

An abstract artwork featuring a large, textured yellow shape in the center, surrounded by blue and brown tones. The background is a complex, layered composition of these colors, with some areas appearing more saturated and others more muted. The overall effect is one of depth and movement, suggesting a natural or organic process.

Pascal Morgan

Sustainable Leadership

Sustainable Leadership: Why Values are Important

„The greatest danger to our future is apathy.“

Jane Godall

Changing perspectives is a critical exercise

„Wouldn't that be a great idea?“, he asked, anxiously waiting for my confirmation not without an air of self-confidence. What began as an informal pitch-driven conversation at a rooftop meetup in Berlin several years ago ended up in a lesson of personal values and commitment. An impromptu two-person workshop between canapés and drinks covering sustainability, responsibility, and embracing the larger picture.

It was a „startups meet investors“ event hosted by the 4YFN team from Barcelona, who have been active in and around the Mobile World Congress for quite some time and have always had an inspiring line-up of startups and an impressive ramp-up program. As a technologist, I've had the honor to meet and greet many startups in my career, from corporate incubators, accelerators, mentoring programs, as well as own engagements - but this conversation would stick out.

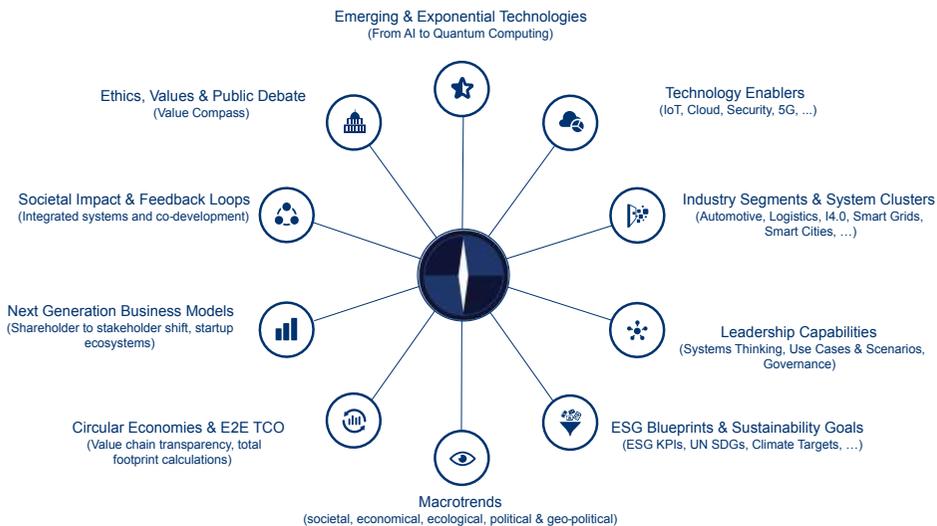
This particular startup was straight-forward: built on a smart, semi-autonomous infrastructure, an IoT network, it was aiming at the large farming fleet manufacturers, the top-line in agriculture from John Deere, CNH Industrial, Kubota, AGCO, to Claas, to enhance their efficiency by feeding more real-time data into the farming system. Soil health, moisture, weather information, terrain specifics, and more - then coupled with the GPS-data these large farming fleets are equipped with, would give the farming industry an even bigger leverage to exploit land. My immediate response was: „Hold on for a second.“

Pulling him aside, I started asking questions like: how about small, rural farmers that are being squeezed out by large, heavily automated, monoculture-focused

industrial producers? How about the organic, self-organized and decentralized farming collectives? How about new urban farming strategies paying into circular, renewable, and ecologically balanced food production? Wouldn't your platform be a cornerstone for sustainable resource value chains that we so desperately need? Providing the technological infrastructure would be key to help these new strategies become more competitive and attractive for farmers, as well as investors, business stakeholders, and policy makers alike.

Navigating a future where technology and sustainability must converge

My take-away was then and still is today: Navigating into an uncertain future with global challenges means we need to develop our own compass: by investing into



© think.speak.transform. 2021

education, technological competency, building resilience, fostering adaptability with a passion for complexity, and the ability to rethink economies within the fundamental societal transformation we're currently in.

A future-driven mindset is key to tackle some of the most important topics of our time. Ecological thinking means to understand how we can use technologies to address climate change, societal inequalities, create tangible impact where it is really needed as well as addressing the risks that technologies themselves are bringing into our lives.

As an example, how can we leverage Artificial Intelligence to crunch our climate data, provide reliable projections, but also to help identify the culprits behind global warming and singling out our biggest threats?

And there are more examples of how technology, mindset, and leadership need to go hand in hand. From carbon sequestration to redesigning energy grids, it is a technological as well as a mindset challenge. Reviewing the energy production and value chain, integrating renewable energy sources into legacy infrastructure, redesigning power grids, automated distribu-

tion networks, while drastically reducing energy- and carbon-footprint per capita not only requires the research and engineering advances we are seeing today, e.g., in next generation solar panels, hydrogen, alternative fuels, to AI-supported smart grids balancing out energy peaks - or even recent break-throughs in nuclear fusion reactors, simulating the sun's savvy sheer endless powerhouse. It also requires the mindset and leadership needed to make the right decisions in policies, incentivizing change, providing the blueprint designs for a livable environment and desirable ecosystem. This includes tackling challenges of increasing urbanization, the pressure humankind is exerting by an exponential rise in population, societal upheavals, and lack of global systems thinking.

Even electric mobility, so eagerly needed to accelerate the exit from fossil fuels, is built around battery storage solutions - raising new challenges of how to solve exploitative production chains from mining lithium and rare earths, having a negative impact on the environment, local workforce, and creating new societal dependencies and inequalities. Though progress is being made, transparency along the production chain is crucial. While it is paramount to leverage the opportunities of new technologies immediately, „total-

cost-of-ownership“ (TCO) must be part of our DNA, part of the very blueprint in designing a new society based on sustainable values.

Science holds up a mirror we can't ignore

In Europe, we have committed to a CO2 reduction of 58% by 2050. Will that be fast enough, do we have a sustainable infrastructure to guide us there and go beyond, and how can we export our knowledge and experience to emerging markets and geographies to help offset the global impact of rising nations? According to PwC, the emerging markets (E7: China, India, Indonesia, Brazil, Russia, Mexico, and Turkey) will grow 2x as fast as the advanced markets (G7: US, UK, France, Germany, Japan, Canada, and Italy) and will already be double in size by 2040. This will have a massive impact on greenhouse emissions, if carbon-neutral technologies are not at the center and forefront of these growing economies.

Unlimited growth is a dangerous, if not grossly negligent, promise in a world of finite resources. But if we are to provide equal access to education, health, prosperity, and well-being, this will not be possible without holding advanced nations

responsible for sharing research, engineering, and technological advances with the rest of the world.

We also need to consider the economic impact if we don't take concise actions immediately. As the World Economic Forum projected in 2021, we will face a total impact of -11% of global GDP by 2050 on a +2° Celsius projection - going up to -18% of global GDP if no mitigation actions are taken and we maintain our current 3.2° Celsius trajectory. Climate change will cost our economy already, no matter what. Even if we stayed within the Paris agreements, we would need to build considerable funds to offset consequential economic and societal damage.

Ever since the Cambrian era starting over 540 million years ago, we've experienced six major waves of extinction, most of them as massive as losing 70% or more of all species. Causes have been many as far as we know from current day research, ranging from drastic global warming events to meteorite impacts. The last wave, though, still ongoing today. Taking place during the Holocene, our current geological phase, is seeing an over 1,000 times increase to background extinction rates. Some researchers estimate this rate

to be even higher, up to 10,000 times the background rate of 1-5 species per year, due to deforestation, habitat loss, climate change, pollution, overhunting, and other impacting factors by human civilization. This rate could likely result in the loss of 30 - 50% of extant species by the middle of this century. Examples of local ecosystems and habitats on the verge of collapse are global from freshwater species in Lake Victoria to primates in continental Africa and South-East Asia. Aside from that, climate change will be a major contributor to human migration, impacting mainly the poor in rural regions of developing countries, forcing whole populations to abandon their homes if they want to survive.

Since 1880, we've seen the rise of ocean levels by 21 - 24 centimeters - with a third of that over the last 25 years alone. In 2020, we've measured a record of 91.3 millimeters above the 1993 average, the highest in satellite record to date. It is a common understanding in the scientific community that we are in a vicious cycle of melting glaciers and ice sheets, reducing earth's albedo (the ability to reflect sun light), contributing to higher temperatures. Combined with seawater expansion as it warms, global temperatures have risen by 0.08° Celsius per decade since 1880, accelerating to 0.18° per decade

“Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has.”

Margaret Mead

over the past 40 years. The World Meteorological Institute (WMO) has announced the past 6 years being the warmest, with 2020 at 1.2° Celsius above pre-industrial era temperature average - and has added the bleak 20% chance of already peaking at 1.5° by 2024. As science is already quite clear, overall mindset and leadership commitment seem to lag.

From Decarbonization to Leadership: It doesn't matter where to start - it's more important to get started now

Starting with carbon-emitting industries as a main driver in our current climate change, we need to actively provide con-

cepts, solutions, and platform services to achieve stricter climate goals as we have so often proclaimed from Kyoto to Green Deal. And, in the bigger picture, fulfill the UN SDGs, build sustainable infrastructures, enable our upcoming younger generations, and avoid the financial and ecological risks of a potentially collapsing habitat.

We need to think differently. How do we maintain sustainable ecosystems for 10 billion people by 2050? New studies estimate an annual benefit of \$33 billion in urban farming with widespread positive impacts from energy savings to nitrogen sequestration. In high-intensity urban far-

ming scenarios the benefits could reach between \$80 and \$160 billion per year. Technology plays an important role in implementing sustainable ecosystems - on a global as well as hyper-local level. Like for one of the world's largest urban farming roof-top projects in Paris, „Nature Urbaine“, with over 14,000 sqm.

With only a limited amount of resources available on our „Planet A“, it will be our biggest challenge to develop and maintain circular economies, cradle-to-cradle value chains, and distribute access to resources equally on a global scale.

But it is hard to aggregate a powerful voice across industries, society, and policy. It means aligning and motivating all stakeholders involved, an ongoing endeavor to educate, empower, and provide governance, to develop guidelines and pathways to a carbon-free future, discuss incentives, funding, and beneficial policy strategies. This calls for a new leadership, new ways of approaching complex systems, and a passion for industrial, societal, but also personal commitments.

What is truly sustainable technology and leadership? It's more than a mindset. It includes knowledge, capabilities, solutions,

having the mandate and resources to decide - and to execute. On a societal, industrial, as well as personal level.

That would be my own roof-top pitch to you.

Key take-aways

Mapping Technologies and Capabilities to UN SDGs:

- Capture technological opportunities, foster local competencies, invest into and swiftly build and test solutions to achieve individual as well as overarching Sustainable Development Goals 1-17

Corporate Transformation from a Systemic Perspective:

- Shift from shareholder to stakeholder economy: economic and political buy-in is critical
- Circular economies are viable, but there is a lack of executional commitment in Boards and in Corporate Strategy
- TCO (total-cost-of-ownership) and E2E (end-to-end) value chains are important to calculate the whole ecological and societal footprint of all goods produced
- Rally for corporate activism: have companies with economic power, impact on staff, families, and communities step up

to the ecological cause - measurably and transparently

Preparing for the Future:

- Rise of next generations: empowering our leaders of tomorrow
- Preparing for complexities: learn and execute with systems thinking
- Jobs of the future need to be anchored in SDGs, otherwise they won't produce sustainable value for people, communities, and local ecosystems
- The roadmap for technology and innovation needs to be synchronized with the roadmap of societal change and drive for equality



Pascal Morgan

CEO & Founder

think.speak.transform.

As a technology pioneer, creative thinker, and passionate speaker, cross-industry digital transformation advisor, Pascal looks back at an almost 30-year career in IT, Technology, Media, and Innovation as an IT Executive and strategist for Fortune 500 companies and industry leaders such as Coca-Cola, Deutsche Telekom, AOL, and Pixelpark.

Pascal is founder of think.speak.transform.: connecting, advising, researching, and internationally speaking on transformation, disruptive technologies, new business models as well as ethical challenges for a sustainable future. This includes guiding startups, companies, and corporations through times of constant change. He is member of the faculty at futur/io Institute, a senior mentor at Germantech, co-founder of the company builder United Peers, and previously Board Member and Chair Academy Commission at the European Technology Chamber. With a love for coffee, gadgets, and people.