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SPRING 2025

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10 opportunities transforming our world

**OPPORTUNITY:
CHANGING VALUES**

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changing values
of our time

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BILANZ

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2025

Interview: the changing values of our time

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PUBLISHER
Globalance Bank AG
Gartenstrasse 16
CH-8002 Zurich
+41 44 215 55 00
info@globalance.com
globalance.com

PROJECT MANAGEMENT
Nicole Stappung

EDITORIAL COLLABORATION
etextera

LAYOUT AND DESIGN
LST AG

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AVD Goldach

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With AI and common sense.
We created these images with
the use of AI tools.

“ Solutions are developing faster than challenges.

Dear readers

In a world in which nothing is as it was before, not only economic benchmarks are changing, but also moral values. One thing is clear: we need to take on more responsibility and play an active role.

Despite the many negative news stories, there are also hopeful developments: for the first time in history, solutions are developing faster than challenges. In our spring 2025 issue, we focus on technologies and concepts which combine economic opportunities with solutions to global problems.

From the possibilities for using space technology to protect the climate, to personalized cell therapies in medicine, from pioneering urban concepts to AI-based learning – the innovations we present in this issue have one thing in common: they combine commercial success with a positive future.

As investors, we can nurture this development. With targeted investments, we can support businesses which move our world forward while also giving us a return. The most exciting opportunities lie in the areas where economic and social benefit go hand in hand.



Let us inspire you!

A handwritten signature in black ink, which appears to read 'Reto Ringger'.

Reto Ringger
Founder and CEO

Interview: the changing values of our time

Political economist and transformation researcher Maja Göpel talks about truthfulness, social change – and why businesses are more successful when they also take future generations into account.

Maja Göpel is a political economist, transformation researcher and best-selling author. She focuses on social change and the sustainable economy. In her book “Werte – Ein Kompass für die Zukunft” (“Values – a compass for the future”), she shows why truthfulness, responsibility and long-term thinking are key to a sustainable society.



Photo: Wolf Lux

Maja Göpel, why are values so important particularly in times of radical change?

Because they give us direction. Values are our internal compass and offer social security, especially when familiar structures start to shake at the foundations. Then we see which values really take the weight. A key element is whether we think only of short-term results, or see our contribution as part of a larger whole. People who look beyond their own advantage can help shape sustainable solutions.

Have digitalization and globalization changed our understanding of values?

Our basic values change more slowly than we think – but their implications are constantly changing. Take, for example, freedom: in a society with many standards, it leads to more personal flexibility in decision-making. But when the decisions made by one person curtail the freedom of another, the question arises as to when compromises are required. Values-based action is always situation-dependent and must be negotiated.

How do values differ between the generations?

Core values often shift with different life stages. Young people often think in a freer and more idealistic way, whereas more responsibility in life makes security more important. At the same time, we are now living

through profound changes, which are leading many people to return more towards seeking straightforward solutions and challenges.

What values are helping us to face the challenges of our time?

To me, three values seem particularly important: truthfulness – the courage to look at things honestly and not take refuge in euphemistic narratives; longtermism – decisions that are painful in the short term, but foster sustainable solutions; and commitment – the readiness to take responsibility for the big picture instead of getting lost in a focus on the self, which ultimately makes everyone less secure.

What does all this mean for businesses?

Businesses that think long-term are more resilient. It's not enough anymore to just be more productive or more innovative. The key factor is the extent to which a business sees itself as part of a developing society. Companies that develop sustainable and meaningful business models will earn the trust of customers, investors and talented people – and thus secure their future viability.

But it's not just businesses that are facing a transition – our understanding of work is changing too.



“ Businesses that think long-term are more resilient.

Which role is digitalization playing in this?

Technological progress always changes our relationship with work too. The question is: which activities do we entrust to machines – and for which will we remain irreplaceable? Human well-being always depends on good interpersonal relationships, and that won't become any less true in a digitalized world. Empathy, creativity, and fundamental social interaction cannot be automated.

Educational or caring professions are gaining in importance, but are sadly often not valued as they should be. When we talk about the work of the future, we also need to consider which activities we want to deliberately upvalue.

90%
of over 2,000 studies show:
businesses that operate
in a sustainable manner are
financially more successful
than, or at least as stable
as others.

90%
of jobs could be
changed by AI
by 2032.

Sources: Cognizant & Oxford Economics:
The Economic Impact of Generative AI; Richards, G.:
Journal of Policy Research in Tourism, Leisure and Events

Is the economy at a turning point?

Absolutely. Where that turn is heading is being decided now. Some businesses have recognized that sustainable business models pave the way for long-term security, while others are still focusing on short-term gains – without also considering the societal consequences or their own risks. Problems arise when companies evade their responsibilities and act as if they have nothing to do with the repercussions of their decisions.

Do you have any examples of companies which are already making this change?

As CEO of outdoor outfitter Vaude, Antje von Dewitz has consistently – and successfully – geared her business towards sustainability; she is considered an example. Or take Edding: when a grandfather with his grandchild in his arms says more or less the following: “If at some point this company's products no longer have a place in a significantly changed world, then that's OK.” This attitude looks at more than just market shares; rather, it highlights the original idea of entrepreneurship: to offer solutions. I can do that in a very different way if I see myself as a creative and adaptable member of a society.

Which financial sector innovations do you see as particularly important?

Today, capital flows mainly into technologies or assets that promise short-term gains. But sustainable innovations require courageous and long-term investments which focus not only on dividends, but also on preserving and developing fundamentals. Education, preservation of natural resources and social innovations are under-financed, although this real capital forms the basis for future economic success. Finally, the question we have to ask is this: which future are we creating with our money?

What can we do to shape the change in values in a positive way?

Take responsibility, instead of passing the buck. Look things in the face, instead of looking away. Act today in a way that can sustain tomorrow too. It is crucial to clearly name which values an economic success model takes into account. From this comes the compass – and trust in uncertain times.

Innovations from outer space

From satellite images to solar cells: innovations from (aero)space have been down on earth for some time now – and offer new perspectives for the climate, research and the economy.

Astronauts looking down at earth from space often feel awed by the blue planet, which – unlike the other planets in our solar system – provides the conditions required to support life. According to astronaut and ISS mission leader Alexander Gerst, it helps to take a look at the little “spaceship earth” from the outside: it makes you realize “how fragile its biosphere is and how limited its resources are”.

This change of perspective – also called the “overview effect” – leads to a change in mindset. Not only among space explorers from the state-owned aerospace companies, but also in many private tech companies. Because, for a long time now, space technology has been about more than just exploring space. New Space – the commercial exploitation of space – is booming. In the last few years, private firms such as SpaceX, Blue Origin or Virgin Galactic have been engaged in a veritable race for supremacy in space. Space travel, previously mainly reserved for the state-owned aerospace companies, is developing into a mega-

trend. Innovative companies are exploiting their opportunities – many of them with the vision of using data or resources from space to make life on earth more sustainable.

High-precision images and data

Today, technology from outer space is already connecting people across all borders and into the remotest parts of the world via internet. Satellite images are giving us a way to monitor the earth very closely, analyse the environment, and predict the weather or storm events more and more accurately. Because data collected via the – ever smaller and more affordable – satellites are also the main resource in space.

New perspectives from space

Solar energy, better harvests and more efficient mobility – technologies from space are offering new opportunities.

EARTH OBSERVATION

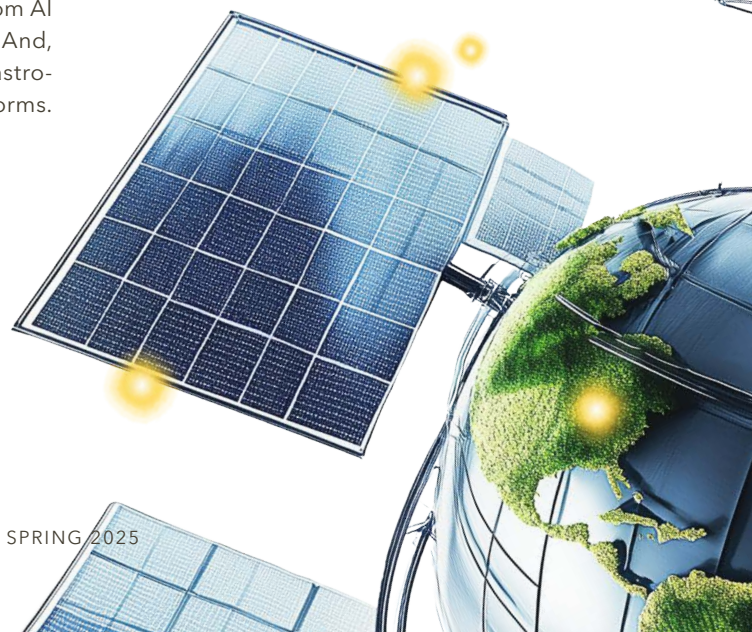
Satellites that observe the climate

Earth observation satellites deliver pin sharp data from the whole of the earth’s surface. The analyses show – including with help from AI and deep learning – how and where the climate is changing. And, thanks to early warning systems, they help detect climate catastrophes such as forest fires, droughts, floods, or storms.

OTHER TECHNOLOGIES

Organs from the printer

Space technologies are advancing innovations not only for the climate, but also in the fields of medicine, biotechnology, and agriculture. They also offer ideal conditions for scientific studies. For example, thanks to zero gravity, space is making it possible to develop 3D-printed organs.



Today, 80 percent of climate data come from space. With earth observation satellites, we can measure the condition of the earth on a day-to-day basis and identify the drivers of climate change. Especially the data on greenhouse gas emissions should be globally available and transparent, urged the World Economic Forum's Global Future Council on the Future of Space in 2023. The aim of this is for economic and political actors to use the data to achieve their net-zero targets.

Innovation against climate change

Many innovations originate from the aerospace field. Solar cells, for example, were originally invented to provide an energy supply in space. Thanks to zero gravity, space also offers ideal research conditions. Researchers on the ISS, for example, found out how cement hardens - and how, with a more climate-friendly process, the current enormously high emissions of the cement industry can be reduced.

Together with AI, the Internet of Things, 3D printing, robotics and miniaturization, technologies from space will change the way we live together. They will make autonomous and climate-friendly mobility viable and bring energy from the sun down to earth from space. And perhaps in future we will also mine minerals, metals, precious metals like gold, iron or nickel in space. Water, noble gases, rare earths, and other raw materials can also be found on meteorites, asteroids, or even the moon. Many start-ups are waiting in the wings. One thing is clear: space technologies are playing a key role in confronting the current climate crisis.

Massive investment potential

The growth potential of the New Space industry is tremendous. According to a study by McKinsey for the World Economic Forum New Space technologies have an enormous investment potential: by 2035, the global space market is predicted to grow to over 1.8 trillion US dollars - from 630 billion dollars in 2023. Alongside space manufacturing, space tourism and disposal of space waste, New Space innovations are opening up a variety of business opportunities to start-ups, investors, and suppliers.

AGRICULTURE

Efficient harvest

Images and data from space are enabling high-precision production processes and use of cultivated land. The result is better harvests, lower water consumption, increased biodiversity, and less food waste.

ENERGY

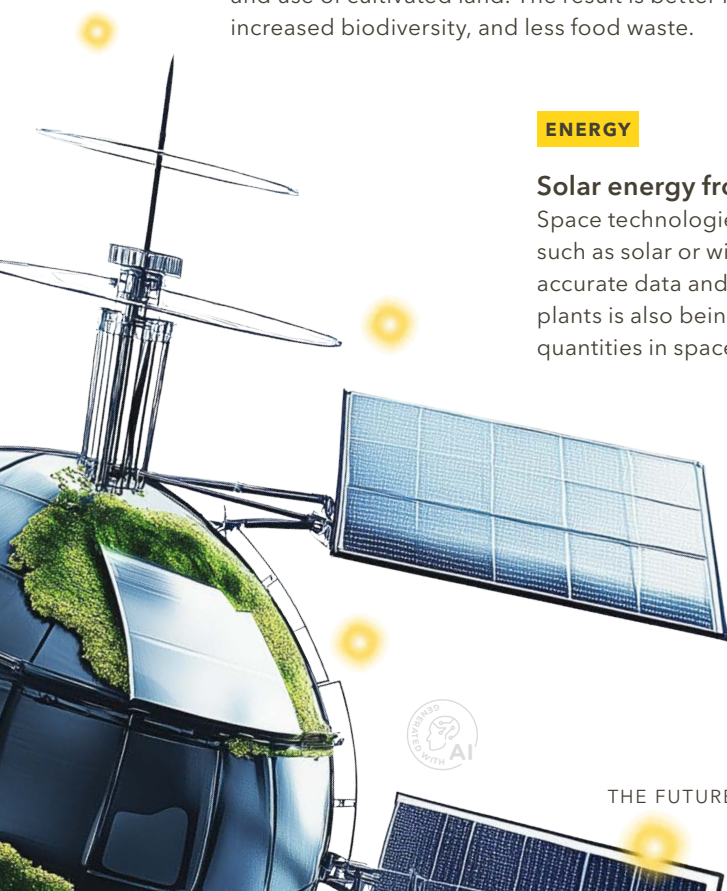
Solar energy from space

Space technologies are helping to further develop renewable energies such as solar or wind farms - or to use them more efficiently thanks to accurate data and weather forecasts. Research on in-space solar power plants is also being conducted, as solar energy is available in unlimited quantities in space - without weather- and daylight-related restrictions.

MOBILITY AND NAVIGATION

Independently mobile

Thanks to satellites in space, cars and buses will in future drive autonomously through the streets. Satellite-guided control systems will also ensure that road traffic is navigated accurately and traffic jams become a thing of the past - which will also benefit the economy.



Empa is making greenhouse gases visible from space

New satellites are showing where on earth greenhouse gases are finding their way into the atmosphere. We spoke to Empa researcher Gerrit Kuhlmann on the new opportunities coming from space.

Empa is supporting the European Space Agency (ESA) in developing the new earth observation satellites for the **European Copernicus programme**. **Gerrit Kuhlmann** has been a researcher with Empa for ten years, monitoring air quality and greenhouse gas emissions. He is advising the ESA on the development of the Copernicus satellite mission.



Photo: Empa

Gerrit Kuhlmann, what is your connection to space?

Our images from space give us a different perspective on the earth. That fascinates me. If you see the earth from above, you get an overview. Instead of borders, our maps show the big picture.

The Empa project is supporting the European Copernicus programme. How does protecting the climate from space work?

The earth observation satellites collect data around the clock; we analyse them. We see, for example, where woodlands are disappearing, where more green is appearing, and where there is less ice. Over the years, we can thus build up an enormous amount of knowledge about climate change – and soon also about greenhouse gases.

In what way do the maps help to protect the climate?

They show, almost in real time, where in the world greenhouse gases are being emitted. This information helps with the compulsory reporting for the signatories of the Paris Agreement. Our maps allow countries to identify major sources of emissions and to reduce them with targeted measures. For example, we can see how high the emissions of a coal-fired power plant are – and whether they correspond to the company's declared figures.

Which opportunities does climate-sensitive space technology offer for tech firms and start-ups?

The potential is phenomenal. An application that determines the footprint of products is one possible example. That's another reason why the European Copernicus programme is making its products freely available: to pave the way for innovations. Companies and start-ups can use them to develop innovative products and services which would not be possible without these new data.



Scan to read the full interview with Empa's Gerrit Kuhlmann.



Renewable agriculture: making deserts fertile

The future will be hotter, the soils drier. The magic phrase here is renewable agriculture. Its aim is to make soils healthier and more fertile – and it is even making barren deserts green. For example, with Liquid Natural Clay.

Healing damaged soils: with this approach, renewable agriculture is revolutionizing farming. By making arid land economically viable, it is bringing food security to regions most affected by climate change.

A variety of traditional methods are helping to make soils fertile again. Increased biodiversity provides more nutrients. A well thought-out crop rotation brings soils into balance; in combination with integrated livestock farming, this creates a healthy ecosystem. But all this requires a great deal of time and water, both of which are scarce commodities in light of increasing desertification. This is where nano-clay comes in.

41.3%

of the world's land surface is made up of arid regions.

Around 24%

of this is continuously turning into desert.

Around 184 million

football fields: this is the size of the affected farmland.

20,000,000 t

of grain could be produced by these regenerated soils.

Around 20,000 t

of grain were produced by Switzerland in 2023.

Ancient knowledge meets modern engineering

The knowledge that clay soils are more fertile than sand is nothing new. Farmers have been mixing clay into their soils for thousands of years. This is, however, very labour-intensive and complex: too much clay does harm; too little does no good. One solution: Liquid Natural Clay (LNC).

The technology from Norwegian company Desert Control has been transforming sandy deserts into fertile farmland since 2007 – and it does so in just a few hours. LNC is a liquid made from natural minerals, tiny clay particles and water. The clay particles bind to the surface of the sand particles, ensuring that grains of sand in the ground store water. This lowers water consumption by up to 50 percent and increases harvests by up to 62 percent. From Dubai to Arizona, LNC has already breathed life into desert soils – and the future of this natural technology looks blooming, to say the least.

Sources: UNO, United Nations Decade for Deserts and the Fight Against Desertification, Agricultural Report Switzerland 2024





Chocolate from a fermentation tank

Cocoa from the lab tastes the same as cocoa from the field, but uses less water and land resources. How start-ups are stirring up the global food market - and highlighting opportunities for greener and more socially equitable food production.

Anyone entering the Food Brewer production hall at the Horgen Labs innovation campus on Lake Zurich feels it right away: the pioneering spirit. Young people with big visions are researching and experimenting here. In white coats, they busy themselves with pipettes and test tubes in the lab. Even if there are no tell-tale signs: cocoa and coffee are being produced here - in the lab instead of in the fields of Africa, Asia or South America. The principle behind the cell cultivation is simple: extract a cell from a bean, feed it and wait for it to propagate. In the tanks and centrifuges at Food Brewer, a brown, pulpy mass forms, which will later be dried and ground into brown cocoa or coffee powder. And sure enough: Food Brewer chocolate taste like - chocolate.

Food tech with big visions

Food Brewer produces the cocoa powder or couverture - the start-up then leaves the development and marketing of the lab chocolate to chocolatiers such as Felchlin or Lindt. There is both great interest and caution to be sensed within the industry, says CEO Christian Schaub: "Many chocolate manufacturers don't yet know how they should position themselves."

The world market prices for conventional cocoa have skyrocketed in recent years. The reason: heat, drought, climate change. Monocultures, water scarcity, pesticides, as well as dubious production conditions and supply chains are making cocoa and coffee into problematic luxury foods. At the same time, global demand is increasing dramatically. Schaub, who had previously worked for many years as an ETH engineer in the biotechnology field and already founded a number of start-ups, went looking for a solution.

A future made from cell cultures

In 2021, he founded Food Brewer. Together with breweries and scientists, he developed not one, but two alternatives to conventional cocoa. A plant-based alternative, produced by fermenting and roasting the leftovers from conventional cocoa production. And the cell culture technology. Today, Food Brewer employs 20 people. The approval process in the USA is underway. Going forward, Schaub is keen to manufacture oils, nuts and other foods in the lab too.



Scan to read the interview with Food Brewer's Christian Schaub.

Photos: Thomas Kern / Swissinfo.ch

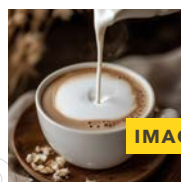
New "old" food thanks to new technologies

Food Brewer is virtually alone in producing foods from cultivated cell cultures – only in Israel and the USA are other start-ups following suit. More common are attempts to manufacture foods using precision fermentation. This involves using microbial hosts such as yeast as "cell factories" to manufacture specific ingredients which are later extracted. According to Schaub, however, this process is complex and expensive. "As a result, I hit upon the idea that it's cheaper to acquire the cells directly from nature and then use them as a whole." He sees the potential for precision fermentation more in the area of highly specialized proteins and lipids, which could offer high added value through the selection of fungi and cells, especially in the pharmaceutical sector. This is because with customized proteins, foods and dietary supplements can be produced with individually assembled nutrients.

Reclaiming ecosystems with novel food

While Food Brewer manufactures luxury foods, novel food – with new types of foodstuffs made from cell cultures and fermentation – could change food production worldwide. These foods have a small CO₂ footprint and require less water and land. Using crop lands less intensively, will allow ecosystems to recover and entire regions to be restored to their original natural state. Novel food is not affected by contaminated soils, needs no pesticides, leaves behind no waste, and does not need to be transported over long distances. It also obviates issues such as child labour, low wages and high distributor profits. As production is not tied to local conditions, these foods can be produced anywhere and contribute to global food security. One question remains: how will the increasing laboratory production affect farming families in traditional growing regions?

Progress through precision fermentation



IMAGINDAIRY – ISRAEL



Plant-based milk proteins

Since 2020, start-up **Imagindairy** has been researching how to produce sustainable, non-animal milk proteins through precision fermentation. So far, consumers have given this solution a somewhat lukewarm reception.



CALYSTA – USA



Vegan proteins for animals

Precision fermentation is also being used to manufacture animal feed proteins. Leading in this field is US pioneer **Calysta**, which is manufacturing proteins from natural gas and microorganisms with its FeedKind product.

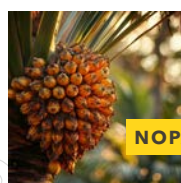


DMC BIOTECHNOLOGIES – USA



Sustainable cosmetics

US company **DMC Biotechnologies** uses precision fermentation to manufacture sustainable, bio-based products such as dietary supplements or cosmetic ingredients.



NOPALM INGREDIENTS – USA



Palm-oil-free oil

Palm oil is in almost everything – from shampoo to sandwich spread. As a result, since 2021 biotech company **NoPalm Ingredients** has been using yeast-based precision fermentation to manufacture a palm oil alternative.



21ST.BIO – DENMARK



Pharmaceuticals

21st.Bio uses precision fermentation to produce manufactured proteins and peptides, including for biopharma products. **21st.Bio** also offers its scalable technology to other companies.

The waste mountain as a goldmine

Thanks to new recycling economy technologies, electronic waste is becoming a valuable resource – and an opportunity for innovative companies. This is because waste often hides rare earths, the mining of which is not only ecologically hazardous, but also socially risky.

People leave behind enormous amounts of waste. In 2023 alone, around 61 million tonnes of electronic waste was created. When we throw things away, many valuable raw materials are lost. The recycling economy wants to change this: with recyclable products that are designed from the outset with the potential to be disassembled and reclaimed. The concept is called “Design to recycle”. It makes sense not only from a green perspective, but also financially. True, recyclable products are often more expensive to manufacture, but the life-cycle costs are significantly lower – in one example in a study by the University of Zurich, these costs were 39 percent lower.

Resources are scarce and valuable. This is especially true for rare earths, without which digitalization, the energy transition and progress would be unthinkable. They are in every smart-

phone, every electric motor and every computer. Precisely because of how difficult it is to extract – mostly in poor countries – and dispose of them, companies with a circular mindset and innovative technologies are in demand in the waste management industry. Only when everyone gets on board will the economy become regenerative – and waste will become an important, in-demand resource.

Umicore – using microorganisms to tackle waste mountains

Belgian company Umicore has made a name for itself as a recycler of precious metals. Today, it is recycling rechargeable batteries with the help of microorganisms – and proving that here, too, a closed material cycle is possible.

Empa – prospecting for rare earths with urban mining

At ETH Zurich researchers are also experimenting with a process which uses a molecule to mine rare earths from old fluorescent lamps. Meanwhile, Empa is focusing on urban mining: recycling valuable resources from buildings or electrical waste. This means that in future we will be able to acquire rare earths here in Switzerland instead of in dubious mines in Africa.

Recycling in Switzerland

52%

of municipal waste in Switzerland is recycled. But we could already be recycling another quarter today.

2,800,000 t

of food are wasted every year in Switzerland instead of being eaten – this is the equivalent of almost 1 kg per person per day.

93 kg

of plastic is thrown away by every Swiss citizen every year. Only 9 percent of this is recycled.

Less than 1 %

of the rare earths contained in dumped electronic waste are recycled. In total, 132,000 tonnes of discarded electronics are collected every year in Switzerland.

Source: Federal Office for the Environment (FOEN)

Precision in the field – AI meets farming

From autonomous tractors to smart crop management: agriculture is experiencing a digital revolution. Precision farming is lowering costs, conserving resources, and increasing yields – with benefits for people, businesses, the environment, and society.

More output with less input, healthier soils and automated animal monitoring: precision farming is bringing innovation into the field. Modern technologies are replacing herbicides, lowering water consumption, and optimizing cultivation methods. At the same time, data-based decision-making is strengthening food security.

Precision farming encompasses smart monitoring of plants and animals, use of drones, autonomous vehicles and tools, as well as smart building and equipment management via the Internet of Things. Together with AI, this is creating new opportunities.

Caterra: the precise weeding robot

Anyone wanting to do without herbicides needs to use their hands: organic vegetable growers either have to weed by hand or resort to less precise mechanical hoeing. But not with Caterra, the weeding robot developed by an ETH Zurich spin-off. This robot can identify weeds growing directly adjacent to crops and remove them precisely using a laser – completely without chemicals.

” Autonomous laser weeders are lowering the costs of herbicide-free growing enormously.

Aurel Neff, founder of Caterra

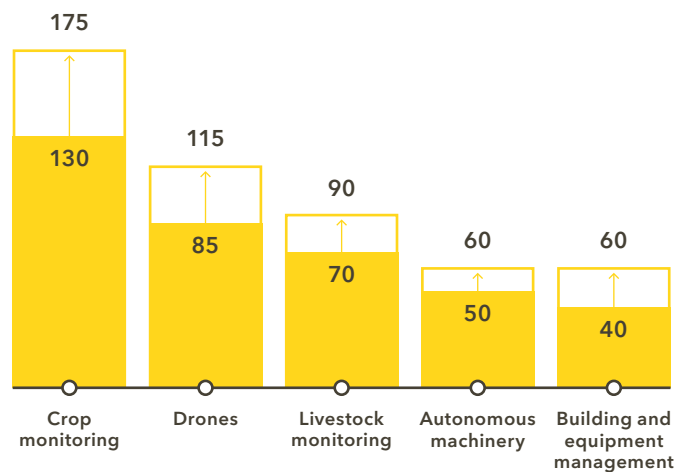
Scan to read the interview with Caterra's Aurel Neff.



ESTIMATED INCREASE IN GLOBAL GDP DUE TO PRECISION FARMING BY 2030

In billions of US dollars

■ min. ■ max.



Source: McKinsey & Company: Agriculture's connected future: How technology can yield new growth

MyFarmIQ: data-driven management

With MyFarmIQ, Swiss company AgriCircle is providing farmers with an innovative tool kit to help them manage their operations more efficiently and sustainably. With the aid of satellite data, the software analyses fields in real time and gives data-based recommendations for optimal management. This allows farmers to maximize their yields and minimize environmental impacts.

And this is just the beginning

Precision farming is still in its infancy, but it is growing rapidly. By the end of 2030, it could generate up to 500 billion US dollars in additional value to the GDP – an increase of up to 9 percent. To ensure that not only large, investable businesses benefit from this, targeted policy support is also needed.

Interview: the city of the future

A city that brings people together: futurologist Oona Horx Strathern talks about new urban concepts, economic opportunities, and why mindful urban planning has more to do with quality of life than technology.

Oona Horx Strathern is a futurologist focusing on urban development and social change. She is executive director of Horx Future GmbH and author of the book "The Kindness Economy: A new currency for the future of business, work, and life". Horx Strathern lives in Vienna, where she and her husband have designed a "future house" focused on social intelligence rather than technological overkill. Further information is available at horx.com.



Photo: Klaus Vyhalek, www.vyhalek.com

Oona Horx Strathern, why does the topic of urban development fascinate you?

I grew up in London and I've lived in Dublin, Paris and Hamburg - but I've also spent a lot of time in the country. Cities are the pace setters of social change: they are where developments become tangible, where we start to see how megatrends are shaping our lives. The way we design cities has an impact on how we work, on our homes, and on how we live together.

How will the city of the future be different?

Cities are growing, but in a different way to how they did before. Instead of an unchecked boom in city centres, living close to town in greener areas with good transport connections is growing in popularity. At the same time, economic momentum remains in the urban centres; that's where innovations, companies and new business models are emerging. The challenge: how do we create cities which are both economically strong and liveable?

A key to this lies in smart urban planning which puts people centre stage. Pedestrian-friendly areas, a variety of mobility options, and mixed residential areas will mean short journeys and a better quality of life. This is exactly where concepts such as the 15-minute city come in: they reduce traffic, improve air quality, and strengthen local trade. Studies show that cities benefit financially when people travel on foot or by bike - they stay longer, discover more, and support local businesses. This makes for lively neighbourhoods and encourages creative business ideas.

Are there already models for this new urban vision?

A few cities are implementing bold concepts. Copenhagen is showing how a city becomes more liveable: wide cycle lanes, traffic-calmed zones, and lots of green dominate the urban landscape. The former mayor of the Frederiksberg district campaigned to ensure that every resident be able to see at least one tree from their window.

30 cents

is the amount that every kilometre travelled by bicycle brings to society - above all through the positive health effects in comparison to the car.

80%

of global GDP is generated in cities.



Paris is driving the 15-minute city concept forward. One example is the Saint-Vincent-de-Paul district, where a former railway site has been transformed into a blended neighbourhood with a wide variety of offerings. Barcelona is going even further, with its Superblocks (Superilles). A number of residential blocks are being transformed into traffic-calmed zones in which cars are only allowed to drive at walking pace. This is creating green street-scapes, play areas and seating areas.

“ Cities aren’t made of buildings; they’re made of people.

You talk about urban acupuncture - what does that mean?

Jamie Lerner, Mayor of Curitiba in Brazil, coined the phrase urban acupuncture: small, targeted interventions with a big impact. An example of this is Vienna’s Grätzloasen initiative, which is transforming car parking areas into mini parks with seating. Originally met with resistance, today these are a cherished part of the cityscape.

60%

of the world’s population will be living in cities by 2030 - compared to 47 percent in the year 2000.

43 megacities

with more than 10 million inhabitants will exist by 2030.

Sources: Federal Agency for Civic Education: Megacities; United Nations: What city people need; Allgemeiner Deutscher Fahrrad-Club (German cycling association): Kosten-Nutzen-Analyse: Auto vs. Rad (Cost-benefit analysis: car vs bicycle)



The one-minute-city concept in Sweden works in a similar way: here, people are actively helping to shape the environment outside their front doors - with benches, e-bike charging stations, or small green areas. These quick, affordable measures show: change doesn’t always require major building projects.

How are cities becoming climate-resilient and eco-friendly?

Cities need to adapt to higher temperatures and extreme weather. In Athens, there is already a city cooling commissioner, who ensures that new buildings don’t contribute to overheating.

More green spaces are an investment in the future: not only do they improve the urban climate, they also lower temperatures and create meeting places. Technology can also make cities more resilient, for example via intelligent traffic control or energy-efficient buildings. The key here is for it to serve people.

What can people do to make their city more liveable?

Show more initiative! Urban development depends on people. Neighbourhoods can create new meeting places through joint activities like street parties. In Switzerland, cooperative societies are supporting affordable living space and social desegregation. The Austrian town of Trofaiach has a Stadtkümmerer (town carer), who advocates for the residents. Towns and cities benefit when people get involved.

If you could design your ideal city - what would it look like?

I’m thinking of the image once described by the president of the German Chamber of Architects: a city in which a four-year-old child can go out for ice cream on its own. A city in which children can move around freely and safely is a city that is liveable for all generations.

Cities aren’t made of buildings - they’re made of people. The Kindness Economy shows: those who invest in social and environmental quality of life will also create economically stable cities. Happier people are more productive, more engaged and act as drivers of a sustainable economy. So a liveable city is not a luxury - it’s a necessity.



A tutor which never gets tired

A new tutor has entered the classroom: artificial intelligence. It is enabling personalized learning – but what does this mean for schools, teachers, and learners?

Imagine a school where every student has a tutor – always available, personalized to the individual, never stressed. What sounds like science fiction is closer to reality than many think. Companies like Khan Academy or Microsoft Education are developing AI-supported learning systems which impart knowledge in a tailor-made manner and adjust to the individual's learning speed.

"Before, teaching materials had to work the same for everyone. Today we can tailor knowledge to every child", says Pierre Dillenbourg, Professor for learning technologies at the Swiss Federal Technology Institute of Lausanne (EPFL). AI tutors analyse what students already understand and where they are having difficulties. They adjust tasks, suggest alternative explanations and give immediate feedback. "Particularly in maths or languages, this can yield significant benefits."

AI not only facilitates traditional learning, but also helps in areas which until now have been hard to measure. One example is Dynamilis,

an AI-supported system for analysing hand-writing which Dillenbourg co-developed. It detects the subtlest of movement patterns, which elude the human eye, and helps identify motor difficulties early on and address them in a targeted way. But learning is more than just knowledge retrieval. Can AI also nurture critical thinking and creativity?

Chatbots can give the correct answers – but they don't believe in you.

Pierre Dillenbourg,
Professor of learning technologies, EPF Lausanne

Teachers as learning coaches

AI is changing the role of teachers – but not making them redundant. "Good teachers aren't imparters of knowledge; rather, they are learning coaches", says Dillenbourg. They ask the crucial questions, encourage students to think, and motivate them.

A well-known educational study shows: learning progress is strongly dependent on teacher expectations. Children who are trusted to be capable and given demanding tasks achieve measurably better results. "Chatbots can give the correct answers – but they don't believe in you", concludes Dillenbourg.

AI can lighten teachers' load, however, for example by automatically correcting work or providing personalized exercises. That means there is more time for the actual job: preparing children not only for exams, but also for life.



Self-regulated learning is underestimated

But not all learners automatically benefit from AI. A key factor is the ability to achieve self-regulated learning – in other words, a person’s ability to set goals for themselves, monitor their learning progress, and correct themselves.

“A person who doesn’t know how to learn in a meaningful way or how to organize themselves won’t succeed even with AI”, says Dillenbourg. AI can make suggestions, but it cannot replace personal initiative. Here, the role of teachers remains paramount: they need to support learners in developing independent learning so that they can work with digital tools.

Technology as an opportunity – but for whom?

AI-supported education can help above all in areas where teachers are in short supply – for example in remote regions or developing countries. But Dillenbourg knows: “Educational equity doesn’t just happen.” Currently, anyone who does not have access to good schools will often also lack access to digital learning.

While companies like Open AI or Google Education are investing billions in the development of AI tutors, it is still unclear how schools will be able to integrate this technology in a meaningful way – and finance it. Because AI is not for free: it not only needs enormous computing power and energy, but also technological infrastructure and trained teachers.

MONTESSORI SCHOOL: LEARNING WITH THE HANDS, NOT WITH ALGORITHMS



Montessori schools encourage independent, experience-based learning. They focus on the child – with its individual pace, a great deal of movement, and practical experiences instead of “chalk and talk”.

“Children need real, haptic experiences before they dive into the digital world”, says Martin Schmidt, Head of Primary Education at the Montessori School Rietberg. Montessori encourages learning through touching: doing sums using strings of beads, writing with sandpaper letters, comprehension through experience. “Technology has its place – but only once the foundations have been laid.”

Between algorithm and empathy

The school of the future will not be shaped by algorithms alone. AI can optimize learning processes and support teachers – but it will not replace people.

Learning is more than getting the correct answer. It is about trying things out, making mistakes, asking questions, and making new discoveries. Because ultimately, human beings do not learn from data alone. Rather, they need experience, interaction, and genuine curiosity.

As Dillenbourg puts it, succinctly and pragmatically: “For decades now, a revolution in education has been predicted. But classrooms today look almost exactly the same as they did a hundred years ago. AI will move education forward – but it won’t revolutionize it overnight.”



Three smart AI tutors

KHANMIGO (KHAN ACADEMY)

This tutor helps students to think independently, instead of just delivering answers. It is particularly strong in mathematics and sciences.

SOCRATIC (GOOGLE EDUCATION)

A widely used app which helps learners to find answers and explanations. It thereby offers low-barrier access to AI learning.

MICROSOFT READING COACH

Developed to promote language and reading skills: identifies errors during reading aloud and gives direct feedback on pronunciation and intonation.

The next work revolution

They help with nursing care, do assembly line work, and help with sales: in the coming years, humanoid robots will revolutionize the world of work. We present two prominent humanoids.

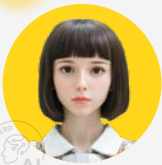
In old-people's homes they act as robot carers, providing a source of friendly company to the seniors and set off an alarm if they detect out of the ordinary vital signs. In factories, they act as industrial robots, undertaking tasks requiring a high level of skill and flair. And at the shopping centre they work as robot assistants fulfilling customer wishes. In future, humanoid robots will be part of everyday life – and in some areas they are already a reality.

Robotics meets intelligence

Humanoid robots are modelled on the human body in their form and function, and act in environments which have been designed for us humans. Ideally, they will have an artificial general intelligence (AGI) which allows them to cope autonomously with any scenario. In short: humanoid robots give artificial intelligence a face.

A futuristic use of AI

The development of humanoids and AGI offers immense opportunities, but also raises new questions. Will humanoids drive human employees out of the market? If AGI develops consciousness, will it then need rights? To ensure that the new technology contributes to the good of all humanity, there needs to be an open dialogue and forward-looking planning.



GRACE ROBOT NURSE

Developer: Hanson Robotics Ltd. (Hong Kong), established 2013

With her thermal imaging camera, she measures pulse and body temperature. If someone complains of pain, she adjusts her facial expression: Grace is a hyperrealistic, empathic robot – developed as a medical assistant and for nursing care.

Special feature: frubber, the nanotech skin which imitates human skin and muscles with remarkable realism. Industry-leading robot hands which can match the fine motor skills of a human hand.



FIGURE 02 INDUSTRIAL ROBOT

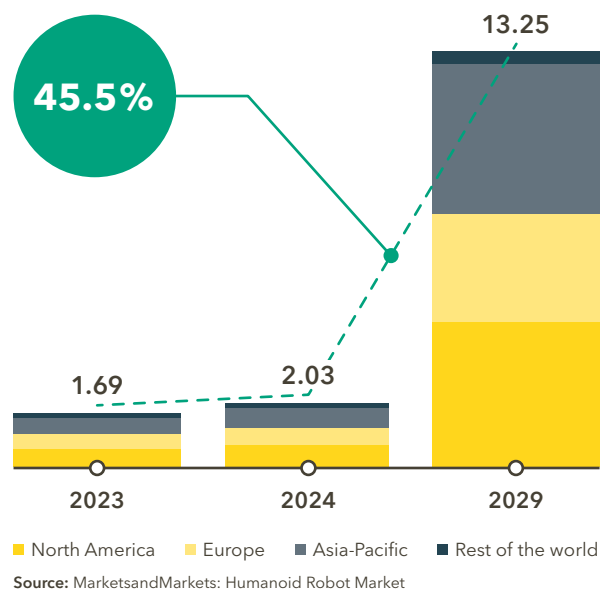
Developer: Figure AI (USA), established 2022

Figure 02, built for use in factories, logistics, or retail, is highly versatile – and, above all, scalable. It proved its tactile capabilities in summer 2024 during a field test constructing car bodywork for the BMW Group.

Special feature: Figure 02 can be delivered in large quantities for specific company needs.

MARKET GROWTH FOR HUMANOID ROBOTICS

Annual growth 2024-2029, in billions of US dollars



Personalized therapies are transforming medicine

Tailor-made treatments instead of standard therapies: personalized medicine is fundamentally transforming healthcare. Thanks to innovative technologies, cell and gene therapies could reach more people in the future – an important step forward.

Cell therapies are considered groundbreaking, but currently only very few people are benefiting from them. The costs are immense: a single dose costs at least 500,000 francs. Having said that, the successes are promising – in particular in cancer therapy, where response rates of up to 90 percent have been achieved. Nonetheless, currently only around 2 percent of the eligible patients are receiving this innovative treatment.

Automation as the key to expansion

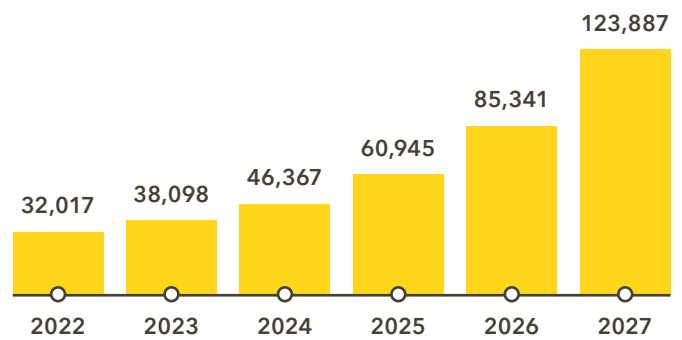
This is where Limula comes in. The company is developing a platform technology which will allow clinics to prepare cell therapies directly on-site. Instead of cells being sent to a central laboratory, where they are analysed, processed and subsequently returned, with Limula's solution they can be produced end-to-end and in a single device. This not only saves time and infrastructure, but also cuts costs significantly and makes the therapies available to a broader group of patients.

The ultimate form of personalized medicine

Cell and gene therapies are the most advanced form of personalized medicine: they use the patient's own cells as "living medicines". But they are time-consuming and expensive to produce. The true breakthrough for this innovative form of therapy will only be achieved when it is available and affordable to all.

TOTAL SPENDING ON PRECISION MEDICAL TREATMENTS WORLDWIDE

2022-2027, in millions of US dollars



Source: Statista: Spending on Precision Medicine Treatments Worldwide

A look into the future

Development is moving forward rapidly. The American licensing authority, the FDA, anticipates that by 2030 there will be over a hundred licensed cell therapies for cancer alone – today there are just seven. A look into the future shows a medical field in which patients are treated and cured using their own cells. In order to unlock this potential, the therapies now need to be scaled up.



Scan to read the interview with Limula's Thomas Eaton.



Limula SA is transforming the production of cell and gene therapies with an automated and scalable manufacturing solution. The Lausanne-based start-up was founded in 2020 and today employs 20 people.

Globalance future- movers

They move the future with promising innovations: these listed companies seize opportunities – and offer attractive investments for future-oriented investors.

MEGATRENDS



DIGITALIZATION – companies which are driving the digital and automated revolution of the economy and society



HEALTHCARE – companies which are developing efficient medical innovations – for an ageing and, in many places, overweight society



URBANIZATION – companies which are developing innovative products and services covering all aspects of high-density living and building



CONSUMER SPENDING – companies which are identifying and nurturing sustainable consumption and the opportunities presented by the circular economy



KNOWLEDGE SOCIETY – companies using new technologies to revolutionize learning and research



STRIDE, INC. – RESTON, USA

Technology for learning success

KNOWLEDGE SOCIETY – Stride, Inc. combines technology and education – with digital lesson plans, innovative learning platforms, and tailored educational offerings. Founded in the year 2000 by Ronald J. Packard, the company focuses on a broad range of career-oriented online education programmes – from basic level to advanced training. Learners benefit from flexible, personalized solutions which allow them to learn at their own pace. Thanks to its high scalability, the company's margins will rise significantly. Despite a sharp rise, the share remains attractive.

GLOBALANCE SCORES

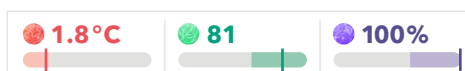


IRIDIUM COMMUNICATIONS, INC. – MCLEAN, USA

Satellites for global connections

DIGITALIZATION – Iridium Communications, Inc. is a global provider of satellite communication services – from satellite phones to IoT terminals and mobile connectivity solutions. Founded in the year 2000, the company offers global coverage with its unparalleled constellation of 66 active satellites. Broad diversification across a range of markets ensures its stability. Over the coming years we anticipate strong sales growth of 5 to 10 percent per year, as well as above average earnings growth. We also rate Iridium Communications as very attractive compared to other firms in this sector.

GLOBALANCE SCORES



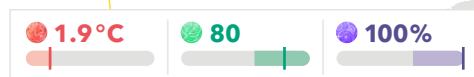


STRAUMANN – BASEL, SWITZERLAND

Solutions for dentistry

HEALTHCARE – Straumann Holding AG provides dentists and dental laboratories with solutions in the fields of implantology as well as restorative and regenerative dentistry. The company was founded by Reinhard Straumann in 1954 and is now considered a global leader in the supply of dental implants and prosthetic solutions. It covers a broad spectrum of clinical requirements, including innovative technologies such as the Variobase® system. With annual sales growth of around 10 percent, high operating margins, and a net profit margin of around 20 percent, we rate Straumann Holding AG as very attractive, with further upside potential.

GLOBALANCE SCORES



SEKISUI HOUSE – OSAKA, JAPAN

Building for the climate

URBANIZATION – Sekisui House is constantly setting new standards in climate-friendly, intelligent, and high-density construction. Founded in 1960, the company has been building zero-energy houses, which generate more energy than they consume, ever since 2009. With a strong focus on customer requirements, Sekisui House creates tailored, individual solutions. Thanks to its strong international presence, especially in the USA, Australia, and Singapore, the company makes the most of attractive market opportunities worldwide. Stable margins (8 to 10 percent), a high dividend yield (4 percent), and an attractive valuation offer further upside potential.

GLOBALANCE SCORES



SIMS LTD. – MASCOT, AUSTRALIA

A new lease of life for metal and electronics

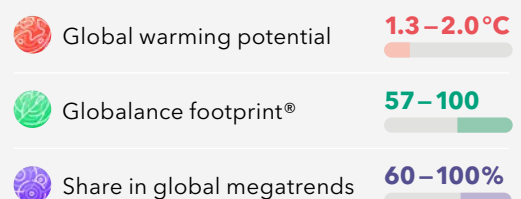
CONSUMER SPENDING – Sims Ltd. recycles metal and electronics with a focus on sustainability and environmental protection. Since its founding in 1917, the company has developed into a global market leader in metal recycling and today operates over 240 facilities in 13 countries. It plays a key role in the environmental services sector by recycling metals and electronics as well as feeding them back into the materials cycle. With Sims Lifecycle Services, the company also offers diversified recycling solutions for IT assets and cloud infrastructures. Its financial results depend on raw material prices; at the present time, we rate Sims Ltd. as an attractive investment.

GLOBALANCE SCORES



GLOBALANCE SCORES

Key areas
classified by
Globalance:





Entrepreneur and AI pioneer

Adrian Locher

” If you don’t make any mistakes, you won’t develop.

Adrian Locher is a General Partner at Merantix Capital, an early-stage investor for AI start-ups. He founded his first company while still a student at the University of St. Gallen (HSG), declining at the last minute to pursue a career in investment banking. His mindset: if you want to establish something, you have to fail and learn from it.

CAREER

Adrian Locher, was there a moment in your career which changed everything?

There were actually two. The first was when I called off my placement with an investment bank three days before it was due to start. I had realized: this isn’t me. Instead of taking the usual career path, I founded my first company – something rather atypical for an HSG student 20 years ago.

The second moment came after I sold my company DeinDeal. I took a year off and asked myself: What are the big topics of the next 100 years going to be? What truly inspires me? Where do I have an unfair advantage? The answer led me to AI – and I founded Merantix.

PERSONAL

What drives you?

Building something new, failing, learning, carrying on. When I’m no longer learning anything new, I know it’s time for the next challenge. Entrepreneurship was never a risk for me. What’s the worst that can happen? That it doesn’t work? Then I’ll just make something else. In Europe, failure is often stigmatized, but it’s what we learn the most from. That’s also what I say to my children: Fail forward! When my daughter gets frustrated with skiing because it doesn’t go smoothly right away, I say to her: “That’s learning! You fall down, get back up again, and get better.”

INVESTMENTS

What was your best investment?

No doubt: my investment in myself. I am my most important resource. In order to maintain a balance, I divide my time between three pots: business, family and friends, myself. Keeping an eye on all the pots helps me not to lose myself. There’s no such thing as the perfect balance – but when I notice that one area is being neglected, I can do something about it quickly.

Globalance Better Capitalist Forum

In February 2025, at the Schiffbau building in Zurich, the first Better Capitalist Forum was held – an annual event which brings our community together to discuss future-oriented topics.

Under the heading **“Disruptive Times: Strategies for a World in Transition”**, the event focused on topics such as artificial intelligence, geopolitical tensions, and climate-induced transformations. While in the 1980s, Gordon Gekko, with his famous mantra **“Greed is good”**, stood for an era of unbridled capitalism, today we know: sustainable success comes not from short-term profits, but rather from forward-looking action, value-oriented leadership, and a deep understanding of global challenges.

The inspiring talks given by Walter Thurnherr, Adrian Locher, Lise Kingo, and Reto Ringger as well as the joint discussions provided valuable insights into the challenges and opportunities that accompany responsible business practices.

IDEAS THAT STICK: WORDS FROM OUR SPEAKERS

“I see the biggest opportunity for the future in the fact that sustainable business practices have now become mainstream. We know what needs to be done, and the young generation wants to work for responsible companies. Now we need to drive the transition forward.”

Lise Kingo, independent board director

“The biggest opportunity for Switzerland are our young people and their education. Our universities provide the foundation for research and innovation – and we need to systematically nurture them in order to strengthen Switzerland as a business location.”

Walter Thurnherr, former Swiss Federal Chancellor



Events outlook for 2025

This year, too, our community can look forward to a varied programme of events, with inspiring entrepreneurs and innovative projects.

You will soon find many more exciting events listed on globalance.com/events.

21 May 2025: Longevity is the key to a fulfilled life in old age – experts from the field of demography and longevity show how this trend is shaping our future.

27 May 2025: Sustainability begins in everyday life – a look into production at Soeder shows how natural personal care products protect both our skin and the environment.

25 and 26 June 2025: Sustainable innovation on the water – X Shore brings its electric boats from Sweden to Lake Zurich. Founder Konrad Bergström will share his vision with us before we get on board ourselves.



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