

Deloitte.



A decade at the Edge
Looking back, ahead and within

Deloitte Center for
the Edge



Center for the Edge

If you look back on the past decade, what took you by surprise? What were your most important experiences, and what are you most proud of?

For this perspective about change, we interviewed ten leaders who have worked with us at the Center for the Edge Europe over the ten years since the Center was established in Europe. We invited them to share a few significant moments of insight over the past decade, and identify long-term opportunities for the next. We organised their reflections into three sections: **The Call to Explore**, **Shift Explorers**, and **Leading by Narrative**.

Over the past ten years, the Center for the Edge in Europe has influenced the transformation of several large organisations, by combining original research with action – a self-reinforcing loop of practice and learning. The greater story about the relationships between the people and the energy emerging from connecting these people is not yet told, but we look forward to writing it together with you over the next decade.

Daniel Sunde-Hansen
Center for the Edge Europe



The call to Explore

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Explorer of edges

Wassili Bertoen
Connecting edges across the Atlantic

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CEOs have become agents of change

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The Call to Explore





Co-founder Center for the Edge

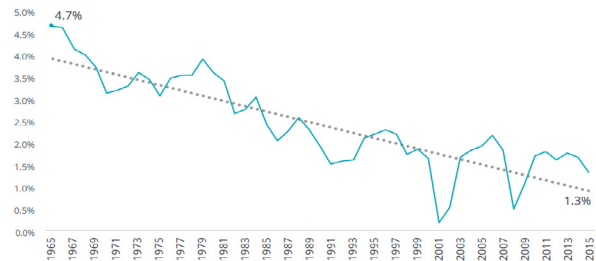
John Hagel III: Explorer of edges

“We founded the Center with the mission of identifying emerging business opportunities that should be on the agenda of CEOs, and then doing the research to persuade them to put these topics on their agenda¹.”

The business strategist and author **John Hagel** founded Deloitte’s Center for the Edge with the former Chief Scientist of Xerox and director of its Palo Alto Research Center, **John Seely Brown** in 2007, originally in Silicon Valley.

The two visionaries were interested in how to get top executives to understand and take advantage of the long-term forces shaping the economy. Their first step was finding ways to quantify these shifts.

In 2009, the Center published the extensive “Shift Index” study, where one eye-opening measurement gained particular attention in the business world: since 1965, the return on assets for all US companies had declined 75%².



Economy-wide Return on Assets (Shift Index, Deloitte Center for the Edge)

Efficiency and innovation are opposites

Labelling the combination of long-term shifts for the ‘Big Shift’, the report signalled a paradox: the Big Shift created exponentially expanding opportunity, but also increased the performance pressure for top executives.

“Large organisations have embraced the model of scalable efficiency, where it’s all about becoming more efficient at scale. This has brought them severe challenges with transformative innovations and rethinking the fundamental assumptions about what business they should be in.”

John Hagel’s perspectives have often gone against established practices. For instance, he serves on the Board of Trustees of the Santa Fe Institute, an organisation that conducts leading-edge research on complex adaptive systems – a very different mindset from the linear thinking prevalent in most organisations.

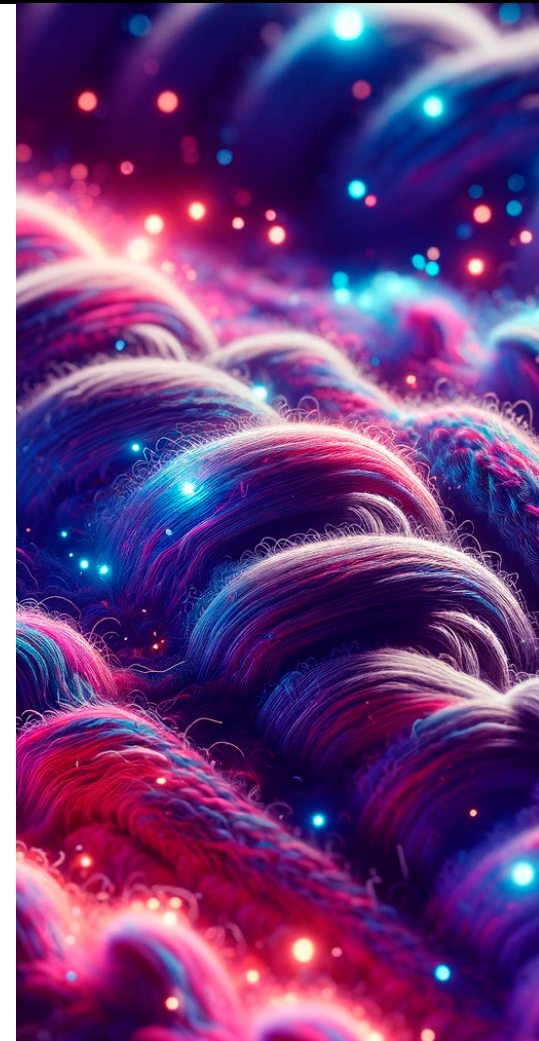
Feeling the fear as a business reality

Over the years, John has become more and more focused on psychology as the key to moving people forward.

His experience with most senior leaders of large institutions is that if you build trust with them and get them in the privacy of their office, they will confess how much fear they have. They don’t want to take any risks, as they could be fired at a moment’s notice. This is the focus of John’s most recent book, *The Journey Beyond Fear*.³

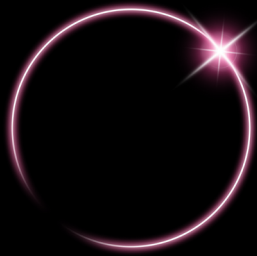
“Unless we address that fear, we can give all the speeches, PowerPoint presentations, and number analyses that we want. It’s not going to do any good. So, we need first to find the people who are open to the passion of the explorer⁴, then find ways to move other people into the passion and help them to overcome their fear.”

By 2013, the Center for the Edge had established a presence in Australia, at which point John received an invitation from Wassili Bertoen. Wassili introduced himself as the leader of Deloitte Netherlands’ innovation entity, and proposed expanding the Center into Europe – a pivotal moment.



66 Unless we address that fear, we can give all the speeches, PowerPoint slides, and number analyses we want. It’s not going to do any good.

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John Hagel III: Explorer of edges

Perspective from the Edge: Embrace complexity

We need new lenses to see how the Big Shift will reshape the world, and one of these lenses is complex adaptive systems.

This lens contrasts with the traditional approaches of analysing systems by breaking their components into parts and studying them individually. There is no “root cause” in a complex adaptive system, as the parts are interconnected and have multiple dependencies.

The dominant understanding of what causes organisations to be efficient is failing. Because large organisations tend to fixate on efficiency, they struggle to innovate.

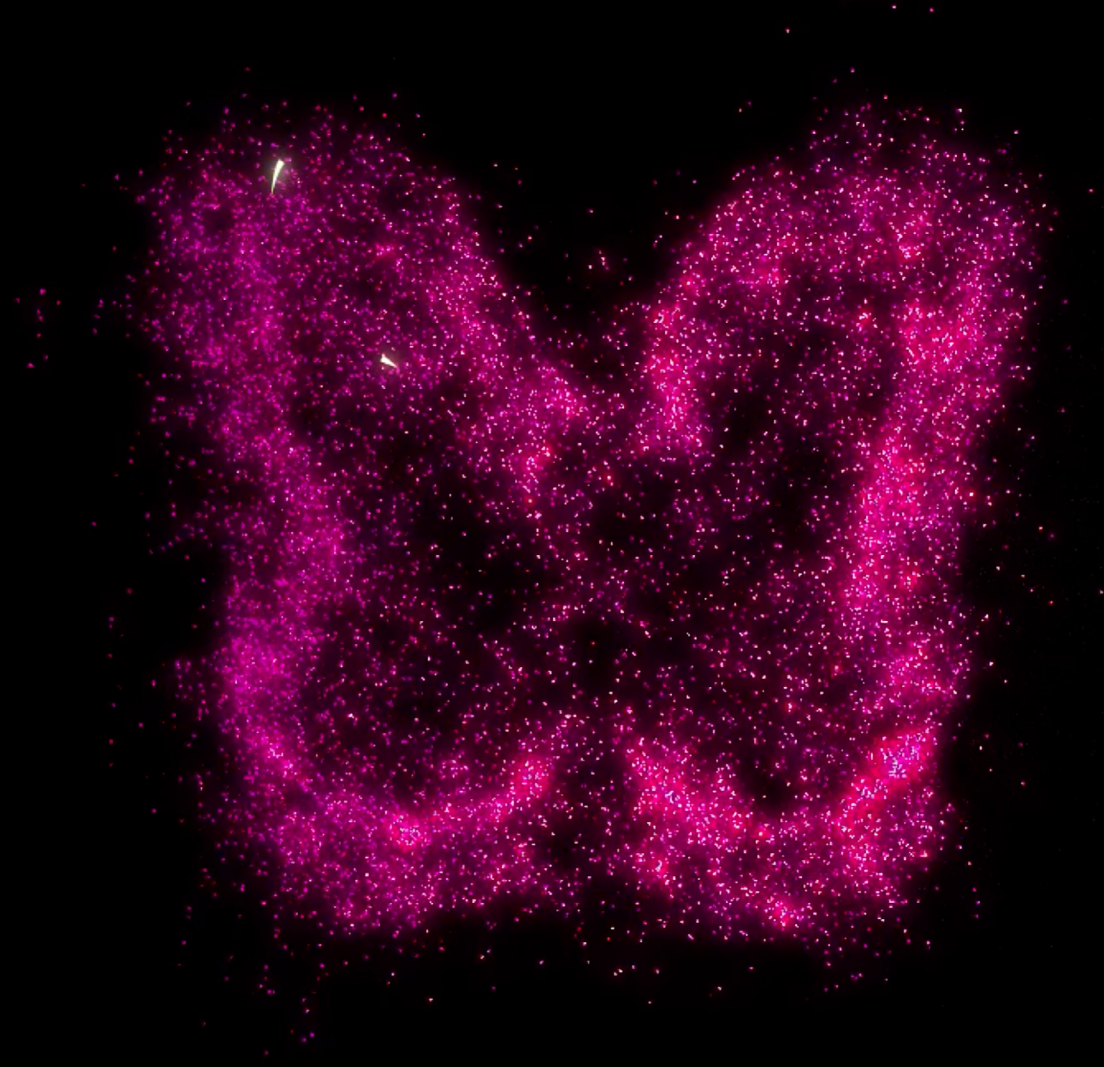
During recessions, this tendency worsens. Executives become obsessed over short-term performance goals such as cost-cutting, sales, and growing their market share.

But traditional metrics often mask the long-term forces of change that undercut normal sources of economic value.

Turbulent times also make us vulnerable to leaders claiming that they have all the answers. They provide a false sense of security, making us more exposed to the challenges ahead.

As John proposes, we need leaders who understand that we are facing new questions. They must ask them in ways that inspire us; in ways that highlight the opportunities the answers could unleash.

★ How could your organisation do more to address a significant long-term opportunity in a way that might mobilise third parties?





Founding Partner Center for the Edge Europe

Wassili Bertoen: Connecting edges across the Atlantic



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Wassili Bertoen recognised the need to bring the Center's forward-thinking approach to the other side of the Atlantic. He and John bonded over a shared passion: to help unlock the innovation potential in Europe.⁵

2013 marked the establishment of the Center for the Edge Europe, creating a transatlantic bridge of insight and practical guidance. The grand opening included sessions with John Hagel about new value creation through ecosystems and platforms, and how AI would transform the future.

The aim was clear: helping leaders to navigate the turbulent waters of digital disruption and unlock opportunities for new growth. But that would not be easy.

A challenging journey

Ten years ago, it was unusual for CEOs of top European companies to commit to meetings about exponential opportunities and ecosystem strategies. And it was also perhaps not an invitation they expected from Deloitte, which was perceived back in 2013 as a traditional audit and advisory firm.

In addition, European CEOs were expected to act more as governors of "business as usual" than as visionary entrepreneurs with a deep understanding of technology. In Silicon Valley, startups and established companies were intertwining at social and informal gatherings. In Europe, those threads ran parallel but seldom crossed

– and especially not in social settings.

How would the Center for the Edge Europe break through established norms and foster a connection with the leaders who held the power to drive change?

Not least, how could Wassili avoid the typical "immune system response" of large organisations – including Deloitte – when introducing a radical innovation initiative?

Transform through the edge

John Hagel had a clear message to leaders aiming to transform their organisation:

"Avoid trying to change the core. Instead, focus on scaling the edge. Here, you can draw more and more partners and people from the core out to edge initiatives."

Following John's advice, Wassili positioned the new centre as an edge initiative by Deloitte.

Another important tip was that it is beneficial for edges to harness external resources and ecosystems for support. Not only can you pull in world-leading expertise when needed, you free up the energy that is otherwise wasted on organisational politics arising when drawing resources from the core.

So, the next important step for the Center for the Edge team was to create the Edge Fellow Program.

Edge Fellows were people who had the passion of

the explorer and could inspire others to change the perspective, rethink and reframe the future. Bringing the Edge Fellows together with the Center for the Edge team was a major step forward.

Perspective from the Edge: Scale the edge⁶

Large-scale change efforts challenging the core of the business often fail, as transformation is not a rational process – it is intensely political.

An alternative is to focus on low-investment, high-growth-potential opportunities – "edges". An edge can be a new customer segment, geographic market, or product with fundamentally different business practices that has the potential to ultimately transform the core of the organisation.

An edge has the ability to grow the pie, but it requires new organisational practices and capabilities from the core. During the early growth stages, it's important that the people in the core do not feel threatened by an edge. As the edge scales, it has the potential of superseding the old core with distinct practices and capabilities to maximise the upside potential of the edge.

★ What initiatives in your organization align with the long-term disruptive shifts in the market, could grow the pie, and require a minor investment to initiate?

66 The big shifts, where AI is one of many exponential forces, will increasingly change our lives. 99
People still overestimate the immediate impact and underestimate the long-term impact.





Edge Fellow | Techleap.nl Envoy

Constantijn Van Oranje-Nassau: CEOs have become agents of change



A decade at the Edge
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Constantijn Van Oranje-Nassau became the first Edge Fellow for the Center for the Edge in Europe. He and the team shared a mutual goal: to make European companies truly competitive, they had to start at the top and help CEOs become more entrepreneurial?

The future narrative for Europe

“Europe has to start talking more about opportunities than only about the risks and the challenges.

Regulation can help because you create a market, as we have seen in the transitions of climate change, energy, and food. But regulation can also be quite limiting. We have seen this with GDPR, and we have definitely seen it in the health and the medical devices space, where many companies are contemplating leaving Europe because the regulatory environment is so bureaucratic and problematic.”

Instead of viewing these transitions as regulatory challenges, we should be saying ‘We’re creating a space in Europe that wants to be the leading platform for new energy, new food. This is a great opportunity.’

Now, we need to properly address the AI space. While we are good at regulating, how can we regulate the space in a way that sets boundaries but also creates opportunities for great businesses to grow and give regulatory stability?

That might be the biggest challenge going forward. How will CEOs who do not understand these exponential digital opportunities adjust and turn these companies around?”

Intimate dialogues on the edge

With Constantijn, the Center for the Edge team developed new dialogue forums to help top executives explore leadership dilemmas. By creating intimate settings where insights are shared, leaders dared to be more honest about their challenges.

Learning from the power of sharing in a small group, Constantijn and Wassili envisioned a new and extremely intimate CEO round table of European leaders that could increase the speed of innovation in Europe. Together with Ralph Hamers and Hakan Bulguru, they founded Amstel Dialogues.

“I am proud that we created a forum that many of the leading CEOs of Europe engage in and really appreciate.

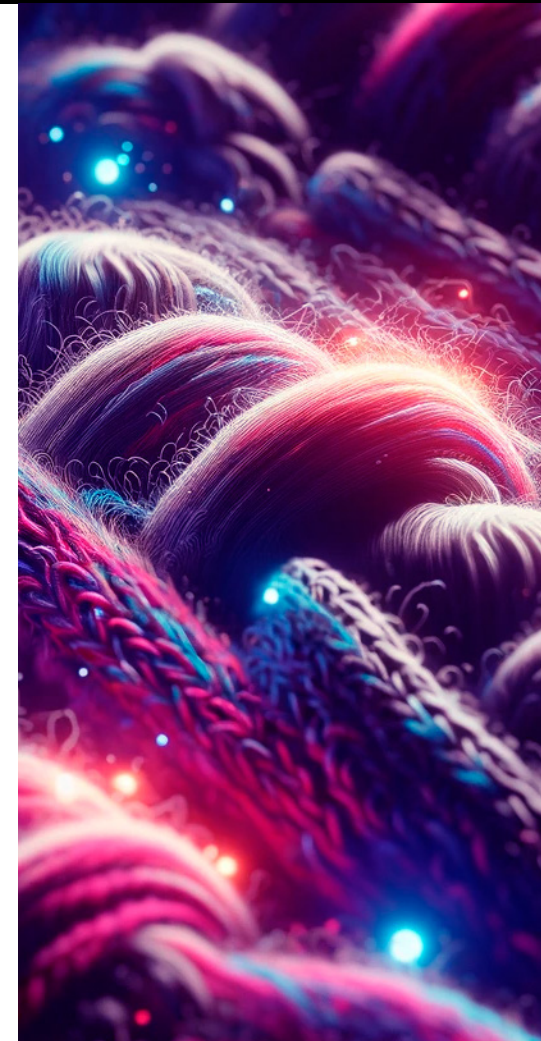
The CEO role has changed dramatically in this decade, and this was accelerated by the pandemic. CEOs are now expected to have much more control over supply chains and work more in ecosystems. Another is addressing challenges such as climate, diversity, and inclusion.”

Perspective from the Edge: Innovate in ecosystems

While “ecosystems” has been a buzzword for over a decade, there is still untapped potential for [dynamic ecosystems](#). Here, the focus is on helping all participants learn faster and accelerate their performance improvement⁸.

Properly designed business platforms can help create and capture new economic value and scale the potential for learning across entire ecosystems.

- ★ Are the ecosystems your organization is involved in today meeting your long-term objectives?
- ★ What ecosystems could your organization join, enhance, or create?⁹



Edge Explorers

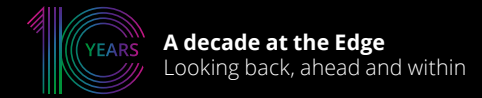
Technology, diversity, sustainability and energy





Co-Founder Equality Check

Isabelle Ringnes: A wiser techno-optimist



There is a saying, “a pessimist is an optimist with experience”. **Isabelle Ringnes**, the co-founder of Equality Check, got to know the Center for the Edge through Singularity University, and has worked with the Center on multiple occasions. She’s still a technology optimist – as we all have the capability to learn.

The past decade’s predictions coming to life, mostly

“I remember the sense of technology optimism from 15 years ago. We were convinced technology would be democratising – everyone would get access to information, and everyone could connect. Everyone had equal opportunities in terms of access to the same information using the same technology.¹⁰

The majority did not predict that social media algorithms would create enormous echo chambers and ultimately could become a threat to democracy. We did not predict that independent actors would generate a sea of fake news, shaping public opinion and influencing war.

However, one of the lessons stuck with us – the concept of exponential versus linear development. Even though our brains may be wired to think linearly, we learned by taking a retrospective view of how technology develops exponentially. With exponential technologies, a few years pass with plenty of hype and little development before things suddenly go very, very fast.

We can look to AI as a perfect example. The possibilities are incredible and mind-blowing, but so are the potential consequences.

However, history has taught us that new technology, with all its bells and whistles, often bears with it a reason to doubt and to ask critical questions. I like to hope that we are better equipped to deal with the inevitable challenges we now face. This is why I’m also happy to see that more regulation and ethical policies are demanded in this sector across the board.”

Diversity is not algebra – it’s more complex

Another research theme for the Center for the Edge has been about what enables high-performing teams.¹¹ Isabelle points out that, too often, leaders treat diversity and inclusion as a nice-to-have, rather than a need-to-have.

“It should not end with recruitment. If the organisational culture forces everyone to conform to the same thinking and behaviour, we’ll miss out on the opportunities that can come from diversity. People aren’t a math riddle with two lines under the answer.”

While algebra can be calculated using a trusted formula, people are less straightforward. People are unpredictable, and this is part of John Hagel’s point about nurturing the passion to learn faster: leaders must give people room to find their passion and develop their exponential potential.

“I would encourage all managers to seek out and foster diversity in their organisations – focusing on management, not just the general makeup of the organisation.

Diversity helps us learn and innovate faster, precisely because you are failing, learning and creating in diverse ways. However, working in diverse teams can pose a few additional challenges.

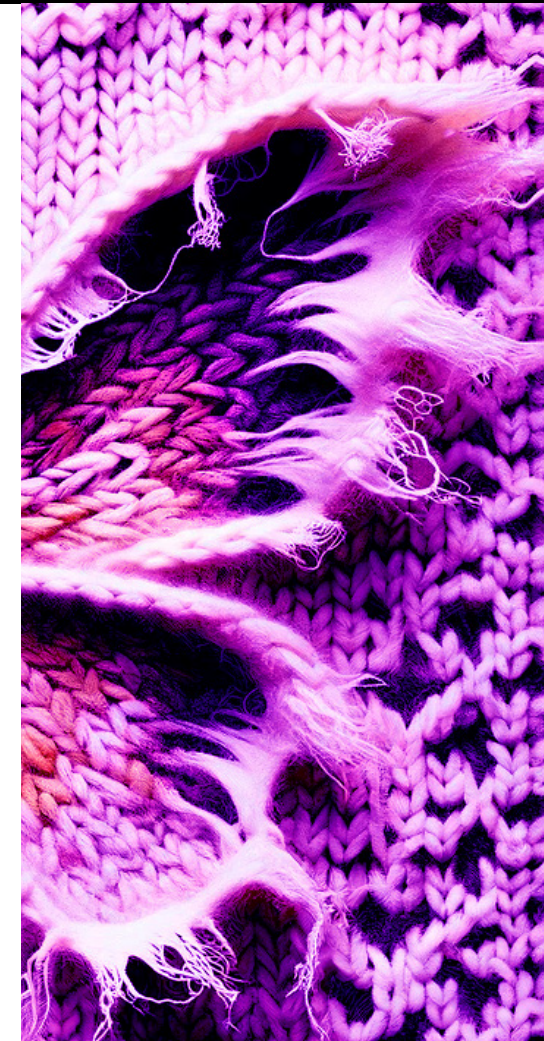
Due to the variety of perspectives and ideas, more friction can arise. It can be difficult to work with people with whom you often disagree, who have completely different perspectives than yourself and will question some of your assumptions. But that’s why it’s important: it makes you reflect, learn, and go the extra mile. You don’t just rely on what you’ve always thought was true. After all, the truth is constantly changing.

As the Center for the Edge points out, we need creative friction to explore questions and challenges to grow.”

Daring to fail

“Because artificial intelligence is a revolutionary technology, the decisions we make today, the ways we work, and the standards we set will be felt by generations long after us.

And I hope that leaders recognise that while this is a challenge to take seriously, it is also an incredibly exciting opportunity.



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Isabelle Ringnes: A wiser techno-optimist



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You have to dare to see the opportunities; you have to dare to make some bets. And as has been said again and again, you have to be prepared to fail. Hopefully, these many bets and failures will guide you to real opportunities that benefit both business and humanity.

I've had the pleasure of being part of your excellent Center for the Edge sessions, where you connect leaders and edge thinkers and doers on exciting topics, giving them so much knowledge and inspiration that they can bring into their work. There's great potential in having these leaders in these sessions asking themselves: "Given this, what could I achieve with my influence?"

As John Hagel stated in the Conversation on the Edge session I attended earlier this year: "We must dare to ask the questions where we don't have the answer."

Perspective from the Edge: Harness creative friction

A lot of attention is given to the notion of "psychological safety" in teams, and we absolutely need to treat each other respectfully. We also need to be willing and open to challenge each other to search for more impact.

Put under scrutiny, could what we often call 'safety' and 'trust' just be other words for predictability? How often does trust depend on someone acting predictably? The big question is whether you can trust people without knowing what they will do.

In complex systems, you cannot predict the outcomes. You have to try things out. It's challenging and will cause a lot of friction – but it is also more exciting. Leaders must dare to ask open-ended questions where there is no clear answer, and invite others to explore potential answers together.

★ How can we turn friction from a destructive to a creative force, accelerating learning, new capabilities and innovation?



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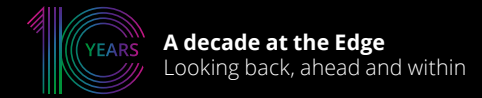
I would encourage all managers to seek out and foster diversity in their organisations – focusing on management, not just the general makeup of the organisation.

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Professor, The University of Bonn

Aimee van Wynsberghe: Europe needs to be a leader in green AI



"I was invited to be a devil's advocate at the Center for the Edge dialogue with top executives. It was a safe space, Chatham House Rule, where these executives had the opportunity to discuss obstacles they were facing.¹²

So, I asked them challenging questions about ethics and data-sharing practices. And they would ask me questions such as: 'We have the possibility of collecting data for this. Am I allowed to?'"

In 2019, **Aimee van Wynsberghe** became an Edge Fellow on the topic of Ethical AI. At the time, it was uncommon for boards to address AI, and the complex notion of ethical AI was "beyond the edge" for most boards.

"I work mostly in the academic space, and it can be very difficult for academia and industry to work together to understand each other's sides. But, through my Edge Fellowship, I was brought directly into contact with top executives from a wide range of industries. And there was this mutual learning that happened.

I would still be the academic who tried to explain what was happening in the academic world. But then, the industry leaders would say 'Aimee, that's just not feasible. That's just absolutely impossible.'

That made me think: 'Okay, alright, so what is possible?' It really had an impact on my own research, and then I found that it had an impact on their directions and their motivations. And the CEOs became inspired and started

saying: 'What you talked about in the dialogue, what can we do now to act?'"

Green data centres can lead the way

For the past four years, Aimee has been arguing that data centres need to become green.

"How can we use only renewable energy sources for our data centres? How do we look at the procurement chains and where the minerals are coming from, and only do business where mining conditions are socially responsible?"

It is possible to achieve this, but it means that we need to have some transparency on how bad and complex the situation is. Other countries could then look to Europe and ask: 'How did you do it? How do you have all your data centres running on renewable energy?'

However, that means that Europe must act now. Because we started the discussion about the ethics of AI much earlier in Europe than in other regions, we are getting into the space of environmental considerations. While other countries are catching up, Europe has been doing that for years. Europe can now take the next step forward and say: 'It's not just about ethical AI, it's about sustainable AI.'

Sustainable AI is not just about using AI for sustainability but addressing the sustainability of making and using AI in general.

Perspective from the Edge: Learning platforms

One of the great opportunities with ecosystems is to increase learning across the players in them. This is where platforms come into play – they are all about fostering the interactions required for an ecosystem to succeed.

Most platforms focus on short-term transactions, are individualistic, or focus on sharing static knowledge. Learning platforms, on the other hand, are about collaborative learning through action, creating new knowledge, and forming impact groups for collective problem-solving and innovation.¹³

While platforms can be digital, they can also be meeting spaces that use a few well-considered rules and protocols.

Over the past decade, a significant learning has been the impact of facilitating leaders learning with domain experts on the edge. The Center for the Edge dialogues, including **Conversations on the Edge**, **Amstel Dialogues**, and **Dining to Net Positive**, are platforms that can accelerate impact within certain ecosystems.

This can create a reinforcing cycle, where people with a passion to contribute join, and talent then attracts talent. Instead of competing against efficiency and cost, leaders can harness and amplify network effects.





Edge Fellow | General Manager Eindhoven AI Systems Institute

Carlo van de Weijer: Energising narratives about our future



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Carlo van de Weijer is a leading thinker and researcher in AI, mobility, and climate-friendly mobility. After collaborating with the Center for the Edge as an expert on the future of mobility, transport and energy, Carlo recently became an Edge Fellow.

“Well over a decade ago, I test-drove one of the early Tesla Roadster models. It was shaky and small, with room for only two people. However, it was fast and silent. I realised this innovation would unleash an electric transport revolution.”¹⁴

Planning for a long-term future of cheap energy

The electric transport revolution came faster than anyone thought possible. Now, the long-term future of cheap energy is coming faster than expected – mainly due to the rapid price decline of solar power, combined with the rapid innovation of long and short-term battery storage and synthetic fuels.

“Energy will be a bit like water. It will be almost free, falling out of the air, but not always available where and when you need it.”

Carlo points out that if we solve the energy equation, we are on a good track regarding carbon emissions.

“Europe’s future narrative could include the possibility of doing everything green. This would better position the countries that are still growing to leapfrog.”

As an example, Carlo mentions that many African countries have skipped landlines and gone directly to mobile phones.

Before the innovation of the mobile phone, enabling widespread telecommunications in emerging economies would demand incredible investments and take ages

But, with economies of scale, mobile technology turned out to be much cheaper – especially if you include the infrastructure in the calculation.

We are on a schedule to prevent the biggest disasters. Through innovation, human beings have managed to solve their problems. Always by innovation, never by degrowth or denial – the two other often suggested strategies.

Seeing the opportunity in the challenge, not vice versa

“Our history has countless examples of turning disadvantages into advantages. In the Netherlands, we have always had a challenge with keeping our feet dry.

But because we innovated ourselves from drowning, we are now leading the industry in building dikes and saving land.

In terms of electric energy, countries with long winters will have an extra storage challenge. But the most constructive perspective is recognising the opportunity in this challenge. Solutions to this challenge can be exported to the rest of the world and accelerate the green shift.”

Green growth, not degrowth

“A challenge with the ‘degrowth’ movement is that it distracts attention from real, long-term solutions. It is ultimately a very unappealing proposition, and it is unlikely that people will voluntarily take a significant and structural step back in comfort.

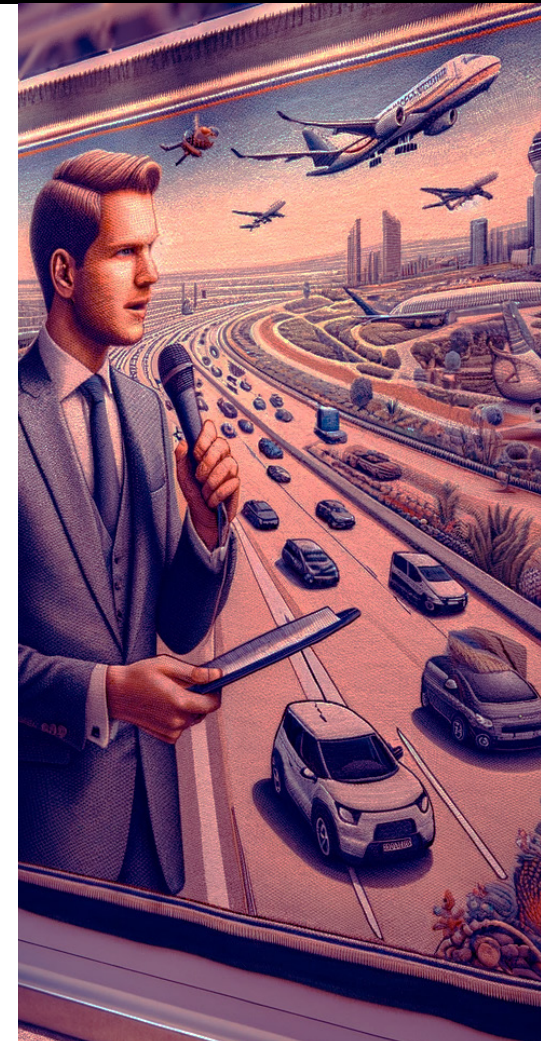
It is hard to move people to do things for the long term. A better approach is to develop something that will lead to a better long-term future, such as electric vehicles driving much better and cheaper than gasoline vehicles.

‘Green growth’ is a better frame.”

Perspective from the Edge:

There is a bright light at the end of the tunnel, and it is not just another train coming toward you. Through innovation, we have liberated ourselves from many catastrophes in the past.

To survive, systems must evolve to provide easier access to the currents that flow through it.¹⁵ We tend to move toward what increases our degree of freedom. As our capacity to innovate is endless, long-term narratives should be opportunity-driven.



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Energy will be a bit like water. It will be almost free, falling out of the air, but not always available where and when you need it.

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Mobility in the coming decade

As Carlo is a mobility expert, we challenge him to predict what the future of mobility looks like. Simplified, he states the following:

- **Cars** will become cheaper, better, and more sustainable. However, we should make smarter parking facilities and make sure we use them more sensibly.
- **Planes** will become the most sustainable option for long-distance travel, and the cheapest as the infrastructure cost of thin air beats roads and rails.
- **Trains** remain essential for connecting cities, but high costs are becoming increasingly hard to justify.
- **High-speed trains** lack the societal benefits to justify the huge financial and environmental costs.
- **Bicycles** will be the worldwide saviour of cities, more so than today.
- **Mobility-as-a-Service and Autonomous Shuttle Services** will arise but will be a marginal part of the overall transportation mix.
- **Taxi drones** are interesting experiments but are unlikely to be significant for a broader market.
- **The Hyperloop** is a fun engineering challenge, but it fails to solve a problem that is proportionally significant. I predict we won't see a hyperloop system constructed transporting goods or passengers at scale – or else I'll eat a tractor.

Carlo has high hopes for air travel, hinting at similarities with the electric car revolution:

“Recently, I had my first flight in an electric plane. It was shaky and had only two seats. However, it was fast and silent.”



Leadership by Narrative





CEO Arçelik

Hakan Bulgurlu: Experiential storytelling

A global business leader and climate activist, **Hakan Bulgurlu** is the CEO of Arçelik, a home appliances manufacturer operating in 150 countries. As a co-founding member of Amstel Dialogues, Hakan's perspectives on purpose-driven business made a deep impression on Wassili and Constantijn.

Ten years ago, Hakan had an eye-opening moment digging into research from The Intergovernmental Panel on Climate Change (IPCC).¹⁶

"Holy crap, this is happening, and it's happening much faster than people realise."

The trajectory of CO₂ compounding in our atmosphere was far from linear. It accelerated rapidly, making our oceans more acidic, killing coral reefs and melting glaciers.

With his newfound understanding of the pace of climate change, Hakan developed the vision of turning Arçelik into the world's most sustainable household appliances company. But a decade ago, sustainability was typically a peripheral CSR area that should not interfere with business.

"When first told them about my vision, I could see on their faces: 'Yeah, yeah. Here goes Hakan again.'"

Hakan was facing a challenge to transform the organisation into a purpose driven one and to convince the organisation that their company should reduce its carbon emissions, which at the time was both a long-term and an abstract ambition. He had to make it tangible.

Small moves, smartly made

Instead of setting up an extensive transformation program with ESG thinkers, Hakan sought out the doers.

"We realized that the hydraulic tools on the production line tended to leak air, and by fixing the leaks, we cut power consumption in half. A very simple thing. As I understood how easy it was to fix these small things, I wanted to inspire everyone to find more cases.

Rather than thinking of myself as a creative, I think of myself as a good storyteller. But a good storyteller needs good content. So, I asked my team, 'How can I get engineers on the production line to think like this?'"

The power of storytelling

From early on in his career, Hakan had mentors who drilled into him the importance of communication.

"It doesn't matter what you do if you're not communicating it right. Ultimately, that's why I climbed Everest. It made everybody pay attention."

He decided to climb Mount Everest to increase awareness about the rapidly increasing pace and magnitude of climate change.

"My journey to climb Everest turned into a daily sustainability feed. Whether it was about the melting glaciers or my preparations for the trip, it always had a sustainability fact built in.

It was a pivotal moment when I finally convinced the board and my shareholders that sustainability also made good business sense.

And then when I went and came back, it gave me a lot more credibility as a leader as well."

Hakan went on to write a book about his journey, *A Mountain to Climb: The Climate Crisis: A Summit Beyond Everest*.¹⁷

The power of doing the impossible

It was a great moment for Hakan when Arçelik was named the leader of the Dow Jones Sustainability Index.

"It gave more credibility to everything I said about transforming the business. It became real, not just a fairy tale we are chasing. Our goal was attainable, and we have taken the first step.

Becoming the leader in this field energised my whole team. Leading sustainability typically sits in the developed world's domain, and we are a company from the emerging market part of the world.

There is one moment I will never forget. I was on a panel at the New York Climate Week, and in the audience, my wife was sitting next to a Harvard professor. When they mentioned on stage our leadership in the Dow Jones Sustainability Index, the professor turned to her and said, 'There has to be a mistake!'



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When first told them about my vision, I could see on their faces:
"Yeah, yeah. Here goes Hakan again."

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It was unthinkable that a Turkish-based business could be the leader in sustainability.

My wife turned to him and said, 'That's my husband up there.'

Everyone was saying that our goal was against all odds. So, when we succeeded, it became an extremely powerful multiplier. It galvanised everyone around one goal: making meaningful change."

Looking ahead

"If the climate continues to change this way, carbon credits will be mandatory in five years. Then, the cost of your carbon emissions may put you out of business. How do you hedge for this?"

Hakan states that reducing your power consumption and increasing renewable energy capacity is the way to go.

"We just invested in 105 megawatts of solar panels. This is utility-scale and can generate roughly 40% of all the power we consume globally. And this is production to consumption. There's no middleman, and we make the investments ourselves. As energy prices may spike also in the future, the payback could be under three years."

Hakan points out that Arçelik building its own solar power plant would have been impossible a decade ago. But when you have done it once, it becomes easier to get support for doing the impossible again.

Perspective from the Edge:

All CEOs experience pressure from their board to deliver on quarterly financial performance improvement. The more the board focuses on it, the more the CEOs focus on it, and so on. As John Hagel phrases it, it can become a 'doom loop.'

Recognising a gap between the opportunity and the company he was leading, Hakan made three interventions:

1. Small moves, smartly made, can set big things in motion

For leaders, it is tempting to do one big thing, a 'big bang' approach to transformation. However, this also invites the 'immune system' to attack, draining critical energy and momentum from the initiative.

2. Make content with examples that make sense

Mastering storytelling is essential, but you also need good content in a context that makes sense for the employees across the organisation.

3. Great storytelling inspires

Leaders need to act to make their aspirations explicit. They can inspire others to follow their reasoning by showing their commitment to the aspiration.

★ What contexts might amplify the core ideas or questions in your narrative?





Former CEO UBS, Former CEO ING

Ralph Hamers: The Lady Gaga learning journey

When **Ralph Hamers** was preparing to become the new CEO of ING, the company was in a challenging period of restructuring. His approach was to look far ahead, applying a Zoom-out¹⁸ perspective:¹⁹

"I was basically asked to develop the new future of the company. So, I asked, what will be the ultimate role of a bank going forward? How should that be different from the past?"

He went on a learning journey to Silicon Valley, and got inspired by the digital disruption taking place. The music industry provided an eye-opening example with 'Gaganomics'. Lady Gaga was the first artist to go direct from production to release without using producers or radio stations. She released her songs directly over the internet, skipping the normal steps in her industry.

"This helped me re-imagine the future of digital banking."

Have a burning ambition, not a burning platform

By involving employees and partners in the process of developing the future narrative of the company, each person could recognise their contributions. This helped everyone become enthusiastic about achieving the shared goals.

"People were anxious to see a light at the end of the tunnel. They needed to understand the future we were aiming for and how we would get there. My role as the CEO was to convey what future we were heading towards, and what role we would play in it."

In what must be unusual for a top executive of a large bank, Ralph did not have numbers in his presentations.

"The numbers are a result, not a starting point. We tend to become overly analytical, and diagnose the company from the numbers. But, to lead transformation, that's the wrong starting point."

What could be a burning ambition for Europe?

"There is a massive opportunity for Europe. This may sound strange, but it lies in the rollback of globalisation.

So, I believe in globalisation as a way to ensure that we all cooperate, and I am not happy with the fact that globalisation in itself has not been as successful as we had wanted. But, in this rollback, I think Europe can play a very constructive role.

We can be a more liberal player in the values that we stand for, and we can be a more social player in terms of how we deal with data, with privacy, and with ethics around AI.

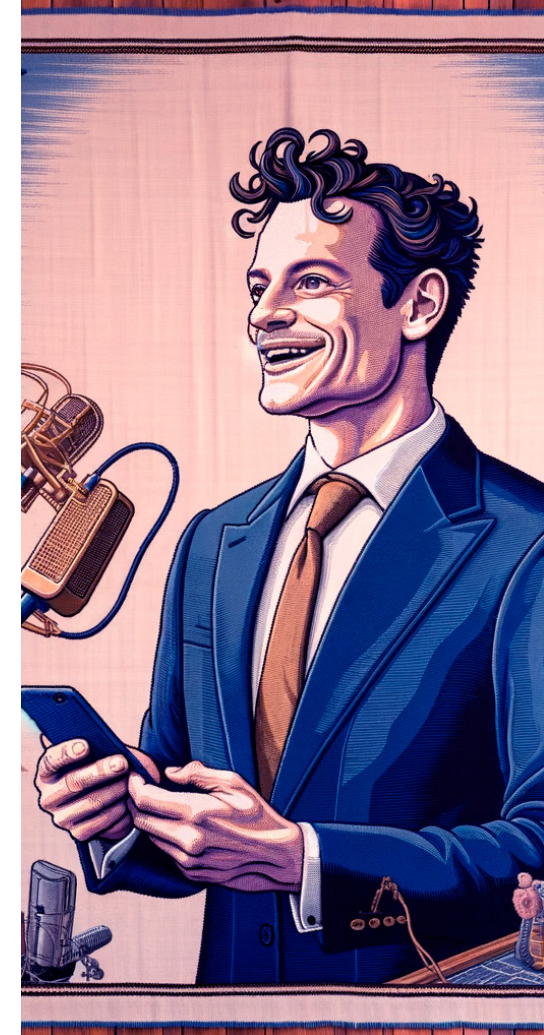
There are dangers in how AI will be implemented across the world. The US may go overboard one way, and the Chinese may go overboard in the other direction. Similar to how Europe dealt with data privacy, we can make a difference in shaping the ethical norms and standards as to how to apply AI."

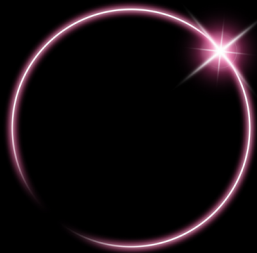
Seeing the opportunity beyond the complexity

"Ten years ago, CEOs would not voice political opinions in their role as CEO. There was a line between politics and how we run a business.

Now, both society and your staff want you to come out with an opinion on the war, on diversity, on ESG. They want to know where you stand.

Although complex and risky, this is also a great opportunity. You can influence what happens in the world."





Ralph Hamers: The Lady Gaga learning journey



A decade at the Edge
Looking back, ahead and within

Perspective from the Edge: Zoom out, Zoom in

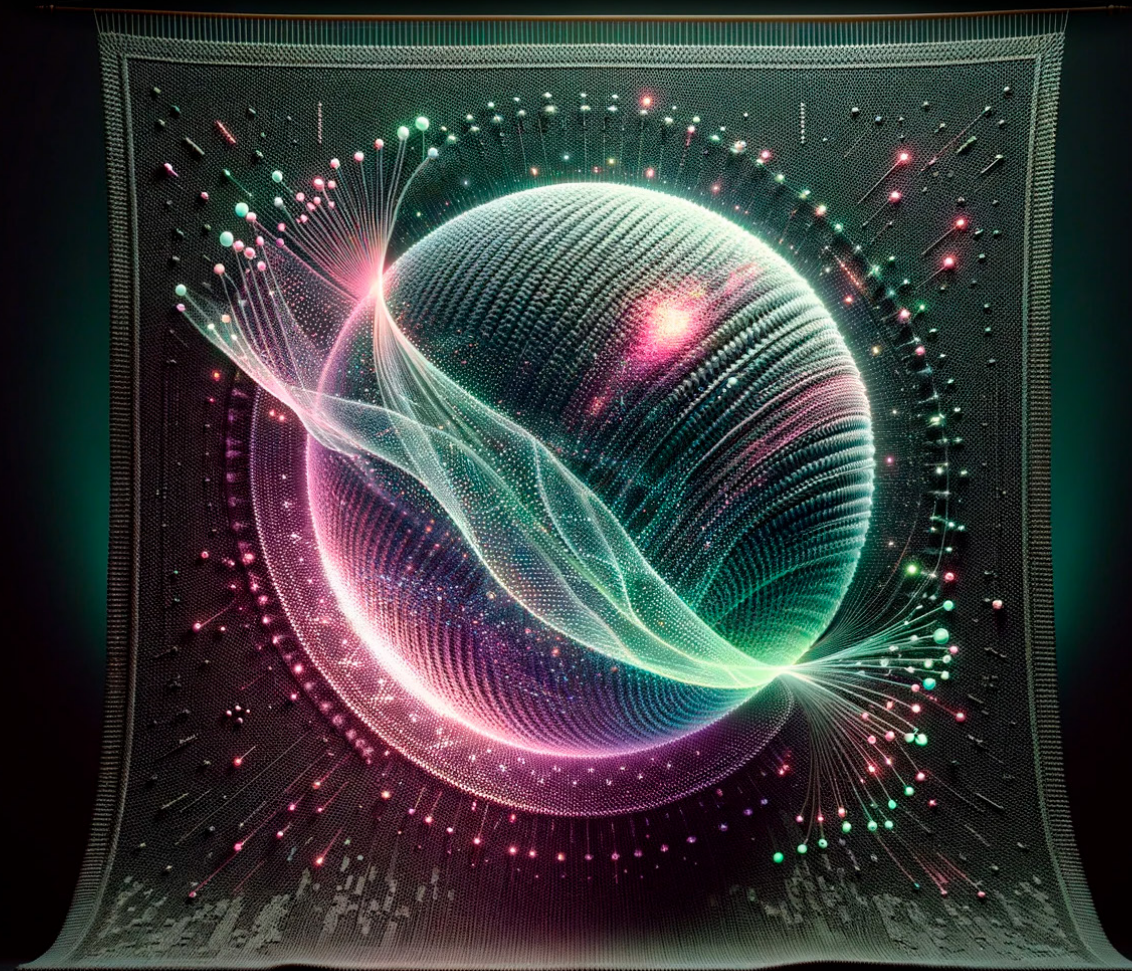
In a rapidly changing world, strategy is less about position and more about trajectory. It's about having a sense of destination, and committing to accelerating movement to reach that destination.

Understanding the market your company will operate in 10–15 years from now should not come from extrapolating from your current market or business model. Instead, embark on Learning Journeys and Zoom out, Zoom in labs to experience the edges where the future is already emerging.

Upon his return, when Ralph connected Lady Gaga with of banking, the seemingly incompatible concepts sparked the imagination of his stakeholders.

It is hard to think about concepts if we don't have words for them; some scientists believe it is impossible.²⁰ However, by creating new words, or interesting combinations of words, we create spaces where the imagination can roam freely.

- ★ How can we create or introduce new terms that help people think beyond outdated practices?
- ★ What innovative concepts might free us from the conventions of our age, and help people imagine a future unbounded by current convictions?





Former CEO DSM | Chairman Royal Philips | Board Member Unilever

Feike Sijbesma: Getting involved to change the narrative



A decade at the Edge
Looking back, ahead and within

Fifteen years ago, **Feike Sijbesma** became the CEO of DSM with a mission to transform DSM from a bulk chemical company into a sustainable innovative science-based company with a focus on food and nutrition. He led the company for almost 14 years.²¹

“As a biologist, I grew up with Darwin’s ‘The Origin of Species’ and knew that those who survive are not the largest, nor the strongest, nor the fastest. But the fittest. The companies that are the most adaptive will thrive.

We need to adapt ourselves to a continuously changing environment and pay attention to sustainability, climate and biodiversity. We cannot run our economy in a linear process as before; we need circular economic models.”

Empowering others to spread the word

Committed to changing the company, Feike needed to develop an inviting narrative of the future and communicating this narrative to a diverse group of stakeholders and convincing them. Feike also learned the power of repetition and that some only got the message after hearing it several times.

With his deepened understanding of the importance of communication, Feike went further. Not only telling the narrative repeatedly, but also expanding to new formats such as videos, town halls and social media.

What further helped to accelerate the change was letting his top leadership share the narrative instead of him, bringing them to the World Economic Forum.

“Everybody who knew the narrative passively now knew it by heart, because they told it to themselves. People start to really believe a story by telling it themselves. The story, the strategy becomes theirs. So, I realised, ‘Hey, this works. I will let the narrative be told by more of my people.’”

The involved leader

A clear example of “setting the example” was when the company had to approve a certain investment in China. Feike started questioning what was being done with the wastewater. The reply he got was: “It’s all good and legal.”

Feike asked: “If you were to build the same factory in the Netherlands, would you build it in the same way?” The reply was that in the Netherlands they would build a wastewater treatment system next to the factory, before allowing the water to flow into the river.

When Feike asked: “Why don’t we do that within China?”, they replied: “It’s legally and regulatorily not necessary.” Feike’s reply?

“It may not be our legal obligation, but Chinese people are people like Dutch people. If we think it’s needed here, it is also needed there!”

We built the wastewater treatment plant.”

Cows and the challenge of innovating across systems

“As we identified the largest sources of CO² emissions, one source kept coming back: Cows. Our response was: ‘Let’s try to find an ingredient that can reduce carbon emissions from cows.’

The challenge was extremely complex; in addition to developing a new product, it required creating a new market, since CO² equivalents (methane) emissions from cows are legally exempted, also from e.g., carbon pricing systems.”

Ultimately, DSM introduced a new product to the market: a feed supplement that reduces cow’s methane emissions.

“We developed a new ingredient, Bovaer, which reduces the emissions of cows by more than 30%, but also a new business model, since especially the dairy companies helped us here: this was their main tool to reduce Scope 3 emissions.”





What would be the topics to consider in general regarding the future?

“When developing the future narrative for your company, the first step is to look outside the company, not within. I suggest four factors that all leaders need to understand, and explore in combination:

- Globalisation versus increased regionalisation
- Population differences – Africa will have the youngest generations in the world, with India following behind, while the rest of the world is aging
- Technology, especially AI and biotechnology
- The importance of taking responsibility and purpose – ESG will have an even bigger impact.”

Perspective from the Edge: Focus on long-term certainties

In a world becoming more and more complex, exciting mutations will occur. Leaders who can create new combinations of these factors – a new synthesis – will participate in shaping our future.

However, attempting to transform the core of any organisation directly will cause resistance. Instead of pushing change initiatives across the organisation, leaders can create pull from the edges and outside of the organisation.

Attempting to change someone’s understanding through purely intellectual means will likely be futile. Dictating thoughts will not be helpful; people must actively recontextualise, internalise, and personalise new concepts. Instead, engage them emotionally through compelling rhetoric or more dramatic methods.

A powerful approach is developing, communicating, and ultimately scaling an opportunity-driven narrative. This can attract people, within and outside the organisation, who are passionate about achieving the opportunity addressed in the narrative. Slowly, gravity shifts toward the edge initiative, which ultimately can transform the core organisation.

- ★ How might you help people play with your ideas through conversations?
 - ★ What experiences might help people embody your idea?
-





CEO Schibsted | President European Tech Alliance | Mozilla Board Member

Kristin Skogen Lund: CEOs need to be talent magnets



A decade at the Edge
Looking back, ahead and within

Kristin Skogen Lund is the CEO of Schibsted Group, an international technology and media company with over 200 million users, headquartered in Oslo.

In recent years, she has contributed to the Center for the Edge's dialogues and new research in Europe. When asked what she would identify as the most significant shift over the last decade, she immediately addresses the rapid evolution of internet connectivity and platforms.²³

"Everything is becoming more and more knowledge-based. As the CEO, my task is to be a magnet for the right people, then ensure that they thrive and perform."

The rising demand for purpose

Kristin observes that one significant trend is the increasing importance of 'purpose'. She notes that the rising generation, having grown up in a society with more abundance than her generation experienced, exhibits a stronger "what's in it for me?" culture. For them to invest many hours into something, it must consistently be meaningful.

"This definitely puts more pressure on us to create that sense of meaning and purpose in the workplace. But honestly, I think that's a great thing. Ideally, that's how all workplaces should operate."

Nurture a culture of passion

Kristin recalls how she used to travel to various offices. With over 6,500 employees spread across several countries, there were limits to the number of people she could interact with daily.

"We were already very digital, but became more so after the pandemic accelerated digitisation for everyone. Now, I can influence through digital town hall meetings and communication on various platforms, but it remains from a distance.

So, the trick is the culture. All new employees join a culture where everyone is extremely dedicated. They are highly ambitious people who want to achieve something. They care about what they do. They have a passion.

My role is to make sure that we have this culture in every nook and cranny."

A dark side of hyperconnectivity

"A dark side of the digital platform shift is how the public debate has become more brutal, amplified by social media. Leaders are much more exposed than before, and expressions of hate for top executives seem to be increasing.

Sadly, this has made me incredibly careful. I almost never dare to joke with people anymore. And I'm actually kind of easy-going and funny in style, but I need to be careful.

It even affects me in private, because I've become so quote-conscious. I can't say anything that can be misinterpreted outside of context. It's hard to let loose because you never know if someone's recording you with their phone, right?"

What could be Europe's zoom-out strategy?

"Europe is not lacking in terms of creativity or entrepreneurship. But with a few honourable exceptions, we are not good at scaling innovations in Europe.

Some point out over-regulation as the cause. That may be part of the explanation, but the biggest problem is that we do not have one domestic market. We do not have a domestic market of 300 million like in the US, let alone 1 billion like in China. Europe is too fragmented.

Also, we are too fragmented in Europe about what we are going to achieve."

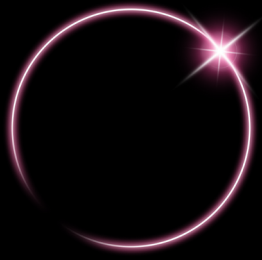
When Kristin was on the panel of the last Center for the Edge dialogue in Oslo, they discussed developing a Zoom out, Zoom in strategy for Norway, aimed at attracting talent from across the world.

"Imagine what we could achieve in Europe if we could shape and align on an opportunity-driven narrative? We should have some areas where we simply say, 'This is where we want to be, and we will mobilize all our resources into creating European solutions that can become global!'"



66 My role is to make sure that we have this culture in every nook and cranny.

99



Kristin Skogen Lund: CEOs need to be talent magnets



A decade at the Edge
Looking back, ahead and within

Perspective from the Edge: Develop a culture for passion

In an increasingly complex age, traditional analytical and linear approaches will not work. Large organisations struggle to innovate because they have become fixated on the goal of efficiency.

The fear prevalent among senior leaders can be overcome by triggering excitement. One way to reduce the resistance to change and innovation is to attract people who have what we call the “passion of the explorer.”

These are individuals who demonstrate three specific qualities: **questing**, which involves constantly pursuing new challenges and learning; **connecting** – actively seeking interactions and collaborations with others; and a strong **commitment to their field**.

They are passionate about learning faster in their domain. And this is not learning in the sense of transmitting existing knowledge. It is not about making the tedious process a bit more fun. On the contrary, these people care about developing new knowledge, in their context – that’s when they are having fun.

★ Identify the most passionate explorers in your organisation and ask open questions to learn how they learn. How do they interact with others to pursue those goals?

★ How can you build a workplace culture that becomes a talent accelerator, enabling people to learn faster with others, inside or outside your organisation?



A few suggestions
for the next decade



A few suggestions for the next decade

Friction and creative energy occur on the edges. And as with all complex systems, you cannot predict what will happen. But you can provoke serendipity by connecting diverse people in ways so that exciting things might happen, as with CEOs of large organisations and edge explorers.

Though the occasion for this story was a 10th anniversary, it soon evolved beyond numbers or facts. We called for serendipity, and as expected, unexpected patterns emerged.

While the following themes are interconnected, we have organised them in our structure of The Call to Explore, Edge Explorers, and Leadership by Narrative, but in reverse order. The greatest journeys are not linear but circular – leading us back to where we started, but hopefully a bit wiser.

Leadership by Narrative

Stories are webs of meaning

The most powerful tools used by the leaders we interviewed are not technology, processes or transformation programmes. These leaders weave causal chains together using stories, creating new meanings.

Stories can be great vehicles for conveying causes.²⁴ The structure of stories may be linear, with a beginning, a middle and an end, as defined by Aristotle,²⁵ but unlike mathematical formulas, stories can convey complex relationships between elements in a manner that is memorably entertaining.

Questions beyond facts

The leaders we interviewed also employ questions to delve deeper than surface-level data, aiming to uncover underlying causes and provoke novel thinking.

For example, when Feike inquired about the factory in China, his question was not to get more facts and data about the regulations from his domain experts. Instead, it was counterfactual: “If we were to build this factory *not* in China but in the Netherlands, would we build it in the same way?”

Such questions transcend existing information. It enables us to escape our default tendency to dig deeper in our existing understanding, challenging us to consider alternative realities and their implications.

Similarly, Hakan’s question to his team: “How can I encourage engineers on the production line to adopt this mindset?” isn’t about deploying an existing practice or approach. The open question encourages a culture of curiosity and innovation.

Kristin’s question: “What could we achieve if we shape and align on an opportunity-driven narrative of Europe’s long-term future?” goes far beyond practicalities to ignite a collective vision.

These leaders are not just seeking answers; their questioning also creates an environment where the quest for knowledge is a shared mission. Their aim is not to know everything themselves; they are fostering a culture of curiosity and collective exploration. Each individual’s insights contribute to a larger pool of understanding, creating a dynamic, collaborative approach to problem-solving and innovation.





Edge Explorers

The ten leaders we interviewed for this story addressed several 'unexplored spaces', but two prominent patterns emerged, which we will address further: rethinking leadership and strategy through the lens of psychology, complex adaptive systems, and narrative; and the rapid advancement of AI.

Numbers do not have to be the heart of the equation

A crucial insight for Wassili was understanding that: "Value is not always found in tangible factors such as technology, or hard facts like numbers and physical assets. It is in the intangible; the soft skills such as the vulnerability to ask questions."

Over time, Wassili and his team devoted more and more attention to the psychology and personality of leaders. They found leaders with more potential for passion and innovation, and began working with them.

To get people to reconsider their convictions and assumptions, we need to go beyond mere facts and data. We need to address emotions.

Exploring outer realms for inner change

Great stories often begin with an invitation to leave the familiar to explore the unknown. This was one of the findings in Campbell's analysis of thousands of traditional stories across cultures.²⁶

As we all know, stories can create memorable emotional experiences we feel in our gut. When characters in myths depart from the known into unknown territory, it opens the audience to be more receptive to new and different ideas.

Drawing inspiration from the first Western philosophers that embraced Hinduism and Buddhism, Campbell emphasised that myths are not meant to present historical facts, but to facilitate psychological change.

But as the European intellectual movement of the "enlightenment" increasingly equated truth with facts, the myths that had evolved into religions adapted. They now conceal their allegorical nature, turning psychological metaphors such as the virgin birth from the symbolic to the biological, and "the promised kingdom" from a psychological state to real estate.

We should understand stories not as mere entertainment, or factual, historical accounts, but as powerful tools for leadership and transformation.

The surprise twist with AI

A topic emerging as a red thread throughout our interviews with the ten leaders was machine learning, simplified as “AI”.

In the coming decade, AI will continue to “do the impossible”. In the past decades, discussions on AI have been focused on how machines might displace blue-collar jobs – the so-called 3Ds of work: “Dirty, dangerous and demeaning.”

However, the twist that sent shockwaves down office corridors was that machines were more fit to imitate the “brainy” jobs.

As the edges of AI evolve, we need to imagine its interplay with other long-term shifts. In an increasingly polarising world, people will be both repelled by and excited by the frontiers of artificial intelligence. One camp will call for strong regulation and shutdown, the other proclaiming their love for the infinite possibilities the technology provides.²⁷

But in either case, technology should not be the starting point. The value of artificial intelligence hinges on data, but data is also inherently stupid. And as John Hagel emphasises, the quality of data depends on trust. In an environment where trust is eroding due to rising pressures and fears, the willingness to share data diminishes, significantly impacting the usefulness of AI.²⁸

Correlation is not enough

As we all can observe, the combination of machine learning coupled with large amounts of data produces amazing results. But data is not understanding, and machines still cannot explain why pieces of information are connected, and the way they affect another.

In his book: *Why: The New Science of Cause and Effect*, Judea Pearl, a renowned computer scientist and philosopher, argues that understanding causation, not just correlation, will become pivotal for the advancement of artificial intelligence in the next decade.²⁹

The other side of the tapestry

Similar to a tapestry, the world presents a well-ordered facade while its lesser-known backside is chaotic and messy. But it offers richness to those who venture out to explore the complex whole.

Western thought is still affected by the dichotomy of the mind as a force separate from the body, three centuries after Descartes proposed this distinction under pressure from the Church.²⁹ It elevates the process of human ‘reasoning’ to the realm of the divine, and one of the many consequences of this myth is a misplaced presupposition of causality.

We assume processes must be governed by an actor outside the system. This affects our understanding of “leadership”,³⁰ as well as our understanding of consciousness.

An alternative path to understanding the phenomenon of both leadership and consciousness might be found in nature’s intricate interconnections. Consider fungi and their extensive mycelial networks, subtly orchestrating a complex, mutualistic relationship with their surroundings, including communication.

Similarly, nearly all the components that constitute your body have been replaced over the past decade. Fortunately, this process of radical change happens outside your control – it would be exhausting if these complex tasks required leadership.



Principles for the next decade

From	To
Reduce complexity	Embrace complexity
3-year strategic plan	Zoom out, Zoom in
Optimize in silos	Innovate in ecosystems
Find answers in the data	Imagine new questions
Share existing knowledge	Create learning platforms
Diversity integration	Leverage creative friction
Hire for and develop skills	Develop an explorer culture

The Call to Explore

Leaders today find themselves at a pivotal point, navigating the evolving landscapes of AI and sustainable practices and regenerative business models. The lessons from the past decade offer guidance: on the practical side, leaders must nurture the edge environments for their organisations, creating spaces for innovation and exploration. On the intangible side, they must dare to be vulnerable, acknowledge the limits of their knowledge, and actively seek dialogue with experts in emerging fields.

Instead of trying to reduce complexity, leaders must embrace it. Organisations, ecosystems, and individuals are all complex, adaptive systems. The key to shaping the future lies in harnessing that complexity.

A major learning from the past decade holds true for the next: the great opportunities with these new technologies hinge on our emotions.



Evolve your personal narrative

As John Hagel states, narratives can be a powerful catalyst for serendipity. To tackle the next decade, his first question to leaders is: "Have you articulated your personal narrative?"

"The journey beyond fear starts with evolving your personal narrative. Everyone has a personal narrative already, but very few people have made the effort to articulate it, much less reflect on it.

When doing so, they tend to discover that their view of the future is about a big threat out there. And there's not much of a call to action to anyone else, because they can't trust anyone else; it's all on their shoulders. They have to do it themselves. So, they realise that's not going to lead to a lot of success in terms of growth and impact."

Leaders must evolve their narrative, and focus on an inspiring opportunity that excites them. Then, what can they ask others to do to help? What's their call to action for others, making it an opportunity for many people to say: "Let's come together and do this"?

The opportunity to explore the unknown is the key to finding your passion. And in this journey, you can understand what matters – and connect with others who want to help you in your journey to create more impact.

The opportunities are out there

The journey continues, with a deeper understanding of our advice for leaders to explore opportunities for new growth: growing the impact of their companies, and growing as individuals.

Constantijn points out that: "We have not achieved our goal yet. But in our journey in Europe, we started out helping CEOs embrace the opportunities of new technology. Then, we began empowering them as change agents for complex challenges. Now, with the rapid development of AI, we are in some ways closer to where we started, as these leaders need help managing these massive technology shifts."

It's both. As AI will also accelerate several societal shifts reshaping the world, we can use these technologies to address these complex challenges and emerging opportunities.

When we ask John to spontaneously zoom out for the next decade and propose nothing less than a future narrative for Europe, he addresses the "silver tsunami" – the long-term demographic pattern in Europe of increasing ageing.

"Why not transfer that into an opportunity and ask ourselves what we could do to make ageing more healthy, fulfilling, and productive? And continue to learn and grow even though we are much older? And what technology could help us do that?"

Context is key³¹

The mission of the Deloitte Center for the Edge is to help leaders make sense of emerging opportunities and transform them into tangible realities.

An important part of our way of working is asking open questions, such as: "What is happening?", and "Why are these changes occurring, and what are the implications and opportunities?" The siren call of short-term trends is strong, but we can steer clear of transient fads and distractions by focusing on the long-term opportunities.

The next decade will be not only complex, but wicked,³² with the number of interconnections between challenges increasing rapidly. A world of constant change requires constant sensemaking and contextualisation. Leaders must resist the temptation to overly generalise and simplify, but gain real understanding by trying things out in practice, and play with different contexts.

This era calls for us to continually challenge and rethink our foundational assumptions. We can unlock exponential opportunities by developing interdisciplinary and interconnected approaches, weaving together technical, humanistic, and artistic disciplines in innovative ways.

By doing so, we can overcome narratives about the future that instil fear, by developing and acting upon narratives that create an equally powerful emotion: excitement.

Let's connect.



Endnotes

1. Daniel Sunde-Hansen, interview with John Hagel III, October 30, 2023
2. John Hagel, J. Brown, and Lang Davison. "Measuring the forces of long-term change: The 2009 shift index." Deloitte Insights (2009).
3. John Hagel, *The Journey Beyond Fear: Leverage the Three Pillars of Positivity to Build Your Success*. McGraw Hill, 2021
4. John Hagel, John Seely Brown, Alok Ranjan, and Daniel Byler, "Passion at work Cultivating worker passion as a cornerstone of talent development" Deloitte Insights (2014)
5. Daniel Sunde-Hansen, interview with Wassili Bertoen, October 23, 2023
6. John Hagel, John Seely Brown, and Duleesha Kulasooriya, "Scaling Edges: A Pragmatic Pathway to broad internal change", Deloitte Insights (2012)
7. Daniel Sunde-Hansen, interview with Constantijn Van Oranje-Nassau, October 30, 2023
8. John Hagel and Daniel Sunde-Hansen, "Refreshed perspective on Performance Ecosystems", Deloitte Center for the Edge (2023)
9. John Hagel, John Seely Brown, and Duleesha Kulasooriya. "Performance Ecosystems: A Decision Framework to Take Performance to the Next Level". West Lake, TX: Deloitte University Press (2012).
10. Daniel Sunde-Hansen, interview with Isabelle Ringnes, October 30, 2023
11. John Hagel, John Seely Brown, Maggie Wooll, and Andrew de Maar, «Getting better, faster» (2019)
12. Daniel Sunde-Hansen, interview with Aimee van Wynsberghe, November 2, 2023
13. John Hagel, "The power of platforms", in *Business Ecosystems come of age*, Deloitte Insights (2015)
14. Daniel Sunde-Hansen, interview with Carlo van de Weijer, October 26, 2023
15. Adrian Bejan, and J. Peder Zane. "Design in nature." *Mechanical Engineering* 134, no. 06 (2012): 42-47
16. Daniel Sunde-Hansen and Wassili Bertoen, interview with Hakan Bulgurlu, October 31, 2023
17. Hakan Bulgurlu, H. *A Mountain to Climb*. Whitefox Publishing, 2022
18. John Hagel, and John Seely Brown. "Zoom out/Zoom in an Alternative Approach to Strategy in a World that Defies Prediction." Deloitte Insights, May 16 (2018).
19. Daniel Sunde-Hansen, interview with Ralph Hamers, October 24, 2023
20. Judea Pearl, and Dana Mackenzie. *The book of why: the new science of cause and effect*. Basic books, 2018.
21. Daniel Sunde-Hansen and Wassili Bertoen, interview with Feike Sijbesma, October 30, 2023
22. Scott Cook and John Seely Brown. "Bridging epistemologies: The generative dance between organizational knowledge and organizational knowing." *Organization science* 10, no. 4 (1999): 381-400.
23. Daniel Sunde-Hansen, interview with Kristin Skogen Lund, November 24, 2023
24. Daniel Sunde-Hansen, "We need opportunity-driven narratives". Deloitte Center for the Edge, 2022
25. Joanna Kwiat, "From Aristotle to Gabriel: A summary of the narratology literature for story technologies." *Knowledge Creation Diffusion Utilisation* (2008).
26. Joseph Campbell, *The hero with a thousand faces*. Vol. 17. New World Library, 1949/2008.
27. Duleesha Kulasooriya, Michelle Khoo, and Michelle Tan, "Being human in a digital world: Questions to guide the internet's evolution", Deloitte Insights, 2023
28. John Hagel, "What's Missing in Artificial Intelligence?", 2023, JohnHagel.com
29. Mary Midgley, *Science and poetry*. Routledge, 2013.
30. Jan Ketil Arnulf & Kai Rune Larsen, Overlapping semantics of leadership and heroism: Expectations of omnipotence, identification with ideal leaders and disappointment in real managers. *Scandinavian Psychologist*, 2(e3), 2015.
31. John Hagel, John Seely Brown, Maggie Wool, and Andrew de Maar, "Patterns of disruption Anticipating disruptive strategies in a world of unicorns, black swans, and exponentials", Deloitte University Press, 2015.
32. Ann Pendleton-Jullian, and John Seely Brown. *Design Unbound: Designing for Emergence in a White Water World*, Volume 2: *Ecologies of Change*. Vol. 2. MIT Press, 2018.

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