

FEATURE

Gen AI in action,
transforming
industries from
call centers to
healthcare

LEADING WITH WISDOM, ACCESSIBLE TO ALL

Business thinker Marshall Goldsmith is developing an AI-powered avatar to share his knowledge and preserve his legacy for years.

by fractal

How to change the gAlme

Mapping the invisible
boundaries of global business

The milli-second secret to
capturing consumers' attention

Successfully scaling
your AI initiatives



In the world of artificial intelligence, we are all in it together. Traversing a shared path, not merely to unlock AI's boundless potential but to ensure that everyone benefits from its prowess equitably, transcending barriers and fostering new possibilities.

Yet, AI is not merely a technological marvel; it is the catalyst for our constructive transformation. It is our best tool against the most pressing issues, from revolutionizing healthcare to spearheading initiatives for a more sustainable world.

Let us, with unwavering conviction, embrace this inspiring vision for a brighter, more inclusive future – a future where AI touches every heart and drives us toward greatness.

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EDITOR’S NOTE

Generative AI models have put extraordinary power into the hands of ordinary people. And while few may have yet ventured beyond AI’s ability to write essays or plan a vacation, most understand its potential is limitless.

In this special volume of ai:sight, we have curated a ‘best-of the-best’ selection of the articles published in our first year. Our focus is on three questions that, here at Fractal, we discuss with our clients regularly: How is AI shaping the world? How can AI help you grow? How can AI be a game changer for your business success?

Exploration of these questions allows us to work out how best to apply our expertise and technologies to our client’s unique circumstances to ensure that they capitalize on the power of AI. We enable businesses to move quickly to deploy solutions that yield real results – such as improved products, reduced costs, and more effective teams – and position themselves ahead of the competition.

Over the following pages, you will find multiple examples of our client’s experiences, insights into the development of our solutions, and deep dives into the topics that matter – like operational excellence, product development, growth, and sustainability. There’s a mix of new content and highlights from the past year, and we hope you find plenty that will resonate with your business challenges.

We are looking back and looking ahead. Only by taking a 360-degree perspective can we fully open our eyes to the unlimited potential of artificial intelligence.

I hope you enjoy the read.



EVOLUTION OF ARTIFICIAL INTELLIGENCE

An adventure through time

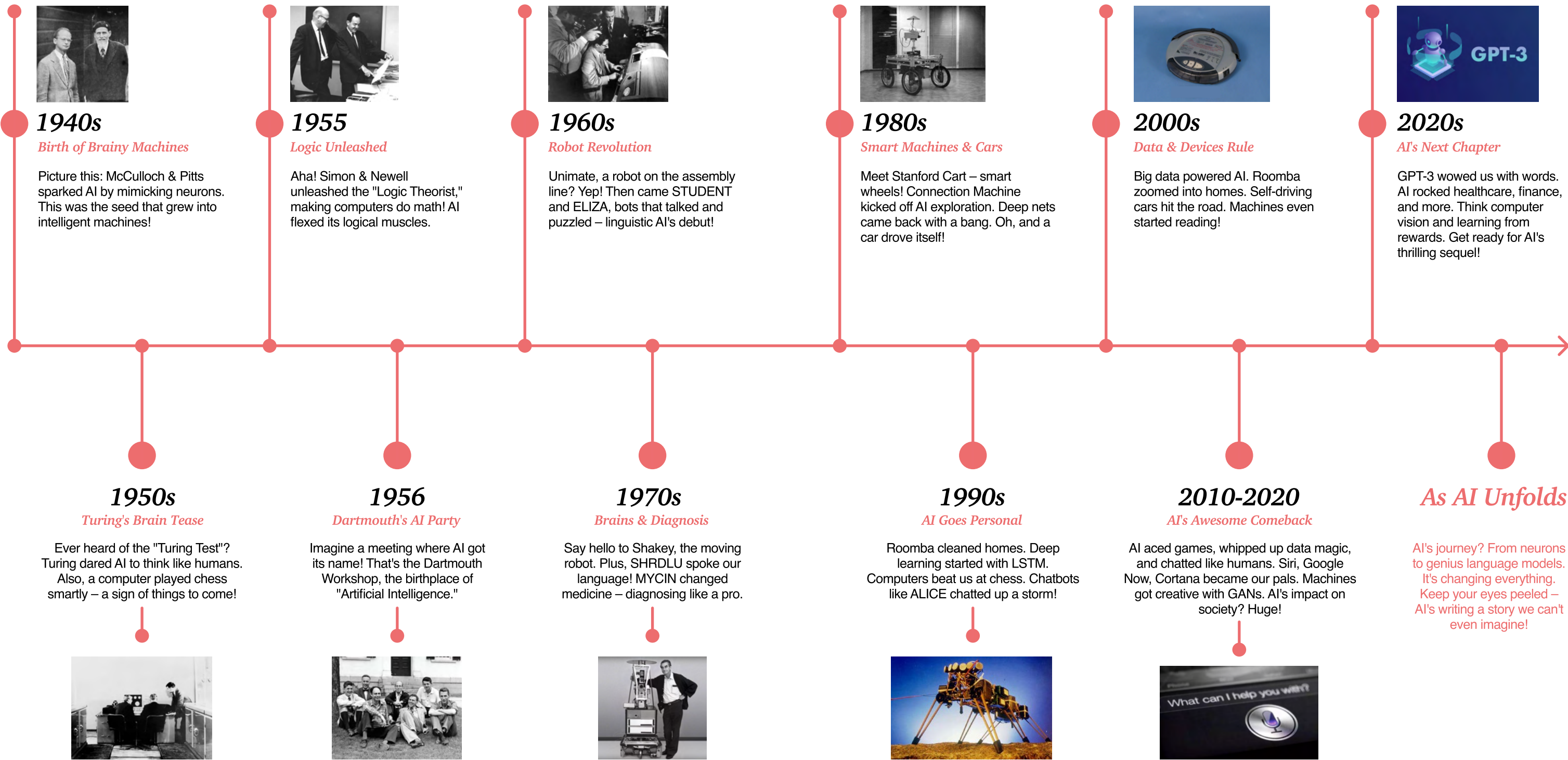


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Generative AI's ability to automatically generate new text, image, audio and video content is jumpstarting innovations across multiple industries.



GENAI IN ACTION FROM CALL CENTERS TO HEALTHCARE

You've probably heard the buzz surrounding Generative AI (GenAI) lately. It's been the talk of the town, with media coverage ranging from awe-inspiring tales of its limitless potential to concerns about its impact on society. But let's dive deeper into this groundbreaking technology, swiftly making its presence felt across various industries.

Think about call centers, for instance. Thanks to GenAI, chatbots have taken a giant leap forward. These intelligent bots can now provide detailed answers to your questions and even learn from your responses. It's like having a virtual assistant constantly evolving to serve your needs better – and who is conversing with you like a human. That's what we call convenience!

Yet, GenAI continues. Creative marketing and media professionals have also harnessed its power to generate captivating content across different mediums. From eye-catching text to mesmerizing images, stunning soundtracks to mind-blowing special effects, GenAI is revolutionizing the way professionals create. Some even use it as a springboard for their creative process, starting with an automatically generated first draft that humans can refine and perfect. Humans are very good at improving things once they are given something to start with. It's like having an AI collaborator that sparks your imagination by giving you the first draft!

However, the software development sector may have witnessed the most significant disruption caused by GenAI. Here is an interesting fact: when the Italian Government recently banned ChatGPT, the productivity of the country's software developers plummeted by 50% in just two days. That's the power of GenAI in action! It has become an integral tool for developers, enhancing efficiency and speeding up the creation of innovative software solutions.

According to **Ajoy Singh, the Chief AI Officer at Fractal, GenAI is a true game-changer.** "It creates a level playing field that enables people less familiar with data science or AI to converse naturally with their data and make sense of it," he explained. "Imagine effortlessly interacting with complex data sets, regardless of your background or technical expertise. It's like having a personal data whisperer by your side."

Nonetheless, GenAI is just getting started, and organizations worldwide are eager to explore its incredible potential. This groundbreaking technology can engage in hyper-personalized conversations with customers, unlocking precious wisdom buried within vast amounts of complex and unstructured data. But its impact continues beyond this. GenAI's lightning-fast search capabilities across thousands of documents are poised to accelerate research in healthcare and pharmaceuticals, revolutionizing how we uncover vital insights.

Himanshu Nautiyal, Chief Product Officer at Fractal, shares, "Many clients today seek voice-based conversations with their data. They want to ask questions and receive narrated answers, complete with specific points and highlighted actions. This capability empowers them to make informed decisions and focus their efforts more effectively. Instead of passively receiving information, they want to engage in meaningful dialogue with their data, driving their discoveries."

As the saying goes, "With great power comes great responsibility." This couldn't be truer regarding the disruptive force of GenAI. We're accustomed to working with software that assists humans in collaboration, but now, machines actively participate in the conversation for the first time. This transformative shift will undoubtedly reshape how we work and our jobs.

When the Italian Government recently banned ChatGPT, the productivity of the country's software developers plummeted by a staggering 50% in just two days. That's the power of GenAI in action!



GenAI's lightning-fast search capabilities across thousands of documents are poised to accelerate research in healthcare and pharmaceuticals.

Insurance and technology are continually evolving, and as the industry finds new uses for GenAI, staying on top of the risks is essential.

"Like humans, AI models can get things wrong," Saunders said. "In parallel to exploring the exciting opportunities the technology brings, we all need to be aware of the risks and have mitigations to ensure that AI models always do the right thing. At Direct Line, we have robust data and AI ethics frameworks and a sophisticated control framework to ensure privacy by design and constant model monitoring. Like every other organization, we must constantly update policies and processes as the technology develops to ensure it is held to the highest standards. GenAI consumes many data and carries out much processing, so it's very important to think widely about the risks. For example, we must look at the environmental impact and assess the value holistically, all the way through the technology supply chain."

Companies planning to use GenAI have a unique opportunity to help shape its evolution. By collaborating with other business and academic institutions, Direct Line is actively developing the technology and the ethics surrounding it.

"We work with many companies and universities at the cutting edge of AI," Saunders said. "Through collaboration and shared excitement about the opportunities we now see, we stay on top of the state of the art. We're also very active in the cross-industry shaping of data and AI ethics. It's incumbent on all organizations to treat both the technology and the accompanying ethical implications with equal weight – one should not exist without the other."

For those seeking to embark on the GenAI journey, it's essential to view the business through two distinct lenses that provide valuable insights and guide decision-making:

Risk Assessment: Consider the potential risks when implementing GenAI. An in-depth analysis of your organization will aid in distinguishing between core and non-core aspects. Presently, many organizations concentrate on automating non-core or internal tasks, such as document processing and data entry, to address unforeseen risks and gaps in the existing frameworks. This approach significantly reduces human effort and minimizes associated risks automatically.

"GenAI can help to create simpler, more dynamic marketing content for our clients. Instead of presenting clients with fact sheets or product documents, we could enable a more interactive discussion with chatbots. It can be as simple as replacing a static 'good morning' on the website with a different, AI-generated greeting each time they visit. These interactions could change the customer experience because more general conversations make product discovery much easier. Internally, GenAI can also help our people to be more efficient. It can help marketing, sales, and distribution teams to find product-specific information, for example. When investment managers track a particular stock, they can get a lot more detail in a very conversational manner. Then the next step is to determine how the technology can be used to make decisions and research to help those people outperform."

Direct Line Group, one of the UK's largest insurers, is looking at how GenAI can help to achieve its vision of a world where insurance is personal, inclusive, and a force for good. Enhancing the customer experience is an ideal starting point.

"There are use cases for GenAI across the entire insurance lifecycle," said Jonathan Saunders, Chief Data Officer at Direct Line Group. "GenAI can help make our customer journeys quicker and easier, for example, by offering context-sensitive, personalized help as customers fill out information. It can also help summarize and simplify the language used in the policy documentation. Little things like these add up to making all our lives easier. Further down the line, when something unfortunate happens and a claim is made, GenAI can help us speed up the path to getting our customers back on the road or back in their homes, for instance, by automating time-consuming processes and distilling documents to extract high-value data. We are exploring all these areas with the guiding principle of making things better for customers and employees."

However, it presents a significant challenge for organizations adopting this technology. They must ensure the resulting disruption is positive rather than traumatic for those involved.

To address this challenge, two fundamental principles hold the key to success:

First, do no harm

Design with people, for people

When dealing with a disruptive phenomenon like GenAI, prioritizing the principle of doing no harm becomes the foundational pillar for all subsequent capabilities and efficiency gains. This principle has been exemplified through Fractal's work with Fortune 500 clients spanning various industries. The equation is simple: to mitigate risk, every action taken must be defensible, responsible, transparent, and unbiased. Coupled with an AI, engineering, and design approach that places people at the heart of decision-making, this forms the bedrock of any successful AI implementation.

"When technology is something that's done to people, it feels like it's going to take their job. But if it's something that's done with and for them, it feels like a superpower," said Ann Hintzman, Chief Design Officer at Fractal. "We have a huge opportunity to create solutions that are emotionally resonant with how people want to work and the purpose they find in their work. This starts with people, what they are trying to achieve, what they value, and how they want to grow. That means designing with those people, starting with an ethical standpoint and using technology to augment that."

One question for those adopting GenAI today is how to ensure transparency and explainability in a technology designed to provide human-like responses.

"One of the key challenges with GenAI is that its models will provide varying responses that are not fully explainable," said one of our clients from a global investment firm. "The way to solve that is to tame it so that we know how to handle exceptions. That means doing much coding to ensure the GenAI model has the right prompting. How we enable the parameters will be the difference between a great AI product and a dumb one."

But with appropriate parameters in place, GenAI has great potential to help start conversations with customers and boost staff efficiency.

However, in sectors like banking, core GenAI business activities involve underwriting, pricing, and selling loans, which are only partially automated. It is crucial to evaluate factors such as reputation, data privacy, and regulatory compliance upfront and to understand the associated risks thoroughly. Doing so will enable the implementation of proactive measures to mitigate these risks effectively.

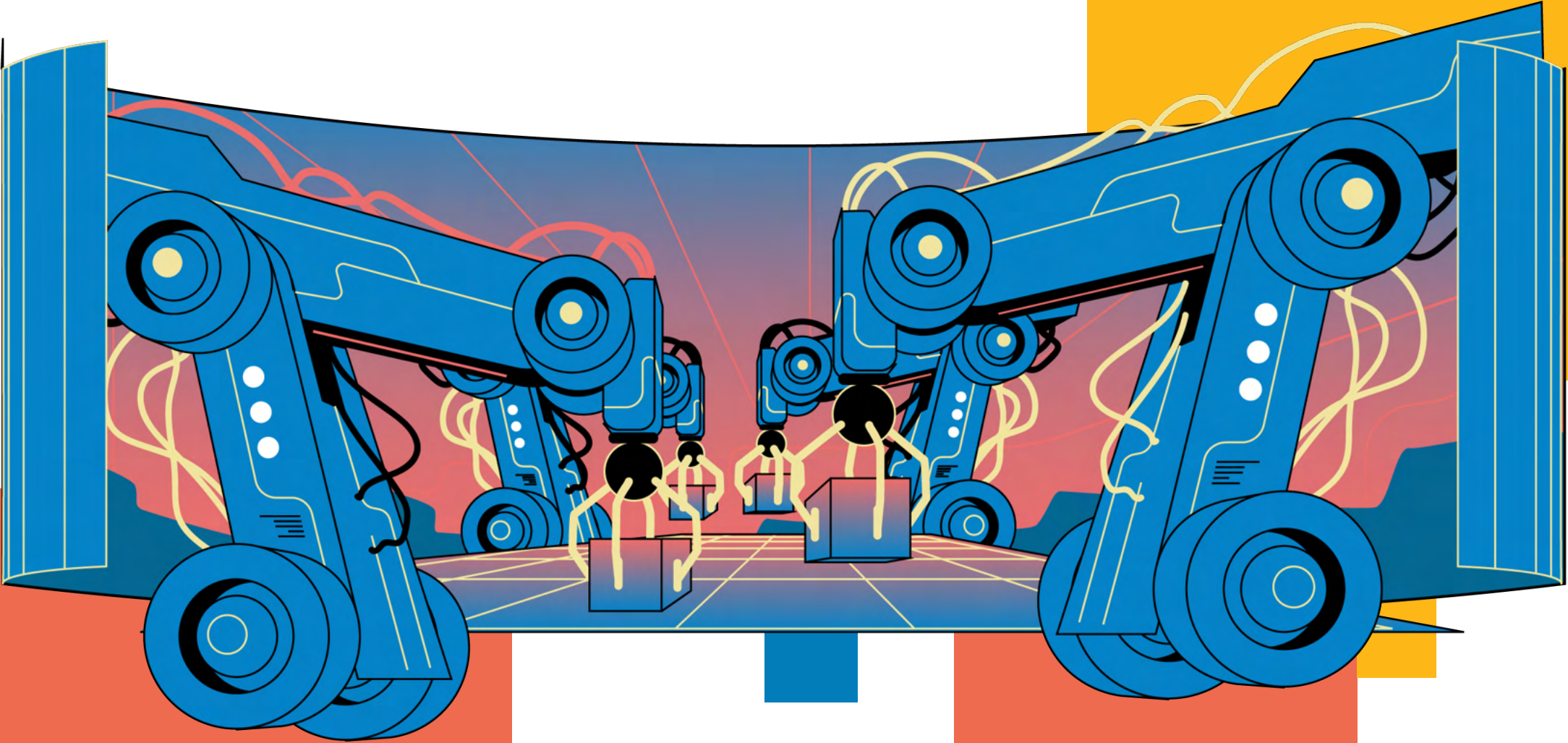
Incremental impact: Explore the positive incremental impact that GenAI can have on your business. Identify areas where it can enhance operations, productivity, and customer experiences. This lens helps prioritize use cases and solution areas for initial implementation.

Ajoy shared, “The significance of these lenses is that it helps guide organizations towards suitable starting points. The most appropriate use cases and solution areas can be identified by carefully examining the business through these perspectives. Let's take the example of a bank: implementing GenAI for anti-money laundering checks proves to be a low-risk, high-impact area, making it an ideal starting point. On the other hand, underwriting carries a higher impact potential, but it also comes with greater risks, such as the possibility of being accused of unfair lending practices. A more cautious and experimental approach may be warranted.”

To harness the true potential of GenAI, it's crucial to delve into the underlying processes of each use case. Doing so gives a clearer picture of how GenAI can make a difference. Take, for instance, the fact that large language models excel at deciphering unstructured data rather than structured, numeric data. This explains why their capabilities shine brightest in creative tasks and environments such as call centers, where a quick understanding of emotional context drives both quality and productivity.

Suraj Amonkar, Client Partner and Head of AI@scale, machine vision, and conversational AI at Fractal, acknowledges this space's complexity and rapid evolution. “There are myriad possibilities with GenAI, but it requires fine-tuning through pretraining and specific utilization,” **Amonkar explains.** “Understanding how to overcome the challenges associated with these complex technologies by reducing friction and enabling seamless integration for businesses is important.”

Fractal leads the charge in GenAI solutions, with offerings like Fractal GPT for seamless AI chatbot integration, Flyfish as the world's first GenAI-powered sales assistant, and Crux Co-Pilot for dynamic voice-based business intelligence.



Insurance and technology are continually evolving, and as the industry finds new uses for GenAI, staying on top of the risks is essential.

Fractal also offers Genesis, a GenAI platform that can help enterprises implement and scale GenAI led transformations securely.

While the full extent of GenAI's impact is yet to be realized, organizations must start preparing for the future. Innovation, driven by these transformative technologies, is set to accelerate. A steadfast commitment to ethical, people-centered design ensures that these developments genuinely benefit individuals and businesses.

Himanshu emphasizes the importance of readiness for the GenAI future. “AI can seem dehumanizing if not implemented thoughtfully. Hence, the approach should always be grounded in a human implementation, for humans.”

Understanding the underlying processes involved in the use case is essential to understand how GenAI can help. Today, for example, large language models are better at making sense of unstructured data than structured, numeric data.

This is why those capabilities shine brightest in creative tasks and environments like the call center, where a quick understanding of emotional context drives quality and productivity. Further work on incorporating contextual data,

intelligence, and workflows over the LLMs, has resulted in platforms like Crux Co-Pilot and Senseforth, which can drive value for enterprise users in safe, reliable, predictable ways by reimagining processes end-to-end, using both structured and unstructured data.



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Client Data Officer,
Direct Line Group



Ajoy Singh
Chief AI Officer
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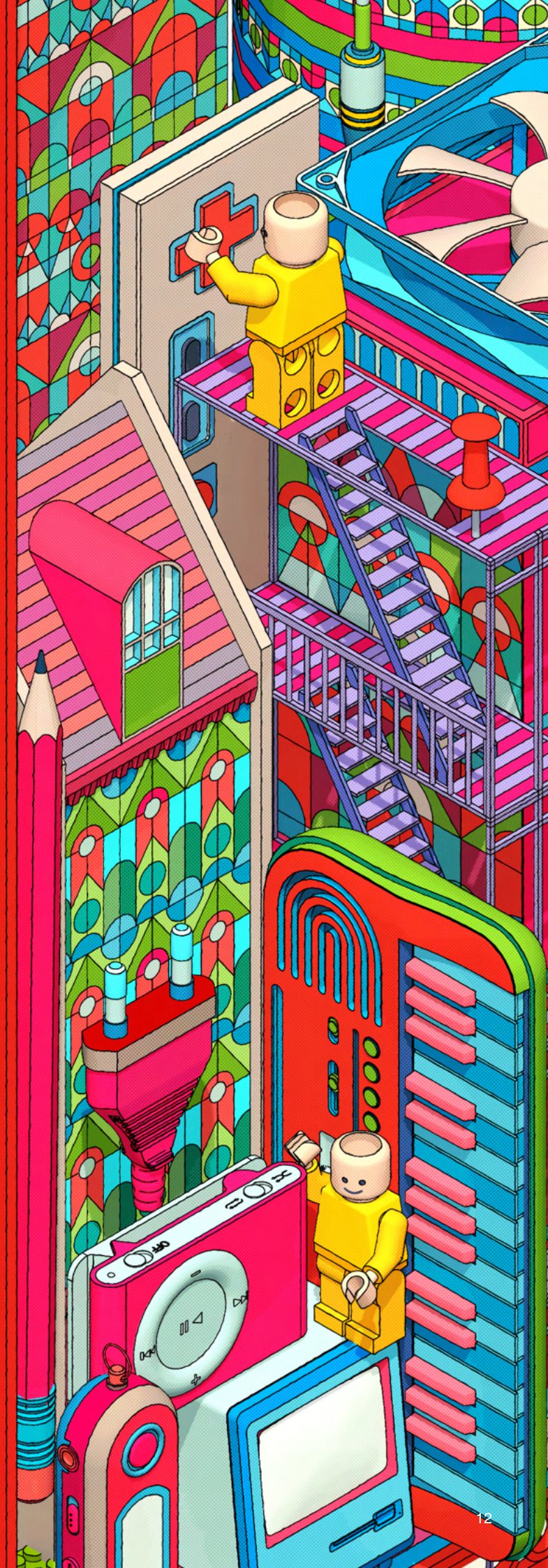
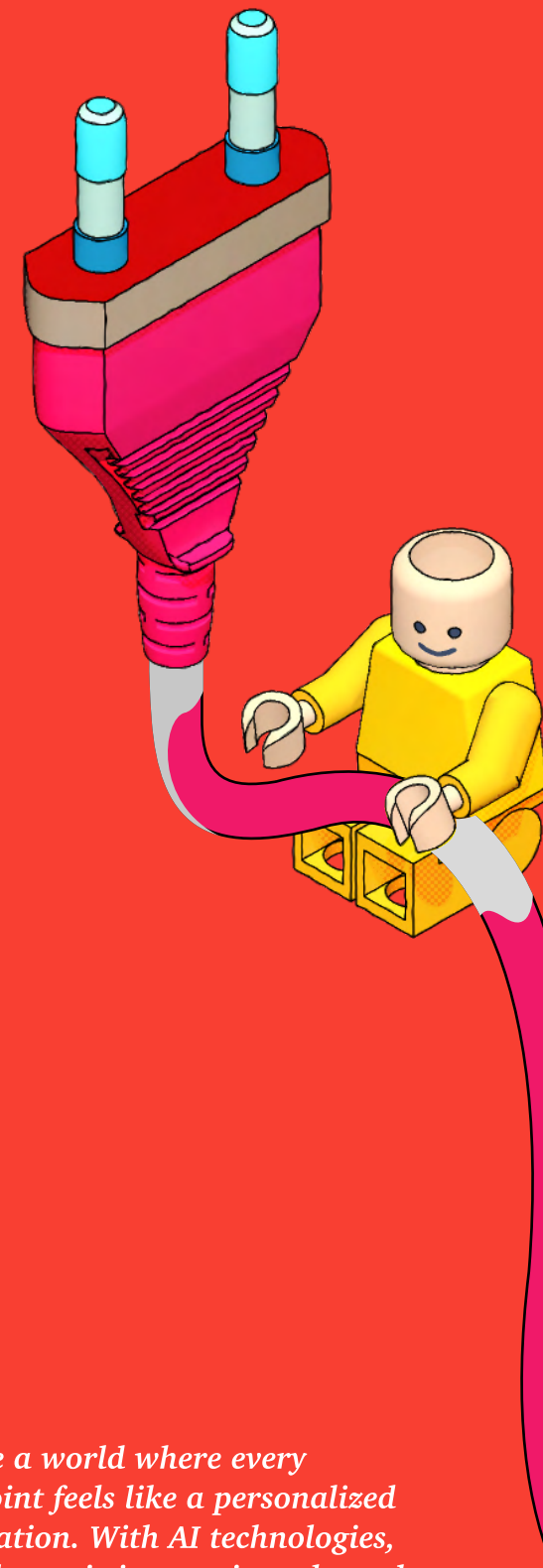
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ENGAGE SEAMLESSLY WITH YOUR AUDIENCE

Imagine a world where every touchpoint feels like a personalized conversation. With AI technologies, create dynamic interactions that adapt in real-time, delivering tailored recommendations and offers and suggestions that feel like they were made just for them. Join us in this journey as we dive into stories that will help you forge meaningful connections with your audience. Embrace the future of customer engagement.





MAPPING THE INVISIBLE BOUNDARIES OF GLOBAL BUSINESS

Erin Meyer

Professor, author and expert in
global communication patterns and
business systems

**Erin Meyer, breaks down her pioneering
Culture Map framework — a valuable
tool for international executives**

In today's globalized business landscape, developing organizational cultures that foster flexibility and innovation is paramount to success. Erin Meyer, a renowned professor at INSEAD and author of the acclaimed book "*The Culture Map: Breaking Through the Invisible Boundaries of Global Business*," brings a unique perspective to this challenge. Having lived and worked across Africa, Europe, and the United States, Meyer has experienced firsthand the complexities of cultural differences in a global environment. Her deep understanding of communication patterns and business systems has led her to develop the Culture Map framework, a valuable tool for international executives.

In our exclusive interview with Erin Meyer, she shares her insights on how companies can cultivate organizational cultures that promote flexibility and innovation. Drawing from her vast experience and research, she highlights the key factors contributing to successful cross-cultural collaboration. She identifies strategies for overcoming the invisible boundaries hindering global business.

The Culture Map framework is the culmination of Meyer's extensive research, which involved conducting thousands of interviews with senior leaders in over 62 countries. By analyzing these interviews and synthesizing the data, Meyer has provided leaders with a powerful tool to navigate cultural differences and compare manager various cultures.

Your book *The Culture Map* is about breaking through the invisible boundaries of global business. Can you tell us what these boundaries might look like and their challenges?

Let's begin with how our cultural background may shape the way we give feedback. I've lived in France for 21 years after growing up in Minnesota. One thing that always strikes me is just how differently we approach feedback in these two places.

In the US, we are taught that if you need to provide criticism, the most motivational approach is to begin by providing a few genuine positive things you feel that person is doing well. This shows respect.

Then you can tell the person what you feel they've done poorly. This style of wrapping positives around negatives is both constructive and motivational. In France, it's a different story.

Here, positive feedback is given less frequently than in the US, and negative feedback more strongly. A frequent example would be that an American boss sits down with his French employee for a performance review. He starts outlining everything this employee is doing well and expressing appreciation for these elements. She's thinking, "Wow, this is the best review I've ever received!"

That's where the invisible boundaries come in. The boss moves on to his real feedback – the areas where improvement is needed. But the French employee is still basking in the glory of the positive messages. By the time he gets to the real message, she isn't listening any longer. The French employee walks away, thinking she's a superstar. The American boss believes he's made it clear that she needs to change her performance.

This invisible boundary can wreak havoc in the workplace if not understood or managed. It's crucial for all of us – whether we're the feedback givers or receivers – to recognize these cultural gaps and find ways to bridge them.

The key is being aware of these differences and adapting our communication styles accordingly. The culture mapping process helps to pinpoint feedback preferences in a wide variety of cultures worldwide so that you can be more strategic and empathic and ultimately get your message across as desired. Regarding feedback, the message is not "do unto others as you would have done to you" but "do unto others as they would have done to themselves."

**Whether we are aware of it
or not, culture plays a
profound role in shaping our
behaviors and perspectives.**



Understanding cultural differences requires us to embrace the complexity and fluidity of cultural dynamics and approach them with an open and curious mindset.

Why must companies ensure their employees are prepared to work effectively with colleagues and clients from different cultures?

When working in global environments, it's easy to assume that we're just independent individuals unaffected by a specific cultural lens. We tend to believe that our actions and behaviors solely reflect our personalities. The truth is more complicated.

Of course, every individual in every culture is unique. But in addition, whether we are aware of it or not, culture plays a profound role in shaping our behaviors and perspectives. Suppose someone from a different culture acts in an entirely appropriate way in their cultural context but inappropriate in mine. In that case, it's natural to jump to conclusions and think, "This person is arrogant," or "He doesn't like me." It's easy to mistake a cultural difference for an individual characteristic when we are not intimately familiar with the other person's culture.

Suppose I take the time to understand the differences in how different cultures communicate, build trust, and get things done.

In that case, I can effectively tease what's cultural and personal when working internationally. I can foster a mindset of curiosity and empathy, seeking to understand the multiple factors at play. This awareness allows me to approach cross-cultural interactions with greater effectiveness.

Can you talk about a time when you encountered a cultural difference you didn't understand and explain how you resolved the situation?

I have an example from several years ago, just after the release of my book. While on a book tour, I visited Tokyo and delivered a 50-minute presentation to 40 Japanese managers. In the end, I asked if there were any questions. No one raised their hand, so I went to sit down.

My Japanese colleague, who supported me, sensed my disappointment and discreetly pulled me aside. She whispered, "I think there actually were some questions. Would you like me to try?" She then addressed the audience, saying, "Professor Meyer has just shared her insights with you. Do any of you have questions?"

Once again, no one raised their hand. But this time, my colleague stood still and silently scanned the room for several long seconds. Then, she gestured to an audience member, who appeared motionless to me, and asked, "Do you have a question?" To my surprise, the person sat up straight, saying, "Thank you, I do," and then posed a thought-provoking inquiry. My colleague did this two more times.

That evening I asked my colleague how she knew those individuals had questions. She thought about it and responded, "It had to do with how bright their eyes were." I must have looked confused because she clarified, "In Japan, direct eye contact is less prevalent than in Western cultures.

Therefore, when you ask questions, you'll often find people looking around the room rather than directly at the speaker. She explained, "When you asked the group if there were any questions, I noticed that a couple of people were looking right at you, and they held your gaze. That signified that they would be happy to have you call on them if you would like to. The next day, after a similar presentation, I again asked for questions and comments, and no one raised a hand. But this time, I followed what my colleague had modeled for me.

I looked carefully at all the faces and saw that only a couple of people were looking directly at me. When I looked back at one of them, she held my gaze. Now whether her eyes were bright or not, I don't know, but I wanted to try. I gestured slightly towards one woman who was clearly looking right at me, to which she responded by giving a slight nod.

"Would you like to share a comment or ask a question?" I asked. She said, "Yes, thank you," and asked an insightful question. In Japan, there is a popular expression: "*kuuki yomenai*." It means someone unable to read the air or someone who can't pick up the subtle, unspoken messages in the interaction. I began to feel just how *kuuki yomenai* I was on this trip. I also saw again how much I could learn from my international colleagues.

After the trip, I returned to INSEAD, where I teach these incredibly multicultural classrooms. My students are managers from all over the world. As I scanned my classes for questions, I felt unsettled to see that I had been missing a lot of bright eyes in my classroom, not just from the Japanese.

My American assumption that if someone had something to say, they would raise their hand was unintentionally blocking much of the student interaction.

On that trip to Tokyo, I was incredibly lucky to have a colleague from the country I was collaborating with whom I could ask questions to. This is what we need to do constantly in our international collaborations. Find someone from the culture you are working with whom you can ask questions. With enough curiosity and humility, we can all get better and read one another's air.

Can you give us an example of one of your culture mapping tools and explain why it is so effective?

Early in my career, I worked with a diverse team comprising individuals from the UK, France, and India. It was fascinating to observe the contrasting perceptions and complaints that arose within this group. The British team members felt the French lacked organization and were consistently tardy. At the same time, the employee from India expressed frustration with what they perceived as rigidity and excessive focus on structure and punctuality displayed by the French colleagues.

In reflecting on these dynamics, I turned to my time orientation scale, which sheds light on how different cultures value and prioritize time-related aspects. What I discovered was that British culture highly values structure and punctuality. In contrast, Indian culture places greater emphasis on flexibility and adaptability. Interestingly, the French position themselves somewhere in between these two extremes. This relativity influences how individuals from Britain and India perceive their French colleagues.

This realization led me to a critical insight: understanding cultural differences is not about describing what each culture is like. Instead, it involves considering how different cultures are positioned about one another and recognizing the relative gaps between them. Through this lens, we can understand the dynamics and effectively navigate the challenges in multicultural environments.

By acknowledging the relative positioning of cultures, we can move away from generalizations and stereotypes and instead focus on fostering empathy and bridging the gaps between diverse perspectives. It's about cultivating a mindset that appreciates each culture's unique strengths and values while also recognizing the potential areas of friction or misalignment that may arise due to these differences.

Understanding cultural differences is an ongoing journey of exploration and learning. It requires us to embrace the complexity and fluidity of cultural dynamics and approach them with an open and curious mindset.

Doing so can foster collaboration, build stronger relationships, and create a harmonious environment where diverse cultures can thrive together.

Your book provides a framework for understanding cultural differences. How can individuals or organizations effectively apply this framework to cultivate a workplace culture that is both inclusive and characterized by mutual respect?

Throughout the past decades, cultural differences have often been overlooked and left unspoken within the corporate world. There is a prevailing belief that discussing culture implies a disregard for individuals' unique personalities. However, this approach needs to be revised in several ways. Let's examine one simple aspect: the dynamics of speaking up in meetings.

In countries like the US, the Netherlands, Brazil, Italy, and India, it's common for people to engage in lively discussions and express their opinions freely in meetings. In these cultures, if you attend a meeting and don't speak up, you will be seen as disengaged or having little to contribute. People from these cultures tend to become uncomfortable with silence quickly and would prefer to say anything at all than to sit without someone speaking.

Often the person to speak the most or to speak first may be perceived as showing off, selfish, or a poor listener. People are more likely to carefully prepare before speaking and weigh whether their comments might be perceived as wasting others' time before sharing their viewpoints.



These cultural differences may seem innocuous, but they can significantly affect our quest for diversity and inclusion. Simply bringing people from various walks of life together around a table is not enough. We must go beyond mere representation and facilitate an understanding of how to navigate and manage cultural disparities.

When you moderate meetings with people worldwide, invite quiet people to share their perspectives. Let participants know in advance what topics you will be asking for input on and advise quieter participants that you will call on them individually so everyone is comfortable and prepared when you do. If some participants don't respond immediately, allow a few more seconds of silence before speaking yourself. When you ask questions, go around the table to hear each team member's input.

As for more talkative cultures, like the US, prepare participants to speak a little less to give international colleagues more space. When holding meetings over virtual media, ask people to raise their electronic hand and call on them in order or ask all participants to chat an answer to a question into the chat box and then ask those with the most interesting written answers to speak up.

Only then can we ensure that all voices, regardless of their cultural backgrounds, are genuinely heard and valued. This approach enables us to tap into diverse perspectives, unlocking innovation, creativity, and problem-solving capabilities that may otherwise go unrecognized.

What are the benefits for companies that successfully break down global business barriers?

I often encounter whether it is more effective for leaders to be authentic or flexible when working globally. The truth is that successful global leaders embody both qualities. They deeply understand their leadership style and what makes them effective. They can discern the aspects of their leadership that are influenced by their cultural background. They also possess the humility and curiosity to learn and continuously adapt their approach to different cultures.

By embracing authenticity and flexibility, these leaders have a choice. It does not mean they must conform to a specific cultural way of leading in each country they operate in. Instead, they recognize the underlying business dynamics within a particular cultural context, enabling them to make informed decisions about adapting their leadership style accordingly when they deem it useful. This ability to navigate cultural nuances is crucial for success.

Companies led by individuals who are authentic but lack flexibility often face challenges. Their employees and teams may feel demotivated and struggle to understand how to collaborate effectively. Moreover, engaging clients and working harmoniously with suppliers becomes a significant hurdle. The multicultural setting in which organizations operate is of utmost importance, and leaders must be attuned to this reality.

Authentic and flexible leaders possess a valuable combination of self-awareness and adaptability. They understand the strengths of their leadership style while remaining open to learning from different cultural perspectives. This allows them to build bridges, foster collaboration, and create a work environment where diverse teams can thrive. Ultimately, embracing authenticity and flexibility enables leaders to navigate the complexities of global business with cultural intelligence and achieve remarkable outcomes.

Can you share a real-life story from one of the businesses you have worked with to address cultural differences?

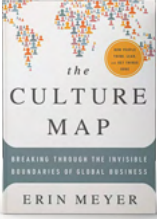
Let me share an illustrative example related to the Trusting scale on my Culture Map framework. This dimension explores how trust is built, encompassing two types: cognitive trust and affective trust. Cognitive trust is trust from my head: you are reliable, on time, and good at your job; therefore, I trust you. Affective trust is trust from your heart: I have an emotional bond with you, I've spent time getting to know you, I've seen who you are below your professional persona, and I trust you.

Recently, I had the opportunity to work with a company based in Australia that was navigating negotiations with a Chinese counterpart amidst the challenges of the COVID-19 pandemic. The Australian contact expressed frustration, perceiving the Chinese team as difficult to work with, confrontational, and experiencing a lack of progress. However, after reading my book and delving into relationship orientation, she realized that the issue might be insufficient attention to building relationships.

Given the travel restrictions, she devised a creative approach to bridge the cultural divide. She visited Chinatown in Sydney and purchased cartons full of Chinese snacks. Then she sent a package containing these snacks alongside typical Australian snacks to their counterparts in Shanghai. During the next meeting, they set aside ten minutes to open the boxes and share their snacks. In this simple act, something remarkable happened. The Chinese team members enthusiastically explained when and how each Chinese snack is eaten, and the Australians reciprocated equally. Suddenly, everything changed. A sense of friendship and camaraderie emerged, leading to the establishment of affective trust.

This example highlights the power of investing effort in building relationships across borders. The Australian contact fostered a connection that transcended cultural differences by demonstrating genuine interest and making thoughtful gestures. This shift in relationship orientation had a transformative impact on the dynamics of the negotiation process.

It serves as a compelling reminder that when we take the time to understand and appreciate the cultural values and norms of others and when we actively engage in relationship-building efforts, we can cultivate a sense of trust and camaraderie that fuels collaboration and success. These small gestures of cultural intelligence can bridge gaps and transform interactions, enabling effective communication and cooperation even in complex cross-cultural settings.



Explore the intriguing global business and cultural dynamics world by reading Erin Meyer's book, "The Culture Map: Breaking Through the Invisible Boundaries of Global Business." Gain valuable insights, practical frameworks, and strategies for navigating cultural differences, building effective relationships, and becoming a successful global leader. Enhance your cultural intelligence and thrive in diverse environments.

TECHNOLOGY THAT SPEAKS FOR ITSELF

How Fractal is building smart, perceptive, human-first speech technology, in harmony with the rhythm of Indian society

UMANG (Unified Mobile Application for New-Age Governance) is the app that provides citizens of India with a single point of access to over 1,200 major government services. It covers everything from education, COVID-19 vaccinations, public transport, and employment advice to passport applications, utilities, cybercrime reporting, and more.

UMANG was launched in 2017 and developed by two departments of the Government of India – the Ministry of Electronics and Information Technology (MeitY) and the National e-Governance Division (NeGD) –to drive the country to mobile governance.

However, while the app was well received by those in the population that are technology-literate, it was seen as complex and hard to navigate by those who are not so digitally savvy and for those whose language wasn't supported by the app.



App In Numbers



Senseforth.ai's Conversational AI Platform handles millions of conversations daily with an **accuracy of over 96%**



The app supports **2 Indian languages** and is working to introduce **8 more regional languages.**



Millions of citizens in both Hindi and English ask. **over 1 million questions,** either spoken or by text

Millions of people interacted with the virtual assistant within the first weeks of its launch

The pilot launch went live in 2022 in both English and Hindi, with the AI Citizen assistant expected to distinguish between 10 major Indian languages and many more local dialects in the following months. Millions of people interacted with the virtual assistant within the first weeks of its launch, asking over one million questions, either spoken or by text.

"It is unfortunate that many government programs see lackluster adoption because people at the grassroots level are unable to access them or understand their benefits. This is why Voice AI is a great equalizer. And UMANG is a great example of this, where people can just speak with the AI Conversational Assistant and instantly access information," **shared Krishna Kadiri, Chief Innovation Officer & Co-founder, Senseforth.ai.**

The government realized that citizens wouldn't be able to make the most of this incredible service and were struggling to access critical information when they needed it most.

UMANG had to be much more. They wanted to eliminate technology and language barriers and create a more inclusive solution – and that could boost the adoption of key government programs and initiatives in the long term.

To achieve this, the Government of India asked conversational AI firm Senseforth.ai to help it create a

voice-enabled interface, so citizens could simply speak their questions into the app and get the desired results.

"India is perhaps one of the most diverse countries in the world, and this is reflected in how we speak. Building a voice-enabled AI Assistant that can handle eight regional languages and scores of dialects is quite challenging," **stated Krishna Kadiri, Chief Innovation Officer & Co-founder, Senseforth.ai.**

This challenge is made more complex, particularly given the major objective of reaching rural citizens who can be isolated from digital services.

"Governments around the world are going on the digitalization journey, and potentially a huge part of the dreams of people could be left out if they don't access the citizen services that are provided on digital platforms," **said Shridhar Marri, Co-founder, and chief executive of Senseforth.ai,** in an interview with The Economic Times.

"Conversational AI is one way to address this by using local language input through voice or text, and then providing the same level of service without having to use a mobile app or go to a website."

Using its patented Natural Language Processing (NLP) technology and decades of experience building very large and complex conversational AI solutions for businesses like HDFC Bank, Nestle, and Prudential Financial, Senseforth.ai was able to meet the brief.

After a comprehensive knowledge-gathering exercise, which involved determining citizens' preferred channels and the most common languages spoken, Senseforth.ai developed an AI virtual assistant for the top 15 services that citizens used most. This was done with the company's proprietary conversational AI platform, which handles millions of conversations daily with an accuracy of over 96%. Pre-built and battle-tested AI models for hundreds of use cases are baked into the conversational AI platform, helping ensure a fast implementation.

However, this is just the start. Senseforth.ai is working closely with government officials to analyze feedback, finetune working on the AI Citizen Assistant, and eventually roll it to many more UMANG services. As a result, citizens in even the most rural areas of India who have traditionally felt disconnected from technology will have access to key government programs and initiatives.

"We will be building a few services in the next few months and eventually cover the entire spectrum of thousands of services," **said Marri, in an interview with mint.** *"All of them will be handled by us to create conversational AI services."*



About Senseforth.ai

A Fractal Alpha company, Senseforth.ai is a premier Conversational AI Platform helping large enterprises transform customer experiences throughout APAC, North America, and Europe.

HACKING HESITANCY

Behavioral science can help us understand what drives people's decisions about new vaccines – and how to increase vaccination uptake



COVID-19 was a game-changer for vaccines. We saw great success with effective vaccines developed in record time. But new challenges emerged, which, in some countries, are still preventing those vaccines from reaching everyone who needs them.

One key obstacle is vaccine hesitancy. People may start intending to get the vaccine, but many may not. Their reasons may include anything from inconveniences to media influences, perceived distance from sources of infection, and fear of side effects.

So how can we change this picture? One way is to shift away from the one size-fits-all promotion of public health measures. Suppose we understand what is driving an end user's hesitancy. In that case, we can start a more nuanced conversation to pave their path toward vaccine uptake.

To help tackle this issue, Final Mile surveyed the populations of four countries with varying levels of vaccine hesitancy: Burkina Faso, Côte d'Ivoire, Kenya, and Pakistan. We wanted to:

- Identify the population segments that are most likely to resist or hesitate about vaccination,
- Empower frontline health workers to help change those people's minds.



Next, we used psycho-behavioral segmentation – a common approach in the private sector to identify clusters of people who can be targeted with specific messaging. We applied machine learning algorithms to identify those segments in each population based on the differences between behavioral drivers. This meant we started with a blank page, and each country could have any number of different segments based on what the algorithm saw. Our other conditions were that each citizen fit into only one segment. That segment could be identified from a handful of indirect questions.

Above all, our data must provide a rock-solid foundation for future public health strategies. To get that information, we conducted large-scale surveys of the population in each country. Most interviews were done in person to ensure that people with no internet or phone access were included. We needed to ensure that no bias or value judgment was associated with people's vaccination decisions, so we didn't ask direct questions about them. Instead, we asked them about the sources of information they trust or how the pandemic has affected them.

But what does the frontline health worker make of all this data science? Well – nothing. They don't need to be burdened with all the technicalities since they already have too much to do. To put those data insights into action, all health workers must engage effectively with the end user based on the results. They can do this using a simple typing tool, either through a website or mobile device. The tool will assign each end user a segment based on the answers to those four or five questions. That segment might be color-coded or characterized by emotion to make it easy to understand. Then the typing tool will guide what the health worker should discuss with that person.

Take the 'distrustful' segment, for instance. It's one of seven segments we identified in Kenya. Its members tend not to trust the government or health authorities. As a result, they will not be receptive to arguments about the severity of COVID-19 or the vaccine's safety. This conversation needs a different starting point: building trust before introducing any health intervention.

Taking its cue from the private sector, this nuanced form of segmentation can also be used where in-person conversations aren't possible. Think of how all those advertisements for cars grab your attention whenever you're thinking about buying one. Our vaccine-hesitancy drivers have the same effect.

So, a billboard campaign could target people in the 'anxious' segment with messaging about the vaccine's safety. In contrast, one for the 'distrustful' segment would focus on building trust in the health care system.

As we evaluate the impact of this approach on COVID-19 vaccination hesitancy, we're also looking at how it can be effective in other areas of public health. For example, we already see outbreaks of measles in Africa after the pandemic disrupted routine immunization. Psycho-behavioral segmentation could help us gauge how much of that impact is related to vaccine hesitancy and how entrenched or temporary that hesitancy is likely to be.

Uncertainty, poor messaging, and misinformation around the COVID-19 vaccine have also undermined traditional assumptions that all vaccines are good. As a result, we could see increased hesitancy around new vaccines being developed for diseases like malaria and human papillomavirus (HPV). By exploring what drives the demand for misinformation, alongside psycho-behavioral segmentation on vaccine hesitancy, we aim to help drive the uptake of these vaccines too.

Ultimately, combining behavioral and data science with simple tools for workers in the field has the potential to make public health promotion more inclusive than ever before.



Ram Prasad
CEO & Co-founder
Final Mile

Ram co-founded Final Mile in 2007, working in large and small organizations across marketing, M&A, branding, and business management. Since 2011, he has built Final Mile's development sector practice, bringing together a strong and diverse team of behavioral science and design experts. In 2018 Final Mile became a Fractal company. Ram is a regular speaker at conferences in public health and behavior change.

THE MILLI- SECOND SECRET TO CAPTURING CONSUMERS' ATTENTION

To combat ever-shortening attention spans, research by Fractal's CerebrAI team has revolutionized the way we engage with e-commerce



The average user
touches their phone
4,513 times, spending
over 3 hours and
36 minutes

Every second counts in a world where attention spans are shorter than ever. Groundbreaking research by Fractal's CerebrAI team has revealed that a smartphone ad takes a mere 0.92 seconds to captivate its audience. With this mind-boggling discovery in hand, Fractal embarked on an extraordinary journey to harness the untapped potential of these handheld devices and revolutionize the way we engage with e-commerce. But little did we know that this was just the beginning of an exhilarating adventure.

Welcome to the smartphone revolution, where marketing rules are rewritten, and possibilities abound. In the bygone era of traditional media, such as newspapers and television, people would consume information at specific points in their day. But smartphones have shattered those limitations, becoming constant companions that never leave our sides. Our study on smartphone behaviors unearthed that the average user touches their phone 4,513 times, spending over 3 hours and 36 minutes each day with the smartphone. We interact with these digital marvels throughout our waking hours, relying on them for purchasing decisions and guidance on what to do and when.

Recognizing the unprecedented influence of smartphones, Fractal set out to uncover a more potent way to utilize these pocket-sized powerhouses.

Our visionary research ventured beyond conventional marketing tactics, which typically focus on driving click-through rates for digital commerce purchases.

But a purchase would only happen intermittently, once a month, perhaps once a fortnight. On the other hand, there can be several moments of consumption in a single day. Identifying and influencing those crucial moments of consumption would give a marketer several more touchpoints to influence the consumer. So, we set our sights on the stimulus provided at these crucial "digital moments that matter," those pivotal instances when a timely stimulus could lead to immediate consumption. Whether it's quenching your thirst with a refreshing drink when there is one sitting in the refrigerator or reminding you to brush your teeth just one more time during the day, before bed, our innovative MicroStimuli have transcended the boundaries of e-commerce, propelling us into the realm of e-consumption. These MicroStimuli, delivered at specific "digital moments that matter," would act, in mere milliseconds, triggering the appropriate, expected action.

But why stop there? Can smartphones sway purchasing decisions and inspire behaviors that enhance our health and well-being? While we know the long-term benefits of an active lifestyle, we often succumb to the allure of immediate rewards, choosing that extra hour of sleep over the morning run we had planned. Despite the vast amount of health data our trusty smart devices provide, our behaviors stubbornly refuse to budge. Similarly, individuals managing chronic conditions like diabetes or high blood pressure frequently struggle to adhere to their prescribed medication routines, veering off track after only a few days. Determined to unlock the transformative potential of smartphones, Fractal embarked on a quest to empower these crucial decisions and support long-term health objectives. We aspired to transition from e-commerce to e-action.

Our tireless efforts led us to identify four essential elements that comprise effective e-action micro-stimuli.

- First, these stimuli should tap into our primal evolutionary needs, such as quenching thirst or satisfying hunger, to trigger an innate response.
- Second, emotions play a pivotal role in decision-making, so our micro-stimuli strive to evoke powerful emotional reactions.
- Third, they must be visually captivating, leveraging our brain's preference for processing visual information swiftly.
- Last, to leave an indelible mark on viewers, we embrace exaggeration by peak-shifting these features, intensifying the impact of our messages.

Let us illustrate our e-action microstimuli's impact through a remarkable case study. Fractal's groundbreaking railway trespassing poster for the Indian Railways Corporation perfectly exemplifies our principles.



By ingeniously highlighting the instinctive fear of large, looming objects, the poster portrays a heart-stopping scene of an individual on the precipice of being struck by a train.

The actor's fear-stricken expression resonates with our innate drive for self-preservation, effectively provoking the desired response.

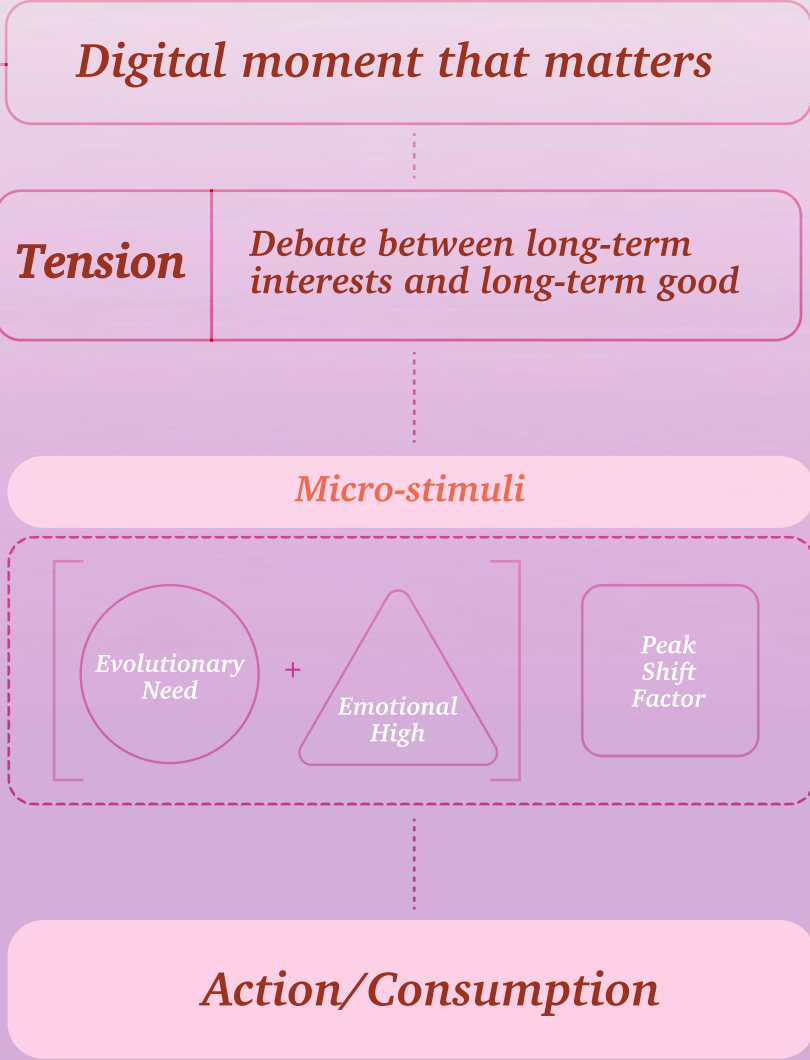
Employing the artistic technique of peak-shifting, we elevated the impact even further. The enlargement of the actor's eyes intensified the sense of fear. At the same time, the repetition of the image three times tapped into the intelligence of repetition in groups of 3's, seen across global cultures and religions.

Designing the future of e-action, however, is only half the story. To truly provoke the right actions at the right time, we must master the art of effective dissemination during these pivotal moments that matter. This requires harnessing the power of artificial intelligence and machine learning capabilities. Picture this: smartphone users who need to take their medication at an optimal time each day. By analyzing users' physiological, behavioral, and digital habits, our generative AI can create and disseminate tailored micro-stimuli automatically and at scale. With a feedback loop constantly gathering information on click-through rates, the technology can make necessary adjustments to achieve the desired response.

As we continue our ambitious journey, Fractal's CerebrAI and AI machine-learning teams are working tirelessly to turn this vision into a tangible reality. Collaborating closely with our clients, we are shaping a future where micro-stimuli embrace the full potential of smartphones as always-with-you companions. As companies transition from e-commerce to e-consumption, the promising realm of e-action beckons. We unlock endless possibilities by harnessing the smartphone as a medium for e-action, transforming these devices into trusted partners on our health and wellness journey.

Welcome to a future where the power to inspire action lies within the palm of your hand.

E-action Framework





Biju Dominic
Chairman and Chief Evangelist
Fractal

As a chief evangelist of Fractal and chairman of FinalMile Consulting, Biju is playing the new game that is emerging at the intersection of human and machine intelligence. He is driven by the belief that the more we understand the inscrutable algorithm in our brains, the better the technology we develop for our machines will be.

Read through the complete paper on "Fostering Effective Communication Between Humans and Machines" now.





THE SECRETS OF INCLUSIVITY

Sally Helgesen
Expert on
women's leadership

We speak with leadership expert Sally Helgesen about fostering inclusivity in the workplace

Many organizations work on rooting out unconscious bias with good intentions, but this can make it harder to foster cultures where people can build collaborative relationships across gender, racial, ethnic, and sexual divides.

That's the view of Sally Helgesen, who has spent 35 years working with women around the world to advance their careers and is described in Forbes as the world's premier expert on women's leadership. Here, she tells us more.



You say that diversity is neither the problem nor the goal. Can you explain what you mean by this?

Diversity is not a goal. It is the nature of the global talent pool. It defines who is available for hire. Inclusion is the means by which this talent pool is most effectively led because those who have historically been outside the leadership mainstream are those most likely to be unsure that they belong.

How can well-intentioned efforts to root out unconscious bias hold organizations back?

First, inclusive bias training seeks primarily to address people's thoughts. It can provide insights but rarely offers a path for moving forward by identifying specific actions or behaviors demonstrating inclusion. It's mostly 'aha' moments, without the 'now what?'.

Second, it can be very painful and discouraging for people to hear what their colleagues may be thinking or know the details of their family's bias against people like them. This therapeutic model may be helpful to the individuals who gain insights, but it does not serve collegiality among team members.

What other triggers might undermine our ability to connect across divides?

Visibility is a major trigger. People who are poor at gaining visibility, claiming their achievements, and being noticed are often triggered by those who are good at it, dismissing them as showboats and telling themselves a story about how nice they are. Those who are good at visibility are often triggered by those who are not, dismissing them as not being players, not ready for prime time. Other key triggers include the words ‘it’s not fair’ and humor, communication styles and how we build and leverage our networks.

What are the key inclusive behaviors that business leaders should look to foster?

A key inclusive behavior is investing in colleagues’ development: finding out what they aspire to, identifying how you might help them, and asking what you can do to be of service. Suggest networks they might want to join, offer to introduce them to people and be on the lookout for honors or awards for which you might nominate them.

It’s also helpful to look beyond the usual suspects when inviting people to a meeting: who might benefit from being included? Who might learn from attending? Seat them in the center or the front of the room or at the table, instead of putting them in the back, as often happens.

Honor people’s time, making it clear that you know they are busy and avoid overloading them with extra work. Push back against robotic bureaucracy requests that can consume frustrating hours for employees. Remember Peter Drucker’s rule that a manager’s first job is always managing up: protecting people from unreasonable demands that float down from higher levels.

How can business leaders do this effectively?

Create a culture where people are comfortable asking for help or clarification by doing so yourself. Be honest and frank about what you do not know. Your credibility is not vested in having all the answers but in whether people believe what you say. You also want to make sure that when mistakes are made, you identify the lessons that can help move everyone forward. Above all, avoid a culture of blame.

Where are we on the journey to inclusivity compared to the turn of the millennium?

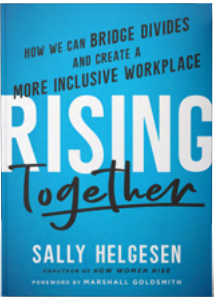
Before the millennium, senior leaders (female, people of color) often hesitated about joining employee networks because they feared doing so would tag them as, for example, “a woman, not a leader.” This reluctance has mostly vanished.

I have observed substantial and sustained progress since the year 2000. Global companies today recognize the reality of a diverse workforce and have, for the most part, made significant adjustments to their policies, increased funding for diversity, equality, and inclusion initiatives, and are far more likely to hold leaders to account for progress. Many have adjusted how they assess performance and identify candidates for promotion in ways that root out biases that were formerly unrecognized.

There is still room for improvement, however, but by applying the principles in my book, companies can elevate their inclusion game and create a workforce that exemplifies solidarity rather than division.



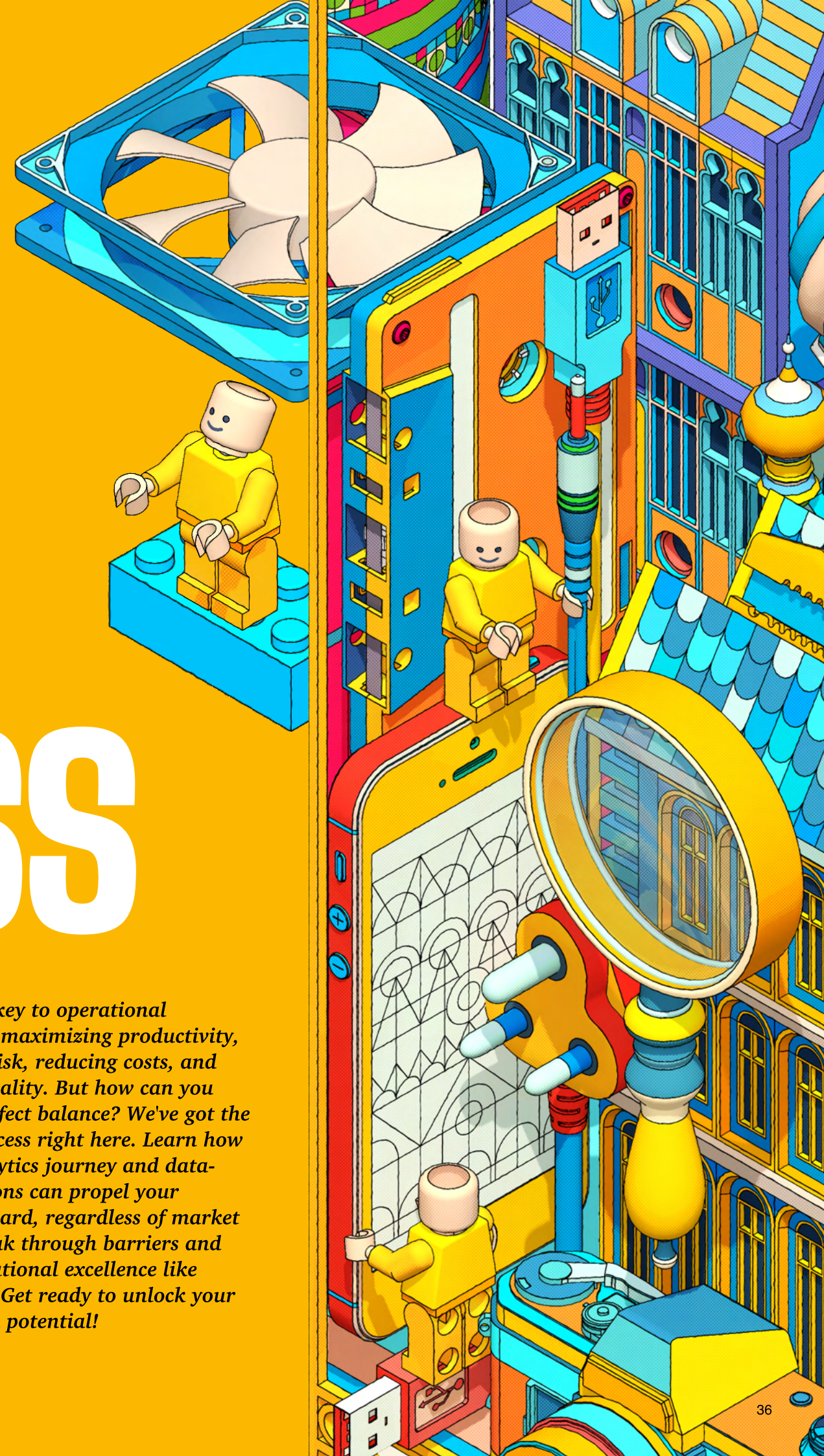
Create a culture in which people are comfortable asking for help or clarification by doing so yourself. Be honest and frank about what you don’t know.



Sally’s latest book, *Rising Together: How We Can Bridge Divides and Create a More Inclusive Workplace*, suggests strategies to build more inclusive relationships, teams, and workplaces and is available in all leading bookstores.

IMPROVE OPERATIONAL EFFECTIVENESS

Discover the key to operational effectiveness: maximizing productivity, minimizing risk, reducing costs, and improving quality. But how can you strike the perfect balance? We've got the secrets to success right here. Learn how an agile analytics journey and data-driven decisions can propel your business forward, regardless of market changes. Break through barriers and achieve operational excellence like never before. Get ready to unlock your business's full potential!



A black and white portrait of Tim Berryman, a middle-aged man with dark hair, smiling. He is wearing a dark suit jacket over a light-colored collared shirt.

SUCCESSFULLY SCALING YOUR AI INITIATIVES

EXPLAINED

Tim Berryman

Vice president of Decision
Analytics at Georgia-Pacific LLC

Tim Berryman, vice president of Decision Analytics at Georgia-Pacific LLC, shares his insights on the deployment of artificial intelligence and the sustained value it brings over time.

Ai:sight recently had the opportunity to speak with Tim Berryman, a seasoned professional with extensive experience at Georgia-Pacific LLC. With a remarkable career spanning 25 years at the company, Berryman has held key positions such as vice president of strategy and business development and vice president of finance. Presently, he serves as the vice president of Decision Analytics, where he spearheads the development of Georgia-Pacific LLC's corporate analytics strategy focusing on the commercial deployment of AI at scale. Decision Analytics drives the implementation of best-in-class practices and deploys 30-40 large-scale AI projects a year, resulting in significant financial gains.

There is one common thread that features in every project we work on: the need to connect to business strategy and business outcomes first

In an exclusive interview conducted for ai:sight, Berryman shared his insights on the successful deployment of artificial intelligence (AI) at scale and the sustained value it brings over time.

How do you balance short-term wins and long-term strategic goals when building an analytics roadmap?

You need to have balance in your pipeline. What I mean by that is sometimes you need to deliver short-term wins to earn the right to go after long-term strategic goals. You want to enable rapid experimentation, demonstrate your capability and brand, and create attractive financial returns in an area important to the organization.

What's important to realize is that even if you have long-term initiatives in your pipeline, it's still essential to break them down into short-term milestones to demonstrate measurable progress. In Decision Analytics, we break down our initiatives into two- or three-week sprints.

It's also important to recognize that urgent requests will always come up – these need to be balanced carefully with the long-term ambitions of the AI project. We have a separate 'Swat' team designed to go after these urgent, short-term requests and enable rapid experimentation. This, teamed with our close collaboration with multiple partners, gives us the scalability and flexibility to meet demands rapidly.

How can businesses maintain an agile and adaptable analytics journey that responds effectively to changing market dynamics and evolving business needs?

The businesses we support have varied degrees of maturity in many different industries. Some are much more sophisticated than others; some employ data scientists, others don't. This means we need an agile operating model to adapt to that – because there is no one-size-fits-all approach.

There is one common thread that features in every project we work on, though – and that's the need to connect to business strategy and business outcomes first, which drives the initiatives we focus on. We have engagement leaders aligned by business & functional area who identify how advanced analytics can help accelerate the vision and strategy of a particular business. They're also responsible for translating what we can deliver into a language the business understands.

What measures do you implement to ensure the ongoing optimization and maintenance of AI systems to prevent value erosion and maximize long-term value realization?

One of the misconceptions is that most value comes from the minimum viable product (MVP) development. So, you've got a problem, and then build an AI solution to solve it.

But this is the easier part. In my opinion, the last mile generates most of the value –the adoption phase– integrating the insights into the business process and scaling and sustaining this over time.

It's also important to involve end users in the AI development process from the beginning to the ideation and scoping stages. If you don't do this, the danger is that you build a solution that no one wants or uses, wasting time and money.

To prevent value erosion, we need the ability to monitor what's put into production. So, after production, there's a crucial step: monitoring the outcomes. We have a separate team that monitors business outcomes while keeping a close eye on data quality and the performance of models. If we are not achieving business outcomes, then there's a problem. We need to pick up business process changes before they occur and identify when something isn't working.

How do you address the ethical considerations and potential biases when deploying AI at scale to prevent value erosion and maintain fairness?

These are important considerations. Say you wanted to create a model to detect whether a student enrolled in a data science program will get an A. If the class consists of 90% boys, then the model is likely to predict that males are more likely to be successful. This is because of bias in the population sample. So, it's important to remove the demographic that is causing the bias. This is why it's essential to have humans involved so that they can highlight these sorts of issues. We also follow a tried-and-tested framework developed by the Institute of Ethical AI and Machine Learning.

There's a lot of discussion around generative AI today. What should businesses consider when deciding whether to deploy these solutions?

Generative AI seems to have attracted more attention than anything else I've seen in the realm of AI, so we are using that as a catalyst to facilitate conversations around more general AI. Because what most people don't realize is that generative AI seldom operates in isolation. Don't be surprised if it only makes up 10% of a project; the other 90% is traditional AI.

Businesses also need to consider the privacy and security of their data when employees start using generative AI solutions. For example, third party managed platforms can provide a secure tenant in a secure environment. This connection means that prompts entered into the solution are not shared for the training of the model – which means we can use it securely. That said, if you employ 30,000 people, you can't stop them from entering information into a generative AI solution from their phone, for example. So, the best thing we can do in this situation is to educate people about the dangers of entering private data in a public environment.

HOW TO CHANGE THE GAME

How a new model of real-time video object detection will change the AI game, according to Fractal senior data scientist Kunal Singh

Object detection is a key discipline in AI. It allows computer systems to detect entities – such as people or objects – in images or videos. It has applications in many areas of computer vision, but video surveillance is one of the most common. The focus here is to detect any suspicious activity or human presence during the day or at night.

What's most important in video surveillance is that object detection happens in real time – if there's a lag of even a few seconds, then it can defeat the whole purpose of having surveillance in the first place.

Historically, however, the deep learning algorithms that power the AI to detect real-time objects with adequate precision require vast computing power. You need many graphics processing units (GPUs) and a computationally heavy platform. This is not only incredibly expensive – the GPU system will likely be more expensive than the AI itself – but also challenging to deploy and manage.

Alternatives have been light models for image object detection, such as You Only Look Once (YOLO) will highlight the entity's location in an image by putting a box around it. YOLO models for video object detection do essentially the same – they work on a frame-by-frame basis, so they analyze a single image, detect any entities present, and then move on to the next image.



This is a sub-optimal approach because something quite fundamental is missing: context. Imagine I show you daytime drone footage taken from a height of 150 meters. You will see people appear very small because you are capturing the video from a very high elevation. If I pause the video and show you the frame, those humans could be confused with artifacts. You may only see a head from right overhead, so they could be anything – a rock or a pothole. Without context, the system can lack accuracy.

Recognizing this problem, I wanted to help develop a real-time video object detection system that would work incredibly well on a computationally limited platform yet provide state-of-the-art accuracy. It needed to be very easy to deploy on a simple laptop or other edge devices, and I wanted it to be fundamentally better than the simple solutions we've seen in the past.

To do this, we used a deep-learning model called a transformer. Transformers are designed to process sequential input data – traditionally natural language – but to process that input all at once and, as a result, grasp the context.

We then added this transformer layer onto a YOLO model, giving the model a memory. This meant that it could now capture the context and keep a summary of what has happened in the last few frames and place attention on certain areas where there is a high probability of an object or person appearing.

Transformers are designed to process sequential input data – traditionally natural language – but to process that input all at once and, as a result, grasp the context.

When a program like ChatGPT, for example, uses a transformer model, it essentially identifies the most important words and predicts the next important word. We're doing the same but at a pixel level. We identify which pixels are important based on the video summary. This way, we can exclude what previously might have been inaccurately flagged as a suspicious person or object. Our model can do all of this in real time while delivering state-of-the-art performance. What's more, it can do this from any edge device without needing a data connection.

The potential is huge – our model can be customized to perform in almost any scenario where monitoring is required. As well as being used in surveillance, it is already proving to be incredibly beneficial in defense, where it's essential to have real-time intelligent object detection for drone footage. It's also proved useful in monitoring social distancing violations.



But this is just the start. There are countless other scenarios where this type of solution might prove transformative. This might be simple asset monitoring, for example. It could be used on a train track to detect whether a person is walking towards the tracks and issue an alert that might prevent a fatality from occurring. It might be used by autonomous vehicles to detect obstacles or in traditional vehicles to recognize that a driver is unresponsive, for example, and to issue a real-time alert that the person urgently needs medical attention. It might even be used in augmented reality situations in the metaverse.

The number of potential applications will grow even further as we see the growing adoption of AI-based solutions, especially those leveraging transformer models. I'm excited to see what the future holds.



Kunal Singh
Senior Data Scientist
Fractal

Kunal Singh was one of the initial members of Fractal's Computer Vision team and has been instrumental in developing Fractal's image and video perception platform. Today he's working with India's leading drone manufacturing startup to develop AI technology stacks for drone-based military surveillance and rescue operations. His research paper '3D attention based YOLO-SWINF for real-time video object detection' is available to download [here](#).



THE SECRETS TO A SUCCESSFUL GLOBAL CAPABILITY CENTER



Mukta Arora, director and leader of Elanco discusses how GCC can deliver much more than support functions

Today, forward-thinking companies realize that global capability centers are capable of much more than just providing back office and business support - they can become powerful Centers of Excellence and innovation hubs. Mukta Arora, Managing director of Elanco's Innovation and Alliance Center in India, outlines how to unlock this untapped potential.

Over the last decade, Mukta Arora has been a driving force of success for two renowned organizations: Eli Lilly and Company (GCC) and Elanco. Her recipe for achievement? Creating strong ties between key stakeholders while fostering an environment that allows individuals to reach their highest potential.

What are the hallmarks of a successful GCC?

It has to be an integral part of the global organization. I always say that we don't build islands of excellence; we build centers of excellence. And, from a geometry standpoint, the center is at heart, right?

GCCs have to deliver value. While we save millions of dollars each year to help the organization achieve its

financial targets, this invaluable impact of transformation, new technologies, and digitalization create an enviable future for the organization. People have graduated from the back office / shared service concept to a capability and value acceleration concept for GCCs. They are becoming essential engines for transformation and change. More and more Fortune 500 companies have made GCCs an essential part of their growth strategy and are under CEOs' direct governing line.

Ensuring this vision is also experienced by employees requires a specific culture and workflow. We're building bridges all the time. Stakeholders need to understand that those working at the GCC are a highly capable talent pool with the potential to transform the company for tomorrow and not just fulfilling back-office tasks; the employees here need to feel that they are shareholders in the company's success and can change its future for the better. I want to ensure that our talent is recognized as global talent. That's why we have started exporting talent from here to the global headquarters and vice versa. This talent exchange helps with integration among the business while providing the business context to our top talent.

The young talent of today needs to be heard. They need a psychologically secure environment where they are not dormant.

Innovation is also incredibly important. The GCC is not a global work center. It's not a service center; it's a capability center, which means you must add value through innovation and continuous improvement.

How can businesses break barriers with their GCC to establish it as a global innovation center rather than just a back-office operation?

We start small. We must try out new ideas to see if they work for everyone. Here at our GCC, we have a multi-generational workforce that is very diverse. Different functional teams sitting together with each other and with technology experts, digital experts etc, provide a great cohort for innovation. So, it's a great testing ground where we can create a proof of concept and, very carefully, scale up the process and delivery of that process. This helps us optimize the way we work and improve productivity which, in turn, leads to greater innovation.

How are those GCCs that leverage AI and analytics better poised for success? What type of insights can be achieved?

AI and analytics are competitive differentiators. It's now a standard practice to use data to improve sales force effectiveness and multi-channel marketing, for example, but it can do much more. For example, you can minimize adverse events by analyzing data from safety reports. You can analyze historical data to develop better drugs or create a better portfolio of products. The key is to move the organization to be driven by these insights rather than the traditional way of hit and trial. Then you start to see your leadership wanting more. Curiosity builds up because we now have the talent and tools to provide answers and make more effective decisions.

It's not a quick process. But the more teams that make data-driven decisions and the more they communicate it, the more use cases you establish. It may take five to six years for an organization to see its whole value, but it can be transformational once they do.

What tips would you offer someone who's looking to take their GCC to the next level?

My first tip would be to focus on the long term. When creating a GCC, you need to take a long-term strategic view of how it will play a part in the overall organizational strategy. You're not here to build the center and close it after five years. You're not here to provide cost arbitrage for the short term. It's about business value, so unless what you want to do is aligned with the organization's long-term vision, I would say think twice. This includes talent – don't use your people as objects. Instead, nourish them so that they can flourish in the organization. Give them career maps so they can see they are part of the long-term strategy.

My second tip would be to focus on stakeholder management and communication. Going back to my first point, you can be an island of excellence, but if it's not connected, it's useless to a global organization. Regular dialogue on managing and growing talent is key to building bridges and ensuring a feeling of oneness and a sense of identity that brings out the best in everyone.

Finally, I cannot stress enough how important employee engagement is. To care about their work, an employee must be engaged. The young talent of today needs to be heard. They need a psychologically secure environment where they are not dormant. Using AI and automation, you can remove some of the manual, repetitive work and free up time to focus on your employees and give them the attention they deserve.

Part of achieving an environment where employees feel heard is focusing on diversity and inclusion. What successes are you realizing with your D&I initiatives?

Today we have one of the highest diversity ratios in the country – 43% of our employees are women, and about 40% of our leadership team are women. I'm proud because it's all well and good to have gender diversity in the workforce, but what's most important is to make sure this translates to the leadership decision-making team.

But diversity is the first step. Inclusion is the most important part and the most difficult. Inclusion is more than offering a women's network or leadership support for our female employees. It is beyond gender. It's about supporting diverse talent groups in all aspects of their life so they can thrive at work. This enables mothers and fathers with young children to manage work and life changes. It means championing these groups when they are not around by ensuring the wider team knows how hard they work. It also means we provide a safe environment for all genders to express themselves, all communities to integrate well, and all experiences from across industries to come alive as we transform our organization and make it future-ready.



We spoke with Diana Schildhouse of Colgate-Palmolive to discover more about the keys to establishing a successful data-driven CPG organization.

With more than 20 years of experience in data science and advanced analytics, business intelligence, strategic planning, and consumer and market insights, and now as chief analytics and insights officer for Colgate-Palmolive, Schildhouse has learned the power of data storytelling and how this applies to the consumer-packaged goods industry. Here, she tells us more about her strategy.

Please tell us about your primary goals for Colgate-Palmolive

I'm very focused on enabling data-driven decision-making for the organization, giving everyone across the business access to the tools and the data they need to make effective decisions. Enabling data is key – it's about instilling a data culture and ensuring everyone understands what data means and how it applies to their role. A key component of that is building data literacy so that everyone speaks a common language.

I'm also focused on bringing discipline to measuring the value of our analytics work. For example, we quantify the value of the recommendations coming out of our work and align those with the business to determine which are feasible. By tracking that, we can focus on both business adoption as well as driving real, measurable value from analytics.

Can you tell us a little about your analytics journey at Colgate-Palmolive and how you prioritize the workstreams?

We started with an outside-in perspective. We took time to understand other proven success stories and familiarize ourselves with the learnings that have happened along the way in this space. We then looked at how this might apply to our journey, while recognizing that a cookie-cutter approach cannot achieve successful analytics transformations.

We are operating in a 'build the plane while you fly it' mode, so we aren't waiting for our data to be in a perfect state before we move forward. This is where some companies stumble – by prioritizing perfection over progress, there's a high probability that you'll never get started.

We're also adopting a use-case-driven approach rather than a tech-first strategy. That means we focus on the different domains across the business where analytics can drive the most value. For example, that might be revenue growth, pricing, trade promotions, or marketing and media effectiveness. We choose a couple of priorities and then focus on building, embedding, and scaling.

How do you organize analytics teams for success? What are the skill sets typically needed?

The first thing I'd say is that the partnership with the IT organization is critical. For us, that means having folks working on data strategy and data operations that act as a day-to-day link with our IT experts. They make sure that we have the data we need to do the type of analytics work that we want to do. Of course, you cannot underestimate the importance of roles like data engineers and data scientists, and they need to work together in an ecosystem. We also need analytics translators for adoption to serve as a link between data scientists and the business teams. To succeed, we need to articulate what data means, how to use it, and how it solves key problems.

We're also looking to foster important attributes, such as curiosity, across our entire team. Curiosity is important in terms of problem-solving and around best-practice approaches to learning, understanding what's new and evolving in the analytics space, and how different approaches might set us apart.

Storytelling is also crucial. It's never been more important for everyone within an organization to connect the dots in their work and weave it together to tell a compelling story that spurs action. The most successful analytics teams can clearly articulate what their work means and how it can impact the business.



"You also have to articulate your vision and strategy and where you're headed very clearly and often... This means speaking in plain terms to demystify data and analytics and make it something that everyone understands."

What competitive advantage will your focus on analytics provide? What potential will this open for the business?

here are two areas where we are focused that I believe will set us apart.

The first is that business link. Everything we do within analytics starts with a business question – rather than a tech-first approach. We have to deeply understand what decisions our business partners need to make, when they need to make them, and what priorities are most important to their success. Then, we can help to solve some of those through analytics. The greatest successes within analytics come from embedding that work into the rhythm of day-to-day business operations.

Another is data storytelling. Of all the case studies I've seen around analytics transformation, as well as the transformations I've led myself in prior roles, the ones that are most successful are those that succeed at changing behaviors and getting those behaviors to stick. It's about fostering a business-first approach that can be enabled through storytelling – especially as we start to link many different types of data. It's not just about syndicated data or market share data, but also first-party data and data partnerships with retailers. Being able to mine that data, draw the relevant insights and spur action is key to real scalable success.

Are there specific adoption challenges that companies like yours face? And what practical steps can be taken to overcome them?

Change management can be a big challenge – it's the case in any organization where people are comfortable working in a particular way.

Building trust across the organization is incredibly important to solving adoption challenges. That starts with really taking the time to listen and understand your stakeholders' priorities and their business problems so that we can address the most important areas for them.

I invest in building relationships, whether that's through one-on-one meetings, lunches, or informal chats. By communicating effectively and, most importantly, by listening, you can build trust from the beginning and therefore overcome a lot of skepticism from the outset. It's also effective to find the curious, interested champions and with whom you can partner for 'quick wins' before scaling up.

You also have to articulate your vision and strategy and where you're headed very clearly and often, not just to your team and your analytics organization but also to the entire business. This means speaking in plain terms to demystify data and analytics and make it something that everyone understands.

We have our analytics strategy on a single page at Colgate, including all of our strategic pillars. It acts as a kind of north star that can be referred to constantly to communicate why we're doing what we're doing, and to make sure that we're focusing and staying on track with what's most important.

What does the future hold? How do you expect your strategic objectives to evolve in the coming years?

We have our strategy, and we know where we're headed, but we also recognize that the business and the analytics space will continue to evolve. We have to constantly look at what's happening externally to make sure that we're still taking the most relevant approach for our business. We need to stay current with emerging approaches, data sources, and technologies.

We are most excited about more predictive and prescriptive analytics for the future and using AI to automate decisions that require human effort. However, it is always with the approach of tying it to a business question, then building, showing value, and scaling.

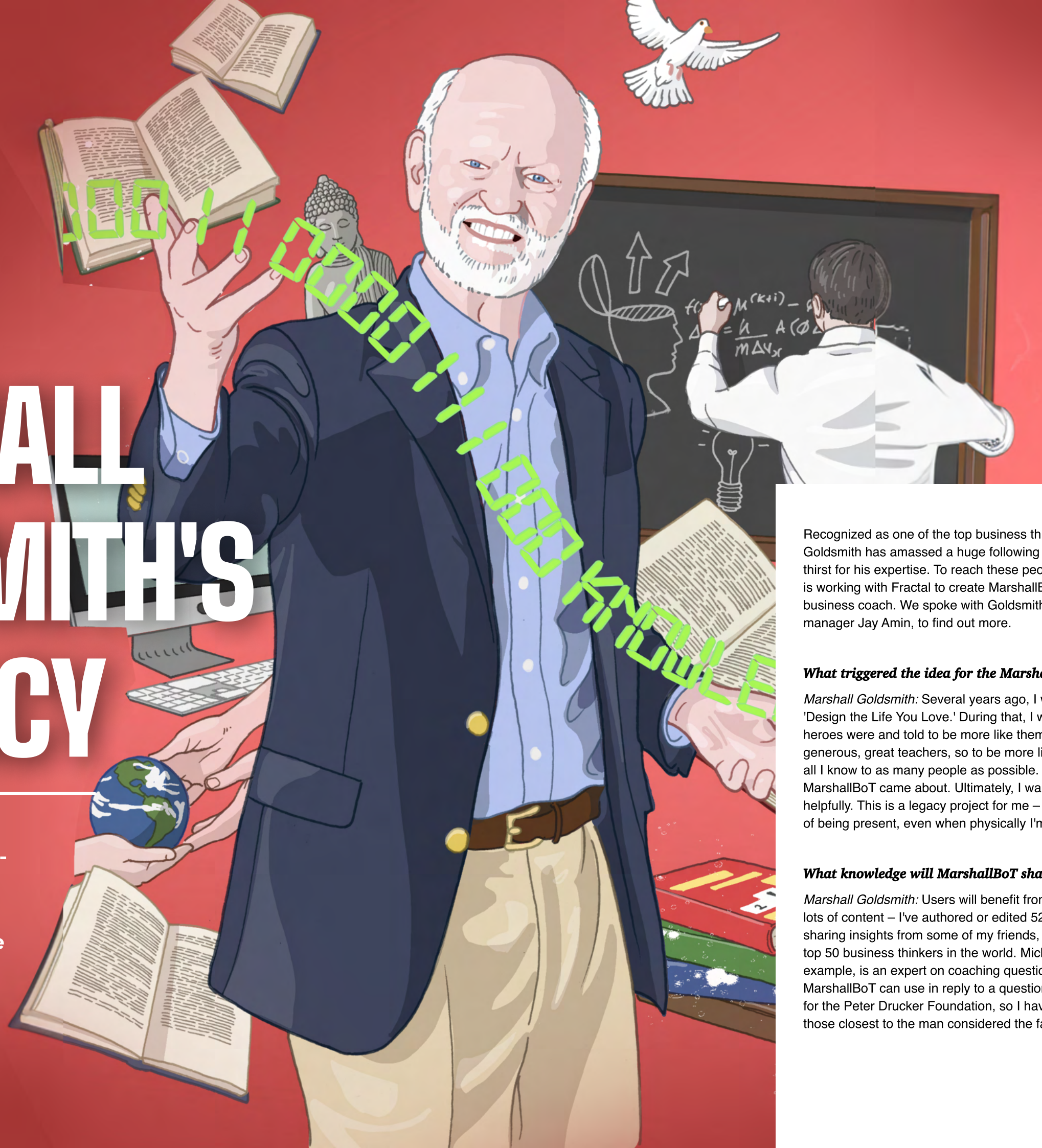
BUILD BETTER PRODUCTS FASTER

In today's fast-paced business landscape, the ability to develop new products swiftly and effectively is crucial for success. Thanks to their data-forward approach, this captivating section deepens into conversations with trailblazing individuals and businesses that have mastered the art of building superior products at lightning speed. Prepare to uncover the cutting-edge technologies powering these remarkable creations, such as predictive analytics, exploratory analysis, large language models, and generative AI. Get ready to be inspired by the pioneers revolutionizing the product development landscape and unlocking unparalleled business growth.



INSIDE MARSHALL GOLDSMITH'S AI LEGACY

Business thinker Marshall Goldsmith is developing an AI-powered virtual version of himself – a first-of-its-kind project to share his knowledge and preserve his legacy for years



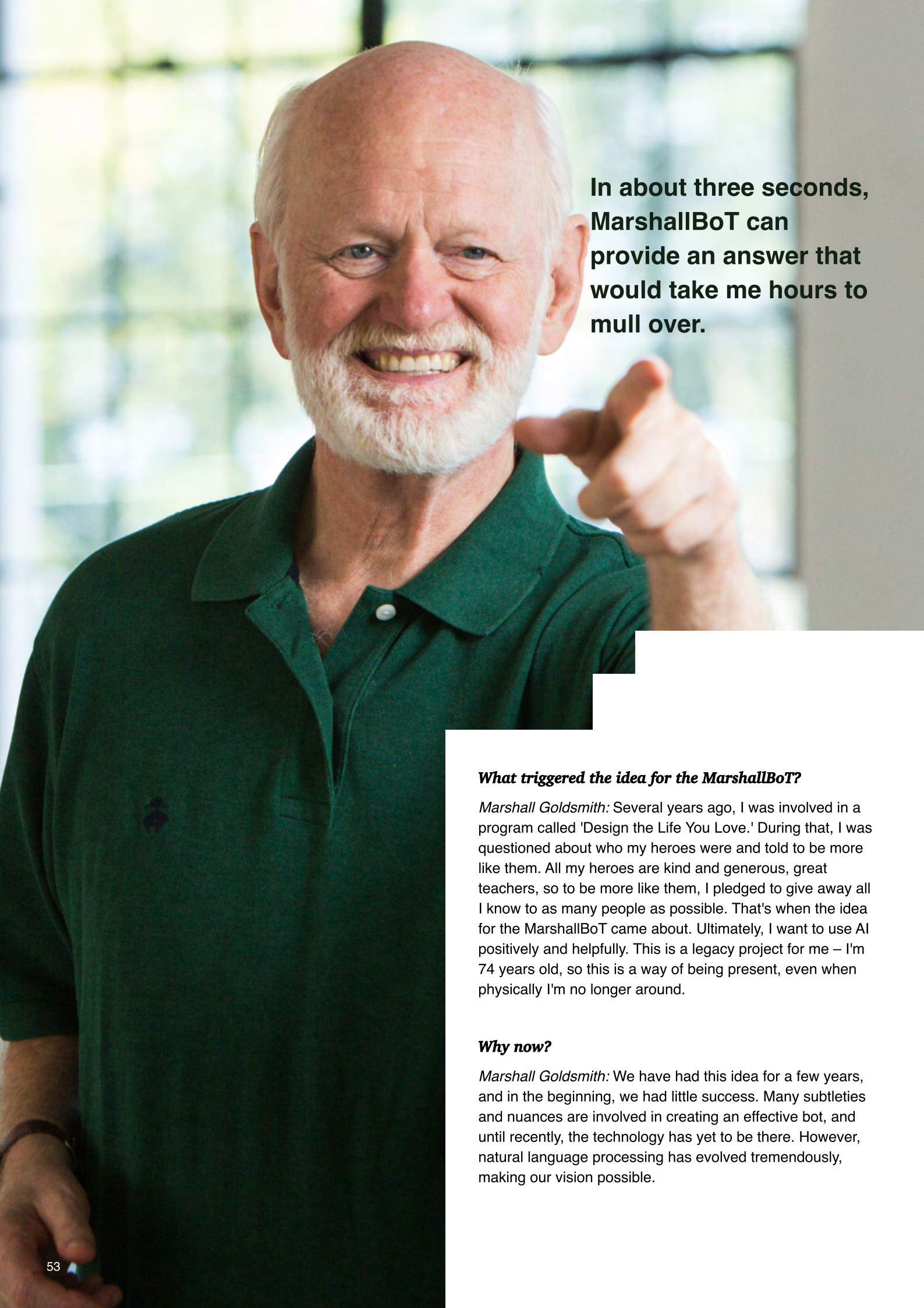
Recognized as one of the top business thinkers in the world, Marshall Goldsmith has amassed a huge following of working professionals with a thirst for his expertise. To reach these people more effectively, Goldsmith is working with Fractal to create MarshallBoT, an AI-powered virtual business coach. We spoke with Goldsmith, and Fractal's principal strategy manager Jay Amin, to find out more.

What triggered the idea for the MarshallBoT?

Marshall Goldsmith: Several years ago, I was involved in a program called 'Design the Life You Love.' During that, I was questioned about who my heroes were and told to be more like them. All my heroes are kind and generous, great teachers, so to be more like them, I pledged to give away all I know to as many people as possible. That's when the idea for the MarshallBoT came about. Ultimately, I want to use AI positively and helpfully. This is a legacy project for me – I'm 74 years old, so this is a way of being present, even when physically I'm no longer around.

What knowledge will MarshallBoT share?

Marshall Goldsmith: Users will benefit from everything I've written. I have lots of content – I've authored or edited 52 books. In addition, I'll be sharing insights from some of my friends, who include at least 25 of the top 50 business thinkers in the world. Michael Bungay Stanier, for example, is an expert on coaching questions. He has shared insights that MarshallBoT can use in reply to a question. I'm also on the advisory board for the Peter Drucker Foundation, so I have included some thoughts from those closest to the man considered the father of management thinking.



In about three seconds, MarshallBoT can provide an answer that would take me hours to mull over.

What triggered the idea for the MarshallBoT?

Marshall Goldsmith: Several years ago, I was involved in a program called 'Design the Life You Love.' During that, I was questioned about who my heroes were and told to be more like them. All my heroes are kind and generous, great teachers, so to be more like them, I pledged to give away all I know to as many people as possible. That's when the idea for the MarshallBoT came about. Ultimately, I want to use AI positively and helpfully. This is a legacy project for me – I'm 74 years old, so this is a way of being present, even when physically I'm no longer around.

Why now?

Marshall Goldsmith: We have had this idea for a few years, and in the beginning, we had little success. Many subtleties and nuances are involved in creating an effective bot, and until recently, the technology has yet to be there. However, natural language processing has evolved tremendously, making our vision possible.

Jay Amin: Earlier attempts to create a product like MarshallBoT would have relied on natural language processing techniques such as rule-based systems, keyword matching, or simple statistical models. This would limit MarshallBoT's ability to learn from and how well it can answer a user's query. The latest version of MarshallBoT uses a large language model (LLM), a generative AI technology. LLMs provide contextual understanding, enabling natural conversations while demonstrating generalization ability and reducing reliance on rules. MarshallBoT's speech component leverages generative AI technology that closely emulates Marshall's voice, which earlier would have been low quality.

How do you envision MarshallBoT enhancing your connection with your audience?

Marshall Goldsmith: There are only so many people that I can personally interact with. A bot changes everything. It can interact with people when I'm not there and doesn't care about time zones. It can interact with far more people and in far more depth than I can. We are now on version four of the technology, and 60 percent of the time, it can answer a question about my area of expertise better than I can. In about three seconds, it can provide an answer that would take me hours to mull over. It's very impressive – and it is only going to get better.

What is the technology behind MarshallBoT?

Jay Amin: MarshallBoT is built on OpenAI's GPT-3.5. We have customized this LLM to incorporate Marshall's leadership and coaching philosophy from the knowledge of his articles, books, videos, and other materials. To ensure accuracy and safety, we have customized MarshallBoT to provide more factual information about Marshall's background, and it only answers questions within Marshall's area of expertise.

How are you ensuring that MarshallBoT's voice is authentically yours?

Marshall Goldsmith: I've spent hundreds of hours asking MarshallBoT questions and then editing the answers – in fact, I've asked over 650 questions so far and edited over 250 responses. The more I do this, the more the bot assumes my voice – it's an iterative learning process.

One of the biggest challenges is giving MarshallBoT a personality... unlike me, it doesn't yet have a sense of humor.

How is MarshallBoT being received?

Marshall Goldsmith: The reaction so far has been incredibly, very positive. What we are doing here is quite different from anything done before. Let's compare it to ChatGPT, for example. ChatGPT, by definition, gives you a generic answer. It doesn't have an opinion. However, MarshallBoT gives you my answer. That's something quite unique.

Why is Fractal doing this?

Marshall Goldsmith: Fractal is experimenting with some of the most cutting-edge technology to build MarshallBoT. It's an excellent experience for the team and a positive use of AI technology.

How would you like MarshallBoT to evolve?

Marshall Goldsmith: As MarshallBoT unfolds, one of the biggest challenges is giving it a personality. It already provides very well-thought-out and articulate answers and – in many ways – is better than me at delivering an objective point of view. However, unlike me, it doesn't yet have a sense of humor. So, I'm practicing trying to give it some humor. For example, suppose you ask it how many languages I speak. In that case, the answer is now: "I can barely speak American English." Or, if you ask about my grandchildren, it replies with: "Marshall has the greatest grandchildren in the world."

What message would you like to convey to users engaging with MarshallBoT?

Marshall Goldsmith: Well, I'm a Buddhist. And Buddha says you should only teach what works for you. With that in mind, I teach what is called 'feed-forward.' I teach all my clients to ask for ideas, be open-minded, listen to suggestions, and thank people. Then to test these suggestions in the context of their own life. So, I ask people to try MarshallBoT and see if it works for them. If it does, great. If it doesn't, that's okay too. There's no downside to trying it, but much to gain.

DR. PET AND PREDICTIVE ANALYTICS FOR YOUR FURRY FRIEND

The new AI app streamlines cancer treatment for beloved cats and dogs, providing treatment as early as possible



Even our furry friends are susceptible to cancer, as tragically, one in five cats and one in four dogs fall victim to the disease at some stage during their lifetime. Early diagnosis is often vital to helping pets beat this life-threatening illness. However, it's no simple matter for veterinarians to determine the most suitable course of action. Crafting individualized treatment plans based on each pet's unique characteristics, such as age, breed, or medical history, can be highly time intensive – meaning precious moments are at stake when fighting this battle against cancer.

But with lifesaving advances made daily in vet medicine technology – from AI Diagnostics Tools to advanced treatments – navigating the path back towards health has become more achievable!

A new app called Dr. Pet is making this possible.

Dr. Pet, powered by cutting-edge Customer Genomics and Fractal's Next Best Action solution, brings this powerful technology into veterinary practice - giving vets a single source of truth they can use when assessing the health status of animals under their care.

Additionally, predictive analytics let them identify pets most at risk of developing cancer in future years so preventive measures can be taken early, ensuring positive pet welfare outcomes now and far into the future.

Veterinarians get to see a pet's persona based on risk level calculated using feature engineering that leverages essential details such as pet characteristics, vet visit data, test results, and weight changes over time – along with further analytics and analysis.

Predictive analytics provides a valuable tool to help veterinarians get the most accurate information on pet prognosis.

With early detection being paramount in treating cancer among pets, these insights enable better follow-up care so that illnesses do not go unnoticed or untreated until it's too late. For instance, findings suggest that certain breeds prone to Anemia are more likely predisposed to Lymphoma.

Predictive analytics provides a valuable tool to help veterinarians get the most accurate information on pet prognosis. By integrating intelligent attribution techniques with traditional expertise, this technology can spot important health triggers and estimate how long pets may live if one treatment path is taken instead of another - giving you and your beloved 4-legged family member peace of mind for years to come!

From concept to reality in just three months, the revolutionary Dr. Pet app is tapping into medical technology for pet owners' peace of mind. Early trials have proven successful, and this remarkable team has plans for more - an on-the-go solution that can potentially monitor a furry friend's health from anywhere, with alerts when issues arise so illnesses don't get out of paw!



Enterprise technology projects often falter when internal users don't adopt the new tools. Combining design thinking with behavioral science provides a powerful framework for success.

DANCING TO YOUR ALGO-RHYTHM

Enterprise artificial intelligence (AI) investment is accelerating fast. For instance, Gartner predicts in its latest CIO and Technology Executive Survey that global revenue will reach \$62.5 billion in 2022, an increase of more than 21% from 2021. Enterprises are driving that growth, with 48% of CIOs saying they have already deployed AI and machine learning or plan to do so in the next 12 months.

However, ensuring the adoption of those new tools can be another matter. Gartner also points out that while organizations are keen to experiment with AI, many struggle to establish the technology as part of their standard operations. It lists reluctance to embrace AI, lack of trust in the technology and difficulties delivering business value from AI investments among the causes.

Behind those figures lies a fundamental reality: enterprise organizations are investing millions of dollars in developing AI business tools, but once they've deployed those tools, many are discovering that most of their people are not using them. And no tool can deliver value if people don't use it.

So, where are all those good intentions going astray? In most cases, the issue can be traced back to early assumptions about what users really need.

"People often assume they know their employees well, so when they're developing new AI tools they don't research internal users' needs as rigorously as they would for an external client," says Benis Kumar Moses, Principal Behavior Architect at Fractal.

"That assumption leads to early-stage mistakes which proliferate during development and are eventually built into the finished product. Poor adoption is the result. Without a full understanding of how the technology meets the needs of its users, enterprises are planning their AI projects to fail despite their good intentions."

Even when organizations realize there's a problem, the assumptions they made early on about users' needs often prevent them resolving the issues. Many companies assume that a better user interface, training program or awareness-raising exercise will get more people using their new AI tool – but those theories are usually wrong. Only rigorous research can reveal the root cause of poor adoption and the steps needed to resolve it. That means going right back to the project's discovery phase and engaging with stakeholders to get a deep understanding of their needs.

It can be a costly lesson for many enterprises to learn. But applying a few simple principles to AI development can help them drive internal adoption and maximize the value of their investment.

Resourcing deep, early-stage research is a must, but while this is common practice for external-facing AI projects, it's often overlooked when it comes developing tools for internal users. Typically, internal enterprise AI projects are developed by the IT, HR and administrative departments – none of which have the research team, design team or budget to fully understand user needs before they start building products. After all, if internal users are unhappy with the tools they're given to do their job, that will spoil the experience for their customers.

It's also crucial to think beyond the new tool's technical output. An organization that is focused entirely on developing an AI algorithm to improve customer segmentation, for example, can inadvertently blind itself to the real problem it needs to solve. Key questions about why the enterprise wants to build that tool can help to reframe the issues. If the salesforce isn't using the current segmentation tool, for instance, why is that happening? Perhaps they have their own way of segmenting customers and have no interest in using a segmentation tool at all. If that's the case, the segmentation algorithm isn't the



“That will avoid the need for top-down directives such as pushing people into training programs or introducing incentives to drive adoption. These strategies are often bolted on after deployment and they simply don’t work in the long term. Instead, look at the success of technology like Apple’s touchscreen devices: they don’t require a training manual or awareness raising exercises, because they deliver intuitive value for users.

Enterprise AI tools are here to power human decision-making in the enterprise, not try to replace it, and they should be just as simple and intuitive for users to adopt. Fundamentally, the process of design thinking and behavioral science is about looking through human eyes and putting aside any preconceptions from a business, technology or organizational perspective. Those perspectives are important, but they come later – it’s important to look at the issue through a human lens first.”

problem. Behavior change is the issue that needs to be addressed, and better segmentation is just one aspect of that. By reframing the problem in this way, the focus turns to understanding what matters to the salesforce, identifying their needs and helping them to improve the way they segment customers – and then translating that into actions including a better way of defining segmentation.

Ultimately, successful adoption of enterprise AI starts with putting the human being at the heart of the problem. After all, scientific evidence indicates that in the ‘hot’ state of decision-making, the choices people make are based on emotions. Rational factors come into play later, when the person wants to justify those decisions.

A traveling salesperson, for instance, lives a life of uncertainty because finishing a job or closing a deal all depends on their client’s response. They spend most of their day in the field, waiting outside clients’ offices with all their sales collateral in the boot of their car. While they wait, they may be worrying about how to close a deal in time for the quarterly bonus or how to juggle their work and childcare commitments. The technical output or business value of the new app they’ve been asked to use is the least of their priorities, but if the app helps them achieve that bonus and strike that work-life balance, they’ll pick it up.

Too many AI investments end up as ‘pretty shiny objects’ that don’t pay off. It’s critical to view any enterprise technology project through a human lens first.

Of course, the tool needs to create value for the business too. But to do that successfully, it’s crucial to understand the user’s context, emotions and motivations first. It’s a simple equation: if the tool makes users’ life easier, they will adopt it; if it doesn’t, they won’t.

“For the technology to deliver real value, the problem it’s intended to solve must be framed at the intersection of the organization’s need and the user’s need,” **says Francesca Passoni, Design Principal at Fractal.**



Deep, early-stage research is a must

Allocate resources for deep early-stage research into users’ needs.



View the project through a human lens:

Understand the emotional needs and context of the people who will use the tool

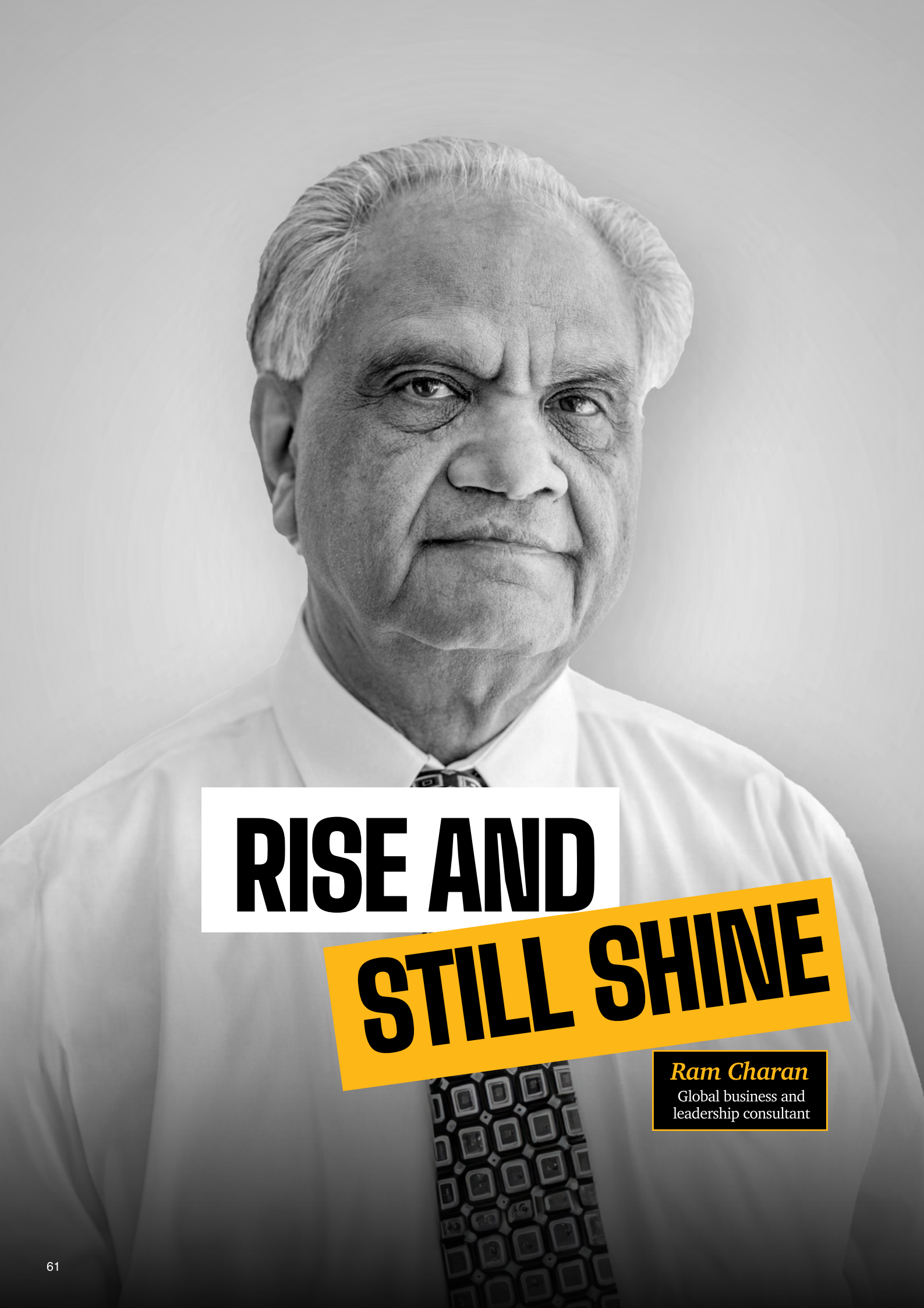
Think beyond technical output – consider the business impact you want from the technology

Focus development efforts at the point where business needs and users’ needs meet.



Follow the path of least resistance.

People will naturally adopt a tool that makes their lives easier – if it doesn’t, no amount of top-down edicts will force them to use it.

A black and white portrait of Dr. Ram Charan, an elderly man with white hair, wearing a white shirt and a patterned tie. He is looking directly at the camera with a serious expression.

RISE AND

STILL SHINE

Ram Charan

Global business and
leadership consultant

Described by Fortune magazine as “the most influential consultant alive,” Dr. Ram Charan is a celebrated thought leader and author, with over 40 years’ experience working with leading companies across the globe. We had the privilege of interviewing him to find out what businesses can do to stay ahead in these inflationary times.

Charan learned business basics while working in his family’s shoe shop in a small town in northern India. He earned an engineering degree in his home country, then did MBA and doctorate degrees from Harvard Business School, where he graduated with high distinction and was a Baker Scholar. He served on the faculties of Harvard Business School and Northwestern University before pursuing consulting full-time.

Having worked with companies including Toyota, Bank of America, Novartis, Fast Retailing (Uniqlo), and many more, Charan knows what it takes to run a business well, even in the most adverse of situations. Here he talks about the current period of high inflation and explains what businesses can do to thrive, even in the toughest of circumstances. Adversity is an opportunity to build the future.

What are the biggest challenges that inflation presents to businesses today?

First, I would say that psychology is the most important challenge because once people begin to believe that inflation is here for a period of time, they begin to take action to protect their cash flow. Therefore, the psychology of management teams and the psychology of consumers and regulators are central to prolonging inflation. It is the hardest to tame.

In the US, there’s now a lot of distrust of the Federal Reserve – the main regulator – because they got the inflation timing wrong. They missed the bend in the road and failed to implement a cohesive action plan. That mistrust has only grown now that the stock market is down 20%, and there is no sign of inflation abatement.

All this challenges businesses that must get to grips with the universal underlying principles of inflation – principles that are not theoretical but are common to most inflationary periods. By doing this, they will have the right mindset to not only get through the recession but come out stronger at the end of it.

Can you explain these key principles?

I believe there are five key principles that management should master:

Principle #1: Manage your cash

There are no ifs and no buts here. Cash is king. Don't manage for earnings per share or EPS, and don't manage for artificial revenue growth because this will mean you will measure in terms of inflationary dollars, which is misleading. Companies need to come to terms with this.

Principle #2: You'll need more cash to do the same volume of business

The same volume of business you have been doing will need more cash during times of inflation, so it's important you plan for that by either generating more money, borrowing it, or sharpening your business portfolio of products and customers, which might mean you become smaller.

Principle #3: Eliminate the cash traps in your end-to-end value chain

Going back to the principles of psychology, it's natural for managers to want to preserve cash in their company during times of inflation, so you may find they may pay later than usual or not at all. Keep a lookout for these cash traps in your entire end-to-end value chain, and make sure your accounts receivable department is on top. The same applies to hoarding inventories.

I firmly believe that, in these times, for the vast majority of businesses, pursuing digitalization is your only choice if you want to succeed.

**Principle #4: Don't be scared to raise your prices
Inflation means prices will go up right across the board.**

Import prices have gone through the roof, and wages are increasing by 12% annually in some sectors. At a time when 70% of your cost is your people, you need to prepare for your costs going upwards of 40% in the next three years. To recoup some of this, your prices must change now. It's difficult, but – even if a competitor slashes prices to gain market share, do not sacrifice your cash. Instead, find a way to differentiate – deliver a better product, better delivery, or better customer service, and you will regain your footing. Cash is more important than gaining market share by price cutting when your costs are increasing. Fear not the competitor unless it has better productivity or an unusual cash hoard.

Principle #5: Make better use of customer data

We live increasingly digital lives – in fact, almost 80% of the world's population now buy online. Every transaction we make – and every move we make online – creates data. So today's companies have access to an extraordinary amount of information. Learn to use it correctly, and you can achieve a significant competitive advantage.

Once people begin to believe that inflation will roll into recession or stagnation, they begin to take action before it is even a problem.



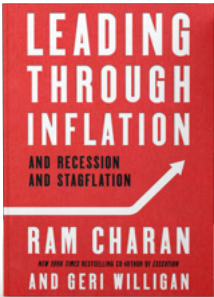
What advice would you offer firms at the beginning of their digitalization journey?

First, I want to reassure these businesses that digitalization doesn't have to be expensive, and any costs will undoubtedly be recouped from the benefits. I firmly believe that, in these times, for most businesses, pursuing digitalization is your only choice if you want to succeed. Now, it doesn't need to be scary – and you do not need to do it alone. Companies like Fractal are very well-equipped to help you on your journey and to uncomplicate the tools you can use to analyze customer data more effectively. So, if I had one real bit of advice, it would be to seek an expert in this area who can guide you forward. Great companies are treating such outsourcing companies as long-term partners.

How can companies innovate to stay ahead in an unknown future?

Inculcate the belief that the customer wants continuous innovation and pursue it earnestly. It's never been more imperative. This means truly understanding your customers' needs and tracking how consumer behavior changes. Part of getting this right goes back to my point about implementing technology and analyzing data. Still, it's also essential to get out there and watch your customers in action. Our most innovative companies today travel all over the world to find out what their customers want – and once you know that, you are far better placed to succeed.

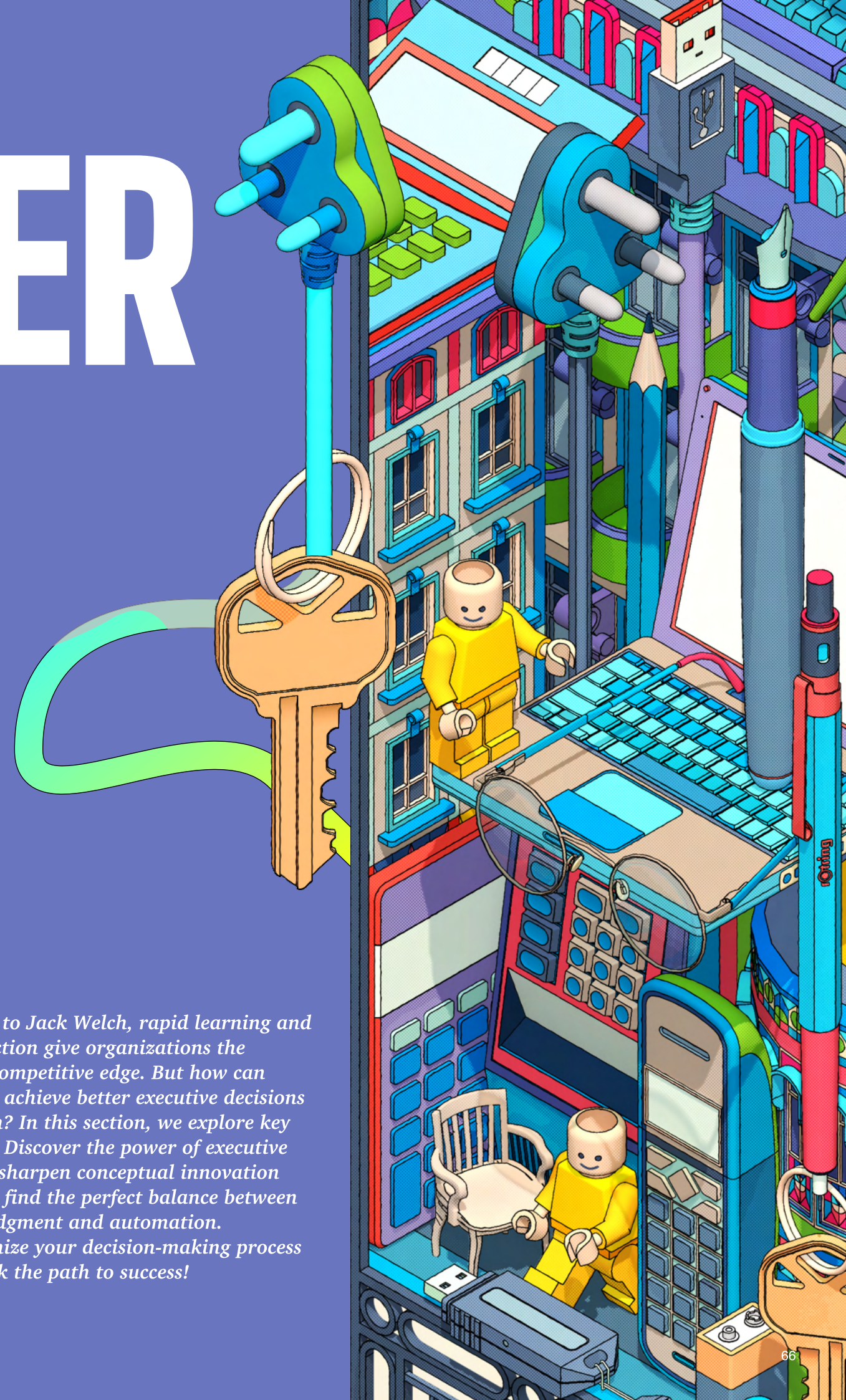
In tough times, the tough get going. In inflationary times, business leaders need untapped skills in a zero-interest-rate environment. What they do now will determine whether their company will prosper or disappear.



Ram Charan's latest book 'Leading Through Inflation' is available now. Scan the code and grab your copy today.

DRIVE BETTER EXECUTIVE DECISIONS

According to Jack Welch, rapid learning and decisive action give organizations the ultimate competitive edge. But how can businesses achieve better executive decisions for growth? In this section, we explore key strategies. Discover the power of executive coaching, sharpen conceptual innovation skills, and find the perfect balance between human judgment and automation. Revolutionize your decision-making process and unlock the path to success!



A group of business professionals are gathered around a wooden conference table in a modern office setting. Two men stand at the head of the table, one holding a folder, while others are seated with laptops. The entire image is overlaid with a semi-transparent red filter. Large, bold, white text is positioned on the left side, and a quote is on the right.

THE SEE SUITE

Digital transformation is a journey, not a destination. Fractal brings clarity to action, to help drive successful change and the vision to guide executive management to create the right strategies

Over the past few years, we've seen exactly how critical digital transformation and artificial intelligence (AI) are for competitive business. When the pandemic hit, companies like Starbucks, that had invested in digital transformation five years earlier, could immediately jump to a no-contact, no-waiting sales model that ensured business continuity alongside the safety of workers and customers. Others, including McDonald's and Burger King, moved quickly to emulate that success with similar strategies. However, without the digital maturity of Starbucks, they are still playing catch-up.

So, what prompted Starbucks to embark on digital transformation so early on? It perhaps didn't foresee a pandemic, but it did see disruption, and a need to disrupt its markets, as the rise in online shopping brought changes in consumer behavior. Its transformation journey has been characterized by customer-centric innovation and preparation to handle rapid changes affecting its industry.

Digital transformation is a journey, not a destination, and boards may need to re-examine goals and directions along the way.

Today, boards of directors in every industry and geography face a similar challenge: envisioning and inspiring their management on how digital transformation can add value for the business and its stakeholders while protecting the organization from risks.

"The board is the one set of people who are expected to lead the company forward or to provoke senior management and help them gauge the company's position and progress in digital transformation," said Pranay Agrawal, Co-founder and Chief executive officer of Fractal. **"However, through our conversations with board members, we have found that they often don't feel well equipped to do that."**

Since boards are not responsible for planning and execution, they face a unique, two-pronged challenge.

"Successful leadership requires thorough preparation, high standards, and conviction," said Deb Henretta, an Executive advisor on digital transformation. **"To maximize their impact on management, boards need to be thoughtful and considered in their questions and contributions and to listen as much as they contribute."**

"When it comes to directing digital transformation, boards often feel they lack two key elements they need to deliver that leadership. First, they require a detailed understanding of transformation and its relevance to the company and industry they serve. In addition, they need an effective way to communicate that understanding that stimulates the company's management to develop effective strategies. To do that, they must know exactly what they can do – which ideas to suggest, which questions to ask and where there are real-world examples to explore – to provoke productive thought among managers about the areas they need to work on. A board that successfully communicates an informed transformation vision in this way is helping the company to make that journey."

There is no shortage of programs aimed at helping leaders to understand digital transformation. However, they often fall short of the board directors' unique needs. Many require a time commitment that directors struggle to afford – courses offered by the university and academic institutions require in-person attendance for anything from one day to sixteen days, while even self-paced online courses can require several hours per week over multiple weeks. And for those that can attend, the available programs often don't cover everything that directors need to know.



“Many of the available courses lack the breadth and depth that boards of directors are looking for,” said Sagar Shah, Client partner, Strategic Center at Fractal. “Some are very academic, focusing on the principles and tenets of digital transformation. Others use case studies to illustrate the concepts of digital transformation. Still, they don’t explain how it was done, how long it took, what type of investment was involved, or exactly which programs brought the company’s success.”

So, what do directors want from a digital transformation education program?

Answering, as well as asking challenging questions, is a must. For example, how can digital help a company disrupt its industry, engage meaningfully with customers, or drive social good? How can it help a major bank to generate more leads or a government organization engage with more than a billion citizens in multiple languages? And how might a Fortune 500 company harness AI to increase earnings by more than \$500 million through better revenue and supply chain management?

Today, boards of directors in every industry and geography face a similar challenge: to envision and inspire their management on how digital transformation can add value for the business and its stakeholders, while protecting the organization from risks

Ultimately, boards need the tools at their disposal to inspire change that creates value.

“One of the greatest challenges for leaders in any industry is engaging their people to drive change rather than be run over by it,” said Mark C. Thompson, a world-leading CEO coach. “Transformation isn’t just about applying technology. It’s about driving change, growth, and a culture of value creation.”

64% of boards have made efforts to significantly alter the enterprise economic structure to a more digital economic architecture.

Source: Gartner, 2022

Nearly half of consumers believe the organization providing or using the AI should be held accountable if AI goes wrong.

Source: Gartner

94% of directors said they felt they needed more training on new technology and governance best practices, just 58% reported receiving that training.

Source: Harvard Business Review

“To provide actionable ideas and insight that provoke a sense of urgency, along with the checks and balances to protect reputation and performance, boards must be able to connect their transformation vision with a spectrum of elements. These include company values and culture, market trends, analyst and customer sentiment, operational knowledge of how other organizations have achieved similar goals, and everything in between. The breadth and depth of knowledge needed might seem overwhelming. Still, a board program focused on helping the company explore its unique challenges should be able to deliver the laser-targeted insights and resources within a day or, for individual issues, hours.”



Pranay Agrawal
Co-founder & Chief Executive Officer, Fractal



Deb Henretta
Executive advisor on Digital Transformation



Mark C. Thompson
World-leading CEO coach



Sagar Shah
Client Partner, Strategic Center, Fractal

Fractal’s understanding of the operational insight needed to explore those questions comes from more than 20 years of working with hundreds of Fortune 500 companies to enable such transformations. This deep operational experience, coupled with a core belief in the value of sharing knowledge and learning from others, has created a flexible program that can be configured to board directors’ priorities and time availability. They may want a full-day program covering a range of tough questions in depth, for instance, or a shorter meeting where board members come together to discuss complex topics. Where C-level management grapples with a single hot topic – such as sustainability or ethics – a 90-minute roundtable is often the perfect format.

“Sustainability and ethics are two prime topics that boards are struggling with today because of the changing nature of laws and regulations in the U.S., UK, Europe, China, and India,” said Shah. “We can also address other topics that are top of mind with directors, such as cyber risk and security, cyber insurance, and governance models across the organization. Metaverse is also gaining interest – for example, if companies follow PNG’s example and hire a chief Metaverse officer reporting to the CEO, those CEOs may want to attend a roundtable where they can learn about the subject.”

This ability to respond to new challenges is crucial. Digital transformation is a journey, not a destination, and boards may need to re-examine goals and directions along the way. A program focusing on directors’ changing requirements may prove essential to deliver long-term value as new challenges and opportunities emerge.

“Our board digital program is one of the many ways we create value for our clients across the life cycle of their transformation journey,” said Pranay. “We build long-term relationships with our clients and help them achieve complex goals using AI, engineering and design. Bringing that deep expertise to help their boards become more effective is one of the major ways we can create value for them.”



WHEN YOU REACH THE TOP, DON'T STOP

Dr. Marshall Goldsmith
Executive coach

The number one reason Marshall Goldsmith's clients are so successful is that they are always looking to improve

Widely recognized as one of the top business thinkers in the world, Dr. Marshall Goldsmith is an expert on leadership and coaching for behavioral change. We spoke with him to learn more about his approach to coaching leaders and for some practical tips for success.

Dr. Marshall Goldsmith is the only two-time winner of the Thinkers50 Leadership Award. He has been ranked as America's number-one executive coach by Inc. magazine and was the inaugural winner of the Global Gurus Corps d'Elite Lifetime Achievement Award. He has written or edited 48 books, which have sold over three million copies, including three *New York Times* and *Wall Street Journal* bestsellers. In his most recent book, *The Earned Life*, Goldsmith emphasizes the importance of living our own lives rather than someone else's version.

Your clients are successful people. Why do they feel the need to have a coach?

I'll answer that with a question: Why do the top ten tennis players in the world need a coach? The answer is the same: to get better. The number one reason why people like my clients are such amazingly successful people is that they are always looking to improve. To me, that's nothing to be ashamed of. That's something to be proud of.

What are some of the classic problems of successful people?

That's an easy one to answer. The biggest issue is that they want to win too much. If it's important, they want to win. If it's meaningful, they want to win. If it's critical, they want to win. But if it's trivial, they still want to win, even if it's not worth it. Winners love winning, and all my clients are winners.

A second problem that successful people are guilty of is adding too much value. Let me explain what I mean with an example. An employee goes to the CEO with an idea. The CEO thinks it's a great idea, but rather than simply going with it, they suggest a slight tweak.

The problem is that while the quality of the idea may improve by, say, 5% because of the change, the employee's enthusiasm for it may reduce by 50% because it's now the boss's idea. They are now just following his orders.

I've worked through this with Jean-Pierre Garnier, the former CEO of GlaxoSmithKline.

He said, "I've learned that my suggestions become orders. So now, before suggesting, I ask myself, 'Is it worth it?'. Sometimes it is. But perhaps 50% of the time, it isn't. It's a valuable lesson."

It's so important never to become attached to results. That's because, one, you don't control the results all the time, and two, what happens after you achieve the results?





How does your coaching process work?

I've developed something called stakeholder-centered coaching. This involves me establishing who my clients' key stakeholders are. It might be board members, it could be peers, or it could be their management. We then interviewed the key stakeholders to get their opinion on what my clients are doing well and what could be improved. We find out what situations bring out the best in the client and what brings out the worst. It helps us build a comprehensive profile, which we can use to pick out the most important behaviors to work on. We then implement change and follow through to measure growth in leadership effectiveness.

Please share a practical tool that our readers can immediately put to work.

Let me share something that takes almost no time at all. It's called the daily question process. I want readers to create a spreadsheet with a series of six questions that they should answer in relation to what's most important in their life. It could be friends, family, health, colleagues, work, or anything else. Here are some example questions:

1. Did I do my best to set clear goals?
2. Did I make progress toward achieving the goals that I set?
3. Did I do my best to create meaning in life?
4. Did I do my best to be happy?
5. Did I do my best to build positive relationships?
6. Did I do my best to be fully engaged?

Every question must be answered with a yes or no, recorded as a one or a zero. Every day you fill it out, and at the end of the week, you create a report card. It's not easy. No one likes looking in the mirror. I do this myself, and I amaze myself with my ability to screw something up daily. But it's important to face the reality of your existence. Do this for a couple of weeks and you'll start to see real results.

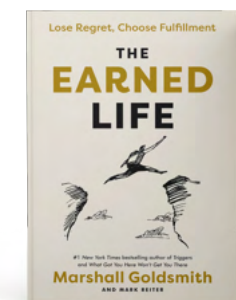
What are some of the key learning points from *The Earned Life*?

I talk a lot about achievements in the book. The people reading this, and most of the people I coach, get stuck in achievement. They become addicted to it. And what happens when we are addicted to achievement? We forget why we're doing what we're doing in the first place, and we forget to enjoy the process of life.

It's so important never to become attached to results. That's because, one, you don't control the results all the time, and two, what happens after you achieve the results?

One of my favorite chapters in my book is *Your life is about the marshmallow test*. It explains the famous Stanford experiment, the marshmallow test, where a professor offers a child a single marshmallow now, or several if they wait. The idea is that delayed gratification is good and that those children that chose to wait tended to be more successful.

But I have a problem with this research. Delayed gratification is all well and good, but there's a line. You don't want to be an old man sitting in a room waiting to die and surrounded by thousands of marshmallows. Sometimes you need to eat the marshmallow. You need to enjoy life.



Dr. Marshall's book, '**The Earned Life**,' is officially the fourth *New York Times* bestseller! It is also an Amazon Editor's Choice Best Book of 2022. Order a copy if you have not read it yet.



CHANGING HOW WE CHANGE

Luke Williams
Professor of NYU Stern
School of Business

New ideas are at the very heart of innovation. But many of us are poor at changing our ideas, according to Luke Williams, a NYU Stern School of Business professor and founder of NYU Innovation Labs

Having addressed the World Innovation Forum and the United Nations General Assembly and lectured in 21 countries, Luke Williams is a sought-after speaker with a passion for innovation. He holds over 30 U.S. patents and has designed over 100 products in industries from transportation, finance, and healthcare to consumer electronics. He is also the bestselling author of *Disrupt: Think the Unthinkable to Spark Transformation in Your Business*.

You say we could improve at changing our ideas. What makes you say so?

For most of human history, we didn't have to keep up with new ideas. That's because, for a long time, ideas lived longer than people. For example, if you lived in the 12th century, your basic life was no different from someone who lived in the 11th century. Progress was achingly slow. But then, in the 18th century, we experienced the sudden change of the industrial revolution.

By 1900, it took around 30 years for a step big enough to make the world uncomfortably different. Now, with the internet and artificial intelligence (AI), it's five to seven years. We're in this unique position where people live longer than ideas, meaning they must change the core ideas behind every decision and action they take in their business or industry.

Of course, we've been discussing this increasing change pace since the 1970s. However, I argue that we have limited tools for changing ideas. Yet the quality of our future life will be determined by the quality of our ideas. I believe the 21st-century leadership challenge is conceptual, not technological.

Organizations have different opinions about what kind of leadership behaviors will work best for them. Most organizations have no idea their *conceptual innovation* skills will govern their future success.

What do you mean by conceptual innovation?

Conceptual innovation refers to our ability to continually reframe our understanding of the world and change our ideas. The effort to change ideas is worthwhile because ideas are the starting point of everything else in history. They shape the world we inhabit.

I hesitate to use the word 'conceptual' because, in many people's minds, it means talking or thinking things to death and not getting enough done. But I always remind my clients and students that getting stuff done usually means doing so within the conceptual boundaries of what you believe is achievable and acceptable.

Assumptions of what will or won't, what can or cannot, and what should or should not be changed are all woven into your—and your employees'—ideas. And those ideas are what determine the freedom of your thinking and your organization's future.

In my experience, most of these ideas are incremental. People generally think about what they are thinking about to support what they have already been thinking about. They claim that ideas are the easy part; the hard part is implementation. So, they spend time arguing over implementation details and convince themselves that they are making decisions when the truth is that they are neglecting important conceptual matters because those matters do not lend themselves to concrete actions.

The problem is that if you are not looking in the right direction, no amount of "taking action" will help you. This is the biggest challenge for businesses today: we all like getting stuff done but are heading in the wrong direction most of the time.

Why are conceptual innovation skills so crucial in business today?

Without conceptual innovation, our ideas cannot develop fast enough to cope with a world filled with VUCA – volatility, uncertainty, complexity, and ambiguity.

We are obsessed with data and technology, but they are no longer a bottleneck. The challenge is how to get value from data and technology.

We must remember that a large pile of bricks does not build a house. The mind thinks with ideas, not with information. So, better ideas are the new bottleneck. And that depends less on the ideas themselves and more on the conceptual innovation skills of the people judging and developing them.

If you believe leaders who evangelize the need to disrupt their existing business are soliciting and eager to accept better ideas, you are making a big mistake. Whether they are aware of it or not, most executives, managers, entrepreneurs, and venture capitalists are biased toward evolution rather than revolution.



One of the greatest challenges for leaders is to support and invest in ideas they intuitively think will not succeed

How can business leaders hone their conceptual innovation skills?

First, it is essential to realize that conceptual innovation skills are not intuitive. It is counter-intuitive to search for alternative ways of thinking about the business when it is at the peak of its success. It is counter-intuitive to experiment slowly with long-term solutions when you need to address short-term problems.

We educate leaders to be reasonable, rational decision-makers. Then we expect them to be irrational, unreasonable “disruptors” hot on the trail of breakthrough innovations.

It comes down to the fact that a leader’s ability to challenge assumptions is more important than the ability to reinforce them. But suppose they have been trained to recognize common problems and respond only with common solutions. In that case, the counter-intuitive mindset I am talking about never develops. So, the first critical thing for business leaders to recognize is their role in helping people, including themselves, get past their thinking habits and biases.

My second piece of advice relates to the first: do not trust your gut. Our faith in our intuition makes us prone to error—especially when we are trying to predict the future from the context of the past or the present.

You know the saying, “You have to see it to believe it.” The opposite is true: “We see what we believe.” The more familiar our frame of reference, the more confident we are in using it. And so, the cycle repeats. New ideas will always be dismissed if we judge them through the context of old ideas—at least until signs of the need for change are so obvious that we cannot ignore them any longer. One of the greatest challenges for leaders is to support and invest in ideas they intuitively think will not succeed.

What other skills are important to spark transformation in business?

I often use a cooking metaphor. Executives use the same old recipes over and over again to repeat their success and avoid mistakes, uncertainty, and the wastefulness of trial and error. New ingredients (potentially disruptive new technologies and insights into consumer behavior) often go unused because they do not fit existing products, services, and business models.

It is not easy to break free of the “we’ve-always- done-it-this-way” approach. But if you truly want to find new recipes, that’s what you will have to do because the problems with innovation often have less to do with the ingredients themselves than the way we put them together.

Simply rethinking or rearranging your ingredients often leads to profound new recipes and shifts in perspective.

Of course, many new recipes will fail. Even after rearranging your ingredients and taking the time and effort to consider each new iteration, you might find that they just aren’t as useful as the traditional recipe you’d like to replace. But focusing too much on this small downside could make you miss a big upside. Constantly expecting success will invariably make your company risk-averse and quickly eliminate many interesting options.

Regardless of the outcome, you need your people ready, willing, and eager to rearrange ingredients to find better recipes continually. If you can capture and share what you learn throughout your organization, you’ll be helping your company increase the odds that the next idea you pursue will hit the target.

What advice do you offer business leaders looking to deliver real change?

Conceptual innovation skills are your ultimate resource. Understand that an idea is itself an item of investment. Every idea gives an organization another way of thinking about its business, another choice. Think of ideas as currency—a source of innovation capital. The more ideas you have in your portfolio, the more capital you have available to “purchase” other ideas.

So instead of grasping at Option A as the single, right direction, innovation capital positions your business to do Option A, B, C, or D—or any combination of those choices—depending on the circumstances. The greater the uncertainty around those circumstances, the more options you’ll need in the future.

Your chance of creating new wealth is directly proportional to the innovation capital you have available. Conceptual innovation is about putting your business in situations in which you have more new ideas to spend than your competition does.

As you build innovation capital, releasing the energy that’s been locked up doing things the way you always have and applying it to new ways of thinking, you’ll eventually start seeing results. Experimenting with more options will ultimately force your business to think more clearly about trade-offs and better understand your priorities.

A black and white portrait of Professor Gerd Gigerenzer, an older man with a mustache, wearing a suit and tie. The portrait is the central focus of the page, with text blocks overlaid on it.

HUMAN DECISION MAKING IN THE TIME OF GROWING AUTOMATION

Professor Gerd Gigerenzer

Renowned psychologist

Renowned psychologist Gerd Gigerenzer shares insights from his new book into the continuing importance of human decision-making in a time of growing automation

Photo credit: Arne Sattler

Why is it that you believe that the human mind is still able to perform better than artificial intelligence in certain situations?

It's very important to distinguish between stable situations, where tomorrow is likely to be the same as today and the day before, and unstable ones, which are ill-defined and contain uncertainty. The difference between these two situations is essential for understanding what AI can do for us. It finds success in stable situations, including in games like chess and Go, and industry applications where AI can carry out routines without much human thinking required.

Situations where uncertainty is involved are a very different proposition. There's no evidence that deep learning and complex models can do any better in such situations than simple rules which human intelligence relies on, otherwise known as heuristics. In my studies, I've found that the answers delivered by simple heuristics can be better than those provided by highly complex models.

What are the advantages of a decision-making process based on heuristics rather than a purely data-driven, 'optimizing' approach?

Firstly, in an uncertain situation, the concept of an optimizing solution is a total illusion. If you try to optimize, you're just hoping that the future is exactly like the past, which is unlikely. Highly complex models are sensitive to small systematic changes and can easily fall apart. Under uncertainty, you need a robust approach based on smart heuristics rather than optimizing.

An example is the case of Harry Markowitz. He was awarded the Nobel Memorial Prize in Economic Sciences for his work on mean-variance optimization, which concerns solving the question of how to invest a certain sum into assets. However, when he invested his own money for his retirement, he did not use his Nobel Prize-winning optimization model. Instead, he used a simple heuristic known as 1/N, which allocates funds equally across all assets under consideration. In contrast, his highly parameterized model needs to estimate all future means, variances, and covariances from past data.

The more you have to estimate, the more estimation error you can expect.

1/N, however, is a heuristic. It doesn't estimate because it uses zero data. While it may have a bias, you get rid of estimation errors, and studies showed that 1/N could make more money than optimization in the real world. Less can be more.

Could you share another example of a situation where heuristics worked better than a purely data-driven AI?

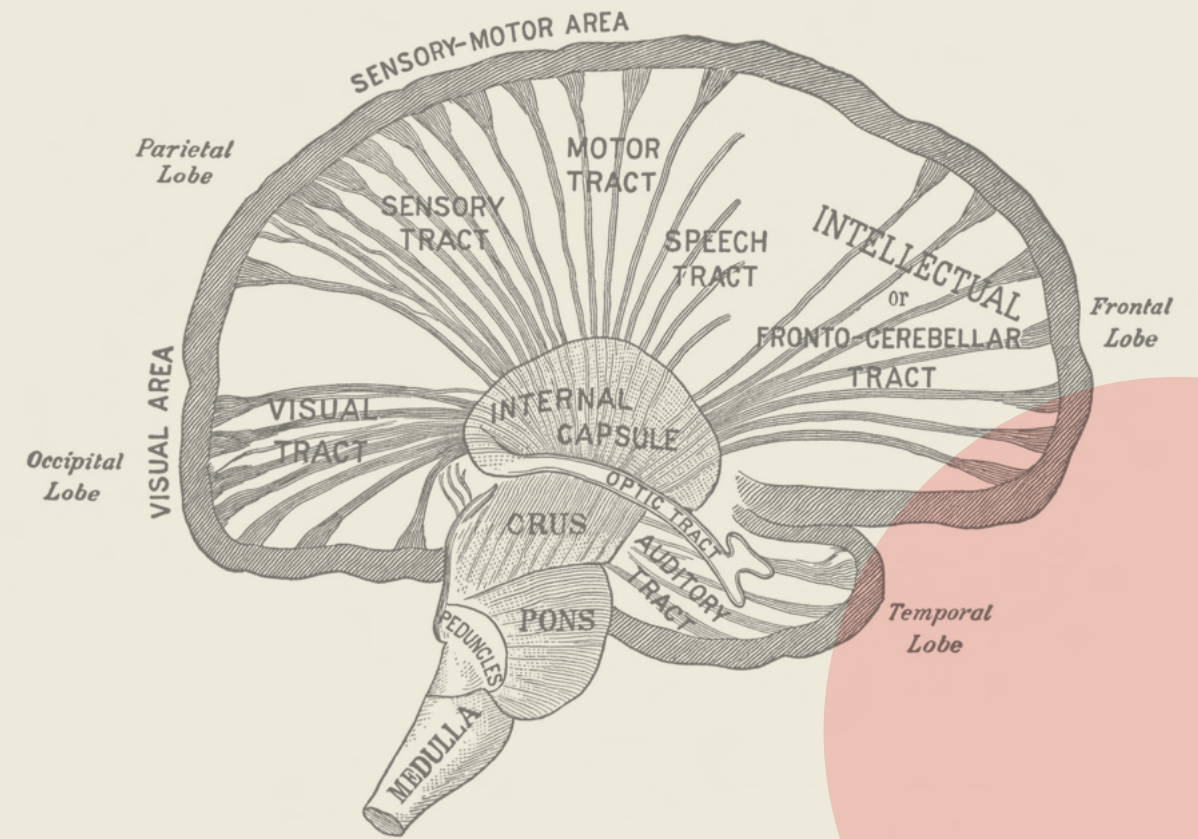
One such instance is Google's attempt to predict the spread of the flu between 2007 and 2015. The assumption was that people with symptoms would enter search terms related to their illness. So it would be possible to find out where the flu is spreading based on the frequency of those searches. Google's engineers analyzed some 50 million search terms, tested 450 million different algorithms and developed a secret algorithm that used 45 terms (also kept secret).

However, this approach failed. When there was an outbreak of swine flu in the summer of 2009, the algorithm could not recognize it because historical data had taught it that flu was high in the winter and low in the summer. In response, the engineers continued to make the algorithm more complex, which did not improve results.

In contrast, what does the human brain do if it has to predict something highly volatile? It doesn't use big data. Instead, it only uses the most recent pieces of information, which are the most reliable ones. We, therefore, used a heuristic in which we only took the most recent data point available for flu-related doctor visits and nothing else and used it to predict next week's visits. This simple heuristic predicted the flu much better than Google's algorithm over the eight years Google made predictions. One data point can be better than big data.

This result shows that looking at how human intelligence deals with volatile situations can be useful and not to think that ignoring some information is always bad.

STAY SMART



Suppose a heuristic approach is more successful in many real-world situations; how can we take those lessons to use AI more effectively?

There are two ways, the first of which is very simple. When you get an offer for an AI application, evaluate whether it would be in a stable or uncertain situation. If it's an uncertain situation, keep away from current AI applications and solve these problems yourself.

Then there's also the question of how we can use psychology to make machines smart. Psychological AI is the original vision of AI proposed by Herbert Simon and Alan Newell. Today, many machine learning researchers do not even consider how the brain solves problems. Yet deep learning is not the route to true intelligence because more computing power makes algorithms faster but not smarter – it does not generate intuition and common sense. For instance, children need to see only a single or a few U.S. school buses to recognize all others, while deep artificial networks need thousands of pictures and can still be fooled into believing that a picture that consists only of horizontal yellow stripes also represents a school bus. Deep learning is fundamentally different from human intelligence.

The concept of an optimizing solution is a total illusion. If you try to optimize, you're just hoping that the future is exactly like the past

The future lies in using insights from the human brain to integrate present machine learning with psychology AI. We need to get causal thinking, intuitive psychology, and intuitive physics into AI. That's the way forward.

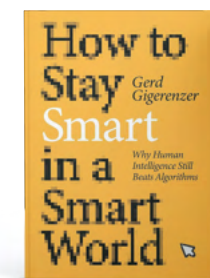
What do you hope readers of your new book will take from it?

AI has been sold as a super-intelligent assistant that tells us what we should do, encouraging us to lean back and dutifully follow its recommendations. That's the wrong idea. To realize the possibilities of smart technology, we need to get smarter and understand what it can and can't do.

For instance, Elon Musk tells us every year that we will have self-driving cars (Level 5) the following year. Level 5 means a car that is able to drive safely under the full range of driving conditions without any human backup. Despite the ongoing marketing hype, no such car exists. Given the unpredictability of human drivers and the difficulty for AI in dealing with uncertainty, I predict that we will not have self-driving cars of this kind.

We will likely get something much more interesting: Level 4 automation, with cars that can drive without human intervention in restricted areas. That's a technology already existing and a vision we can apply more widely. Level 4 is interesting because it will change our environment. It requires a stable environment and humans that are more predictable if we are to profit from the limited abilities of AI. And that may eventually mean that we humans will no longer be allowed to drive.

AI is not just a technology that assists us in making our lives more convenient. It changes us, as many technologies have done before. We must adapt to take advantage of it and, at the same time, stay in charge. That's what I'd like readers to take from the book.



Read more from Professor Gerd Gigerenzer's new book **'How to Stay Smart in a Smart World: Why Human Intelligence Still Beats Algorithms,'** available at leading booksellers. Grab your copy with this QR code:

THE HEART OF FRACTAL'S BILLION-DOLLAR FOCUS – CLIENT-CENTRICITY

Over the last 23 years, Fractal has established itself as a mainstay in the AI space, providing Fortune 500 companies across the globe with solutions that deliver billions of dollars of value. The secret to this success? An unwavering focus on the client.

Growing up in 1980s India, I never imagined myself as an entrepreneur. My middle-class upbringing and my father's belief that 'an honest businessman is an oxymoron' led me to assume I would work for a large corporation after completing my studies.

But life had other plans. Enrolling in a business ethics course during my MBA changed everything. Guest speakers, including Infosys co-founder Narayana Murthy, opened my eyes to the possibilities. Infosys had recently gone public, was already generating \$50 million in revenue, and was known for its high standard of ethics.

Listening to Murthy, I realized that India of the late 90s differed greatly from my upbringing. It became clear that being an honest businessman was not impossible.

At the same time, I saw friends venturing into various businesses and raising capital. Venture capital providers emerged, further dispelling my belief that large sums of personal capital were a prerequisite to starting a business. The entrepreneurial spirit and financial support I saw fuelled my ambition.

By 2000, I was determined to embark on my entrepreneurial journey. Alongside classmates from business school, we took our first steps. We made mistakes, turned down funding, and had a failed dotcom venture.

But we learned from those experiences. We adapted, persevered, and refined our strategies. Each obstacle made us stronger and more attuned to the business landscape.

It was at this intersection of math and psychology that we found our sweet spot. We decided to utilize these disciplines to delve into consumer behavior, enabling companies to make more informed decisions with a consumer-centric approach.

After six months, we embarked on a journey of meaning that led us to a significant realization. While I had always been drawn to mathematics, I had also developed a passion for understanding human behavior through psychology.

Our initial focus was building models for banks to predict credit card defaults. Soon, we expanded our scope and started collaborating with retailers and consumer goods companies, providing data analysis and insights into consumer behavior.

During the challenging times of the 2001 recession, we truly understood the power of data. As people tightened their belts and became more sensitive to promotions, we realized how valuable our data-driven approach could be. We not only predicted consumer behavior but also had the potential to shape it.

In addition to our innovative ideas, we were fortunate to attract exceptional talent. Although a startup, we had a clear vision of the kind of individuals we wanted to bring on board. This clarity played a vital role in assembling a team of brilliant minds. Our ambitious and exciting goals attracted smart professionals eager to contribute to our mission.

However, our journey was not without its challenges. Our egos sometimes got the best of us. Our commitment to our clients sets us apart. We were proud of our excellent work, and "client centricity" became a mantra adorning our walls. Therefore, it was a shock when a renowned business coach pointed out that our business lacked client-friendliness. It was humbling, forcing me to re-evaluate our approach and embrace constructive feedback.

Shrikant Gupta, the coach who enlightened me, played a pivotal role in our transformation. After a few sessions with him, he wanted to observe our company's operations for a few days. His insights highlighted a critical aspect:



We were craft-centric, obsessing over analytics and its potential to revolutionize businesses. However, being craft-centric didn't automatically make us client-centric.

We must question our dedication to our client's success and confront our self-obsession.

This realization became a turning point for us. We recognized the need for change and made a bold decision. We took the courageous step of not going after new deals for that year. Instead, we focused on serving our existing clients better, becoming problem-solvers committed to their success. This shift helped us understand how to put our existing clients in the center, propelling our business to new heights.

Another significant change we implemented was adopting the Net Promoter Score (NPS) as a metric to gauge our progress. We believed this indicator reflected our growth more accurately than revenue or profits.

Our NPS quickly climbed to 30, then 50, and eventually surpassed 60. In the past couple of years, our NPS has consistently remained at 70 or higher. This remarkable growth speaks volumes about how far we have come.

Through introspection, guidance, and a genuine commitment to our clients, we have undergone a remarkable transformation. Our focus on serving clients and embracing their success as our own has driven our progress and cultivated long-lasting relationships.

Today, I take immense pride in stating that we have become truly client-centric. To us, this means measuring our success by the success of our clients. It entails understanding their needs and desires and then delivering solutions that align with them rather than simply selling what we have.

Being client-centric also entails investing and innovating on behalf of our clients. Amazon CEO Jeff Bezos once highlighted that customers are perpetually dissatisfied, and it is our duty to listen attentively to their feedback to improve and meet their evolving expectations.

We strive to deeply understand our clients' requirements and build solutions that precisely address those needs.

As a result, we allocate approximately 12.5% of our revenues to research and development, anticipating what our clients will need in the future.

This approach sets us apart in two significant ways. Firstly, we have shifted our perspective on the market.

Our peers are no longer seen as competitors but as collaborators. By working alongside industry giants, we create a collaborative ecosystem that ultimately brings exceptional value to our clients. Our commitment to driving client success has been instrumental in our remarkable growth.

With a solid foundation in place, we now focus on the future. The current advancements in artificial intelligence (AI) are fascinating and indicate what lies ahead. We are looking at a future where every company needs to adopt AI.

At Fractal, we are uniquely positioned to make this future a reality. We recognize that successfully implementing AI within large, successful organizations is a complex process beyond what most people realize.

We firmly believe in three crucial equations that enterprises must adapt and align to drive decisions at scale. AI can deliver remarkable results when these equations are correctly understood and applied. Conversely, failure to grasp these equations can lead to catastrophic consequences.

What drives results @ scale?

$R = AI * E2 * D2$

The first equation emphasizes that the outcomes of AI systems are directly proportional to smart algorithms but even more so to exceptional engineering and thoughtful design.

Achieving outstanding AI problem-solving requires adopting a user-centric decision-backward approach rather than a technology-centric data-forward approach.

To illustrate this equation, let me share a personal example. In 2015, as I reflected on my life's purpose, my father's untimely passing due to a misdiagnosed pneumonia condition when I was 24 still haunted me.

Results @ Scale

$R = AI * E2 * D2$

This fuelled my desire to create an impact and help others facing similar challenges. Qure.ai came out of this time. Qure.ai is a healthcare imaging AI startup empowering radiologists and doctors to make better diagnostic decisions.

At Qure.ai, we developed an AI system that analyses X-ray images and generates reports for up to 30 abnormalities. Initially intended as pre-reads for doctors, we faced resistance from those hesitant to rely solely on an AI algorithm.

Our breakthrough came when we applied the system to detecting tuberculosis, a disease with significant mortality rates in emerging countries. Unlike traditional programs that involved slow mobile screening vans and manual X-ray screenings, our technology allowed patients to be diagnosed within minutes, receiving life-saving treatment immediately.

This example exemplifies how our approach combines AI, engineering, and design, creating a recipe for scalable problem-solving. Our AI algorithms match or surpass human performance in various cognitive tasks. Exceptional engineering ensures seamless data pipeline connectivity and real-time automated decisions. And through design thinking, we identify and address problems by deeply understanding human behavior.

We can deliver transformative solutions that address complex challenges by integrating these three crucial elements—smart algorithms, exceptional engineering, and thoughtful design.

Reducing error
 $1/e = d * c * t$

The second equation puts a lens on reducing error by bringing in more data, higher computational power, and better technique. Let's illustrate this with an example.

We can deliver transformative solutions that address complex challenges by integrating these three crucial elements—smart algorithms, exceptional engineering, and thoughtful design.

In October 2011, Apple introduced Siri, its virtual assistant. However, at that time, Siri's performance was far from satisfactory. Users reported significant issues with its ability to comprehend accents, understand questions, and accurately interpret user intent. The error rates were alarmingly high.

But over the following four years, everything changed. Adoption of Siri soared, and error rates plummeted. The key to this remarkable reduction in error lay in the combination of several factors. First, more data became available, allowing Siri to learn from a broader range of inputs. Second, computing power increased, enabling faster and more complex calculations. Lastly, there were advancements in the techniques employed to train and refine Siri's algorithms.

Reducing Error

$$1/E = D * C * T$$

Organizational Effectiveness

$$OE = T * C * G$$

The confluence of these factors led to a substantial improvement in Siri's performance. At the organizational level, to reduce error rates, there must be a culture where mistakes are celebrated. In the world of AI, one can learn only when there is an error.

Organizational effectiveness
 $OE = T * C * G$

The final equation we adhere to defines the effectiveness of organizations utilizing AI as a function of **talent, culture, and governance**. Remarkable AI companies understand that exceptional talent yields significantly higher productivity than average talent. This phenomenon is observed in professional sports, where top players earn five to seven times more than their counterparts. In the fast-paced AI landscape, where knowledge quickly becomes outdated, top talent capable of adapting and embracing new methods and techniques can outperform their peers by a wide margin.

Moreover, it is crucial to acknowledge the immense power of great AI. Ensuring its safety, human-centeredness, and ethical implementation drives organizational effectiveness. Organizations that successfully combine talent, culture, and governance not only achieve outstanding AI success within their walls but also contribute to positive advancements on a global scale.

At the heart of this equation lies the understanding that investing in exceptional talent yields exponential returns. Organizations can drive innovation, push boundaries, and consistently outperform their competition by attracting and nurturing top talent. Recognizing the value of great talent is key to staying ahead in the rapidly evolving AI landscape.

Furthermore, fostering a culture that embraces adaptability, collaboration, and continuous learning is paramount. In an environment where the pace of change is relentless, a culture that encourages experimentation, knowledge sharing, and embracing new approaches becomes a competitive advantage. Through a strong organizational culture, talented individuals' collective potential can be harnessed to achieve remarkable results.

Lastly, governance is crucial in ensuring AI's responsible and ethical application. Organizations must prioritize the well-being of individuals and society, proactively addressing privacy, bias, and transparency concerns. By integrating ethical considerations into every stage of AI development and deployment, organizations can build trust, foster long-term relationships, and positively impact the world.

By understanding and optimizing the equation of talent, culture, and governance, organizations can unleash the full potential of AI. They can drive internal success and contribute to shaping a future where AI benefits humanity. At Fractal, we continue to build a talented team, nurture a progressive culture, and prioritize ethical practices, as we drive meaningful AI innovation.

The road forward

Unwavering morality and ethics drive our dedication to delivering value to clients and society. Doing what's right for them is the essence of true success, fostering trust and enduring partnerships.

Strategic mergers have played a vital role in our growth journey, granting access to exceptional talent, new markets, and cutting-edge technologies. The powerful integration of AI, engineering, and design lies at the core of our value proposition, enabling us to redefine industries and empower our clients' businesses.

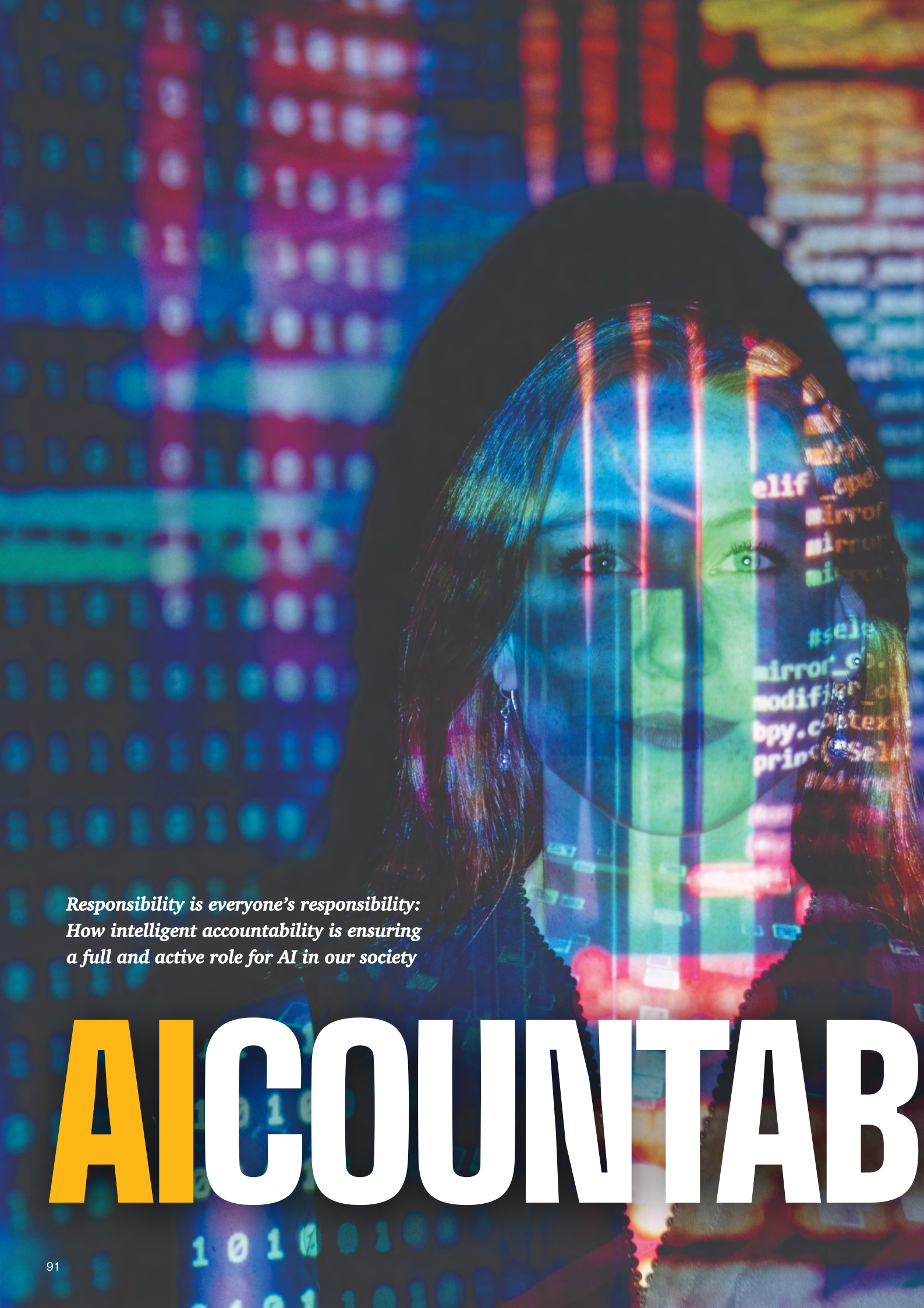
Our unwavering commitment to ethics will be as important as the harmonious convergence of AI, engineering, and design in everything we do. Fractal is determined to be a trusted partner on our clients' transformative journey as we continue shaping the future and achieving extraordinary outcomes in an ever-evolving world.

BUILD A SUSTAINABLE FUTURE

Picture this: sustainability has become the battle cry of today's business leaders, with a whopping 87% gearing up for increased investments (Gartner). But here's the exciting part: sustainability is more than just a buzzword. It's about creating a thriving future by weaving together environmental impact, well being, and unwavering resilience.

In this captivating section, we embark on a journey that goes beyond traditional sustainability. We dive into the fascinating world of organizations that have cracked the code, achieving remarkable success in their sustainability initiatives. Prepare to be inspired by their stories and learn how they strike the perfect balance between meeting present needs and safeguarding the future.





*Responsibility is everyone's responsibility:
How intelligent accountability is ensuring
a full and active role for AI in our society*

AI ACCOUNTABILITY

Picture the scene: a user-focused organization is excited to employ Artificial intelligence (AI) to help it engage with customers, work smarter, and make better decisions. It implements technology that can analyze and learn from large volumes of data, serve content tailored to users' interests and behavior, and make accurate predictions about business needs. But just a few months later, those good intentions have gone awry as the organization's use of AI has brought unintended, negative consequences. This is an apparent and present risk without sufficient awareness of the responsibilities attached to AI.

Unfortunately, research shows that many companies are not as savvy about Responsible AI (RAI) as they think they are. For example, Boston Consulting Group found that while 35% of organizations believe they have fully implemented an RAI program, only 16% have reached maturity. So, what needs to happen to change this picture? Ultimately, it's a case of putting practicable RAI principles at the heart of every AI project.

"If you see RAI as separate from AI, as something that you can implement later on, then you are already on the back foot," said Sray Agarwal, Principal consultant at Fractal and co-author of Responsible AI: Implementing Ethical and Unbiased Algorithms. "Anything you do in AI must have the responsibility, from the initial thinking about the project. If it's too late, then RAI must be implemented before a major reputational event happens."

Building responsibility for AI involves work on several levels, from shaping national and industry regulations to providing the guidance and tools that make RAI work for individual businesses.

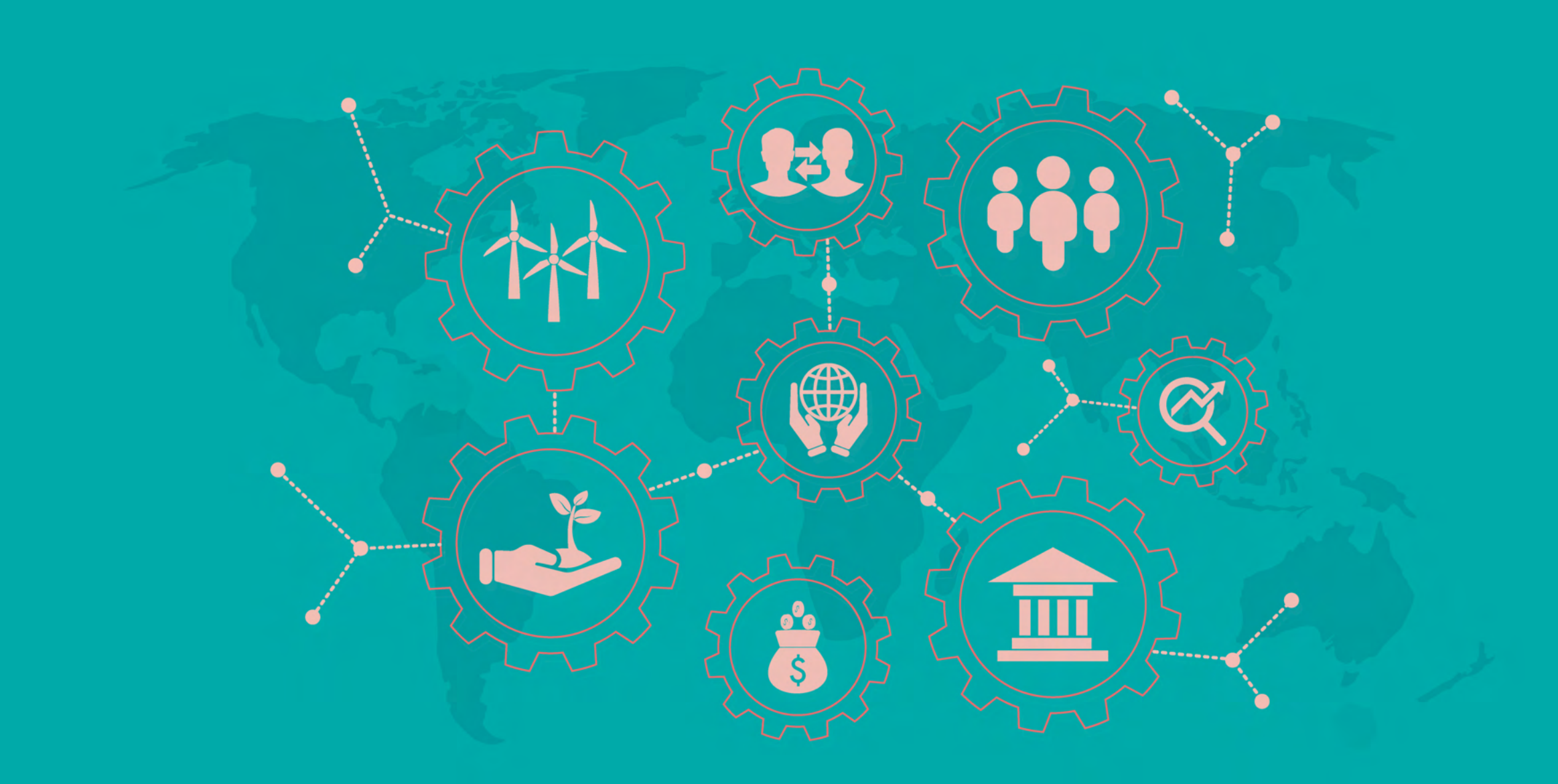
"AI is ever-present in everyday life," said Kevin Bishop, Associate information management officer at the United Nations Centre for Trade Facilitation and Electronic Business, United Nations Economic Commission for Europe. "The world needs guidelines for responsible and ethical AI that contribute to the benefit of humanity, ensure a safe and equitable digital future, and achieve the Sustainable Development Goals."

Rapid progress is being made at the regulatory level, with new RAI laws set to be implemented in China, India, the UK, the US, and beyond over the coming years. As a prime mover behind AI and its application, the technology industry is taking responsibility, helping shape those regulations and enabling organizations to comply.

At Fractal, this commitment has involved working with the Governments of India, New York state, Switzerland, and others to help shape RAI policy and regulations. This will ultimately be implemented across thousands of companies. In parallel, it is collaborating with the United Nations to produce whitepapers that will help the leaders of different countries to ensure RAI doesn't introduce conflicting laws and policies that affect cross-border trade.

"As we increase our reliance on algorithms to automate tasks and augment human decisions, it is even more crucial that we hold ourselves and our systems to the highest ethical standards. This means ensuring that our AI systems are designed and implemented in a fair, transparent, and accountable way. I recommend that companies beyond a certain scale must set up an AI Ethics Committee that applies responsible AI principles to practical situations and guides the organization," said Srikanth Velamakanni, Co-founder, Group Chief Executive & Vice Chairman, Fractal.

Anything you do in AI must have responsibility, from the initial thinking about the project. If it's too late for that, then it's imperative that RAI is implemented before a major reputational event happens



Within its industry, Fractal is working with IT bodies like the National Association of Software and Service Companies (NASSCOM) to build awareness of the issues. One example is the Responsible AI Hub and Resource Kit (<https://indiaai.gov.in/responsible-ai/homepage>), which NASSCOM launched as part of the government's Digital India initiative. It provides free resources for IT players in India to benchmark their RAI maturity and access practicable guidance and tools for improving it.

"Companies building, deploying, or sourcing AI solutions must realize the integral role ethics has come to play (and rightly so) in ensuring long-term business sustainability. The growth and scaling prospects that AI presents for businesses are truly unprecedented; yet, to effectively realise any of these prospects, industry actors must tread the path of AI adoption with an uncompromising commitment to user trust and safety. We at NASSCOM are driving efforts to help the industry develop its shared commitment and capacity for delivering AI solutions in an ethical, trustworthy, and inclusive manner." **Sangeeta Gupta, Sr. Vice president and Chief strategy officer, NASSCOM.**

The world needs guidelines for responsible and ethical AI that contribute to the benefit of humanity, ensure a safe and equitable digital future, and the achievement of the Sustainable Development Goals

While high-level regulation promises to build a strong foundation for RAI, there is also a lot of activity on the ground. Increasingly, organizations across different industries want to ensure they are already compliant with RAI principles before they become law. To do that, they need help understanding what RAI should look like for their company and its industry.

"Organizations, especially in regulated industries like financial services and healthcare, are addressing RAI practices proactively because they want to be ahead of the policymakers and have those structures in place when regulations come into force," **said Akbar Mohammed, Head of innovation, Strategic center at Fractal.** *"In healthcare, for example, RAI can be a matter of life and death. Those organizations cannot wait for a clear legal and policy framework to be implemented, so they are looking for ways to develop and operationalize their own RAI framework and governance structure."*

Leaders in the AI space have already developed their RAI practices and are sharing their experiences with others. Fractal, for instance, has established frameworks, toolkits, and training courses to ensure all its employees understand RAI and know how to practice it. Now, it is helping its Fortune 500 clients to frame their problems and put their RAI structures and governance mechanisms in place. From the big pharmaceutical companies incorporating some of Fractal's RAI practices into its internal responsibility practices to the growing number of consumer goods companies looking for help to establish their RAI frameworks, it touches all industries.

It is a diverse picture in which each industry and individual organizations require a different approach to make RAI work.

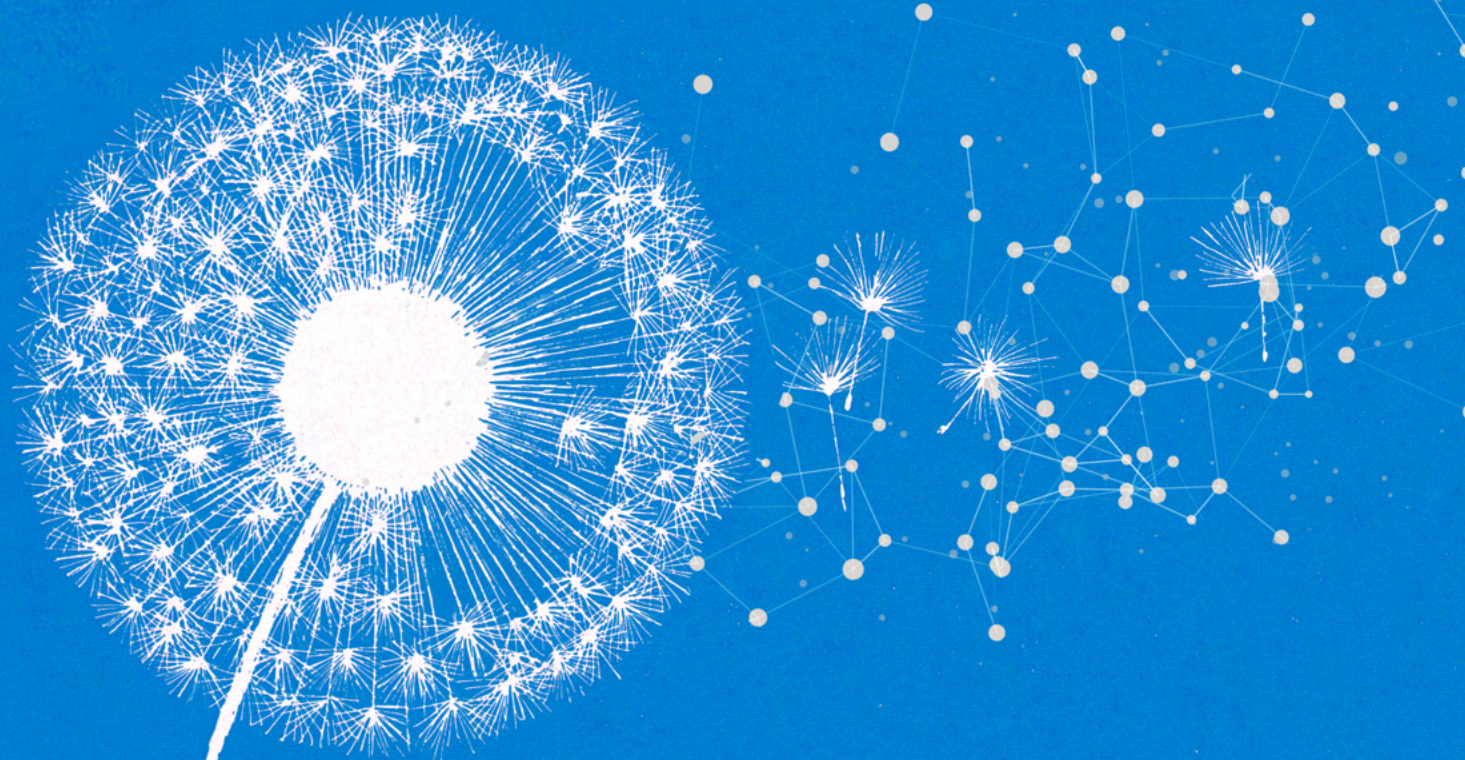
"There is no one-size-fits-all solution to RAI," Agarwal said. "A financial services business, for instance, needs RAI tools for detailed fairness and explainability, which ensures that humans can understand the decisions and predictions their AI makes. Meanwhile, a healthcare organization requires a focus on privacy and monitoring. It's different for supply chains, where explainability and monitoring are high. To be effective, RAI tools need to be customizable, usable and developed in tune with business needs. They must enable organizations to address industry-specific and business-specific RAI issues in a way that is both industry-ready and implementable."

This is about much more than developing an algorithm. To develop and implement effective RAI, people need help to visualize the issues and find answers. That requires a human-centered design approach to problem framing encompassing surveys, templates, project planning methodologies, ways of working, guidelines, training programs, and case studies.

"Asking questions structured from a gamification, behavioral science point of view is an effective way to direct stakeholders towards the issues they should be reflecting on," said Sagar Shah, Client partner, Strategic center. "Those questions are often quite blunt. For example, we might ask if a stakeholder has taken consent from the people whose data they are using. If they have assumed that consent, it may come back to bite them – so how will they document this activity so it can be audited in a few years? Suppose the stakeholder can't answer a question. Exploring the available guidebooks, real-life examples, and case studies will help them find the solution."

Ultimately, RAI needs to allow flexibility for innovation while providing checks and balances for organizations to consider the effects of what they are trying to create. Today's toolkits enable people to develop and operationalize RAI, which is a crucial first step. The next challenge will be to ensure that these methods are adopted within every organization. This will require components that have been developed to understand how business leaders and stakeholders operate with AI today. When RAI is relevant to the work people do on a day-to-day basis, it will also become integrated into the life cycle of every AI project.

SUSTAINABILITY CAPABILITY



*Fractal is looking beyond carbon neutrality to
create a positive impact on the planet*



At Fractal, we see sustainability and wellness as an integrated whole. That's why we run programs to enable better educational outcomes for disadvantaged children, empower women to be financially independent and included, and improve the quality and affordability of healthcare and safe housing solutions. It's also why we seek to commit ourselves to the Paris Agreement goal of limiting global warming to 1.5C, a more ambitious goal than the earlier 2C target. Our vision is to go beyond becoming carbon neutral to impact the planet positively.

So, what does that look like at Fractal? Within the organization, it starts with two key elements:

- A committed sustainability culture
- Accurate and current knowledge of the organization's key sustainability and wellness indicators.

Fractal nurtures a culture inspired by strong stewardship delivered by our founders Srikanth Velamakanni and Pranay Agrawal, grounded in the individual commitment to sustainability at every level of the organization. Over the years, we've built a sense of shared ownership through exercises to communicate the issues, gamify sustainability targets and set achievable goals.

By celebrating early milestones and hitting bite-sized targets alongside our most ambitious sustainability goals, we chip

away at issues like reducing our use of plastics or better managing energy, water and waste at each Fractal workspace. These committed, daily actions provide the motivation and momentum needed to reach medium and long-term Fractal sustainability goals.

Setting clear goals and measuring progress is crucial to maintaining that momentum. We need to know where we are on our sustainability journey – what we are already doing, the targets we want to achieve, and our opportunities to make the best impact – so we can map our path and measure our progress. Crucially, we need to know that we are capturing the right data to give us actionable sustainability insights, even when that data lies across multiple systems. Failure to do that will result in a data void, a challenge that hampers many organizations' sustainability efforts; however, the data void challenge can be overcome.

Fractal faced this challenge recently when we ran a thorough carbon inventory project to understand Fractal's carbon footprint. To get the most accurate picture, we focused on the pre-COVID baseline year of 2019-20. However, we discovered that our systems were not capturing the fullest extent of Scope 3 emissions in some areas. Details about whether air travel had been direct or involved a layover – which has a very different emissions pattern – were inadequate for our measurement purposes.

Our shared ownership of sustainability goals at Fractal, combined with our best-in-class technology, enabled us to fix the problem. We used our image and video analytics capability to study historic reimbursement chits and wrote an algorithm to analyze the amount of direct and layover air travel in different regions. We quickly ensured that we were capturing high-quality data and generating the insights we needed to reduce our carbon footprint, including our Scope 3 emissions.

Alongside internal activities, we must look outside the organization and locate our sustainability efforts in a much broader context. Fractal does this by:

- Benchmarking and validating our efforts against globally recognized standards.
- Sharing our knowledge and learning from and with others.



“Sustainability is a global issue and a journey that no organization or individual can make alone,” says Chetana Kumar

7 ways to build the sustainability muscle

- 01 Measure on-site activity data/behaviors and mine early insights to understand the sustainability impact you’re already making while identifying the opportunities ahead
- 02 Generate open discussion and create a cross-functional task force to foster shared ownership of targets. Mine and measure for insights at least annually and at a frequency that is right for you.
- 03 Seek input from organizational leadership to set targets, guide efforts, celebrate successes and provide support through challenging times.
- 04 Set key performance indicators and monitor progress constantly.
- 05 Declare targets and commitments – even if it’s only internally at first.
- 06 Benchmark your vision, mission and targets against best-in-class industry and global standards.
- 07 Learn and educate: as you progress on your journey, share insights and experiences to help others grow their sustainability muscle.

By validating Fractal’s vision, mission, and targets against globally established benchmarks, we can keep our efforts on track and share our goals and progress transparently with the wider community. When a company receives a Platinum rating from Bureau Veritas Quality International (recently gained by Fractal’s Mumbai workspace for health and hygiene management) or Leadership in Energy and Environmental Design Gold certification (achieved by Fractal’s Mumbai and Bengaluru, India workspaces), it tells every stakeholder within the company and in the wider ecosystem that they’re hitting important milestones.

Achievements like these move Fractal toward its long-term sustainability targets – and we are working on basing those targets on the Science Based Targets initiative frameworks to ensure that our emission reduction efforts align with the world’s ambition to limit global warming to 1.5C.

Sustainability is a global issue and a journey that no organization or individual can make alone. Progress is propelled by decades of great work by researchers, scientists, and regulators, sharing our experiences and learning from fellow travelers’ insights. For instance, as Fractal expands its reporting to the Carbon Disclosure Project, which provides the gold standard for corporate environmental reporting, we will not only be helping ourselves to improve our emissions management but will also be contributing to a body of data that helps others to act on their environmental impact.

Fractal’s clients are also leading from the front on sustainability. Their work and generous knowledge sharing constantly inspire us. With these shared insights guided by Fractal values, we synthesize environmental science and local knowledge and innovate to enrich and sustain the symbiosis between the community, the planet, and our organization.

Through this combination of measuring, monitoring, benchmarking and learning – tied together with a culture of individual ownership – Fractal continues to identify opportunities to improve environmental impact. We are creating new business practices and leveraging our technology and expertise to enable our clients and us to do more for the planet.

Sustainability is a great muscle for any organization to build - and as with any muscle-building exercise, achieving the vision requires a combination of knowledge, commitment, monitoring and validation

We’re hitting early milestones using Fractal’s AI and analytics expertise to positively impact energy emissions and help our clients frame and solve the problems they face to get more from their ESG reporting.

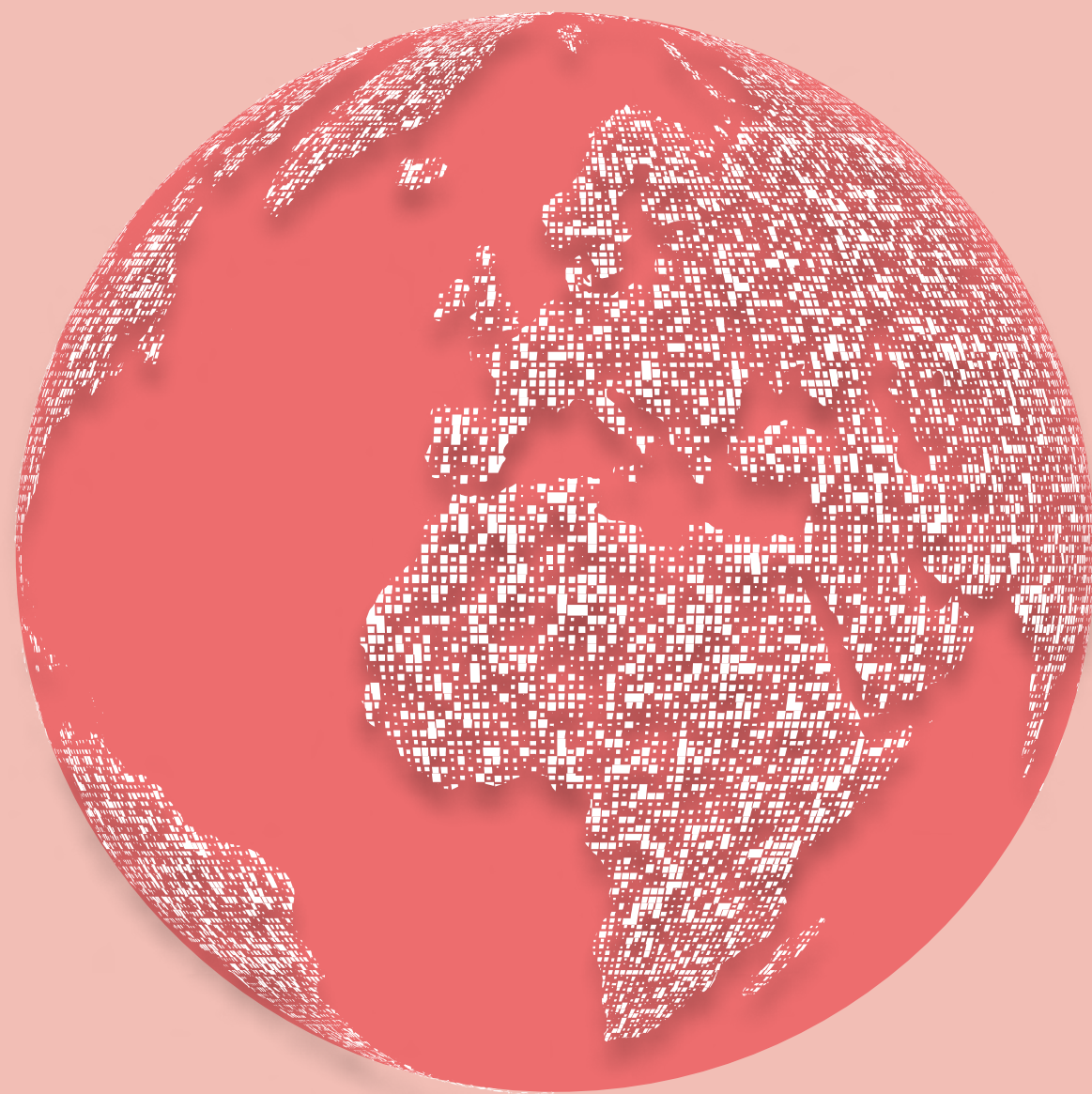
Boosting efficiency, cutting emissions: Eugenie.ai, a Fractal incubated company, is helping major oil and gas producers, mining, and public utility firms to achieve net zero emissions, reduce operational downtime and improve efficiency. It does this by: using remote sensing and satellite image analysis to trace the root causes of emissions to machines and processes; and applying an outcome-focused approach to recommend actions maintenance/downtime costs.

As we develop our core expertise, people and ecosystems, we chip away more at that shared goal of keeping global warming below 1.5C. By taking informed, measured steps toward that bigger picture, we are building our sustainability muscle to bring a positive impact to the planet, its people, and communities beyond our immediate value chain.



Chetana Kumar
Head, Corporate Social Responsibility & Special Projects, Fractal

Chetana helms the corporate social responsibility(CSR) program and Special Projects at Fractal, where she is helping shape the strategy for leveraging Fractal’s strength in analytics and artificial intelligence to create greater social impact. She is also the Chair of the Fractal Critical Event Team (FACET) and the ESG task force (ESTA) at Fractal. She is known for her attention to design and detail, sophisticated execution and meticulous administration of projects. With a passion for technology and medicine, Chetana is especially interested in leveraging technology to fine-tune the impact of CSR initiatives. An active public speaker since her days as a student of Law and Management, she also enjoys building her trainer’s muscle during ESG/Sustainability training sessions at Fractal.



*Harnessing the power of AI to
accelerate sustainable solutions*

ECO LOGICAL

Environment, social, and governance (ESG) issues were once seen by business leaders as a secondary concern. Now, they are a strong magnet for investment, especially among generations who will shortly be making those key decisions. Millennials and Generation Z are twice as likely to invest in funds that endorse companies with strong ESG principles, and 70% prefer to work for a company with a strong ESG footprint. As workforce issues like talent retention continue to climb up executives' priorities, satisfying those sustainability expectations has become essential for business growth.

Committing to sustainability goals is one thing, but delivering on them – and proving the results add value to the business – is a complex challenge. Organizations must choose between an abundance of frameworks like the Global Reporting Initiative and the Task Force on Climate-Related Financial Disclosures and prepare to comply with emerging governmental regulations worldwide. It's even more complex for suppliers, who may need to comply with different sustainability standards depending on their clients' expectations.

Success is built on three pillars: identifying the best strategy to tackle sustainability issues, devising meaningful ways to monitor, measure and report on the results, and empowering people across the organization to put those plans into practice. By addressing all three pillars, Fractal helps its clients frame the right problems to address and design the solutions.

Question one is the same for every organization: what exactly is the ESG problem you want to tackle? The answers are very different. We all have ideas about reducing emissions and conserving natural resources, but how does it look in the context of your business and the industry in which it operates? By putting the issues in this frame, organizations can identify opportunities to make the impact they want and explore ways to make it happen. A design-led approach is the best way to pinpoint the pertinent issues, envisage effective solutions, create prototypes and manage change so

the whole organization can rethink how it does things and achieve its sustainability goals.

This design-thinking, solution-seeking approach is at the heart of what Fractal does, and it can be used to develop powerful ESG strategies. In the Asia-Pacific region, for example, a major telecom company wanted to harness innovation and technology to help reduce carbon emissions, address environmental issues and reduce consumption.

“Telstra’s sustainability vision goes beyond carbon neutral operations, which we achieved in July 2020 through one of Australia’s largest ever carbon offset purchasing programs. By 2025, we aim to be generating renewable energy equivalent to the amount we use, and by 2030 we’ll have reduced our absolute emissions by at least 50%. We are also committed to creating a more sustainable future by optimizing the resources we use, reducing consumption and waste across our business and investing in circular solutions. Alongside an 85% increase in our network waste recycling rate, our goal is to reuse or recycle 500,000 mobile phones, modems and over devices each year to 2025.”

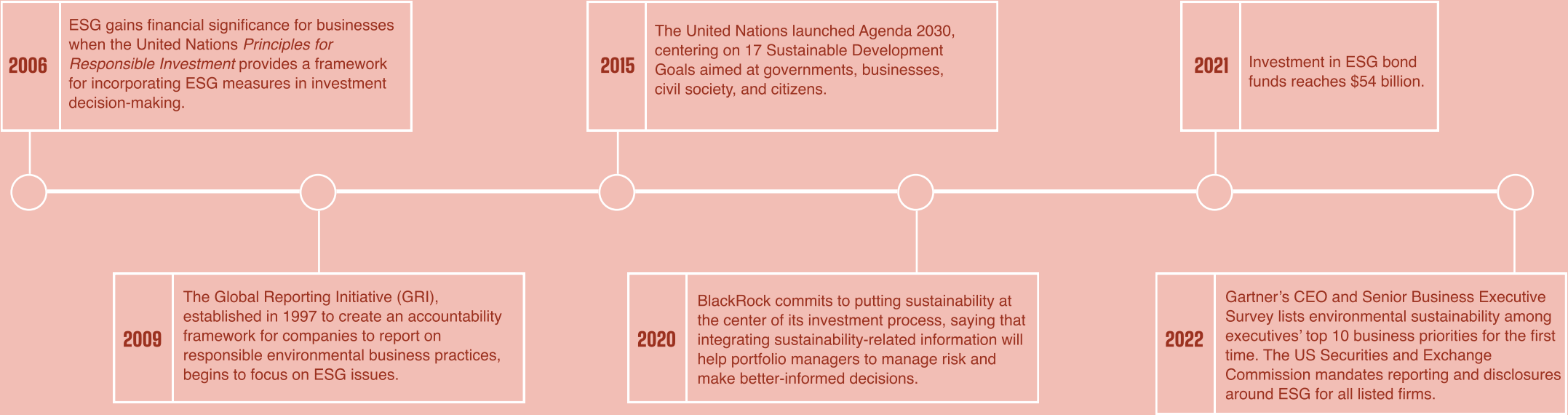
– Fei Tan, Advanced Analytics Chapter Lead, Telstra.

Telstra’s vision extends beyond internal goals to support sustainability efforts across its ecosystem.

“As Australia’s leading telecommunications and technology company, and a large user of energy, Telstra has an important role to play in addressing climate change and the many environmental challenges we face. We are committed to leading by example and using our scale and voice to help drive better environmental outcomes in our own operations and among our customers, suppliers and communities. We use technology to address environmental challenges and help others to do the same.” – Tim Osborne, Data Solutions Manager, Telstra

Every industry, and every company within each industry, has different needs, whether it’s identifying targets they can work towards incrementally or realizing dramatic change to make their business future-proof.

A Brief History of ESG



Using a multi-disciplinary, design-led approach, Fractal’s artificial intelligence, engineering, design and domain experts worked with employees and stakeholders from across the company in a hackathon-type process.

“We started with an immersive view of the business, including the client ecosystem, data centers, and network sites, and the data available on their systems,” said Tanay Kumar, Senior consultant at Fractal. “This was complemented by primary and secondary research, including collaboration with industry experts, corporates, and educational institutions to deepen our understanding of the trends and best practices in the telecom industry.”

By combining those best-in-class examples through its design-driven process, Fractal worked with the company to synthesize and narrow down the problems it wanted to address, build a solid business case, and experiment with solutions. It then moved towards three prototypes that can be scaled to reduce emissions across its data centers and network sites.

While framing the problem is an essential starting point for a strong ESG strategy, progress can only come from a deep understanding of the organization’s current position in its sustainability journey, what it aims to achieve and the actions needed to move forward. For instance, what benchmarks, baselines, and data controls should be in place to deliver a full and accurate picture of progress, not least in compliance with various governmental and non-governmental standards and regulations?

And how can you make sure everyone has the information they need to keep things on track? It’s a challenge that demands all the right data to be in one place, where it can be aligned and modeled against a spectrum of well-defined key performance indicators (KPIs) and automatically audited and validated. That’s where Fractal’s process consulting expertise comes in.

Take the example of two major consumer packaged goods companies that needed to build end-to-end ESG reporting and visualization platforms. Both organizations faced a similar problem: structured and unstructured data coming from various sources, including third-party suppliers and their own sourcing and procurement teams. By creating a data model for ESG, Fractal harmonized and democratized each organization’s data onto a single platform so it could be used across business functions, from manufacturing to procurement, logistics, human resources and governance teams.

“Each of these business functions had different processes for collecting and gathering data, as well as different KPIs relating to sustainability,” said Siddhartha Sabale, Engagement manager at Fractal. “Developing a single platform helped them to visualize the entire range of KPIs, but it also reduced the overall turnaround time. Visualization reports that took weeks or months to create can now be generated at the click of a button. The organizations use these reports in their annual sustainability reporting to external audit partners. Additional simulation tools are now being developed with one of these companies, enabling it to

see how sustainability initiatives in logistics or manufacturing will have a wider impact on areas like net growth or net revenue.”

When all stakeholders are clued up on ESG performance against KPIs, it’s easier for them to make the right decisions – and that is another area where Fractal excels. How, for example, can a global confectionary manufacturer ensure it is sourcing raw materials that are cost-efficient and environmentally responsible?

That was the big problem for one Fractal client, which needed to identify the most sustainable areas to source its cocoa supplies from. Cocoa trees are susceptible to water stress, and some plantations that supply the organization include areas with limited groundwater availability. The company needed accurate, up-to-date information to identify areas of baseline water stress (BWS – the ratio of annual water withdrawals to total available annual renewable supply) to create sustainable sourcing strategies across a given farm or geography. Its manual calculations proved prone to error. Fractal recommended an optimization solution that uses site-level simulation with inputs including BWS, emissions, the volume of raw material required, and latitudinal and longitudinal location parameters to provide recommendations about which areas sourcing teams should select for different scenarios. The result? Low-cost sourcing of raw materials with lower average BWS across the chosen farm or location.

3 Key steps to sustainability

PLOT THE PATH

Fractal works with enterprises to understand their current ESG maturity and create a road map for meaningful sustainability impact.

MAKE IT MEASURABLE

Standardized data models and industry-specific templates enable powerful data analytics and ESG reporting so firms can understand where they are, where they’re going and how to get there.

SEE THE SOLUTIONS

Captured data is used to identify key sustainability drivers, with scenario planning to optimize decision making and reporting against KPIs.

With these three pillars of sustainability in place, companies can devise, test and demonstrate the value of their ESG measures. But to paraphrase an old saying, time waits for no man, organization, environment or planet. The pressure is on to act now and to match accuracy with speed and scale.

“Every industry, and every company within each industry, has different needs, whether it’s identifying targets they can work towards incrementally or realizing dramatic change to make their business future-proof,” said Bhaskar Roy, Client Partner, and Head, ESG Data and Analytics at Fractal. “As we’ve worked with different clients’ frameworks, we have created accelerators to help speed up the journey of discovering and achieving the sustainability impacts they’re looking for. That might involve framing the solution, consulting on the assessment process or creating data models to help clients create the solutions they need. Our design-thinking approach helps companies to identify the problems they want to address quickly and to tackle them through targeted strategies and scalable solutions.”

By bringing a personal and pragmatic perspective beyond the data, women are leading a new wave of innovation in artificial intelligence

Women are spearheading a revolutionary change in different industries by utilizing the power of artificial intelligence. These torchbearers come from diverse backgrounds: entrepreneurs, academic researchers, industry specialists, or venture capitalists. What binds them is their commitment to carving out a viable path for future generations and shaping the future of technology. They represent and inspire young female leaders striving toward success!

BREAKING BOUND**AI**RIES

Sangeetha Chandru

Chief Practice Officer of Retail at Fractal

Sangeetha Chandru, Chief Practice Officer of Retail at Fractal, has more than two decades of experience leading transformation in the retail industry, both within organizations and as a consultant. During that time, she has seen how data has been at the heart of every organizational transformation.

"The work that's happening in AI today may seem inaccessible to the layperson, but at the very heart of it, it's a very pragmatic approach to solving some of our most complex problems," Chandru said. "Essentially, AI brings unprecedented computing speeds to convert huge volumes of data into something we can use to make decisions. And this transcends the technical environment and feeds into every aspect of the retail business. It's about democratizing data, and women are at the forefront of that."

Women – including in Chandru's team – work at every level to drive insights. They are helping organizations structure their data, solving bespoke functional problems in marketing, supply chain, or technology, and leveraging AI to disrupt and innovate their businesses.

AI is not a purist, analytics field. There are many roles that feed into it and I'm seeing a huge increase in the number of women who are contributing to it

Meanwhile, AI is rapidly transforming our data landscape thanks to reporting mechanisms, self-serve capabilities, and other tools that empower many users to make decisions. These have created newer career paths that women leaders across distinct roles and industries are leading in a way that was impossible ten years ago.

One of those women is **Danielle Handley, APAC (Asia Pacific) Customer Director at Bupa**. Handley is an experienced leader in enterprise strategy and innovation in the financial services sector. Now she focuses on how AI can help Bupa understand its health insurance customers and shape their healthcare experience.

"Ultimately, we need to figure out how best to leverage AI to wrap the right advice and suggestions around each customer to meet their needs. For example, how can AI help me apply science and predictability in decision-making to guide our customers to the right pathways across their lifetime health journey? How can we use it to provide the data in a consumable way that is personalized for that customer, based on where they are in their health and well-being journey?"

Answering these questions takes an inquisitive mind and an open attitude to the possibilities that technological advances bring.

"Wherever we can use AI to do tasks like day-to-day information capture or taking payment, we are also creating capacity for our teams to have human-to-human conversations with customers where emotion and judgment are required," Handley said. "There are some exciting advances in AI, such as conversational AI, which can help us remove friction, especially from the front end of the customer experience."

Handley combines a strong vision of what she wants to achieve with the flexibility to embrace new developments and the possibilities they create. So, what is her key advice for those who want to follow in her footsteps?

"Don't be afraid," Handley said. "Be curious about the data and how it can be used, and constantly challenge the what-if scenarios. I am not a data scientist; I do not develop the logic behind AI, but I always ask those questions and then rely on my team's amazing brains to put the data to work. By constantly exploring and challenging the scenarios around AI, we can unlock new possibilities."

Mel Parks, Chief Operating Officer of Save the Children Australia and has previously led complex change for financial services organizations. She sees great potential for ethically applied AI and analytics to support better decision-making, boost productivity and improve stakeholder outcomes.

Fractal's ReBoot program has enabled many women to develop new technical and professional skills, work closely with industry experts and expand their networks.

"One of the big challenges for leaders is to foster a dialogue about opportunities for the application of advanced technologies," Parks said. "The sweet spot is identifying use cases and thinking about what toolsets will enable maximum impact. If you don't have leaders who can think about how those elements come together, it doesn't matter if you have the world's best technology or problem statement."

Mel and the team at Save the Children Australia are exploring how to best use AI in their work. For instance, AI-enabled image detection could help identify children at risk of malnutrition, especially in locations difficult for medical professionals to reach. Predictive models could help users of the organization's Library For All business, providing experiential, real-time tools to improve children's learning capability on basic literacy or numeracy. And while Save the Children Australia focuses on meeting children's basic needs like health and education, Mel believes technology could also help their happiness.

"We are increasingly working on climate adaptation in partnership with communities throughout the world, and we know that children are rightly very concerned about the climate crisis," Mel said. "AI models that predict climate implications and help us undertake the right interventions in communities will benefit the environment and could even help to reduce climate anxiety in children. If we get that right, I hope children's overall well-being will improve too."

Mel's path to senior leadership has seen her become an empathetic advocate for upcoming leaders.



"There are micro-interventions that I do as a senior female leader that I would have liked somebody to have done for me when I was coming up as a leader," Mel said. "For instance, I encourage emerging leaders to take on broader roles and try to create opportunities for quiet or less confident voices to be heard, particularly younger women or people from culturally and linguistically diverse backgrounds."

Mel has two key pieces of advice for women aspiring to leadership positions now.

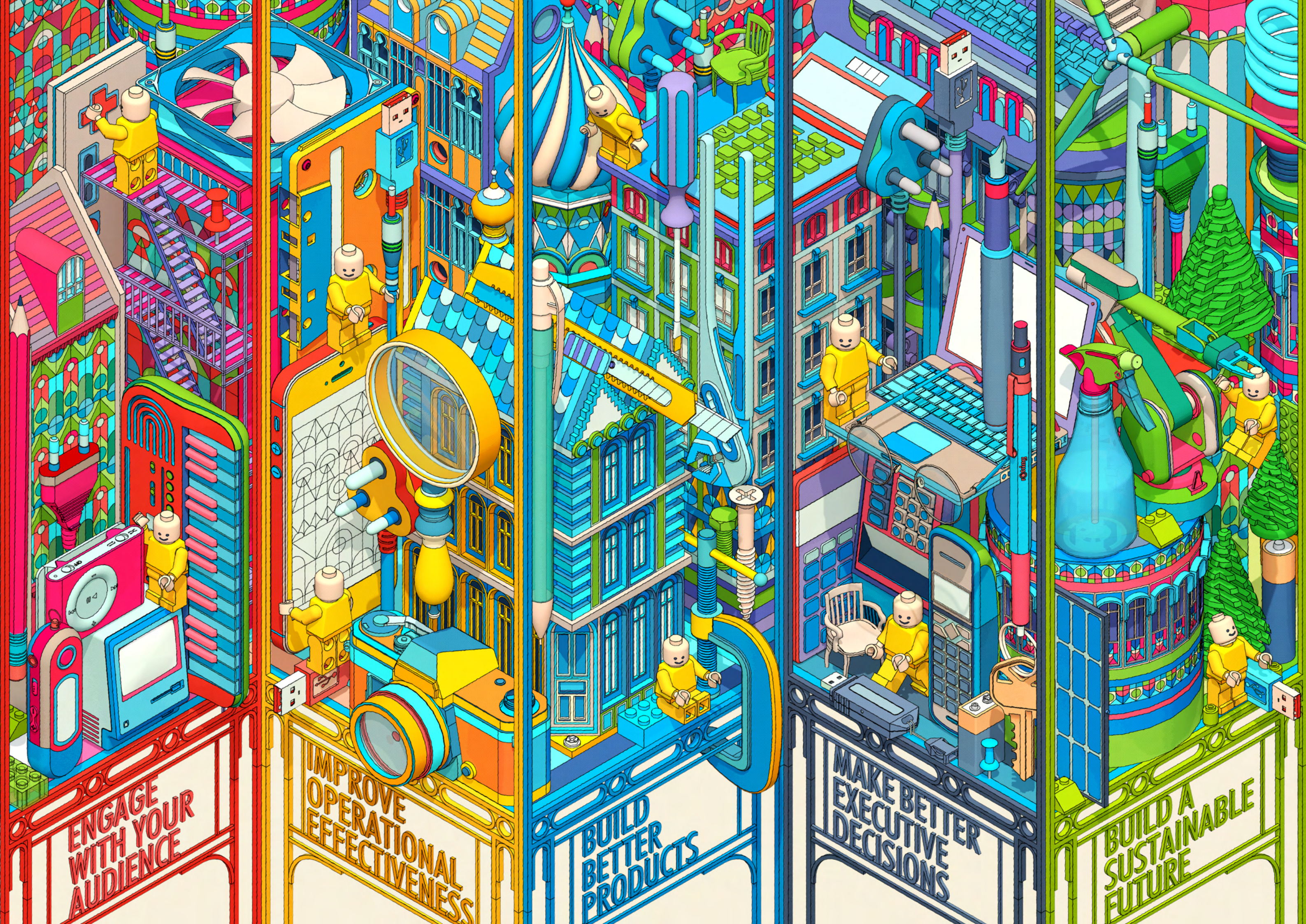
"It's critical to understand what is important to you and to work in a way that aligns with your values," Mel said. "When that happens, it shows in the way you lead. In addition, it's important to approach risks – including career opportunities – focusing on what you might learn, the skills you could gain, and how the experience can help you be a better leader. If you do those two things well, people will engage with and follow you, and you will learn from each other."

It has taken grit for many of today's women leaders to get to the top and stay there. For decades, girls and women were discouraged from studying science, technology, engineering, and mathematics (STEM), which were regarded as masculine. And in the workplace, inflexible routines can make it challenging to combine a career with commitments like raising a family – causing some women to self-select themselves out of career opportunities before they reach the top. And fewer women leaders also meant less representation to chart a path for the next generation.

But that picture is gradually changing. Women like Chandru, Handley, and Parks show future generations what they can achieve in STEM fields. Technology leaders, governments, and educators are running programs to encourage, and mentor girls and women in STEM education, from elementary school to university level – and their efforts are starting to pay off in the workplace. Meanwhile, organizations are introducing flexible policies that allow a healthier balance between work and family.

Many companies now provide for and support those who have taken a career break as they return to the workforce. Fractal's gender-agnostic ReBoot program is one example. It has enabled many women to develop new technical and professional skills, work closely with industry experts and expand their networks.

"When women reach leadership positions, we must turn around and clear the path for others," Chandru said. "A huge focus within my practice is on creating the right platform to nurture women's talent, so they will take on leadership roles within Fractal. By ensuring women know they have a path for growth and success, we are beginning to see the potential of an inclusive STEM community – and better business outcomes."



By bringing a personal and pragmatic perspective beyond the data, women are leading a new wave of innovation in artificial intelligence.

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Brake Habits

We understand that even good drivers have bad days.

For 150,000 drivers in India each year, their destination becomes all too final. With road fatalities mounting at speed, Fractal took action. Lives depended on it.

By blending AI with behavioral science we were able to identify & predict blackspots, influence risk perception and change the way drivers think and behave.

On India's National Highway 24, serious accidents have already fallen by 60% — but our journey is only just beginning.

Fractal: we don't tire of making positive change.



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