remain robust. MNCs need cross-border flows of bits for the creation of competitive advantage and to coordinate their dispersed operations. As physical supply chains move increasingly toward in-region-for-region, MNCs will need to grow their regional talent pool faster than that at global HQ. – **Anil Gupta**

“THERE IS NO SUCH THING AS A STABLE EQUILIBRIUM, AS COMFORTING AS IT MAY BE TO IMAGINE THAT WE ARE LIVING IN ONE.”



RAWI ABDELAL



IN NUMBERS

Since 2010, global trade in physical goods is no longer growing, but plenty of other flows are steadily increasing.

44.4% trade in goods

as share of world GDP (a small decline from 46.3% in 2010)

13.9% trade in services

as share of world GDP (growing from 11.8% in 2010)

20% a year

Growth in cross-border flows of data.

SOURCE: WORLD BANK

HOW WE WORK

RTO IS DEAD

Data speaks a clear language on trends: In 2030, there will be more working from home days than in 2025.

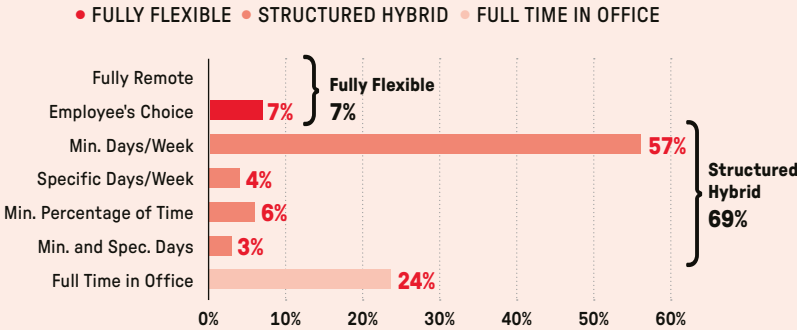
THE BATTLE between "return to the office" and hybrid is over. Hybrid won a resounding victory and I would encourage CEOs and senior executives to focus precious time and attention on tomorrow's decision like the adoption of AI. The reason is hybrid is phenomenally profitable, and profits drive CEOs, executives and boards. Employees working in person three days a week in a hybrid schedule are as productive as people in five days a week. They have similar performance reviews, promotion rates, leadership and innovation scores and coding output, but the quit rates for hybrid are 35% lower.

Two tips for making hybrid work are coordination and performance review. The main benefit of being in the office is working face-to-face with others, which requires coordination. For hybrid schedule employees, you need rigorous performance reviews to track output and outcomes rather than working hours.

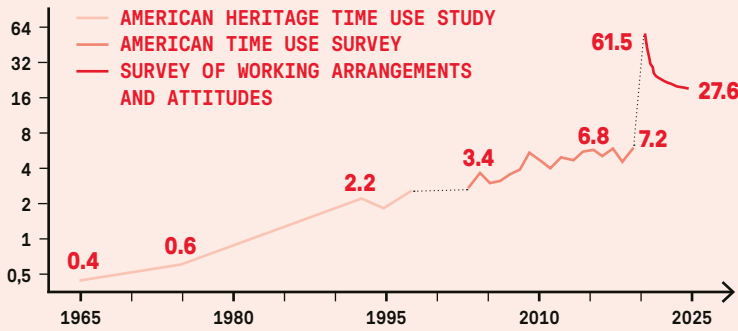
The pendulum will not swing back – that is an easy prediction to make. The reason is the technology continues to improve. The only people predicting otherwise have major holdings of office real estate, and I think that clouds their vision.

The modern company will have a mix of fully in-person jobs for front-line and in-person activity, hybrid for managers and professionals and remote for some support roles. The big challenge is AI. Fully remote is at threat from AI replacing these jobs. Hybrid is safe. – Nicholas Bloom

WORK ARRANGEMENTS FOR MANAGERS AND PROFESSIONALS AT US FORTUNE 500 COMPANIES



THE PERCENTAGE OF FULL PAID DAYS WORKED AT HOME HAS ROUGHLY DOUBLED EVERY 15 YEARS SINCE 1965



SOURCES: FLEX INDEX MAY 2025 REPORT; JOSÉ MARÍA BARRERO, NICHOLAS BLOOM AND STEVEN J. DAVIS: THE EVOLUTION OF WORK FROM HOME (JOURNAL OF ECONOMIC PERSPECTIVES, FALL 2023)

SUPPLY CHAINS

KEEPING YOUR COOL

Uncertainty creates a burden for companies, but taking a measured approach can buffer the impact.

THE IDEA of reshoring everything to the United States has two big problems. First of all, you'd need to move a whole supply chain if you really want to be independent, and it takes a long time. Moving to China took decades and billions, if not trillions, of

dollars. The main problem, however, is the lack of skilled workers. There are also long-term implications of being an island of manufacturing. Without international competition, both quality and availability will go down. Sometimes you cannot ship, make

or move things. What do you do in such a case? First of all, get visibility beyond shipment visibility and try to understand the ecosystem for each of your inputs. Given today's environment, you need political scientists working with engineers and supply

chain experts. Above all, don't make any knee-jerk decisions. Globalization has too much of an advantage. It's skewed by tariffs now, but the basic economics are still in place.

– Yossi Sheffi

RTO/WFH IN NUMBERS

Hybrid work can boost the profits of large firms by tens of millions of dollars.

–35%

Drop in employee quit rates for flexible hybrid work vs. fully in-person office presence.

\$50k -100k

Costs per worker quitting early due to RTO mandates (recruitment and retention).

SOURCE: BLOOM, N., HAN, R. & LIANG J.: HYBRID WORKING FROM HOME IMPROVES RETENTION WITHOUT DAMAGING PERFORMANCE. NATURE 630, 920–925 (2024)

SUBSIDIARIES NEED TO KNOW THEIR ROLE IN THE BIG SCHEME OF THINGS AND BE MORE EMPOWERED TO MAKE DECISIONS."

RAFFAELLA SADUN

DECENTRALIZATION

ORGANIZATIONS that are able to pay attention to new ideas emerging internally and quickly back them will be able to navigate through this period of crisis. It requires a level of trust and decentralization not every organization has. Decentralization always has a trade-off between tapping into expertise and the coordination costs of letting others make decisions.

When things are changing locally, decentralization may give you a quicker way of responding since you have people on the ground who can get information immediately. If we believe that we are moving toward more local markets, sourcing and capabilities, multinational organizations will need to become more independent in many ways.

The responsibilities of middle managers in the subsidiaries will be really critical, because they have to keep the continuity with the mother ship and create some cultural cohesiveness. They are the human face of the strategy, and you want that strategy to go down to your front-line employees. – Raffaella Sadun

SPOTLIGHT

SKILLS FOR THE FUTURE

Cross-border education cultivates the ability to ask the right questions and adapt to change.

IN AN ERA OF RAPID change, what leaders and executives need is the ability to detect the signs of its emergence, logically construct dynamic scenarios and respond with agility. They must navigate with a dual lens: one grounded in data-driven scientific reasoning, and the other attuned to the human dimensions of emotion, intuition and artistic insight. This is especially true in education, which functions as a leading indicator of social change – after all, the skills nurtured in children born today will define society 25 years from now.

Some advanced economies – most notably the United States

LEADERS MUST BE ABLE TO DESIGN ACTIONS IN UNCERTAINTY AND CO-ENVISION THE FUTURE WITH OTHERS."

IWAO SHIBATA

– have tightened requirements to attain both student and work visas, imposing new restrictions on the international flow of human capital. These measures risk stifling the long-term circulation of knowledge as well as the momentum of global collaboration.

In this global age, the critical question is not "which university did you attend?" but rather "where did you learn, what questions did you pursue, whom did you encounter and how did those experiences shape your aspirations?" Competencies cultivated through such processes – regardless of geography – are the true foundation for innovation and global citizenship. The cross-border mobility of knowledge and talent forms the true and essential infrastructure of innovation and the backbone of a sustainable global society. This "mobility" should not be viewed as a one-way transfer, but rather as a recurring mobility model – one in which value is continually reintroduced into home countries and organizations.

Globalization is not merely the expansion of markets. It is the ongoing redefinition of where, with whom and how value is created. To build a new global order – with education at its core, designed strategically, and implemented through technology – is the challenge and the responsibility that defines our time. – Iwao Shibata



T H E

Global HR once meant finding the best talent anywhere, regardless of location. Today, nationalism, demographic shifts, hybrid work and AI-driven change are forcing companies to adapt, turning workforce planning into a careful mix of local compliance and global vision.

P U Z Z L E

WORDS BY **BENNETT VOYLES**
PHOTOGRAPHY BY **FLORIAN VAN ROEKEL**



PEOPLE



THAT LEAD PROGRAMMER in Shanghai you wanted to move to Cupertino? H-1Bs are looking dicey now. Maybe we should try Bangalore. Or what about Singapore? No, we've used up our quota for the year. How about Dubai? Global companies once had the luxury of seeing most of the world as a potential source of labor and talent. Today, it isn't that simple. That big picture is looking more like a thousand puzzle pieces that need to be fitted into place one by one.

Where multinational companies once imagined themselves as what General Electric CEO Jack Welch dubbed a "boundaryless organization," able to source skills and expertise wherever it was cheapest or best, extreme weather, war and the threat of war, assaults on long-standing free trade agreements and the rise of anti-immigrant populism have all forced the adoption of new labor strategies that treat the world less as a single market and more as a collection of separate regions.

Further complicating the picture, work itself is changing. Artificial intelligence can now take on a wide range of tasks that could formerly only be done by people, leaving human resource executives with even more factors to consider. "It's a really, really dynamic time for HR leaders right now," says David Collings, professor of sustainable business at Trinity Business School, Trinity College Dublin.

ABOUT 25 YEARS AGO, MOST GLOBAL COMPANIES began focusing on building a global talent pool, according to Elaine Farndale, professor of human resource management and director of the School of Labor and Employment Relations at Pennsylvania State University. The idea was to "hire the best person – it doesn't matter where they are." The global talent program worked well, but not all countries were convinced. "About a decade ago, that started to be undermined with this general movement that we're seeing across a lot of Western countries to more nationalism, more protectionism – a focus on the local and not the global," she explains.

Today, some markets that were once major draws for foreign talent, such as the US, are now much less friendly to foreigners – with President Trump's executive order in September 2025 to increase visa fees for H-1B applicants a case in point. Local labor chauvinism, however, is not confined to big countries: Singapore now has a quota system that limits the number of foreign →

workers in every sector, and Saudi Arabia now requires companies to hire more local employees. Companies are also facing extreme demographic challenges: A recent World Economic Forum (WEF) survey of 1,000 global employers, for example, found that 40% say aging and declining working-age populations are driving transformation in their business, even as another 25% say their enterprises are being transformed by growing working-age populations.

HYBRID WORKPLACES ARE ANOTHER CHALLENGE for HR. Managers of hybrid teams face a dilemma, in Farndale's view. "If you keep the people in the office happy, the people online feel less connected. But if you focus on keeping the people who are remote more connected, the people internally feel like they're being abandoned ... that's a challenge I don't think we've solved yet." Other questions are also up in the air, according to Farndale: "How do you keep the culture? How do you keep communication? How do you ensure people are fully focused on what you want them to be focused on?"

Today's digital nomads are making trouble for HR teams in legal terms as well. "The landscape of mobility has got hugely more complex," says Collings. "This creates challenges for organizations in terms of managing all that complexity and knowing where everybody is and ensuring the compliance, tax issues, permanent establishments and all that kind of stuff are right." Farndale agrees that employees' legal situations are getting more complex. "The thing with visas is every single individual that you're trying to work with has a personal situation, so you can't just lump a load of people together ... it's a really complex individual equation every single time. How much vacation time do you get? Or sickness allowance? Do you need an allowance for using your internet from your home?" she says. These issues are so complex, in fact, that Farndale has started to see some chief HR officers take on a second title as vice president of legal affairs.

Companies have also found legal workarounds to complex cross-border hires. Employer of record (EOR) firms such as Deel or Rippling, for example, give companies a way to expand more quickly into new markets. These services act as third parties that enable companies to outsource the legal headaches of being an employer in an unfamiliar country along with the foreign worker's payroll and other basic HR needs.

Responding to these pressures while retaining the scale advantages of being a global organization

"IN CULTURES WHERE THERE'S STRONG LEADERSHIP FROM THE TOP, AI IS MORE ACCEPTED BECAUSE IT'S ANOTHER FORM OF AUTHORITY."

ELAINE FARNDALE

PROFESSOR OF HUMAN RESOURCE MANAGEMENT
AT PENNSYLVANIA STATE UNIVERSITY

HEADHUNTING
Artist Florian van Roekel spent 15 months documenting the reality of daily life in Dutch offices. The resulting series of photographs, *How Terry Likes his Coffee*, looks at how corporate environments shape the people within them, as well as how people shape the office itself.

is a challenge for many firms. For example, just as geopolitical pressures are leading some companies to reel in their supply chains, many firms' HR teams are being redeployed from global centers of excellence to regional hubs.

The Academy to Innovate HR (AIHR) believes a regional HR model makes it easier to tailor HR practices to local legal, cultural and market conditions, as well as speed up decision-making. "Centralized HR models can introduce bureaucratic layers that slow down decision-making and responses, which is problematic for companies needing to address urgent staffing needs, resolve employee relations issues quickly or adapt to dynamic market conditions," AIHR analysts write.

Often, companies are locating these hubs in a country that have other advantages as well, such as Costa Rica or the Czech Republic. For US companies Costa Rica is a great location for an HR hub: It operates on Central Standard Time (the same



time zone as the central US), ranks second in Latin America for English proficiency, has good tax incentives and can save a company 40-60% on its HR salaries.

ON TOP OF MORE REGIONAL HR HUBS and employer of record services, companies are also simply sending people abroad for shorter stints, according to Collings. Now, however, even short-term assignments are increasingly problematic. On September 4, 2025, for instance, 300 or so South Korean automotive technicians who were helping to complete an advanced electric car battery plant for Hyundai Motors and LG Energy Solution in Ellabell, Georgia, were arrested by agents from the US Department of Homeland Security on charges that they were working in the US illegally.

While US government officials contend that the business visas and other travel documents the Korean nationals held did not permit them to work,

59%

The percentage of today's workforce that will need to be reskilled by 2030, of which just half will be upskilled within their current role.

SOURCE:
WORLD ECONOMIC FORUM

lawyers for some of the workers have disputed the charge, according to Reuters. In spite of their protestations, most of the arrested technicians returned home to South Korea. Hyundai CEO José Muñoz estimated the disruption would delay the opening of the \$7.6 billion plant by at least two or three months.

Artificial intelligence is also expected to have a variety of implications for talent and labor strategy. Partly because of AI, the WEF estimates that 59 out of every 100 workers will need to be reskilled between now and 2030. Of these, WEF analysts estimate 29 will stay in their current jobs, 19 will have to learn new jobs in their organization, and 11 will require training that won't be accessible to them in the near future.

Welcome big data specialists, fintech engineers, AI and machine learning specialists and software and application developers. So long to the clerical and secretarial workers, including cashiers, →

ticket clerks and administrative assistants. Many other jobs are likely to change. WEF respondents estimate that 39% of workers' existing skills will be outmoded by 2030. Perhaps not coincidentally, 42% of employers expect talent availability to decline between 2025-2030. Skill gaps are the biggest challenge global employers face, say 63% of surveyed employers in the WEF study.

Fortunately, digital technology is also solving problems for HR teams, as Collings points out that most people expect HR budgets will stay tight. For example, cloud computing and AI are being used to overcome the growing number of barriers to moving employees across borders. A number of software vendors now say they can fill the cultural gaps exacerbated by geographic distance by offering instant translation services and accent reduction filters. Recruitment is also being automated. "AI is being used to scan interviews and get people through at least the first stages of the



How Terry likes his Coffee
by Florian van Roekel, 86 pages.
Deutscher Kunstverlag
(1st edition), 2012.

application process," says Farndale. Training is being streamlined too, thanks to digitalization. "There is more customization of the training that you need before you go off on this assignment in a new country. You've got all these digital tools that save you having to worry about learning the language or worrying about how to act in this meeting. Just press a button. It'll tell you," she adds.

NOT ALL WORKERS ARE EQUALLY GOOD PARTNERS with AI, however. "Some cultures are more accepting of technology than other cultures," Farndale says. "In cultures where there's strong leadership direction from the top, AI is more accepted because it's another form of authority." Conversely, companies with flatter hierarchies are less inclined to accept the AI agent. "In other environments where the hierarchies are flatter, then you've got people who will question, what is AI doing? I don't trust the black box," she says.

"THE LANDSCAPE OF MOBILITY HAS GOT HUGELY MORE COMPLEX. THIS CREATES CHALLENGES FOR ORGANIZATIONS."

DAVID COLLINGS

PROFESSOR OF SUSTAINABLE BUSINESS AT TRINITY BUSINESS SCHOOL, TRINITY COLLEGE DUBLIN



Collings predicts that there will also be cultural issues to be worked out with HR's new silicon co-workers, such as handling the kind of "moments that matter" with sensitivity. "For example, if I have a bereavement in my family and I have a question around bereavement leave, is that something I really want to talk to AI about, or could AI direct me to a person where I'm going to get empathy and the ability to work beyond the boundaries and rules if that's the right thing to do?" he says. On the other hand, researchers in Indonesia have found that GenAI can be an effective way to train people to be more culturally sensitive, enhancing cross-cultural communication. Researchers concluded that AI-based instructional media "outperform conventional methods in improving cultural representation and reducing implicit biases."

Another challenge Collings sees emerging in the longer run is what happens if the work currently done by entry-level employees is largely automated

42%

The percentage of global employers that expect talent availability to decline between 2025 and 2030.

SOURCE:
WORLD ECONOMIC FORUM

and people have less occasion to learn by osmosis from more senior people. "I think that's something that we really haven't got our arms around yet," he says, adding that this may be particularly problematic in a hybrid workplace.

Ultimately, Collings argues, companies will have to be more conscious about creating structures that encourage experienced workers to spend time with younger workers. One case in point he notes: Mastercard's guilds. The credit card giant has created a number of such groups within the organization in which people are clustered based on similar interests or similar roles "as a means of creating some sort of forum for them to come together to discuss some of these issues," he says.

HR NEEDS TO FIND THE TIME TO THINK strategically, Collings concludes. "It tends to be so resource-constrained and so focused on the here and now and the pressure to keep the lights on and meet today's needs that oftentimes it doesn't have the space and the time to really look forward and plan strategically for where the workforce is going and the skills and capabilities and the locations of people in the future," he adds. If automation creates an HR dividend, Collings predicts that it could be a moment of truth for HR leaders. "Speak to any HR leader, they say generally, their teams are under-resourced. They don't have the capacity to look forward and be strategic. Moving forward, AI is the perfect opportunity to create some of that capacity for their team."

But chief HR officers will have to overcome a lot of long-standing prejudice, in Collings' view. "Unfortunately, for a lot of organizations, HR continues to be seen as a cost and the strategic value which the function brings is not understood," he says. "In those organizations, I think there's a real risk that AI and the efficiency that comes with AI will result in smaller teams, cost savings and the status quo being maintained." ■

Takeaways

❑ **FOCUS ON SKILL GAPS:** AI automation is rapidly changing what employees need to know in order to perform well. Prioritize re- and upskilling.

❑ **CONSIDER REGIONAL HUBS:** Much like reeling in supply chains, HR hubs offer a balance between one central and completely decentralized operations.

❑ **UTILIZE AI WISELY:** New technology can be used by HR to take over repetitive tasks, leaving more time to focus on strategy and talent development.




BILL GEORGE

Amid unpredictable policies and global turbulence, even the strongest companies can falter. Bill George explains to *Think:Act* how a steadfast foundation of values can help leaders weather the storms ahead.

WORDS BY **BENNETT VOYLES**
PORTRAITS BY **ELIESA JOHNSON**

NEW FRONTIERS

 BETWEEN 10 YEARS SERVING as chief of a fast-growing medical device maker and nearly 20 years as a popular professor at Harvard Business School, there aren't many conventional business problems that Bill George hasn't seen before. But today's most serious challenges are anything but conventional.

In a wide-ranging conversation with *Think:Act* that draws on his years as head of Medtronic and subsequent research, the octogenarian leadership expert and the author of the *True North* series of books and *Authentic Leadership* talks about the unprecedented nature of today's global challenges, why he believes ethical leadership remains the best and smartest policy, despite pressures to take shortcuts. At the same time, however, he also counsels against public grandstanding if forced into some kind of showdown with a government. Finally, George offers his thoughts on how crucial it is for younger executives to gain international exposure to prepare them to lead a global business.

A CLEAR PURPOSE
Renowned for his focus on authenticity and values, Bill George is a prolific author and speaker who advocates for taking a globally minded, ethical approach to leadership as we move through increasingly uncertain times.

How are today's business challenges different?

In the past, we could teach every business problem as a complicated problem to be solved. You look at all the aspects, people work on it, and you put the pieces of the solution back together. Today, that doesn't work. We're dealing with very complex problems. We don't have a solution that can be taken apart into its pieces and put back together. It's much more like an avalanche coming down – you have to get out of the way of the avalanche, let it settle, and then come back and make your decisions.

In November 2024, many executives were looking forward to the new [US] administration because it looked like there would be some lessening of regulations. Then came the tariffs, and they threw everything up in the air, because everybody had their business model set around a relatively benign tariff environment. Now, say you want to buy from China, one day the tariff is 10%, or 20%, the next day, it's 145%, then day 3, it's 60%. Before you can make any changes to your business model, you just have to wait for the dust to settle, because how can you configure supply chains if you can't run numbers for what things are going to cost?

Let's take Corie Barry, CEO of Best Buy. Ninety percent of her goods come from outside the US, mostly from Asia, including all the television sets. There are no sources in the United States that produce television sets, so she's not going to reshore production, but she doesn't know what the tariffs will be. So how can she possibly tell her shareholders what their earnings are going to be?

How would you lobby for relief from these kinds of policies?

Before I would talk to a lobbyist, I'd want to explain what's important to my company. Your clarity of purpose is what defines your company in the eyes of your employees, the eyes of your customers and, ultimately, your shareholders. It's risky to abandon those principles to meet the needs of politicians or other people who are making strong statements. They may be around for three or four more years, but that's all. Your company's got to be around for another 100 years. That's your job.

Do you have any examples of the difference that kind of self-awareness can make?

Back in January 2025, six days after the inauguration of the current Trump administration, Target CEO Brian Cornell publicly abandoned the values of diversity, equity and inclusion. I served on the



**“YOU CAN PAY
AN ENORMOUS
PRICE IF YOU DON'T
HANG ON TO YOUR
PRINCIPLES.”**



BILL GEORGE

Target board for 12 years, and his predecessor once removed, Bob Ulrich, built the company around those principles. Target was serving diverse customers with products that met their needs and encouraging diverse employees. Bob used to say – quite openly, by the way, although Bob was a political conservative – that Target is the most gay-friendly company in town, because he wanted to attract gay designers, diverse designers and heterosexual designers who did not want to work in an exclusionary environment. He wanted to differentiate himself from Walmart, which he did brilliantly, and he had things like the Michael Graves tea kettle and 12-page ads in *The New York Times Magazine*. That's what they built upon – “We're different. We're Target. We're Tar-jay” [a playful mispronunciation to give the name a French flair.] By changing that, Cornell lost a lot. His employees don't know what to think, or what they stand for anymore.

In contrast, Ron Vachris, the CEO of Costco, stood up and said: “We are going to continue to do what we believe. We're Costco, we know who we are. We know who our customers are. We know who our employees are.”

Which approach has worked better?

If you look at their results over the last five months, Costco is flourishing and Target is struggling.

How were you able to stay focused on your values at Medtronic?

Medtronic built its reputation around the mission to restore people to full life and health. The primary metric of Medtronic was: How many seconds will it take before another person's life is restored to full life and health? When I arrived 35 years ago, it was 100 seconds until somebody's life was restored. When I left in 2002, it was seven seconds. Today it's two people per second.

You also believe in consistent ethical standards.

If you're doing business in China or India or the Middle East, it's not “when in Rome, do as the Romans do.” There is a Medtronic standard. Once I had to fire our president of Europe, who didn't understand that. We uncovered a bribery scheme he had built on behalf of Italian distributors. He said “that's the way business is done here” and then accused me of imposing American beliefs on Europeans. I said: “Well, it's not the way Medtronic does business. Medtronic principles are the same all around the world.” →

You can pay an enormous price if you don't hang on to your principles. Let's take the instant case. The Trump administration recently announced it's not going to enforce the Foreign Corrupt Practices Act. Suppose you're running a global company, and you go along with that, and you pay bribes say in Saudi Arabia, and then a new administration comes in and the Securities and Exchange Commission starts looking into your practices and says, "No, you violated the law, and now you're in trouble." These things, they come back to bite you. You'll regret what you did, and then you can't undo it.

You are a long-time instructor in the HBS's program for first-year CEOs. Are there any challenges you emphasize more now than you once did?

People coming into the CEO role are well prepared to deal with the internal business – how to build an organization, create a team, help create strategies, or make good financial numbers for shareholders – but they're not prepared for external issues. You could say, but Bill, how could you be prepared for Covid-19? And I say, you have to lead in a different way. You have to reaffirm your principles but stay very agile and flexible in your strategy. You can't have a five- or 10-year plan today.

Does executive training need to change to cope with such a chaotic world?

If you have somebody coming up to be a potential CEO, you need to give them some experience in dealing with the external world. I got my experience early on, when I was president of Honeywell Europe, back in 1983. It was a great experience, living in Brussels and traveling to France and Germany. I think a lot of Americans are not good in other environments. They deal with one culture and they need to get broader exposure. I say, give your people that foreign exposure early in their career. People need intuitive skills to deal with complexity. How do you learn intuition? You have to have experience in dealing with complex problems.

But many countries are making it tougher these days to bring in foreign employees. Is that going to pose a problem for developing global leaders?
Absolutely.

How vocal should you be when you run up against policies, such as restrictive visa rules or tariffs, that could hurt your business?

What I'm telling businesspeople today is stay true



BILL GEORGE is an executive fellow at Harvard Business School, where he was a professor for many years, and the former chairman and CEO of Medtronic. He was formerly a senior executive with Honeywell and Litton Industries and served in the US Department of Defense.

to your principles and your values but stay below the radar. You don't have to put your head up where there is crossfire going on. You don't have to taunt to stay true to what you believe.

Like Costco?

We have two different worlds colliding – the political world and the internal business world. As a global CEO, you have to navigate that and be prepared for both. ■

Takeaways

☑ **PAUSE BEFORE YOU ACT:** External factors have made today's problems more like an avalanche. Try waiting for things to settle before making decisions.

☑ **DON'T ABANDON YOUR PRINCIPLES:** Your job is to shore up your company to last for 100 years. Don't change what defines it to fit in with passing whims.

☑ **ENCOURAGE GLOBAL EXPERIENCE:** Leaders need intuitive skills to deal with today's complexity. These skills are gained by exposure to other environments.



**“ORGANIZATIONS
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BE ACTIVATED.”**



RAFFAELLA SADUN
PROFESSOR OF BUSINESS ADMINISTRATION AT HARVARD BUSINESS SCHOOL

Wide angle

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



Sole mates

Blundstone has grown from a Tasmanian family bootmaker into a global fashion powerhouse, selling millions of shoes worldwide. Its 155-year story shows how heritage brands can scale without chasing hype or losing the authenticity that built their reputation.

BY **Megan Tatum**

BY THE TIME HRH KATE MIDDLETON was photographed in a pair of Blundstone boots on a trip to Denmark in 2022, the Aussie brand was already well on its way to cult status. A roster of international fashionistas and A-listers – Brad Pitt, David Beckham and Emma Watson – had all been spotted in their own pair of “Blunnies,” sparking a swathe of international interest in the 155-year-old footwear manufacturer and a threefold increase in sales within five years. By 2023, the brand had been dubbed the boot to watch by *The New York Times*. That same year, it sold three million pairs of its shoes in more than 70 countries. In 2024, it made the Time 100 list of Most Influential Companies.

The family-owned brand, first set up in Hobart, Tasmania in 1870 by married couple John and Eliza Blundstone before it was purchased by the Cuthbertsons in 1932, had spent much of the last century quietly catering to blue-collar Australians. As joint CEO Adam Blake said in a 2020 interview: “We really don’t chase fashion, but we have been brought into fashion by other people ... We still hear people say that a Blundstone is not trying to scream for attention. It’s just there.”

But once Blundstone was there, there was no turning back. And, cast into the global sartorial spotlight, the brand has deftly navigated the seismic shift in culture, customer and strategy that comes with explosive growth, sidestepping the pitfalls that have plagued many before to emerge with a plan to calmly triple the size of the business once again by 2030. So, how did they manage it?

BLUNDSTONE WASN'T EXACTLY A SMALL STARTUP when it became one of fashion’s must-have items. It had sold to everyone from Everest expeditioners, to Olympic athletes and the Australian army by the time Brad Pitt stepped out in a pair in LA in 2017. But the privately owned family business (now in the hands of the reportedly reclusive Cuthbertson sisters) would still have been forced to reckon with some significant internal shifts in recent years.

For example, though culture would have been there from the second John Blundstone began selling boots tough enough for the 1870s Tasmanian terrain, it requires a lot more thought as a company grows, points out Yvonne Randle, co-author of *Growing Pains*. Too often, companies caught up in a heady growth spurt don’t give that proper consideration. The result of which is waves of new employees coming in and “misalignment in →



terms of how people think you do things, which causes conflict," she adds. "Culture may be a reflection of the founders of the company, but as a company grows it requires time and attention to ensure those values are visible." The same goes for leadership. "The leadership skills that you need as a \$100 million or a \$200 million business are very different than \$10 million. Too often, companies don't have performance management systems in place or systems where they know that teams, departments, individuals and the company as a whole are achieving their goals."

FACED WITH THE REALITIES OF EMBEDDING these more managed, formalized frameworks, some owners cut and run. Brian Smith, the Aussie founder of UGGs, has admitted he sold the brand to Decker's Brands in 1995, at the cusp of its international growth spurt, in part because "being subject to committees, consensus, lines of command and the dumbing down of risky ideas would have killed me."

And even for those that stay put it can inspire trepidation as often as excitement. Few family-run businesses are cut out for it, fewer still want to find out. "I wouldn't wish for it on my worst day," says James Richardson, author of *Ramping Your Brand*. Though every business owner daydreams of international domination "most of them grow slowly or not at all," he says. "They're never going to get the chance to test themselves. Am I a leader that can actually jump on acceleration?" Those that can



Sure-footed success

Five milestone moments in Blundstone's rise to the top

1894

At the International Exhibition in Hobart, Blundstone's footwear is dubbed "exceedingly well made" and "second to none."

1940s

Blundstone supplies half a million pairs of its boots to the Australian army in WWII. They're so coveted that US soldiers attempt to swap them for their own.

1960s

The #500 series, the distinctive pull-up Chelsea boot that has turned into Blundstone's best-known shoe, is born.

2014

Australian athletes opt for Blundstone dress boots at the Winter Olympics in Sochi.

2020

The brand marks its 150th anniversary at four times the size it was just 10 years earlier.



answer yes typically share common traits, he believes. "These are people who are breaking rules, getting things done without permission and getting above-average results in legacy businesses," he says. They're also humble enough to understand the customer is in the driving seat. "The people running the business are probably the wrong people."

BLUNDSTONE'S OWNERS DIDN'T SELL UP. But they did look beyond their Hobart HQ to bring in new perspectives when growth accelerated, and their Australian workforce doubled by 2021. Adam Blake was made head of brand in 2015 and later promoted to joint CEO, having formerly worked as head of a government initiative to champion SMEs. He shares the job with Blundstone veteran Darryl Wilkes, who's been with the business since 1983. In 2022, Nik Jackson joined as the company's inaugural chief brand officer after 15 years spent at Nike in



"Even if something gets caught up in that hype cycle, if it's not delivering value, people are not going to keep using it."

– Sean Ellis

Author of *Hacking Growth* and former growth lead at Eventbrite and Dropbox

CRAFTED TRADITION
Blundstone long produced its footwear at its Hobart, Tasmania, boot factory. While the company still produces its gum boots in Tasmania, its leather products are now produced overseas by suppliers that meet strict ethical and environmental standards.

the US (a brand he rejoined in March 2025). The same year James Burke made a move from Asahi to become Group ESG Manager. The combination was a senior leadership team that blended the old and the new, and allowed Blundstone to balance its culture of legacy and family ownership, with an eye on new audiences and opportunities.

Twenty years ago, the bulk of Blundstone's customers cared far more about functionality than fashion. The boots were worn by World War II soldiers, deep in Australian mines and hiking across Tasmania's arid terrain. But with 70% of sales now from an international customer base, they're just as likely to be traipsed through farmers' markets, country walks or film festivals.

The temptation to reengineer their range toward this lucrative fashion-conscious clientele must've been pretty overwhelming. "You're in that hype cycle, investors are throwing money at you and you're right just in the mode of 'let's throw fuel on the fire' because it's going great," says Sean Ellis, author of *Hacking Growth* and former growth lead at Eventbrite and Dropbox. But, if you take that route, "six months or two years from now, you're probably going to be cleaning up the pieces ... Even if something gets caught up in that hype cycle, if it's not delivering value, people are not going to keep using it."

IT'S HAPPENED MANY TIMES BEFORE. When Timberland saw an explosion in sales of its boots in the 1980s, for example, the company quickly introduced 160 new models to take advantage. Factories began to buckle under the strain, orders were delayed, quality fell and customer satisfaction began to wane, tanking profits by a reported 14%. The brand recovered, its revenues now exceed \$1.5 billion, but it learned the hard way that adding new products, services and platforms in a bid to milk a growth opportunity can backfire.

That doesn't mean neglecting a new and potentially lucrative customer segment that wants to emulate their favorite celebrity style. But neither does it mean walking all over the attributes that appealed to the (at one time) core audience. There's an art to managing these competing customer segments, says Annie Wilson, co-author of *The Growth Dilemma* and a senior lecturer at the Wharton School of Business. "A lot of companies jump on the fad, and then they lose the brand in the process," she says. "They flood the market, making the brand really available, really loud, seemingly →

pervasive, like it's showing up everywhere. You have tons of collaborations and you're responding really quickly to serve the demand."

THERE ARE WAYS TO "MILK DEMAND" for a trending product while protecting the core audience and value proposition, Wilson argues. She gives the example of Crocs. Having begun in 2002 as functional footwear beloved by boaters and gardeners, the brand pivoted to a no-frills shoe designed for the masses. But criticisms of poor fit and quality by its original customers, and boredom from more mainstream wearers, left the brand in dire straits. In 2018 it announced it would close all of its manufacturing facilities, as well as 160 of its retail stores. Under the leadership of CEO Andrew Rees, however, Crocs today has found a second wind. "They've done a really good job of milking the clog fad but simultaneously building the brand with sandals and other products that are more stable in terms of long-term demand that the brand can offer," says Wilson.

Blundstone has perhaps done its homework in this regard. Though it opened a new design and innovation center in Hobart to innovate and prototype new products, it remains a single-season brand, with small strategy tweaks to its core shoe despite strategic extensions into women's and kids ranges. This consistency has been key to its success – and its credibility. As head of US marketing Kate Shevack highlighted: "The #500 has remained relatively unchanged since the '60s, which is a testament to the craftsmanship and longevity of the Blundstone brand."

Yannick Dillen, professor of entrepreneurship at Vlerick Business School, adds that SMEs love to add international export maps to their company pitch decks. But for most, the juice of international expansion simply isn't worth the squeeze. "There are administration shifts, shifts in your supply chain ... Going international means complexity, and complexity kills scale-ups." This is why he typically advocates for increasing domestic penetration, despite the allure of an international footprint. But when international demand comes knocking, he recommends a test-and-learn approach, with small pilots testing out supply chains and demand. "Even if there is a large momentum, there's value in the scarcity effect."

He points to Prime as a classic example of failing to heed that advice. Founded by YouTube stars Logan Paul and KSI in 2022, the sports drink

ROYAL APPROVAL Princess Catherine wore a pair of Blundstone boots to join volunteers in Slough as part of the Big Help Out to refurbish the 3rd Upton Scouts Hut in May 2023.

"A lot of companies jump on the fad, and then they lose the brand in the process. You're responding really quickly to serve the demand."

– Annie Wilson
Wharton School of Business lecturer
and co-author of *The Growth Dilemma*



brand quickly grew its international distribution, buoyed by an initial furore around the beverage that saw fans queue for hours and sometimes pay hundreds of dollars for a single bottle. "They could have said, let's test the temperature of the water and start with a soft launch. That would also have helped sustain that customer fear of missing out." Two years on, the brand's revenues had reportedly nosedived 40%.

THAT MENTALITY OF STRATEGIC GROWTH at Blundstone has shaped what might look like rapid international expansion, but in truth has been happening for decades. It's been exporting its boots to Europe since the mid-1980s. By the late 1990s it was sold in 22 countries. None of which is to downplay the global growth spurt of the last decade, which the brand captured in its first global campaign last year.



Stepping up sales

3 million

How many pairs of boots Blundstone sold in 2023 across more than 70 different countries.

>20 percent

The share of Blundstone's 2023 sales to US customers, up from around 5% of its annual sales just five years earlier in 2018.

25 million

The number of pairs of its iconic #500 Chelsea boot that Blundstone has sold since introducing the model in the 1960s.

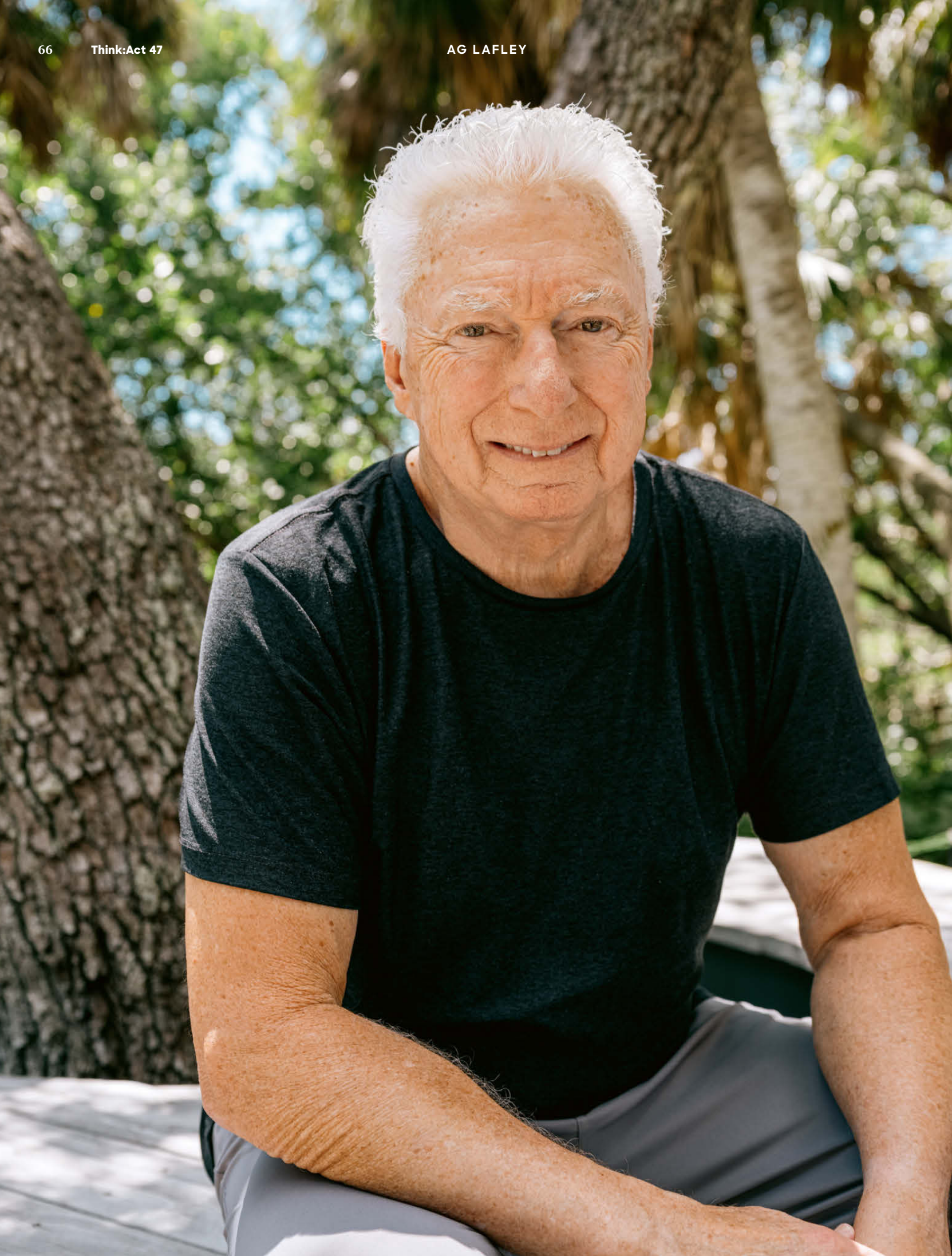
SOURCES:
BLUNDSTONE, TIME



The Well Worn platform, which highlights the personal stories of a diverse, international collection of Blundstone wearers, was designed to unearth a "universal commonality" to Blundstone owners, said Tom Wenborn, chief creative tinker at Thinkerbell, the agency behind the campaign. "Trailblazers" in five countries were featured. It was an ambitious project that reflected the brand's behind-the-scenes effort to scale its international footprint. As its then chief brand officer Nik Jackson put it: "All of a sudden, that international business forces us to think, 'is this still going to be relevant for people in other parts of the world?'" It has entered into each new market with its eyes wide open, painstakingly deciphering data from nearly 10,000 retailers across 70 countries, managed by 19 distributors. While Jackson was at the helm, the company also undertook in-depth market research across 12 international markets, a six-month project that garnered even more data and allowed the team to understand where they could authentically add value, for the long term.

It might be every business owner's aspiration, but the realities of a brand being hurtled into the spotlight can be far more than many bargained for, with a ripple effect across culture, customer and strategy that has left many floundering. But with more than a century of experience under its belt, Blundstone has proven how it can be done, leveraging expert outside perspectives, refusing to bend to transient trends and a strategic international expansion that doesn't compromise its core offer. ■





Playing to win. Twice.

*The two-time former CEO of P&G, **AG Lafley** is regarded as one of the most successful business leaders of his era, handling growth and streamlining with equal skill.*

BY **Neelima Mahajan** PHOTOS BY **Josh Aronson**

BUSINESS LEADERS rarely get a repeat performance at the same company. Not so for AG Lafley. Under his first 10 years of direction, he doubled sales and then tripled profits for the US consumer products behemoth Procter & Gamble, making it one of the 10 most valuable companies in the world. Then, after a three-year break, he came back for a second stint at the helm and used his skills to adapt P&G for a new age, streamlining the company and setting simplicity to work under a very clear set of principles while also pushing innovation. Now in a more relaxed phase of his life, he can look back and reflect on these two very different periods of management and the challenges that came with them. He spoke to *Think:Act* via video link from Sarasota, Florida, and reflected on everything from the importance of R&D to why we need human empathy in an AI age.

IN HIS ELEMENT
AG Lafley met *Think:Act* for an exclusive photo shoot on the grounds of The Bay, the conservancy and "signature public park" along the Sarasota Bay in Florida of which he is the founding CEO.

How did you think through the strategy and develop principles that would hold well across the P&G organization, brands and countries?

The first principle for me has always been "the consumer is the boss": The purpose of any business is to create a customer, serve that customer better than anyone else can and keep that customer for as long as you can. Classic Peter Drucker. The second principle was, if we were going to win, we had to choose where we were going to play. The first question about where to play is "who"; consumers who believed that our brands and products were relevant, important and preferred them to the other choices that they had. So we focused on winning the first moment of truth when the consumer shopped in whatever retail or e-commerce environment. We focused on winning the second moment of truth when the consumer used our →

product at home: Did we perform and create a great experience? If we won those two moments of truth, then we had to do it all over again. That was our simple principle. Focus on the consumer, offer them innovative brands and products that met their needs.

How should leaders think long-term, build for the future and also handle the quarter-on-quarter culture that has gripped most corporates?

We were very clear from the outset that we were focused on the longer term, five to 10 years. You have to be clear that's your mindset, how you're going to lead, manage and operate your businesses. We were not in any businesses that were on a quarterly cycle: two-, three-, five-year cycles. The capital-intensive businesses were on five- to seven-year cycles. Since we were a public company headquartered in the US, we had to report our financials on a quarterly basis. We focused on the year and it was just the next milestone in our journey along the way to the decade.

There would be volatility quarter by quarter. But we asked our investors, employees, customers and suppliers to keep their eye on where we're headed year by year. In the end, the market and investors are looking at how consistent, reliable and sustainable your business and financial results are. If your organization can deliver that level of consistency, reliability and sustainability, then in general, they don't get too excited by quarters.

In between both your P&G stints, you worked in private equity and in venture capital. How did these industries shape your perspective?

I'm an oversimplifier. If you step back, there are three kinds of businesses: "start them up" businesses (i.e. startups), "fix them up" businesses (private equity) and "keep them up" businesses (like P&G, where you have to be able to do startups, fix-ups and be able to sustain). "Fix them up" businesses teach you cash discipline. Most businesses perform better if they have their balance sheet in order, they have cash discipline – and they have their cost structure where they want it. In general, you don't want to be investing a lot of money in new innovation or new acquisitions unless and until you've got your balance sheet and cost structure right.

Private equity is pretty much 90-100% focused on value creation. Their time horizon is three to five, maybe seven years. So it's a different time horizon than P&G, but it's long enough for the leadership and the strategy, the choices you choose to make a difference on the operating results.



AG Lafley

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is a CEO, business mentor, non-profit leader and philanthropist who served two stints as CEO of Procter & Gamble, first from 2000 to 2010 and then again from 2013 to 2015. He is also the author of several *Harvard Business Review* articles on strategy, innovation and leadership as well as the co-author of the bestselling books *Playing to Win* and *The Game-Changer*.

Today, Lafley consults on business and innovation strategy, advises on CEO succession and coaches experienced, new, and potential CEOs. He currently serves as the founding CEO of The Bay Park Conservancy in Sarasota, Florida.



How should CEOs today aspire for simplicity when the contexts we operate in are so complex?

Every generation of CEOs thinks they are in the most complex, tumultuous and difficult environment. So I thought back on my two tours in Asia and the Asian financial crisis, where an Indonesian business worth \$100 million went to \$18 million in revenue overnight. I lived and worked through the Kobe earthquake as well as the tsunami in Southeast Asia. 2000 was a tumultuous year, and in 2002 we had the dot-com bubble and in 2008-09 we had the global financial crisis and the worldwide recession. Things are tough right now and there is complexity, uncertainty and volatility. But that's part of the job.

The more complex, volatile and uncertain things get outside, the simpler you have to make things inside. That means a few simple goals on the strategy side that clearly define what is winning for your company – and a few simple choices about



"The purpose of any business is to create a customer, serve that customer better than anyone else can and keep that customer for as long as you can. Classic Peter Drucker."

– AG Lafley

where you are going to play and how you're going to win as well as what core competencies you need.

Things need to be very simple on the operating side as well. We simplified in a bunch of ways: I only focused on four encounters with the president, CEOs, category and country leaders. I threw out the notebook and said, I want to talk about two to three questions: Are you winning? If you're winning, how are we going to widen the moat? If you're not winning, what one or two strategic choices do we need to make to get you on the path to winning?

I would go through their innovation strategies and programs, then. I threw out the notebook and wanted to see the product prototypes, technologies and consumers' reactions to them. I sat down with them once a year and looked at their succession planning and talent pipeline. Lastly, I went through the annual rolling one- and two-year plans. Again, I didn't want to see the notebook or the PowerPoint. I just wanted to see the numbers and the two or

"BAY" WATCH Under AG Lafley's watchful leadership, The Bay opened its first 10-acre phase in October 2022 and is currently expecting to open its 14-acre second phase in 2026. The completed park will cost around \$200 million and take another eight to 10 years to complete over four or more phases.

three things they were going to do in their operating plan to deliver their strategy.

So not getting caught up in all the concerns that are swirling around outside and staying focused on the few things that you can control and influence really make a difference to your consumer and to value creation for your company.

Did you also manage to cascade down this way of working across the board?

We tried very hard to do so because we wanted the strategy work at the country level to be done in the country. We did a whole bunch of different things. When I went to the country, my review with them was as I described: going through strategic objectives, goals, strategy choices, innovations they were bringing to market, their leadership team and talent pool and how they were performing against their operating plan. Two, we created an executive leadership program and a lot of online and →

in-person courses because we believed that you could teach "playing to win" strategy and leadership. Some of the countries and categories did extremely well. Others struggled and we tried to enable, empower and help them deliver results. If they couldn't, you changed the leadership or some team members so you can put together the team you need to get the results you want.

On the topic of choosing where to win, how did you decide on which opportunities were worth pursuing and which ones weren't?

First of all, the only decisions that my relatively small executive team and I made were the "where to play" decisions and "how to win" decisions for the entire corporation: operating on a multi-industry, multi-sector, multi-category and multinational basis. Where to play at that level was largely a portfolio set of decisions: what industries, sectors, categories and countries? The second area we spent a lot

*A GROUNDED VISION
Whether working from the Chidsey Building, The Bay's current office location and the former site of Sarasota's oldest library, or on the 53 acres of city-owned land that will form The Bay's grounds, Lafley has brought his background in innovation to a landmark civic project aimed at creating "one park for all."*

of time on was how to win. How do we need to keep evolving our business model so that we can perform better, support the country, category or sector better? We focused on building core capabilities and competencies. We made multibillion dollar investments in understanding consumers and proprietary research techniques, some of which we developed and some of which we acquired. We invested a significant amount of money in innovation. We spent more on R&D than our next five competitors combined. We were going to win or lose on innovation. Lastly, we invested a lot more than most other companies in the hiring, development and growth of our talent and leadership.

You spent an outsized amount of money on different kinds of innovation including open innovation in the form of P&G Connect + Develop. How did you think through it because it was a gamble after all?

We didn't invest all that money at one time. We took all of our investments in innovation one step at a time, testing and learning as we went along. Connect + Develop was a test and learn opportunity. Our hypothesis was that while we were inventive and one of the top 10 patentors in the US and in many countries around the world, there were a lot



"AI and machine learning could become more of a commodity and less of a competitive advantage ... The differentiator will be human beings."

– AG Lafley

of great inventors out there. We wanted access to inventions and technologies that might have application in our industry sectors and categories. If we insourced some of this innovation and inventiveness, we could put P&G's commercialization capabilities to use.

Back then P&G had 10,000 researchers and engineers in R&D, and they were very concerned that we were outsourcing R&D. But we were insourcing additional "R" (research) so that we could "D" (develop) and commercialize it. Once people understood that, they started working with first-rate scientists from our suppliers, BASF, Novozymes, research universities and research laboratories. They got stimulated. But it was hard to get it started.

A lot of open innovation gets shot down within companies due to cultural issues.

It's a big cultural issue. We tried to encourage them to give it a try, engage in one experiment. We'd put chemists from P&G together with chemists from BASF, and all of a sudden they were creating new polymers that we could use at both companies. It was a win-win for the research scientists. They got a lot of appreciation and recognition.

If a great research scientist was stubborn and they didn't want anybody in their laboratory except their handpicked lab technicians, we would find ways to inject positive opportunities into their labs. We'd ask them: "Could you test this for us?" It's hard to turn that down if you're a scientist. It didn't work all the time. But when we started the program, about 10% of the new products and improved products that we took to the marketplace had one or more outside co-innovators or partners. By 2005-2006, it was 40-50%.

We benefited from a culture that was strong on ownership, leadership and innovation. That helped, but wasn't sufficient. Everybody had to try it for themselves to see whether it worked in their case. Some industries, categories, sectors moved quickly and had success so that was a motivator.

At P&G you focused a lot on human empathy. In today's world of data, AI and analytics, do you think we are at risk of losing the focus on the human aspect of the customer?

There's clearly a role for collecting the data that's relevant and important, and understanding it as well as you can. But I also deeply believe there's a role for human empathetic insight and understanding. I've worked with FIGS, a startup that went



Short Takes

Discover the bonus video interview with AG Lafley online:

→ [thinkact.](https://thinkact.rolandberger.com/en/lafley)

[rolandberger.com](https://rolandberger.com/en/lafley)
/en/lafley

public. Think of it as the combination of Lululemon and Nike, a health care uniform alternative to scrubs. They use a lot of data. But CEO Trina Spear and her team also invest a lot of time face-to-face in hospitals and health clinics, with the nurses and primary care physicians who are their primary customers, trying to really understand what life is like in a 12-hour shift and how that impacts what they wear and how what they wear has to perform, fit and feel. So I don't see a way around that.

AI and machine learning could become more of a commodity and less of a competitive advantage, especially at large, sophisticated companies that have relatively unlimited budgets and human resources to throw against this opportunity. They're going to be competing at the edge of what they can do with databases and AI. The differentiator will be human beings. There'll be an advantage to the individuals, leaders, people, companies that can discern unarticulated needs and wants. ■

Tapping into trust

Recycled wastewater may trigger an "ick" response in many people, but it's already helping to sustain millions worldwide. With water scarcity intensifying, experts argue that embracing direct potable reuse may soon be less about preference – and more about survival.

BY **Geoff Poulton** PHOTOS BY **Luke Withers**

WOULD YOU DRINK wastewater, even if it were recycled? Chances are, your instinctive response would be to recoil and answer with an immediate "no." And that's understandable. After all, something that's been labeled "toilet-to-tap" water by some doesn't exactly sound appealing. Yet behind the visceral reaction lies a valuable solution to one of the 21st century's biggest challenges: water scarcity.

For centuries, wastewater has been treated as a nuisance, a by-product to be cleaned up and dumped as quickly as possible. Or, sadly, sometimes just dumped. But what if the very thing we flush away multiple times each day could support climate resilience and economic growth as well as human survival?

The world generates around 360 billion cubic meters of wastewater every day – enough to fill 144 million Olympic-sized swimming pools, according

to a study by Utrecht University and the United Nations. However, only 11% of this is directly reused. Importantly, of the 11% of water we do reuse, the vast majority goes toward irrigation and industry. This has its benefits, but it also means that only a tiny fraction is repurposed as precious drinking water – just 3%, according to a recent study by the World Bank.

This needs to change, says Heather Cooley, director of research at the Pacific Institute, a global nonprofit focused on water issues. "Water scarcity is a growing problem around the world. Population and economic development, as well as climate change, are making supplies more uncertain," she explains. Indeed, global demand for water has doubled since 1960 and could rise another 30% in the next 25 years. Climate change is disrupting rainfall patterns, while overconsumption and pollution strain aquifers and rivers. There is no silver bullet to solve this, but increasing →





FULL OF POTENTIAL
Reclaiming water through physicochemical processes like membrane technology dates back to the 1970s and utilizes a semipermeable membrane to remove impurities, such as the salt in seawater, through reverse osmosis tanks.

water reuse offers a proven, scalable solution. "By reusing wastewater, we can harness the energy and nutrients within it, as well as the water itself," Cooley says.

THIS IS HARDLY A NOVEL IDEA. Archaeological evidence shows wastewater irrigation as far back as Bronze Age Crete, and rainwater harvesting was common in ancient Rome. But it wasn't until the 20th century that planned reuse emerged as a deliberate response to drinking water shortages. In 1968, Namibian authorities opened the Goreangab Water Reclamation Plant in the capital city Windhoek, making it the first large-scale plant to produce purified drinking water directly from wastewater. Namibia is the driest country in southern Africa, receiving around just 280 millimeters of rainfall a year. Today, the upgraded plant delivers up to 35% of Windhoek's daily demand for drinking water, alleviating pressure on its precious groundwater supplies. For Windhoek's residents, potable reuse isn't a matter of preference – it's one of survival.

Today, Namibia is no longer alone. Singapore's NEWater program, launched in 2002, provides more than a third of the city-state's supply via its reuse facilities, including some of its drinking water. In the United States, California's Orange County operates the world's largest potable reuse plant, while across the US Southwest, from El Paso to Phoenix, utilities are now planning reuse plants to keep pace with growing populations as well as worsening aridification.

Yet, on a global level, adoption remains limited. In many places, strict regulations allow potable reuse only during emergencies or ban it outright. In Spain, for example, wastewater can only be recycled for drinking in crisis conditions. And in much of the Middle East and North Africa – where potable reuse is arguably needed most – desalination is more widespread, despite often being a more costly and energy-intensive solution.

The technology itself behind potable water reuse is not in question, as the long-standing success of Namibia's reuse facilities shows. There are two approaches: Indirect potable reuse (IPR) involves treating wastewater, releasing it into an aquifer or reservoir and later drawing it back out for further purification. This provides an environmental buffer, mimicking natural processes of dilution. Direct potable reuse (DPR), by contrast, skips the buffer: Wastewater is purified using advanced multi-barrier treatment such as biological



Exploring new waters

360 billion

How many cubic meters of wastewater the world generates every day, enough to fill 144 million Olympic-sized swimming pools.

11%

How much of this wastewater is currently directly reused, with the vast majority going toward irrigation and industry.

3%

The fraction of global wastewater that is being repurposed for drinking water, despite growing scarcity.

SOURCES:
UTRECHT UNIVERSITY,
THE UNITED NATIONS,
THE WORLD BANK

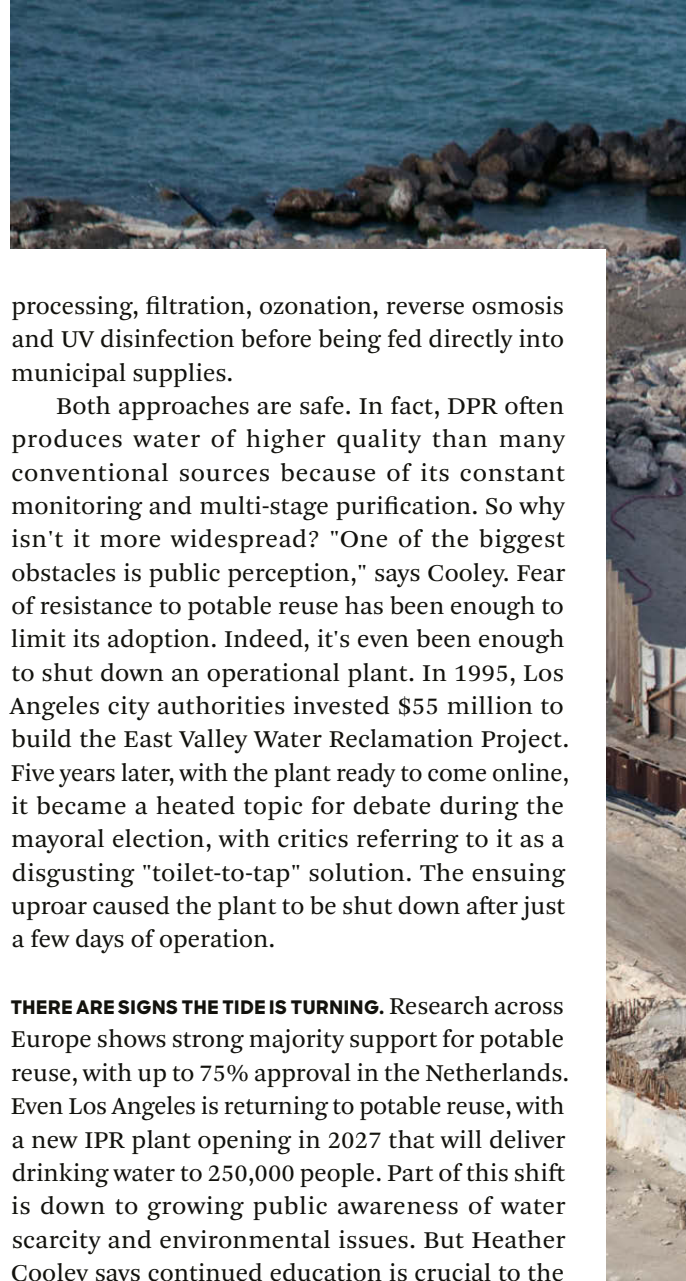
processing, filtration, ozonation, reverse osmosis and UV disinfection before being fed directly into municipal supplies.

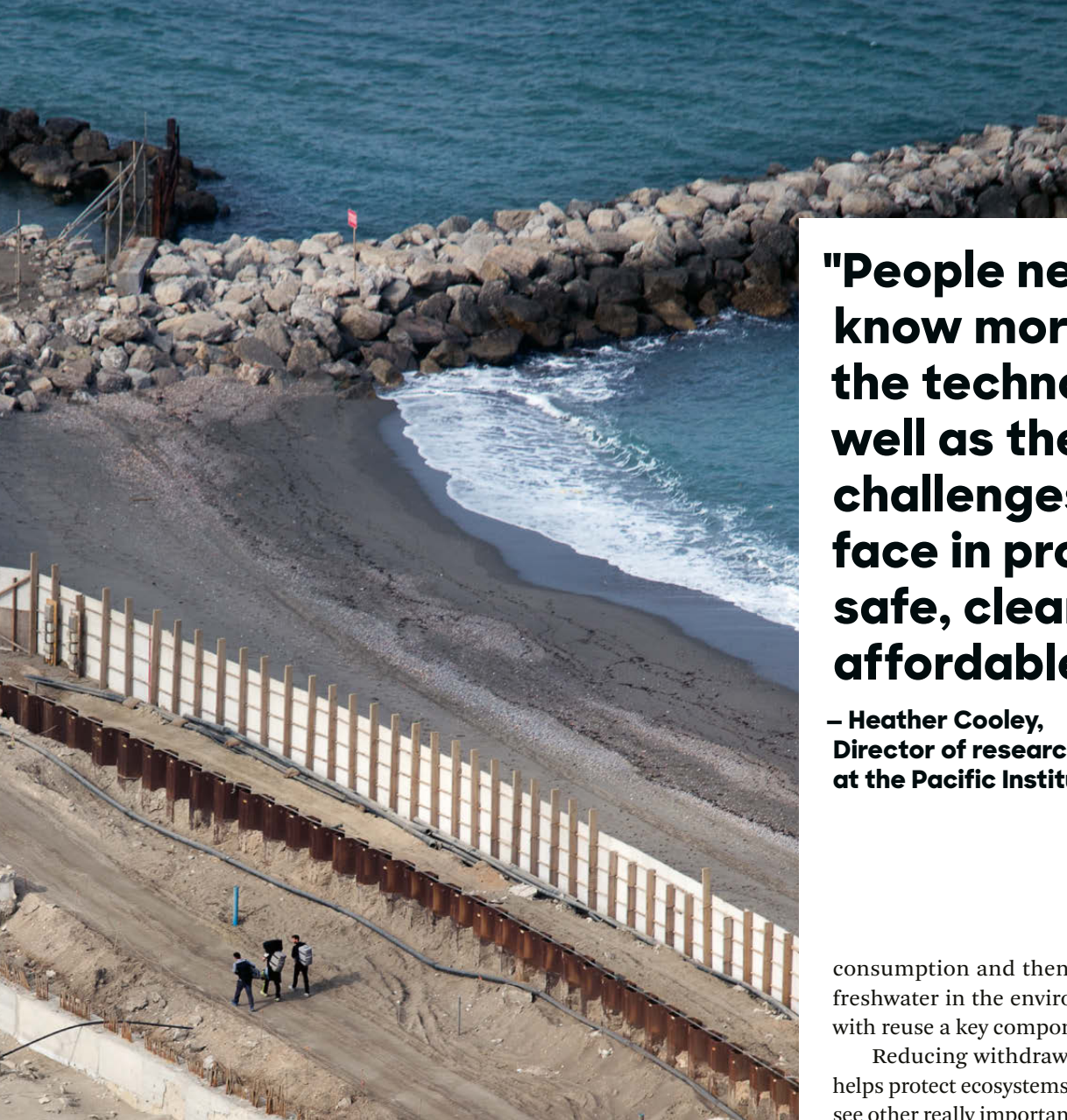
Both approaches are safe. In fact, DPR often produces water of higher quality than many conventional sources because of its constant monitoring and multi-stage purification. So why isn't it more widespread? "One of the biggest obstacles is public perception," says Cooley. Fear of resistance to potable reuse has been enough to limit its adoption. Indeed, it's even been enough to shut down an operational plant. In 1995, Los Angeles city authorities invested \$55 million to build the East Valley Water Reclamation Project. Five years later, with the plant ready to come online, it became a heated topic for debate during the mayoral election, with critics referring to it as a disgusting "toilet-to-tap" solution. The ensuing uproar caused the plant to be shut down after just a few days of operation.

THERE ARE SIGNS THE TIDE IS TURNING. Research across Europe shows strong majority support for potable reuse, with up to 75% approval in the Netherlands. Even Los Angeles is returning to potable reuse, with a new IPR plant opening in 2027 that will deliver drinking water to 250,000 people. Part of this shift is down to growing public awareness of water scarcity and environmental issues. But Heather Cooley says continued education is crucial to the success of potable water reuse. "People need to know more about the technology as well as the growing challenges we face in providing safe, clean and affordable water."

Singapore is seen as a leader in this respect. The government created a NEWater visitor center, integrated water education into school curricula and made the technology visible through guided tours and interactive exhibits. Bottled NEWater was handed out at events such as the National Day Parade, transforming what could have been stigma into a symbol of pride. They've even collaborated with a local brewery to create a craft beer using NEWater. And then there's the name itself: "NEWater" sounds fresh and fun. Branding matters.

At least 35 cities or communities around the world added recycled drinking water to their local supply. This water is safely drunk by around 30 million people. However, perhaps mindful of potential public resistance, most countries don't yet have the regulations to support potable water reuse. "More governments need to start developing





"People need to know more about the technology as well as the growing challenges we face in providing safe, clean and affordable water."

**– Heather Cooley,
Director of research
at the Pacific Institute**

guidelines and potentially regulations, such that if a community wants to or is considering it, they at least know the path forward," says Cooley.

It helps that general water reuse, including for non-potable activities, is starting to attract greater attention. In addition to its obvious significance in our existence, water underpins nearly every product on Earth, from semiconductors and EV batteries to food and clothing. According to the World Resources Institute, 31% of global GDP, or \$70 trillion, will be exposed to high water stress by 2050.

WATER STRESS EQUALS WATER RISK for businesses, including physical risks such as water scarcity, the impact of regulatory initiatives, and reputational risks. A growing list of companies are now committing to becoming "water positive" over the coming decades, from consumer goods businesses such as PepsiCo and Nestlé to tech firms like Microsoft and Meta. This means they will look to reduce

*A DROP TO DRINK
Some geographic areas, including Northern Africa and Gibraltar, rely heavily on desalination processes to repurpose sea-water for human consumption and meet local demand for drinking water.*

consumption and then actively replenish more freshwater in the environment than they extract, with reuse a key component.

Reducing withdrawals from natural sources helps protect ecosystems and biodiversity. "We also see other really important benefits with reuse," says Cooley. "In some places, the discharge of treated wastewater can pollute receiving waters. Treated wastewater is essentially freshwater, and you're discharging that into your oceans – that's a pollutant." Potable reuse won't always be the right solution, but it is something that every community should consider as part of their portfolio, Cooley says. There are investment and infrastructural criteria to consider: Indirect potable reuse requires access to reservoirs or aquifers, for instance, which not all communities possess. Reusing wastewater upstream may also deprive downstream ecosystems or farmers of flows they currently rely on.

Ultimately, all water is recycled through the Earth's natural water cycle. While we can't create "new" water, we can aid this process by treating and reusing wastewater, effectively "recycling" water on a human timescale to provide drinking water and meet other needs. As we continue to ask more and more of our planet's water systems, perhaps the real question isn't whether we would drink recycled wastewater, but whether we can afford not to. ■



A TÊTE-À-TÊTE WITH

Linda Hill

*Linda Hill has analyzed innovation in business for decades. In her latest book, **Genius at Scale**, she introduces the three key roles that help advance new ideas across organizations: the architect, the bridger and the catalyst.*

BY **Neelima Mahajan**

ILLUSTRATIONS BY **Nigel Buchanan**



You write about getting everyone in an organization to innovate. What does it take to democratize innovation in an organization without creating chaos?

You have to unleash the diverse slices of genius in your organization because you rarely get innovation without people with different perspectives collaborating. You'll have conflict, because people don't think the same way. You will get chaos if you, as a leader, are not comfortable managing that conflict. Leaders have to develop the capacity to work across difference.

As a leader, if you think you have the right answer, you may think that you're supposed to pick, as opposed to bringing our different slices of genius together and putting them in a new combination that actually will allow us to innovate. Many leaders discover that people didn't agree, even though they were nodding. Afterwards they're not willing to implement whatever was decided. Employees may not push back verbally, but they just don't do it. Given how competitive business is, as a leader you need to learn how to work with top talents, and help unleash and leverage them. To keep it from

becoming chaotic, you have to be clear about your purpose. Purpose makes us willing to work through differences.

How can leaders make others want to innovate, especially when they identify their jobs with a certain mandate and innovating means going beyond that?

We've studied corporate accelerators and innovation labs. When you tell people the innovators are in that center of excellence and they're the executors, you get a problem. You want everyone to think they have a role to play in innovation. So that's the first thing: how you describe people's jobs and what you allow them to do. Purpose is part of it too. It makes us say: "If this means that we can make a difference to our consumers, deal with a pain point, I feel good about that. It links into my identity." Next, we need to have shared values, so I can predict how you think about →



Available online

Watch the video interview with Linda Hill:
→ thinkact.rolandberger.com/en/hill



Best practice builder

Linda Hill is a professor of business administration at Harvard Business School and faculty chair of the Leadership Initiative. She has authored or co-authored numerous articles and books on leadership, including *Collective Genius* and *Being the Boss*. She has been shortlisted for the 2025 Thinkers50 Innovation Award alongside the co-authors of her latest book, *Genius at Scale*.

things. When you build a culture, you are making the world somewhat more predictable for people in terms of how others are going to behave and they feel psychologically safe. Unless people feel safe, they won't do the kind of work necessary for an organization to thrive, which is being adaptable and agile.

How is the idea of a good leader evolving, especially in today's environment?

We spent time with large, successful incumbents, meeting leaders who were trying to make transformations. Many companies recognized they didn't have the internal capabilities and were partnering with other organizations. A lot of that was driven by the need to get digital assets, digital talent. It became very clear that big companies were struggling to scale it. Companies working with other companies or government need leaders who know how to co-create across organizational boundaries – many organizations are still quite siloed. When you see something like Microsoft-ChatGPT, you need leaders up and down the organization who can co-create with some group very different from them. Otherwise, you're not going to build those ChatGPT capabilities into the products of Microsoft.

It is not enough to "architect" an organization to have the culture and capabilities necessary to routinely innovate. You have to be a "bridger" and a "catalyst" as well to innovate at scale with any speed. Scale and speed really matter in today's environment. Speed in particular because of how fast the world is moving. As a bridger, you need to be able to co-create across organizational boundaries. Finally, the catalyst role is becoming ever more important, particularly with sustainability. Look at Renault trying to do a software car or electric vehicles. Renault's CEO wrote a letter to EU citizens saying, essentially: "For us to really meet our sustainability goals in the region and build competitive businesses we need to come together in the private sector, the public sector,

communities, etc., to figure out how to build an ecosystem supportive of electric vehicles. If we don't have charging stations and smart grids, we don't have this." That requires multiparty coalitions, private, public, etc. Leaders are thinking about the system where they sit and making sure that whole system is able to operate.

During Covid-19, the whole world became much more aware of how interdependent we all are. No one business

on its own could survive. The biotech companies in Boston came together to create their own testing sites so that people could go to work and be together. They didn't wait for someone else to do it. You saw private-private and private-public coalitions building to meet needs. The hospitals had to work together. So you have this recognition that we're in an ecosystem. Business leaders understand we need those bridgers and catalysts to break down those silos.

The "ABC"s: your building blocks for scaling up

A

for "architect"

Architects work to build a framework that empowers and incentivizes everyone to share their ideas and reach their full innovation potential.

B

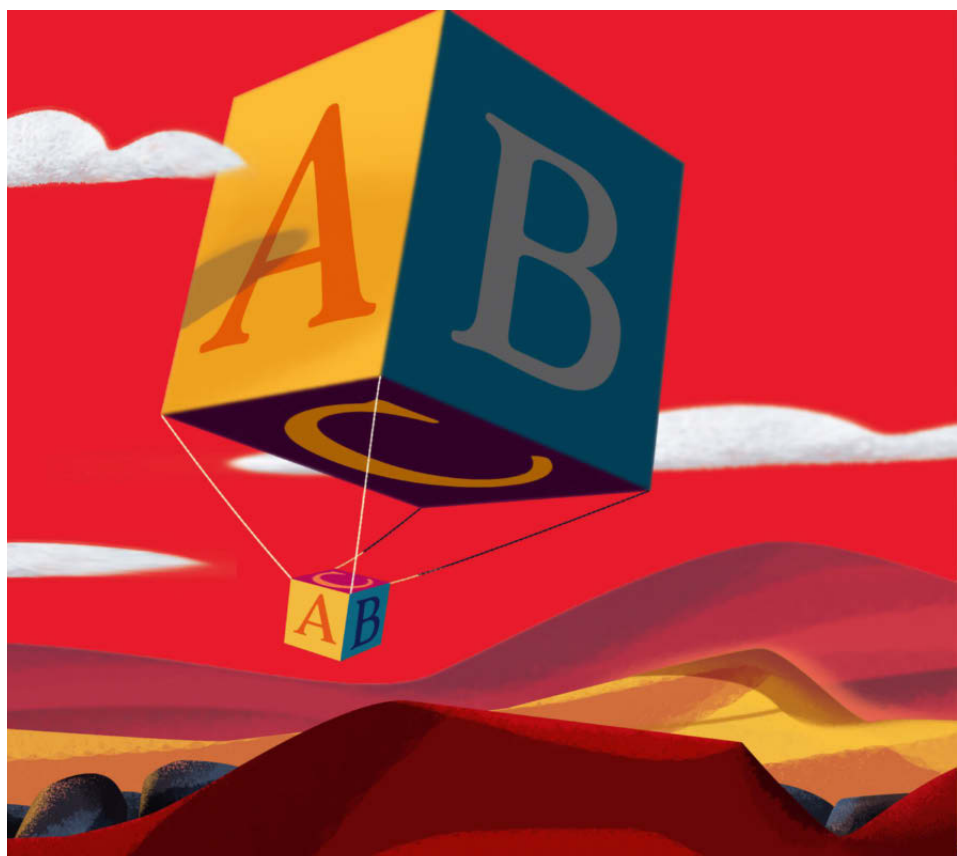
for "bridger"

Bridgers take on the challenge of encouraging people to work closely with others outside the organization, accessing more talent and tools.

C

for "catalyst"

Catalysts work to activate key players and accelerate innovation across a wider ecosystem to bring successful collaborations to fruition.



Do leaders have to play all three roles together or do they get other people to handle these? What are some of the examples you've come across?

Ajay Banga at Mastercard (now head of the World Bank) played all three roles in different ways at different times, although mostly he was the architect trying to move culture and capabilities. He did enlist bridgers to play those bridging and catalyst roles. He played a lot of those catalyst roles.

The head of the Cleveland Clinic Abu Dhabi had to work very closely with their partner, the sovereign wealth fund of Abu Dhabi, colleagues back in the US, local medical centers and also regulators. He came from the US to Abu Dhabi. So he had a lot of contextual intelligence to learn. One of his younger, less experienced Emirati managers volunteered to be the lead on managing relationships with other local medical centers because he had the contextual intelligence – he was of the community. Other people volunteered to do a whole range of different activities or were appointed. They took advantage of their diversity, 80 nationalities. The architects were also bridgers. Senior people get together and do the contracting, the governance, etc. But they don't necessarily take the time to build the relationships that are going to be required if we're truly going to do innovation at scale together, and we come from very different organizations. So these leaders are all quite sensitive to the quality of the relationships.

Can you be good at all three roles – architects, bridgers and catalysts?

To be good at all three, but particularly as a catalyst and a bridger, you not only have to be a strategic thinker, but also a systemic thinker. A lot of leaders know how to be strategic thinkers, but they don't necessarily know how the dots are connected. Large-scale system change is a different animal. I suspect that there are people who can be architects and bridgers who are not necessarily going to be very skilled catalysts.

"Leaders have to be able to read the tea leaves, but have people who are adaptive and willing to learn."

– Linda Hill

A lot of what you're telling me is also about being comfortable beyond the boundaries of our organizations: dealing with contexts, processes and people. How do these leaders navigate them?

They understand the connections: who's connected to whom, who the key stakeholders are, why these stakeholders behave the way they do and how to change some of those conditions so they might think about doing things differently. They have a systemic view.

You have to understand how things work, and who's working together, before you can make a move. The way you do Cleveland Clinic in Cleveland is different than the way you do it in Abu

Dhabi. Too often leaders think they know best practice and can apply it. No. Best practice always has to be adapted. The first thing that you see about these leaders is that they know they need to develop contextual intelligence. They go in with an "I don't know the answer" mindset. They also know they have to build teams that are collaborative and become more comfortable experimenting and learning together.

Inevitably, all the people who lead digital transformation say it's about the people and the culture, not so much the technology. These leaders work very hard at getting the metrics and the structures right, but they also know that they are using themselves as instruments to try to get something done, and they're role modeling the behavior they expect. So they're collaborative, they're experimental, they're learners, they're using data and those tools themselves. There's no magic to it, and it does take time to change. But the leaders we're studying are proactive. They're moving even when they're "successful" because they know the time frame of success is limited.

It's a really hard time to be a leader. Scenario planning is just one piece of it. Fundamentally, in the end, they have to be able to read the tea leaves, anticipate as much as they can, but have people who are adaptive and willing to learn. One of the characteristics of an effective leader that keeps coming up is curiosity. You've got to be adaptive, curious and prepared to help your people learn. ■



Rethink the role of formal authority

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Successful innovation needs leadership, but that may not look like you expect. To take an idea and grow it at scale, try fostering an environment that embraces the spirit of co-creation. After all, you can't tell people to innovate – you can only invite them.



ZOOMING IN ON

Globalization recast

As geopolitics reshapes trade, firms must balance resilience with opportunity.

WHEN THE FORMER World Bank economist Branko Milanović first published his "elephant curve" in 2012, his graphic succinctly captured two developments: the emergence of a truly global middle class as well as the seeds of discontent with the results of globalization across industrialized countries. Today, these factors are at the core of why the debate about globalization's future is so complex. It revealed that the global middle class saw major income gains – especially in Asia – as rapid growth lifted millions out of poverty. In sharp contrast, lower middle classes in advanced economies such as France, Italy, Germany and the US lost ground in relative terms, while the top 1% of earners globally cemented their place as globalization's major beneficiaries.

Milanović's chart is more than a touchstone for debates on growth. Income growth following the financial crisis has been strongest among the lower to middle percentiles – reflecting the continued rise of the middle class in emerging markets. Meanwhile, growth in middle-income households in advanced economies lagged behind. The evolution of Milanović's curve helps explain today's turmoil – from geo-economic disruptions to the rise of

populism. Events like Brexit or Donald Trump's renewed election on a protectionist platform underline how voters in regions left behind by globalization, where industrial jobs have vanished and prosperity has stagnated, are driving today's political discontent. Although technological advancements also contributed to job losses, globalization has become the scapegoat.

Available online

Zooming In brings you the latest analyses from the Roland Berger Institute, exploring economics, global dynamics and emerging trends.

Access the full analysis behind this article here:

rolandberger.com/seismicshifts



A new geopolitical order

Emerging powers, meanwhile, are seizing the opportunity created by America's withdrawal from the liberal order it once led. The Global South's share of global GDP surged from 26% in 1990 to over 50% in 2023. China in particular has secured leading positions in industries such as AI, telecommunications and advanced manufacturing. These economies are increasingly coordinating on trade, finance and security, motivated by the desire to build alternatives to the Western-dominated order – from BRICS+ and the AIIB to new financial mechanisms like CIPS and mBridge. The world economy is shifting toward a more multipolar structure.

The West – including aligned countries like Japan and Australia – has responded with a renaissance of industrial policy. According to research by

the US National Bureau of Economic Research, annual interventions have surged from 20-30 in the early 2010s to around 1,600 in the early 2020s, most from OECD members. This shift is particularly evident in technology, where the US – first under Trump and later Biden – has sought to curb China's rise through export restrictions and tariffs, culminating in the "Liberation Day" measures aimed at driving reindustrialization of the US.

Does this mean that globalization is dead? No. We must remember that the trajectory of globalization has never been linear. It simply continues to evolve. In a repoliticized world where bloc-building is on the rise, efficiency is no longer the sole driver. David Ricardo's classic insight on comparative advantage, and hence globe-spanning supply chains, remains as relevant as ever. However, geopolitical realities are bound to lead to some adjustments, not least as the strife for more technological sovereignty leads to significant adjustment to the more unfettered free trade approaches of the past decades.

Implications for companies

While the future shape of the evolving geopolitical and geo-economic order is uncertain, strategic issues such as national security, defense alliances, industrial policy and energy resilience are becoming more intertwined. Even in economic decision-making, these issues increasingly rival with cost optimization considerations, if they don't

“Does this mean that globalization is dead? No. We must remember that the trajectory of globalization has never been linear. It simply continues to evolve.”

increasingly take precedence over them. Companies must navigate a retreat from multilateral frameworks, heightened trade frictions, military escalations, fragmented global supply chains, shifting technology standards and the rise of new economic powers in the Global South, led by China as a systemic competitor to established economies in the West.

Clearly, crisis management strategies have had – and continue – to be modified and improved. These overlapping dynamics require a broader, more anticipatory approach that goes beyond traditional risk management and embraces scenario planning, strategic agility and regional diversification. Unpredictability places a burden on effective risk mitigation and prudent, adaptive decision-making. This involves four dimensions:

1. GEOPOLITICS ENTERS NOT JUST BOARDROOMS:

Geopolitical literacy becomes a requirement for managers at many corporate levels for any decisions involving trade, supply chains and investment.

2. AGILITY IN OPERATIONS:

Firms must design production footprints that can pivot when tariffs, sanctions or export controls shift. This requires a dual lens: short-term tactical agility (e.g., rerouting supply chains quickly) combined with a long-term portfolio view that ensures consistency and strategic coherence. Global reach becomes an asset – expertise from multiple regions provides resilience.

3. GEOPOLITICAL RISK MANAGEMENT:

Political risk monitoring, scenario planning and structured government relations functions must move from "peripheral" to core strategic capabilities, akin to finance or compliance. Companies that anticipate shifts will gain competitive advantage.

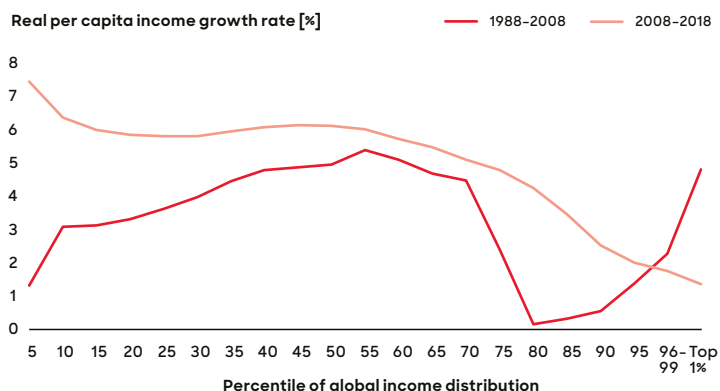
4. STRATEGIC DE-RISKING:

Overreliance on any single bloc, supplier or market is no longer viable. Corporates need diversified supply, market and logistics portfolios, even if that adds cost, because resilience and reputation outweigh efficiency alone.

For decision-makers worldwide, the shifting geopolitical order presents a profound strategic challenge: navigating national policy shifts while sustaining global operations, managing technological and geopolitical disruptions and building resilience across markets and supply chains. Those who anticipate change, adapt their business models and act decisively in this multipolar environment will be best positioned to secure long-term competitiveness and to capture emerging opportunities. ■

Globalization's winners and losers

Lower-income percentiles have seen real incomes rise while the Western middle class only gained modestly.



SOURCE: BRANKO MILANOVIĆ



James D. White is the former chair, president and CEO of Jamba Juice and held executive roles at Safeway, Gillette and Nestlé Purina. His latest book, *Culture Design*, is his second written with his daughter Krista.

engage each of those. We all have value to add to the equation, and the more we can include the perspective of really everyone in an organization, we create stronger, more resilient companies.

➤ **People treasure flexibility and diversity at work. How can we maintain this open-mindedness when it looks like more companies are pushing in the opposite direction?**

The best leaders understand the business environment they sit in and what the mechanisms are to engage teams that could come back to the office certain days, as well as the hybrid workforce. When there's a lack of flexibility, younger generations will opt out in significant numbers. That's different from someone in my generation, where you just follow the rules. We have to find the things that unite us and strengthen a company. It comes down to trust. Forcing people back to the office shows a lack of trust. Now, there's also an upside: When we're together, we share stories and pass on rituals and norms that benefit the next generation in the workforce. There's a give-and-take. ■

Culture is built with intention

*The best leaders will approach culture like designing a product that engages multiple generations, says **James D. White**, former CEO of Jamba Juice.*

INTERVIEW BY **Steffan Heuer**

ILLUSTRATIONS BY **Julia Zimmermann**

➤ **How does corporate culture build strength and resilience?**

Culture design is much like that of a product like a new car or sneaker: intentional, methodical and repetitious. The most resilient cultures have rituals and practices and artifacts that are consistent over time, but they also view their cultures as living and breathing, which means you're adjusting them over time and maybe even over generations.

➤ **You've written two books now with your daughter. How important is intergenerational collaboration?**

When we're leading people across various generations, we have to be thoughtful of the things that will motivate and

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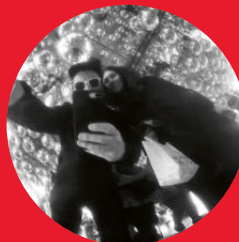


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is a Hamburg-based design agency and a workshop founded in 2010 by designers André Gröger and Susanne Kehrer. The award-winning studio has worked with clients including *Die Zeit*, *Der Spiegel*, Mercedes Benz, Arte and Deutsche Bahn.

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**“THE WINNERS
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OF THE GAME
ARE IN FLUX.”**

SIMON EVENETT

PROFESSOR OF GEOPOLITICS AND STRATEGY AT IMD



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