

# Futuremover

#### WINTER 2024

# How entrepreneurs are shaping the world

#### FOCAL TOPIC

Innovation and risks: the DNA of progress

#### INTERVIEW

Konrad Bergström: "Questioning the wheel, not reinventing it"

PAGE 14

#### INNOVATION

Technologies that change our world

PAGE 16



FOCAL TOPIC

4

## Innovation and risks: the DNA of progress

What makes successful entrepreneurs

#### GREAT MINDS

- 6 Al and ethics: Fei-Fei Li
- 8 E-mobility: Wang Chuanfu
- 10 Quantum cryptography: Grégoire Ribordy
- 12 Biotech and science: Xavier Duportet

## 14 INTERVIEW

Konrad Bergström

16 INNOVATION

Technologies that change our world

20 FUTURE-ORIENTED PORTFOLIOS

Globalance futuremovers

22 short interview

Cleantech investor Gina Domanig

#### 23 OUR OWN SUCCESS

The Globalance climate plan

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# 77 Entrepreneurship generates prosperity for us all

Dear reader

Today, more than ever, the world needs people who take responsibility. People who – with courage and determination – develop solutions for the pressing challenges of our time. This issue of *Futuremover* is devoted to entrepreneurship and its transformative power for business and society.

Entrepreneurs are much more than company founders. They use innovative ideas to create new markets, revolutionize existing industries and often make a key contribution to the sustainable development of our society. From e-mobility to artificial intelligence – the big innovations of our time tend to be driven by courageous individuals who believe in their ideas and pursue them against all odds.

In this issue, we spotlight inspiring visionaries and thinkers who are shaping the world with their pioneering products. We also show the extent to which their success depends on a pro-innovation culture – and on investors.

Be inspired by people who are actively shaping the future thanks to their foresight, tenacity and unshakeable belief in their ideas.



I hope you find this issue informative and inspiring.

Reto Ringger Founder and CEO

FOCAL TOPIC

# Innovation and risks: the DNA of progress

Through courage, determination and an unshakeable belief in their ideas, entrepreneurs don't just create new markets – they shape the future, and find solutions to the challenges of our time.

Everything starts with an idea - perhaps in a garage, in a small office or on a walk through town. This was also the case for Nick Swinmurn, who was looking for a specific type of shoe in San Francisco in 1999 but couldn't find it. He decided to solve the problem himself and to sell shoes online; he founded Zappos and built up the company into one of the world's biggest online shoe retailers. Through top-notch customer service and generous rights of return, Zappos is revolutionizing the online shoe trade. Visionaries don't just create new markets - they shake up entire sectors.

Each newly founded company and every innovative product drive economic development. Start-ups and SMEs – many of them led by their founders – drive economic development and are the backbone of many economies: they create jobs, boost purchasing power and attract investment. Tesla is a good example: with its foray into e-mobility, the company has redefined the automotive industry and set sustainability standards. Entrepreneurs like Elon Musk demonstrate how innovation can disrupt traditional industries and ensure the economy is fit for the future.

## Appetite for risk

It was in the 1980s that Logitech co-founder **Daniel Borel** ventured into the uncertain market for computer peripherals. His conviction that computer mice were indispensable paid off, and today Logitech is a market leader in the sector.

## Ingenuity

Creating innovative energy sources for underdeveloped regions is the vision pursued by **Jessica O. Matthews**. With Uncharted Power, she is developing a kinetic football that generates electricity through movement – and changing the lives of many people.

## Innovation

IKEA founder **Ingvar Kamprad** revolutionized the furniture market in the 1940s by supplying affordable, flat-packed furniture for the mass market. His idea led to the emergence of a global furniture giant.

The essence of entrepreneurship What makes successful entrepreneurs

4



of GDP in emerging-market countries is generated by SMEs that were set up by entrepreneurs. <mark>22%</mark>

annual increase in the value of founder-led companies. Externally led firms saw an increase of only 4.7%. **54%** 

of Generation Z plan to set up their own business, with 84% believing they will do so in the next five years.

Sources: World Bank/Global Entrepreneurship Monitor/Square Report

#### Resilience at a time of crisis

Entrepreneurship fosters economic diversification and stability. Entrepreneurs capture new areas of business, ensuring that economies are broaderbased and more resilient in the face of economic fluctuations and crises. Many entrepreneurs responded swiftly during the Covid-19 pandemic by building digital business models or adapting their production lines to incorporate face masks and other protective clothing. In this way they showed flexibility and social responsibility at a time of crisis. Through courage and determination, visionary entrepreneurs are shaping a future in which economic success and social progress are intertwined – a trend that favours Globalance.

#### How important are entrepreneurs to the economy?

People who set up a firm are not only responsible for the success of their business – they are also the driving force behind the economic development of entire countries. In the EU, SMEs account for 99.8 per cent of companies and create more than 64 per cent of jobs.

## Tenacity

**Götz Werner,** founder of the dm-drogerie markt chain, faced down initial opposition back in 1973 with his focus on flat hierarchies and sustainable management. His tenacity led to dm becoming one of Europe's largest drugstore chains.

## Adaptability

As well as music, Spotify now also provides podcasts and exclusive publications. Founder **Daniel Ek** recognized the transition to the consumption of digital media at an early stage and is responding to the needs of users in a flexible way.

## Skin in the game

**Sara Blakely,** the founder of Spanx, invested all her savings in shapewear. Despite plenty of setbacks, she built up a billion-dollar business and shows how personal commitment leads to success.

# Artificial intelligence aims to inspire, not destroy

## Al founder Fei-Fei Li

With AI, nearly everything is possible. But what do we really want to use artificial intelligence for? AI research scientist and entrepreneur Fei-Fei Li has helped spearhead the development of AI over the past 20 years. As the "voice of reason", she also highlights the dangers of self-learning algorithms and is committed to deploying them on a humane, forward-looking basis.



Digital image recognition was lamentably poor back in the noughties, when physicist and former head of AI at Google Fei-Fei Li decided to focus her research on "computer vision": the discipline to teach machines how to see. While her fellow scientists were working on solutions involving algorithms, Li had the idea of training computers to see – and, indeed, in the way that children learn to recognize people, animals and objects: through constant repetition. To feed the algorithms, Li and her team collected nearly a billion digital images. Nearly 50,000 people then went about labelling and categorizing them. This led to the creation of the Imagenet database in 2009.

#### Taught computers to see

Li's idea was incredibly successful, with computers actually learning to identify objects. Li made the new technology available free of charge to ensure other scientists could train its algorithms. And indeed they did: Li's invention is now considered a major advance in the development of Al and was also used to develop driverless cars as well as image generators.

She taught computers to see – and now wants to teach them spatial thinking.

#### GREAT MINDS - AI AND ETHICS

For that reason, Li is described as the "godmother of Al". What's more, she probably has the next ground-breaking innovation in the pipeline: Her 2024 start-up World Labs is specialized in spatial intelligence. The aim is to teach computers to think spatially (see box). Within a short space of time, her start-up had attracted leading investors in the tech sector and was valued at a billion dollars.

#### Recognizing the power of AI

Fei-Fei Li's biggest contribution to the development of AI is probably of a more secondary nature, however: Li argues that science has a big responsibility to create humane, trustworthy AI. She wants AI to be used in a forward-looking, sustainable and responsible manner. As a Stanford professor, AI scientist, member of the supervisory of major tech firms and mother of two children, she is committed to being a "voice of reason" and believes artificial intelligence should be used for the common good.



#### Spatial intelligence – the next breakthrough in AI?

Fei-Fei Li caused a furore with her firm World Labs in 2024. World Labs is specialized in artificial intelligence. The start-up aims to teach computers to see on a three-dimensional basis – as well as act accordingly. This would be a major breakthrough in the development of AI. Spatial intelligence would take many technologies – drones and driverless vehicles, for example – to a new level.

#### Fei-Fei Li's recipe for success

#### **Family situation**

In China, Li faced discrimination because she was a girl. Her parents therefore emigrated to the US.

#### **Talent scout**

Li's mathematical talent was recognized and encouraged in the US.

#### Access to education

Thanks to her extraordinary gifts, she studied for free at Princeton University.

#### **Right setting**

Despite initial scepticism, she was able to realize her bold plans by attending a top university.

#### Open source

Li made her technology available to other researchers, thus facilitating the further development of AI.

#### Investors

Thanks to major tech investors, Li is able to take Al to a higher level with World Labs. With that goal in mind, Li co-founded the University of Stanford's Human-Centered AI Institute. Its objective is to demand and foster ethical, "human" AI technologies and applications. Li and her fellow campaigners are calling for improved exchange between research, tech startups and professionals in practice – for instance in education, medicine and agriculture. They are also demanding a critical distancing from the opportunities provided by AI. Fact is, AI can destroy just as easily as it can inspire. The belief is that humans should not be using AI to kill each other in wars or to individually enrich themselves. Li's aim is for humans to use the technology to improve the world and society at large – be it through scientific discoveries, new materials or medical breakthroughs.

#### Minorities in Al research

Li thinks one of the biggest risks posed by AI lies in the researchers themselves, given that they are the ones who are determining the algorithms. This could mean that they are subconsciously passing on their prejudices to AI. Through the AI4ALL organization, Li therefore supports women and minorities in AI research. Li suffered from discrimination herself as a child – in China, her talent for natural sciences was ignored due to the fact that she was a girl. When her parents then emigrated to the US with her in the 1990s, she was once again a member of a minority – an Asian – and experienced racism. In addition, her parents lived in poverty in the US, and it was only thanks to her extraordinary talents that she was able to study.

# Clean car batteries for the future

Electric vehicle pioneer Wang Chuanfu



Through innovative technologies, BYD founder Wang Chuanfu made automotive batteries safer and longer-lasting, thus setting new global standards in e-mobility. He also gave the industry a decisive impetus to produce electric vehicles that are not only more environment-friendly but also affordable to the population at large.

Wang Chuanfu became a legend in China, in a classic rags-to-riches story: Born in one of the poorest regions in China, he was orphaned as a teenager – and despite that made it to grammar school thanks to his intelligence and an unshakeable capacity for hard work. He studied metallurgical physical chemistry, ultimately becoming professor of Non-Ferrous Metal Research. In 1995, Chuanfu founded the firm BYD – or "Build Your Dreams" – in Shenzhen in the province of Guangdong. He used his specialist expertise to manufacture rechargeable batteries and other components for mobile phones. BYD soon became one of the world's leading battery manufacturers.

#### Ascent to market leader in ten years

Wang Chuanfu identified the potential of electric cars and began producing automotive batteries (see box). But he didn't leave it at that: he purchased a car producer and was now producing entire electric vehicles – from battery to computer chip. Today, Chuanfu is a billionaire and market leader. BYD's share price has seen a near fivefold increase since the start of 2020. The company now sells more "new energy vehicles" – as electric and hybrid cars are called in China – than Tesla. In 2023, the figure stood at more than three million vehicles. The Chinese market – the biggest car market in the world – has long been captured by Chuanfu. The international markets are his next target.

#### BYD sets standards worldwide

Through innovative technologies, Wang Chuanfu succeeded in producing vehicle batteries in a more environment-friendly way. He founded BYD Auto in 2003 and competed with the major Japanese and Korean battery manufacturers. Investors responded with scepticism, but BYD was more innovative than its competitors and rapidly overtook them.

The fast-growing conglomerate of subsidiary companies allowed Chuanfu to not only build car batteries but also entire electric vehicles including all electronic components. He developed cell-to-body technology, where the battery cells are seamlessly integrated into the car's body. To ensure users of his car charge them using renewable energy, he also produced suitable solar panels and energy storage systems. His integrated approach transformed supply chains within the industry, and he sparked an innovation drive that led to the breakthrough for e-mobility worldwide.

#### Breakthrough for e-mobility

Through its innovations, Chuanfu not only succeeded in becoming market leader – he also helped e-mobility to achieve a decisive worldwide breakthrough. With his innovative battery technology, Chuanfu set new standards globally: His batteries – which he also sold to competitors like Tesla – were based on more environmentfriendly technologies. They were safer, more efficient and longer-lasting than those of other manufacturers. Through these advances, BYD also prompted the likes of Tesla and Toyota to innovate. Experts assume that this breakthrough was decisive in terms of electric cars becoming affordable to the wider public.

#### Intelligent mobility for smart cities

Wang Chuanfu is a firm believer in innovation and technology. His strong work ethic also attracts criticism, with BYD being accused of treating people like robots. Even so, BYD's success is based not only on massive cost-cutting – as pointed out by his critics - but also on Chuanfu's commitment to research, development and innovation. He believes new technologies are the main driver behind our ability to address our social responsibilities and solve global problems. Through his innovations, he aims to reduce  $CO_2$  emissions and dependence on fossil fuels as well as foster renewable energy sources. Through BYD, he aims to lead the transition to sustainable transport systems - and speed up the development of smart cities thanks to intelligent mobility.

#### Wang Chuanfu's recipe for success

#### Intelligence

Chuanfu was a technically gifted high-achiever who – despite adverse circumstances – pursued an academic career.

Drive and work ethic

He runs his company BYD in the same structured and disciplined manner that was pivotal to his earlier career success. However, this also attracts criticism.

Belief in power of technology

Chuanfu addresses global problems through innovative technical solutions. He believes he can change the world through environment-friendly innovations.

#### Courage to innovate

Chuanfu never let up. The fact that he started out by making mobile phone batteries did not stop him from competing with the car battery giants – and then going on to produce entire cars.

Using the power of new technologies to change the world.



# Ensuring quantum computers don't unleash disaster

## Visionary **Grégoire Ribordy**

Is it possible to encrypt our data so securely that even quantum computers can't hack it at some point? That was the question posed by Grégoire Ribordy – who hails from Frenchspeaking Switzerland – when studying for his doctorate. Today, with the ID Quantique firm he co-founded, Ribordy produces quantum cryptography for the world market. 77 Quantum technology will create things that are currently unimaginable to us.

Mr Ribordy, quantum computers are set to change our world. What sort of things can we expect? Quantum computers are a new type of computer that use the laws of quantum physics to solve previously insurmountable problems. To give you an example, they will enable us to develop new materials or discover drugs. In the future, it will also be possible to use the technology in finance or logistics. It's also very likely that there will be applications that are currently unimaginable to us. The flipside of this innovation is that – in a matter of seconds – quantum computers can hack the codes we currently use to protect information. This constitutes a big risk as far as the sensitive data of governments, banks and companies is concerned.

To avert this risk, you - along with three other scientists - set up the ID Quantique spin-off in 2001, when you were studying for your doctorate in philosophy and physics. Your aim was to encrypt data so securely that even quantum computers couldn't hack it. But quantum computers were a long way off back then. Why did you predict this megatrend? It isn't the case that quantum computers weren't around yet. The software had already existed since the 1990s though not the hardware. It's only a matter of time before this is invented as well. At Geneva University in 2001, I was in the right place at the right time. With two professors and an engineer, I had the perfect team by my side. It was clear to us that if we want to protect our data for the long term, we need to predict the risks of the future and protect data for its entire lifetime.



#### ID Quantique is now a world leader in quantum cryptography. Did you benefit from a pro-innovation culture in Switzerland?

I always say Switzerland is the best place to research quantum physics ... and the worst place for setting up a deep-tech start-up. ID Quantique benefits heavily from the close cooperation between science and education. But Switzerland shouldn't just be investing in science – it should also be investing in the development of marketable products. That's where our competitors in China and in Europe have a clear lead. Do Swiss spin-offs and start-ups get too little support?

Exactly right. Deep-tech firms in particular need a lot of time to come up with a marketable product – and they also need money to survive this "valley of death" between science and marketing. Underlying conditions in Switzerland are poor: Swiss investors show little willingness to take risk – reflected in the fact that we've never received any investment from Switzerland. There's usually a lack of support from government, too, during this phase. The National Science Foundation helps right at the start, as does Innosuisse in the run-up to market launch. But there's a big gap between the two.



#### Random numbers for greater security

Quantum cryptography takes the principles of quantum physics to encrypt data and make them tap-proof. Grégoire Ribordy founded ID Quantique in 2001 with the vision of developing chips based on genuinely random numbers. These enable particularly secure encryption that stands up even to quantum computers.

Data encryption using quantum physics offers two key advantages:

- 1. Manipulations are identified immediately: any deviation in data transmission is registered without delay.
- 2. Future-proof Information remains secure against attacks in the long term too – even from future technologies such as quantum computers.

#### Grégoire Ribordy's recipe for success

#### **Switzerland – a centre for education** Ribordy was awarded a doctorate by the EPFL in Geneva. He later studied business management in St. Gallen. He benefited from Switzerland's excellent reputation for science.

#### Vision

He recognized the dangers of quantum computers at a time when everyone else was only talking about the opportunities.

#### Courage

Ribordy leaned to think big and lead ID Quantique to success in pioneering fashion.

#### Luck

He was with the right people in the right place at the right time – and made the most of this unique opportunity.

**Science and business** Ribordy successfully brought the various actors together.

Your story is one of success: You began with CHF 100,000 in start-up capital. Soon after, a million Swiss francs in investor funds were channelled into ID Quantique. Then in 2018 the South Korean firm SK Telecom came up with CHF 65 million. Through chips for Samsung, it gave the start-up access to the global market. What did this success mean for you personally?

As far as I'm concerned, it was always clear that – rather than a sprint – we were facing a marathon with long-term goals. We had to force ourselves to think big. That's not something the Swiss are good at. I had to learn to do that.

#### Your first product was big and impractical. Today, quantum cryptography is concealed in tiny chips. What's next in store?

We've still got a long way to go. The fact is that our solution is still too big for complex applications. At the same time, we mustn't miss out on opportunities. We need to tackle new areas and invest in more innovations. Because rival start-ups are springing up around the world. Although they're behind us in technology terms, they've got big ideas.



# Tackling the "hidden pandemic" with precision

Biotech entrepreneur **Xavier Duportet** 

As co-founder of biotech firm Eligo Bioscience, French scientist Xavier Duportet is tackling one of the truly major global issues: antibiotic resistance. To attract investors, he took an innovative, entrepreneurial approach.

As a pioneer, he urges scientists to use their findings to change the world. Xavier Duportet is only 37 years old. Incredibly smart, he has devoted himself to science since his childhood. His passion for biotechnology was originally sparked by ants. As a 12-year-old, he worked as an intern in a genetic engineering laboratory for insects – and from that point on wanted to become a genetic engineer. These days, he's motivated by the power of science and entrepreneurship, believing we can solve global problems through research and innovation. Some of them, at least – including the problem of antibiotic resistance, which is what has driven Duportet since his doctorate in synthetic biotechnology.

#### Market too small for global problem

Antibiotic resistance is a very urgent challenge. Since the discovery of penicillin by Alexander Fleming in 1928, antibiotics have been the only effective treatment against harmful bacteria. The more antibiotics we use in human medicine or animals, the more quickly bacteria develop resistance. This has grave consequences, because without effective antibiotics every case of pneumonia becomes life-threatening. People can die from hospital germs following routine operations. Cat bites can quickly develop into septicaemia.

#### Xavier Duportet's recipe for success

#### Passion

Duportet discovered his passion for biological processes at an early age – as a child, he was already determined to become a scientist.

#### Intelligence

Duportet was an intellectual highflyer and academically encouraged from an early age.

#### Science

As a doctoral student, he had the opportunity to apply the CRISPR method to bacteria.

#### Networking

Together with his professors, Duportet founded Eligo Bioscience as a spin-off.

#### Entrepreneurship

The Frenchman believes good science is also possible in an entrepreneurial setting.

#### Flexibility

Because the market for new antibiotics was too small, Duportet focused on the microbiome – with great success.

But while experts have for many years talked about a "hidden pandemic" that claims more victims every year, the market for developing new antibiotics is unattractive. Fact is, in order to prevent further resistance, doctors should only be using new active ingredients in human medicine and only in patients with resistance. In other words, they should be reserved for emergencies – so, it's not a lucrative business for pharmaceutical companies.

#### Success down to entrepreneurial innovation

This reticence was also noted by start-up Eligo Bioscience, which Duportet set up jointly with professors from the Massachusetts Institute of Technology (MIT) and French research institute Inria in 2014 at the age of 27. Duportet quickly recognized that no investors could be found in the antibiotics market. Without losing sight of his objectives, he looked for a solution that would be more attractive from an entrepreneurial perspective: rather than focusing on resistance, Eligo Bioscience soon turned its attention to the microbiome. This consists of billions of bacteria, which inhabit the human body. It is now undisputed that the microbiome plays a crucial role in our health and immune system. However, the fact is that antibiotics weaken the microbiome every time they are taken: as well as attacking harmful bacteria, their active ingredients also affect the useful bacteria contained in the digestive tract. However, that isn't the case with Duportet's patented CRISPR method (see box): it specifically targets the genome of individual gut bacteria and therefore leaves the microbiome alone. The market for this precise, protective antibiotic is huge. At the same time, the technology has the potential to solve the problem of antibiotic resistance. Business success was not long in coming, and the first investors were soon on board.

#### Plea for research and entrepreneurship

Duportet pleads for greater entrepreneurship in research, believing researchers can solve global challenges using deep tech. He calls on science firms to not only concentrate on technological developments but also to sell themselves better. And he encourages scientists to establish start-ups (see box). He wants them to cast off their modesty and use their scientific findings to develop products that will change the world.

#### Young Global Leader

The biotech start-up Eligo Bioscience manipulates the genome of specific bacteria using the CRISPR method – or "genetic scissors". In contrast with conventional antibiotics, the new active ingredients are intended to systematically treat bacterial infections – and as a result protect the microbiome that is so important to health. Experts say Duportet's biotechnological innovation simultaneously has the potential to solve the problem of antibiotic resistance. The young technology pioneer was rated Young Global Leader by the World Economic Forum (WEF).

However, Duportet is also very innovative as a networker: To strengthen entrepreneurship in science, he set up the charitable organization Hello Tomorrow in 2011. Today, it's the world's largest deep tech community – bringing together scientists, investors and entrepreneurs. In addition, Duportet set up Deeptech Founders – a training programme for global founders from the science sector – in 2019. He encourages them to more actively market their scientific findings – and consequently attract investors. INTERVIEW

# "Questioning the wheel, not reinventing it"

## Serial entrepreneur Konrad Bergström

A tale of highs and lows, of grand visions and minute details – Konrad Bergström talks about his road to success and has top advice for the next generation.

## Konrad Bergström, what inspired you to become an entrepreneur?

I grew up in a family in which anything was possible. My mother was creative and worked in theatre, while my father taught mathematics and ran various businesses on the side. We weren't wealthy, and my father did everything he could to give us a good life. I went fishing when I was a child and sold my first catch at the campsite. What about school? That wasn't my thing – I've been doing business my entire life.

#### Everything you touch seems to turn to gold. What's the secret behind your success?

Secret? Hard work and the drive to always do better. The more I train, the more luck I have. Success comes through continuous learning and practising.

## Is there a guiding principle that defines your work?

It's often enough to take a critical look at existing things and systematically improve them to achieve big things: I'm questioning the wheel, not reinventing it. I've taken this approach to a number of projects and it has enabled me to develop meaningful products.

#### You've built up globally successful brands with Marshall and Urbanears. What's particularly important to you when developing your brands?

When I develop a brand, I always think about the five senses: What does the product look like, sound like, how does it taste, how does it smell, and how does it feel? Our senses are the key to our feelings and what bring a brand to life. As co-founder of Zound Industries, now the Marshall Group, I designed the iconic Marshall speakers and headphones. In the case of Urbanears too, we fused technology and fashion. I'm very demanding when it comes to design – everything needs to appear as it should in a billion-dollar business.

#### Right now with X Shore, you're helping electric boats to achieve a breakthrough. What prompted you to focus on e-mobility on the water?

The idea came to me back in the 1990s. I was doing a lot of wakeboarding and diving at the time and experienced the effects of noisy, polluting boats first-hand. Clearly something had to change – for nature and also for

Swedish serial entrepreneur Konrad Bergström is regarded as a superstar in his home country. With Marshall and Urbanears, he turned headphones into a stylish accessory. With X Shore, he is now bringing electric mobility to the water. A passionate surfer and snowboarder, he finds inspiration and energy for his ideas in nature. We spoke to him shortly before he left for a break in Bali.



people's experience on the water. X Shore is my way of contributing to this transition. As well as being more energy-efficient, electric boats enable us to enjoy nature without emitting noise and exhaust fumes. Electric mobility on the water is an important step towards sustainability, and I'm convinced it will shape the future of seafaring.

#### Your home country of Sweden is one of Europe's innovation leaders. How does Swedish start-up culture differ from that of other countries?

Sweden is a great place for start-ups. We've got a good work ethic, and we also have a strong industrial and engineering tradition.

## 7 7 A brand has to touch people – that's the only way it will be remembered.

FACTS & FIGURES x shore electric boats

## 7×NY

The number of return flights between New York and Central Europe corresponds to the CO<sub>2</sub> emissions of petrol boats during 50 hours of operation.

## €1,360

That's how much an X Shore 1 boat saves per year compared to petrol boats.

## 1.5 hours

That's all the time it takes to recharge from 20 to 80 percent.

At the same time, we're a small country and need to think internationally. Another interesting fact is that we don't just invest via banks – we have a culture of angel investors. Lots of successful entrepreneurs invest directly in other entrepreneurs. This trust in individuals and their ideas encourages us to retain an innovative approach and break new ground.

## What are the greatest challenges for entrepreneurship?

Many people think entrepreneurship means freedom. But it's also hard work. Every day brings new challenges that make day-to-day life more intense compared with that of an employee. However, I see challenges as opportunities – that's what drives me.

## Is there an experience that has particularly shaped your career?

One of the most difficult periods was when one of my companies went bankrupt; I had to sleep in my car and owed half a million euros. At the time, I didn't know what do to next. A friend said to me: "Konrad, your knowledge is something no one can take away from you." Those words gave me fresh energy. I wrote the business plan for Zound Industries and implemented it within only a few months. I learned how important it is to never allow yourself to get discouraged.

## What motivates you to constantly dare to do new things?

We have a responsibility as a society to use our talents to build a better future – it was Patti Smith who said that. And I agree with her. For me it's not just about financial success. My motivation is to change the world for the better.

## What tips do you have for the next generation of entrepreneurs?

My best bit of advice? Find your own equilibrium. In Sweden, we call it "lagom" – not too little, not too much, but just right. That applies to listening, too. Young entrepreneurs are inundated with advice from all quarters and need to weigh up what really matches their vision. At the end of the day, only they know their business, and they should therefore focus on what matters most. INNOVATION

# Technologies that change our world

They've always existed: innovations that have the potential to fundamentally change our lives. Thanks to the latest megatrends, technological progress is developing at an ever faster rate. What does this mean for our economies? And for investors?

For centuries, education was reserved for monks and nuns – along with a few noblemen: through years of painstaking work in the monasteries of Europe, they drew ornate letters, words and sentences on parchment, binding together the precious pages with the copied texts to produce magnificent books. In 1,440, Gutenberg revolutionized access to the most valuable of all items – the book – through letterpress printing. Reading and learning now became affordable for larger sections of the population.

Education underwent a similar, radical change with the invention of the internet: knowledge became a mass-market product that was available to nearly all and nearly everywhere. The internet changed the way we work as well as the way our economic systems operate.

In contrast to the internet, Al not only democratizes knowledge - it also unlocks access to skills that have until now been the preserve of people with a high level of education.

#### AI handles complex tasks

Today - only a few decades later - we are already on the verge of another education-transforming breakthrough: Artificial intelligence (AI) is in the process of shaking up the workplace at lightning speed. It is redefining work and - once again - access to education. Fact is, not only does AI democratize knowledge - it also enables access to complex skillsets: It takes care of reading, analysis and content-writing for us. The computer recognizes contexts and makes forecasts on our behalf. The quantum computing megatrend will also bring currently unimaginable innovations and separate our lives into "before" and "after" periods.

#### Innovation-friendly structures needed

Visions alter our everyday lives - regardless of how innocuous or revolutionary the changes are. However, good ideas are not sufficient for achieving progress. That takes courageous, creative entrepreneurs - ambitious people who believe in an idea, even if it seems impossible. It requires start-ups that will develop an idea into a product, solution or service that benefits our society and our economy - be that in relation to consumption, work, medicine, government, science or the social fabric. Innovative firms in turn depend on innovation-friendly structures as well as on far-sighted investors who are will-

#### PRICE-PERFORMANCE TREND OF SOLAR TECHNOLOGY Source: BNEF, Refinitiv

Costs of photovoltaic modules (watts)



#### Biotech and health

#### CUSTOMIZED MEDICINE, NEW MATERIALS

Innovations in genetic engineering such as the CRISPR gene shears will help us to treat diseases such as HIV and cancer in the future. Livestock also become less susceptible to disease and plants more resistant to heat. The world will become a better one – with fertilizers based on microbes, leather made from bacteria, and protein from methane.

#### **Renewable energy**

#### WITH TECHNOLOGIES FOR RENEWABLE ENERGY

Innovations in the field of renewable energy – such as solar and wind power – as well as new types of energy storage systems will make our way of life much more sustainable in the future. The hydrogen sector and nuclear energy technologies are also seen as important growth drivers.

## Artificial intelligence

#### MORE CREATIVITY, LESS ROUTINE AND HARD WORK

In the form of ChatGPT and deep learning, AI has long been part of our everyday lives. In future, AI will be able to produce or analyse even more content. This will revolutionize sectors such as healthcare and finance. AI is forcing us to redefine work, providing greater scope for creativity.

ing to invest in their projects. Were it not for these four factors – vision, entre-vership, innovation and invest-thement – our society would come to a standstill.

#### Addressing global challenges

The global megatrends (see infographic) illustrate the extent to which innovations will change the world. That makes it all the more important for us to be guided not just by economic objectives but also by forward-looking visions: We need to address environmental and social challenges through new technologies. Fact is, the innovations of previous centuries have left their mark and resulted in massive social and environmental imbalances.

Today, start-ups show us how we can tackle global challenges such as poverty, environmental issues and social injustice through innovative entrepreneurship. The Global Innovation Index 2024 (GII) shows the huge potential for social innovation. Investment in courageous start-ups brings rewards not just in the form of new business areas and returns but simultaneously also in the technology

Quantum

Quantum computers work with the loading of ions and photons as well as with microwaves and lasers. They calculate extremely quickly and in a much more complex way than current computers and are set to rethink cryptography, materials and medicine. They will also create things that are currently unimaginable

to us.

form of positive change to social and environmental structures. As the GII highlights, however, this progress is dependent on social/innovation-friendly structures.

## Small Swiss companies achieve great things

These biotech and healthcare start-ups received the most investment funds in 2024 (in CHF).

# 56 mn

#### Timeline

The biotech company received CHF 56 million from industry leaders. The aim: solutions for healthy ageing and longevity.

## 57 mn

#### Neurosterix

The newly founded company received CHF 57.1 million in start-up capital, enabling it to take over preclinical assets and a technology platform from Addex Therapeutics.

# <mark>52 m</mark>r

#### Neustark

The climate tech start-up Neustark received CHF 61.6 million in 2024. It develops a technology used to mineralize and bind CO<sub>2</sub>.

**77** mn

#### iOnctura

CHF 76.5 million flowed into the start-up iOnctura. The biopharma start-up uses precise molecules to develop a therapy for types of cancer that were previously difficult to treat.

# 80 mn

#### Bright Peak Therapeutics

CHF 80 million was invested in the biotech company in the first half of 2024. It develops multifunctional immunotherapies for the treatment of cancer.

Source: Swiss Venture Capital Report

Other best-funded Swiss start-ups

**SkyCell** Transport of pharmaceutical goods

#### Argá Medtech

Innovative technology for the treatment of cardiac arrhythmia

**Bcomp** Natural fibres for the automotive industry

**Sygnum Bank** B2B platform, asset banking

**SixPeaks** Therapies for healthy weight loss

#### Making room for innovation

Swiss companies are equally dependent on an innovation-friendly setting. Indeed, Switzerland remains the world leader for innovation. We lead the global ranking list of the GII for the 14<sup>th</sup> time in succession. Switzerland is an innovation leader, ahead of Sweden and the US. However, the report also shows that emerging-market countries like China, Turkey and India are rapidly catching up, despite their economic disadvantages. The world's largest science and technology clusters are also sited in Asia, the biggest being in Japan. Europe is a leader thanks to Paris (12th position), London (21st) and Munich (22nd), while Switzerland has two innovation clusters in the top 100 with Zurich (50th) and Basel (96th). As the index shows, however, we cannot rest on our laurels; rather, we need to continue investing in our innovative capacity. Politicians and business now need to work together to make room for innovative individuals. Fact is, our world is dependent on innovations. We rely on new technologies such as renewable energy, e-mobility,

innovative materials and AI applications because, as well as providing economic growth, they also address global challenges such as the climate crisis, social injustice and the exploitation of renewable resources.

#### Rapid growth in start-ups

Young entrepreneurs play a crucial role here. Up until only a few years ago, Switzerland's innovative strengths were concentrated on giants such as Novartis, Nestlé and Swatch – as well as niche firms like Stadler Rail. The picture has changed since 2019, with promising technology start-ups springing up –

#### INNOVATION

particularly in Zurich, Valais and Geneva. A very high proportion of them pursue sustainable objectives. According to the Swiss Venture Capital Report, around 300 start-ups are currently being set up every year. In total, nearly CHF 4 billion has been invested in Swiss start-ups since 2022. This compares with a figure of only CHF 300 million ten years ago. Start-ups have also created an above-average proportion of jobs in recent years and are now considered the engine of Swiss innovation.

According to Swiss Startup Radar, Swiss start-ups are ahead in terms of sustainable innovation: on a per-head basis, no other country has more tech startups contributing to sustainability through their products or services. Their primary focus is on new technologies such as AI, and they play a key role in its development: Through the use of self-learning algorithms, they make processes more efficient. They use AI applications to predict events more accurately. Or they develop products that – thanks to AI – preserve resources or are actually beneficial to the environment: drugs for previously untreatable diseases, circular substances and climate-positive materials. This applies in the field of biotech start-ups in particular, but also in companies in the energy and cleantech, medtech and ICT sectors.

Swiss start-ups were early in recognizing that AI is poised to transform the economy as a whole. According to Swiss Startup Radar, however, Switzerland is not yet able to translate this "unique potential into growth". In no other country is there such a big discrepancy between the number of AI firms and the financing available to them. By way of comparison: ten times more money was invested in Israeli start-ups than in their Swiss peers in 2024. If this is to change, the entire ecosystem surrounding start-ups needs to be improved.



## Investing for the future

As an investor, you are one of the key factors in successful innovation – and therefore in our economic, environmental and social development. For Globalance, investing in companies that are innovative and promote a positive footprint means investing with the aim of generating returns and simultaneously taking responsibility. We invest in forward-looking solutions and innovative companies. As well as enabling us to achieve a financial gain, it also means we can address the preservation of our vital natural resources.



POSITIVE FOOTPRINT

INNOVATION LEADERS These companies invest heavily in innovation, but their footprint is not positive.

**TRADITIONALISTS** These companies show a lesser commitment to innovation and do not have a positive footprint. **FUTUREMOVERS** These companies are innovative and achieve a positive footprint.

**GREEN CHAMPIONS** These companies focus on a positive footprint without investing heavily in innovation. Why not invest in companies that contribute to environmental equilibrium? Globalance will support you. By investing in the future, you can:

- + capture new business opportunities and generate financial returns
- + improve your competitiveness
- + always be certain of what impact your assets are having on climate and footprint
- + help put the world on a sustainable footing

We identify forward-moving companies by using a specially designed matrix that measures innovative capacity and the positive footprint on an equal basis.



Learn more about Futuremovers.

# Globalance Futuremovers

We look at five innovative, futuremoving firms that Globalance rates as highly attractive investment targets. They have one thing in common: All of them have the DNA of a family firm and are developing solutions for major global challenges. ESSILORLUXOTTICA SA – FRANCE

## Glasses for an interconnected world

**HEALTH AND AGE** — EssilorLuxottica manufactures lenses and frames for spectacles. The French firm was created in 2018 from a merger between lens pioneer Essilor and Italian spectacles giant Luxottica. The latter's founding Del Vecchio family retain a shareholding of around 32 percent in EssilorLuxottica. Today, the company offers solutions that combine visual aids with design. Having teamed up with Mark Zuckerberg's Meta platform, the firm is working on smart spectacles that connect users with the digital world.



#### MEGATRENDS

HEALTH AND AGE — companies that are developing efficient medical innovations – for an ageing and in many instances overweight society.

DIGITALIZATION — companies that are driving the digital and automation revolution of business and society.

CLIMATE AND ENERGY — companies in the renewable energy sector that are developing innovative products and services related to efficiency, storage and distribution.

Processors for AI

**DIGITALISIERUNG** — Nvidia sells semiconductor systems and is considered a pioneer in high-performance graphic processors. The US firm was established in 1993 by Chris Malachowsky, Curtis Priem and Jensen Huang. The latter is now CEO and largest single shareholder, owning nearly 3.5 percent of the company – equivalent to around USD 125 billion. We expect earnings to double in 2024. Nvidia – alongside Apple now the world's biggest listed company – dominates the markets for gaming and computing centres. It is a big beneficiary of Al hype. Although it remains unclear how Al is changing the market, we can expect greater efficiency and innovation. The high growth rates are also reflected in the share price.

#### GLOBALANCE SCORES





## Cables for fast connections

**CLIMATE AND ENERGY** — Italian firm Prysmian SpA is the world's biggest manufacturer of cables for the energy sector as well as telecommunications. Through specialist submarine cables for offshore wind energy and global data infrastructure, it has built up a strong market position. Prysmian SpA was set up in 2005, when tyre manufacturer Pirelli sold its cable business. The original founding family still has a small share in the company. We expect strong growth in sales (10 percent) and earnings. Free cash flow: EUR 800 million to 1.2 billion. Despite a very strong performance, we think Prysmian SpA remains a very attractive investment.



#### GLOBALANCE SCORES



#### Injections for home use

**HEALTH AND AGE** — Ypsomed Holding AG produces injection systems for self-medication, in particular for the treatment of diabetes and obesity. The ongoing boom in weight-loss injections is attributable to these pens and injectors. The founding family of Wilhelm Michel, who set up the company in Burgdorf in 2003, is the main shareholder with a stake of around 70 percent. Ypsomed is focused on partnering with the likes of Novo Nordisk and Abbott, but is independent thanks to its own production sites. We expect strong growth in sales (20 percent) and earnings (45 percent) over the next few years. We continue to see Ypsomed as an attractive investment.

#### GLOBALANCE SCORES



## Products for pharmacies

**HEALTH AND AGE** — Japanese firm SUGI sells everything you might expect in a pharmacy – from medications through hygiene items to health foods. Headquartered in Obu, the company also operates local drugstores that also offer home care. It was set up in 1976 by the Sugiura family, who still own around 35 percent of the shares. SUGI scores highly in terms of recycling, innovative packaging materials and simplified access to a healthy lifestyle. The SUGI Pharmacy app helps foster customer loyalty. We expect strong growth, not least due to demographic trends in Japan. We therefore think SUGI is attractive and has further upside potential.

#### GLOBALANCE SCORES





The risk of failure is overestimated – those with the courage to attempt new things can only be winners.

## Pioneer for climate-friendly investments

## **Gina Domanig**

Cleantech investor and a member of the Board of Directors of Globalance Bank

Gina Domanig is one of the top cleantech investors in Europe and the USA and is considered to be a sustainable investment pioneer. As a managing partner of the Emerald Technology Ventures venture capital fund, she is committed to climate protection and innovation. Contrary to the common cliché, most CEOs in her portfolio are over 40 years old – and have in-depth experience of the industry.

#### CAREER

## Gina Domanig, when you think of your career, did you also experience turning points?

I left Sulzer in 2000 to found a start-up company. Instead of a corner office with two assistants, I found myself sitting on the stairs at first – we simply didn't have any offices. It was an opportunity for me to really make a difference and to orient myself completely to sustainable investments. Without this step, Emerald probably wouldn't exist.

#### What tips can you give young entrepreneurs?

Get to know the world you want to change before you become disruptive. A good idea alone is not enough: you have to really understand the market, the players and the existing problems and know which solutions are really needed. A strong management team with industry expertise and direct market access is key to making targeted use of capital and achieving long-term success.

#### PERSONAL

#### What would you still like to learn?

I am fascinated by how the brain works. I read many books about what sleep, nutrition and experiences do with our brains. I used to think that sleep was a waste of time. Now I know how important it is in order to stay healthy in the long term. And I'm satisfied if I sleep for eight hours.

#### INVESTMENTS

#### What was your best investment?

Emerald. Taking the step into venture capital was a risk, but it paid off. Today, I'm satisfied by how we are shaping a sustainable future with our work. With Emerald I have created a platform that will last beyond my career. It's about more than financial returns. It's about the longterm positive impact we can have on the environment and society.

## The Globalance climate plan

According to the Paris Agreement, companies as well as governments should commit to achieving a net zero climate target. Globalance is taking concrete steps to fulfil its obligations.

The financial markets have a vital role to play in terms of meeting international climate objectives. Investors likewise have a responsibility. Because: 99 percent of a bank's CO<sub>2</sub> emissions are produced through investments and loans - rather than electricity consumption, building insulation or office ecology, for instance. We therefore require our investee companies to have a climate or transition plan. As a business, we too are taking steps in the same direction: Globalance is systematically focused on ensuring its portfolios and investments meet the 1.5-degree climate target.

#### Climate - opportunities and risks for your financial investments

We analyse and rate each company in our investment universe using MSCI's Implied Temperature Rise (ITR) methodology. This enables us to calculate the degree to which a company contributes to climate warming. The lower the warming potential, the more climate-friendly and forward-looking the company.

#### **Future-oriented portfolios**

The climate theme is set to grow over the coming years - irrespective of current or planned measures - and will impact business, society and politics. Globalance investment strategies take climate risks into account and focus on companies that develop and profiting from concrete solutions.

#### As a business, we achieve our climate targets through the following strategies:

- **1** We invest in climate-friendly solutions - in innovative companies in the decarbonization or e-mobility space, for example.
- **2** We finance companies that are committed to the Paris **Agreement** – and are reducing their CO<sub>2</sub> emissions accordingly.
- **3** We seek dialogue and highlight room for improvement - ensuring our investee companies can continue to improve their footprint.
- **4** We avoid non-climate-friendly companies – because climate risks are investment risks too, and we want to reduce them.



Find out more at **Globalance World:** 



In particular, companies that have low climate risks – or market opportunities in this area – will be more resilient in the face of any regulations, crises or market developments. Our Globalance World platform gives you a clear and transparent picture of the progress

these companies are making.

By the end of 2023 1.9°C Globalance 0°C 3°C 2.5°C

MSCI World

WARMING POTENTIAL

Sources: Globalance

TRANSITION PATHWAY

Tonnes of CO<sub>2</sub> equivalent per million francs of invested capital





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