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THE
Futuremover
SUMMER 2022

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PODCAST

More about this issue's contents in the podcast by Board member Christina Kehl:

globalance.com/zukunftbeweger-christina-kehl

Stay Positive – the Order of the Day

The fact that several interconnected crises are escalating at the moment – climatic disaster, pandemic, war in Europe, geopolitical tensions and stagflation – is causing increasing anxiety and uncertainty on a worldwide scale. Conventional solutions no longer work, and our politicians and institutions rarely have convincing answers. Our global civilisation is facing unprecedented change.

In such a challenging environment, negative thoughts often dominate our thinking and actions. For this reason, we want to set a counterpoint with this *Futuremover* magazine. In this issue, we will show you only positive developments.

The thing is: we, and especially the generations that will follow us, are facing numerous Herculean tasks. But we no longer have to wait for expensive breakthrough technologies. We already have promising technologies at our disposal in the areas of energy, mobility, food, education and infrastructure; and that at a fraction of the previous costs. We just need to have the courage to rethink and break away from old customs.

> The happiness of your life depends upon the quality of your thoughts.
>
> Marc Aurel

But technology alone will not suffice. We have to take the biggest step in our minds and start rethinking how we do things. The key to overcoming the many of the challenges is enacting change and looking at things from a new angle. Let us go into this change with a positive attitude.

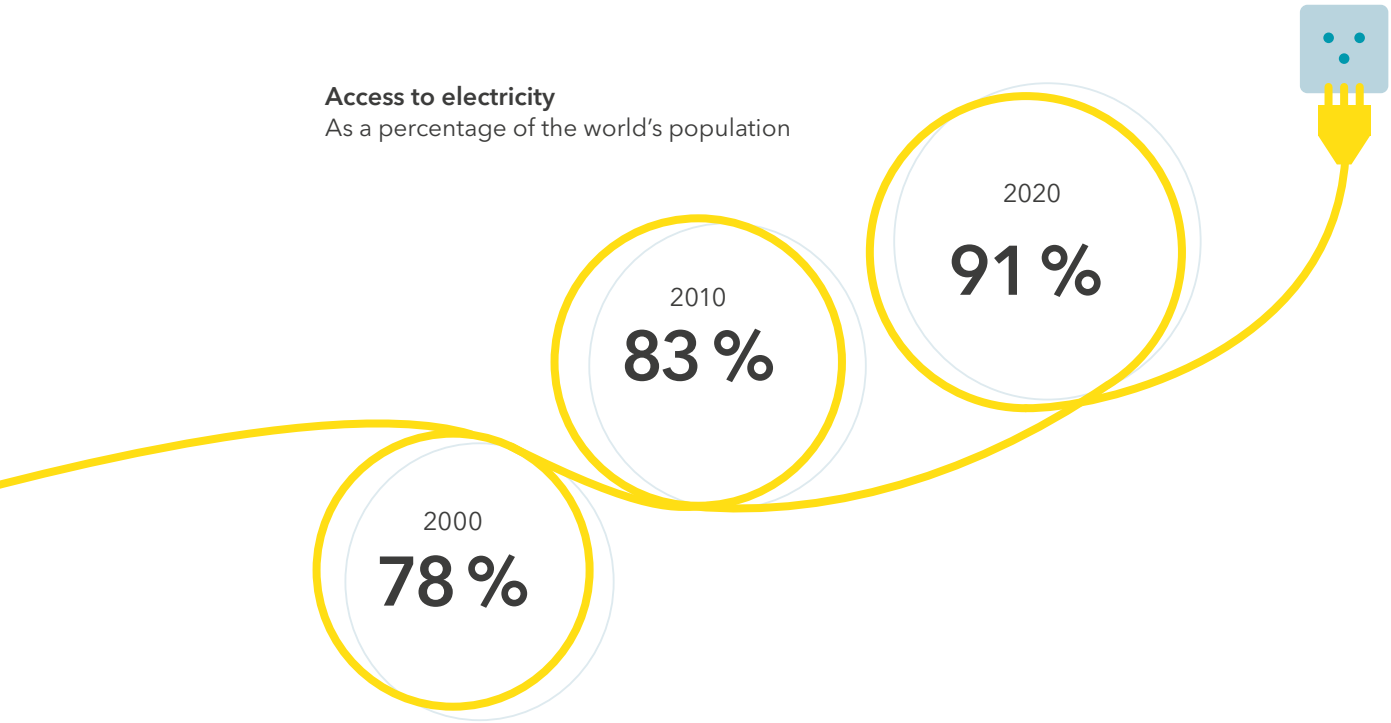
I wish you a beautiful and inspiring autumn and a lot of positive energy to accompany you.

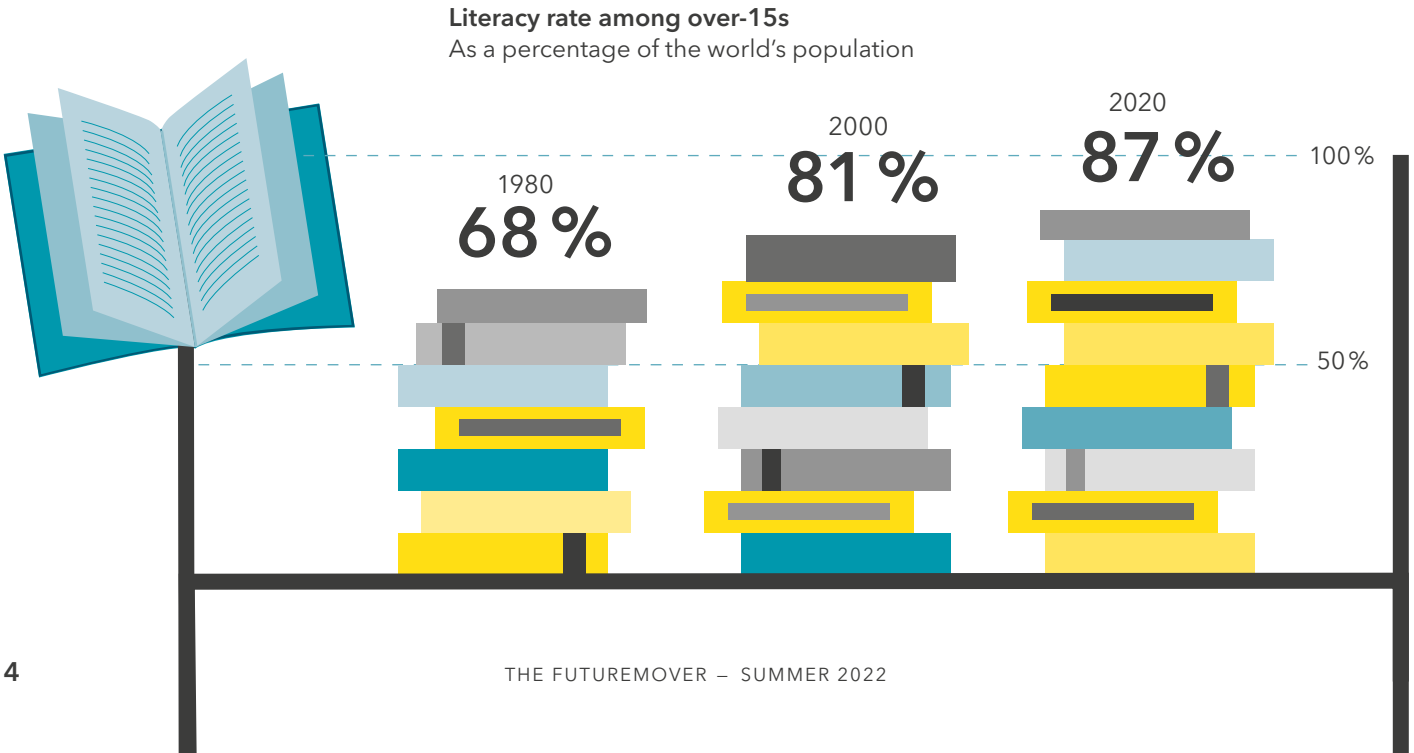
Reto Ringger
Founder and CEO

A More Positive Look at Our World

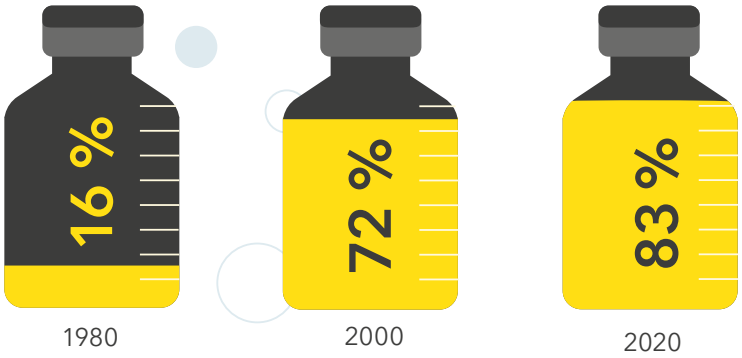
FIGURES THAT INSTILL CONFIDENCE IN US – Development in the last few decades was very positive, after all, we have never had more resources at our disposal for a good, healthy and long life than we have today. A cross-section in figures.

Source: World Bank, World Development Indicators

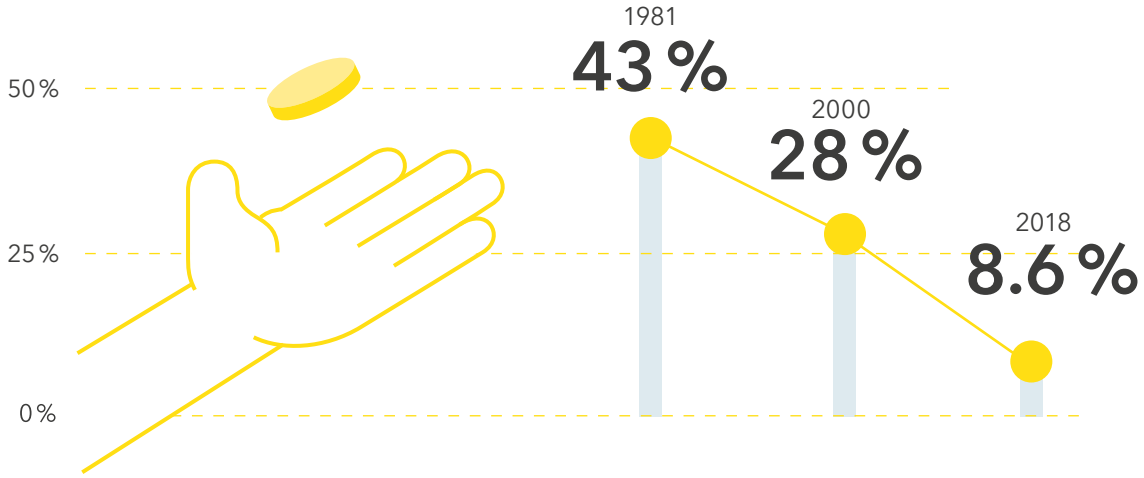




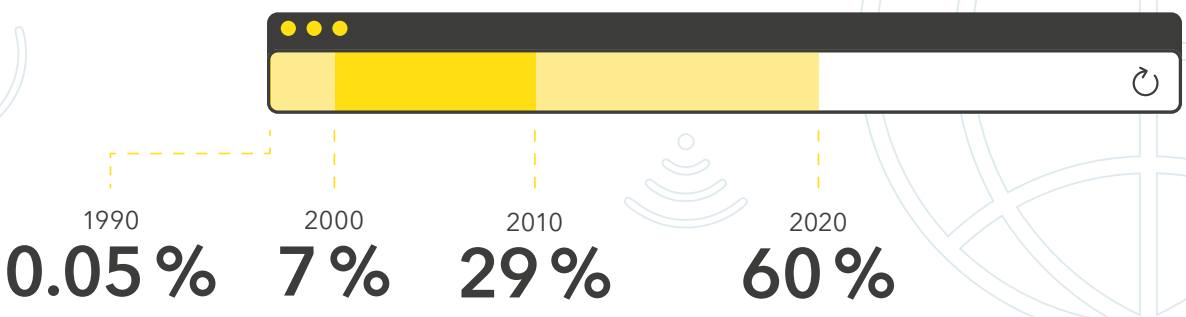
Immunisation rate against measles
As a percentage of children aged 12 to 13 months worldwide



Extreme poverty, less than USD 1.90 per day
As a percentage of the world's population



Internet use
As a percentage of the world's population



Forests — Versatile and Valuable

WHY WE SHOULD PROTECT OUR GREEN LUNGS BETTER – Habitat, recreational area, source of energy, climate protector. The forest is so many things and so much more. We know just how precious it is, yet it is continuously being destroyed. There are reasons to paint a bleak picture, but there are also enough "rays of hope".

Illustration: iStock

The myth of the forest is created already in our childhood – after all, we all listened to the well-known fairy tales once upon a time. We should still regularly succumb to its magical allure today. As walks in the forest reduce symptoms of stress, strengthen the immune system and support mental health.

But what is the measurable economic value of the tree-covered ecosystem that occupies about 30 percent of the world's land? What was long considered almost impossible to estimate has now been calculated for the first time by economists from the Boston Consulting Group – USD 150 trillion. For comparison: the GDP of the USA reached a value of around USD 22.99 billion in 2021. But this is not the only reason why we should look after the planet's green lungs.

Green Gabon – Forest Conservation as a Business Model?

More than half of the global forest area is located in the territories of just five countries: Russia, Brazil, Canada, USA and China. On the other hand, it is the smaller countries that have the highest forest density. The leader is the South American country of Suriname with a forest area of 97.6 percent. But Guyana, Micronesia, the Solomon Islands or Gabon also shimmer strikingly green from a bird's eye view. It is Gabon in Africa though that is making a real name for itself in this respect and is the model country in terms of forest conservation for many people.

Besides purifying water and safeguarding natural biodiversity, forests store vast amounts of carbon dioxide. This is precisely why Gabon is one of the few countries that manages to absorb more CO_2 than it emits. To ensure that this remains the case, the Central African country is establishing countless national parks and keeping deforestation to a minimum. A maximum of just two trees may be felled per year and hectare. Even if critics suspect that the deforestation statistics are embellished, satellite images show that Gabon is losing significantly less forest, at 0.1 percent per year.

In the short term, the timber industry would be more lucrative for Gabon, so the country wants support for its "green strategy". Whether it will even be allowed to offer "carbon credits" to companies with a large footprint in future is still unclear. What is certain though, is that developing countries have recently been promised USD 12 billion for forest conservation. Because at the 2021 World Climate Conference, more than 100 countries declared they would stop the loss of forest areas by 2030.

A "New Guardian" for the Forest?

On average, 13 million hectares of forest disappear every year due to deforestation. Healthy forests usually have to make way for agriculture – clearings for arable land, pasture land and plantations. Forests are also destroyed for mineral resources such as iron, aluminium, gold and the like. Illegal logging also poses a great threat to forest conservation.

> Walks in the forest reduce symptoms of stress, strengthen the immune system and support mental health.

At the Living Planet Symposium in Bonn, ETH Zurich presented a new measurement method that could serve as a monitoring tool for this in the future. The height of the tree tops can now also be measured by combining satellite images and digital maps. Five percent of the earth's surface is covered with trees taller than 30 metres. These are extremely important for biodiversity, play a key role in feeding young seedlings and store an extremely large amount of biomass, making these "giant trees", as they are known, particularly worthy of protection. The technology on its own may not be able to serve as a protective shield, but it can certainly be a vigilant eye on developments.

Indigenous People Protect Their Rainforest Using Their Mobile Phones

Indigenous people could also play a crucial role in the fight against deforestation. If indigenous communities in Latin America have documented land rights, significantly less land is deforested in those areas. Furthermore, the area of intact forests in indigenous regions in the Amazon Basin only decreased by 4.9 percent between 2000 and 2016, compared to an 11.2 percent decrease in the forest area in other regions. This is the result of a study by the Food and Agriculture Organization of the United Nations (FAO) and the Fund for the Development of Indigenous Peoples of Latin America and the Caribbean (Filac). The authors of this study are therefore demanding that indigenous people's land rights be respected and reinforced. The FAO sees this as a cost-effective strategy in the fight against deforestation.

Meanwhile, indigenous people are surveying their own territories using their mobile phones. They are being taught how to use the GPS technology by FAO technicians. This gives them the assurance that no land is being "stolen". Using photographs of trees, rocks and streams as well as markings on digital maps, they create cadastral surveys that make it easier to assert territorial claims.

TAKING A STROLL THROUGH THE FACT-JUNGLE

Country with the largest share of the world's forested area: **Russia (~20 %)**

Oldest tree in the world: **~5`070 y/o** (Great Basin Bristlecone pine; White Mountains of California)

Country with the greatest diversity of trees: **Brazil**

Tallest tree in the world: **115,7 metres** (coastal redwood; Redwood National Park in California)

Artificial Intelligence: the Modern-Day Problem Solver

BECAUSE THE PROS OUTWEIGH THE CONS – As so often in life, we contrast the benefits with the risks. This is no different in the case of artificial intelligence (AI) – and that is perfectly fine. But we must not overlook the opportunities because of all the risk analyses, as there are so many of them.

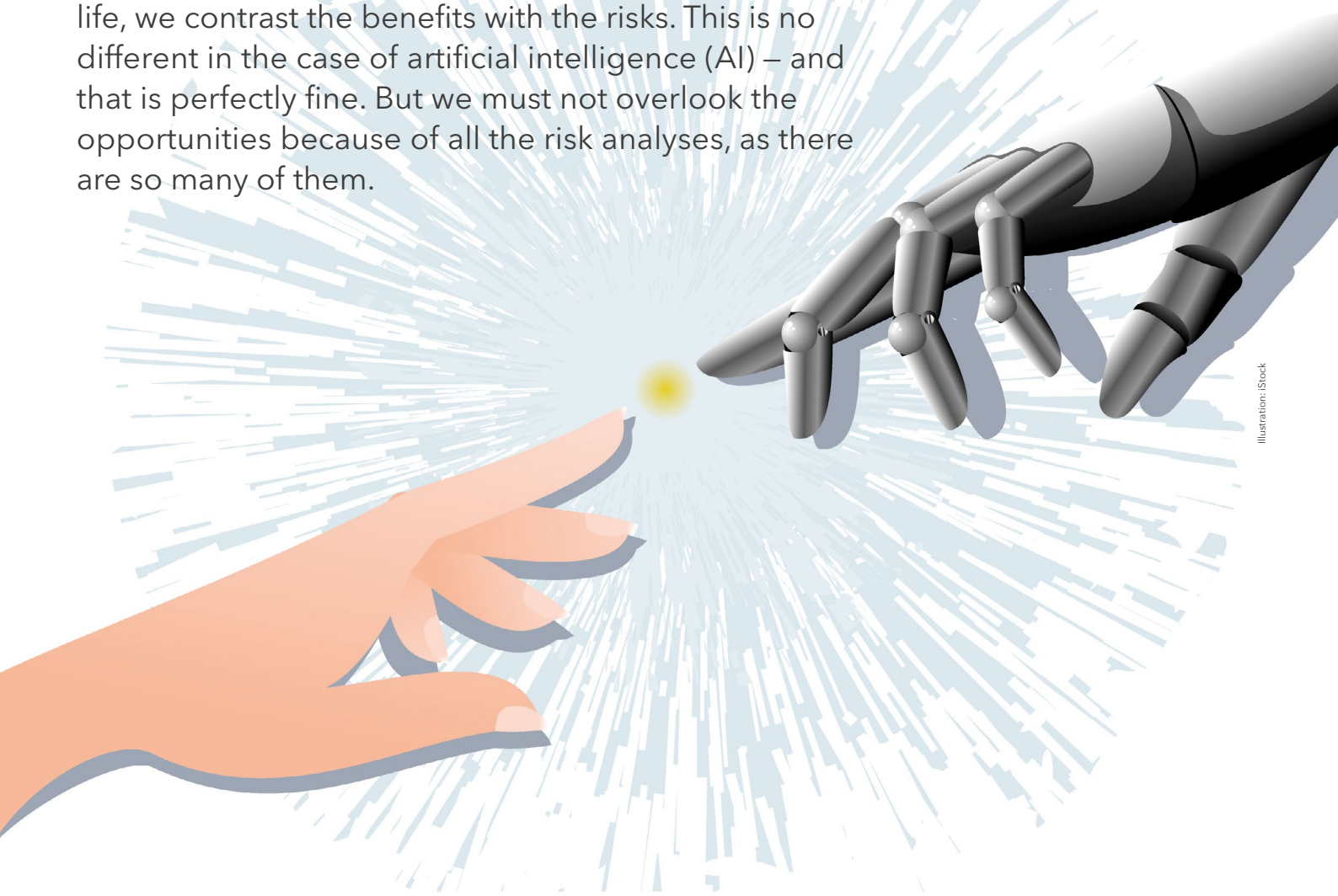
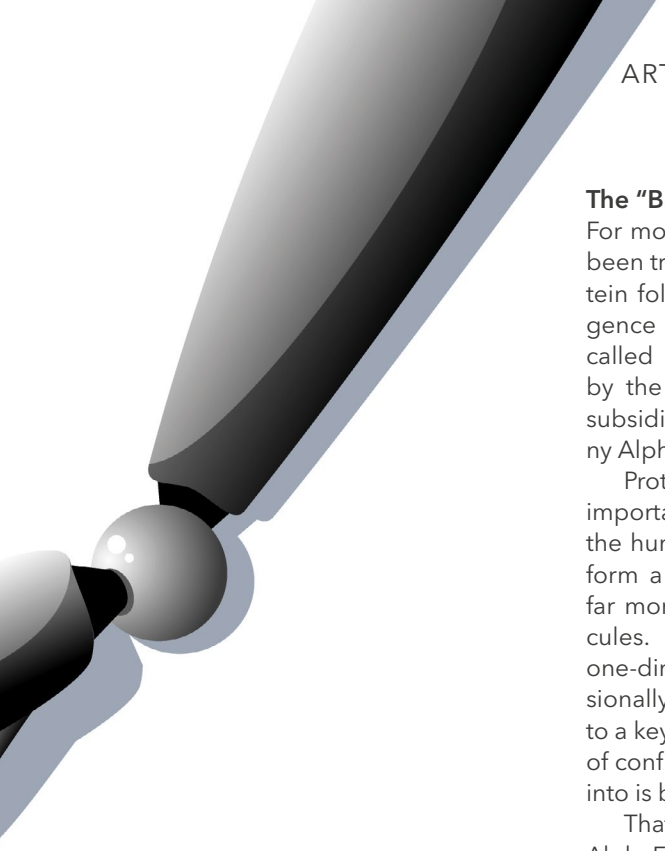


Illustration: iStock

We live in a world full of data flows. However, for the valuable information not to remain useless and swamp us, AI is needed as a regulating dam. A kind of retention basin where the data is analysed in such a way that it provides us with added value and is channelled in the right directions. Built on algorithms, AI can evolve on its own though without any further human intervention. We benefit from this in everyday life, but especially in science, to tackle the really big challenges of our time.

Where We Encounter Artificial Intelligence

Frequently cited examples of machine learning are the chess computers that beat the real stars of the scene. While this nicely illustrates how algorithms can evolve based on training data, why use a far-fetched example when we already encounter them all the time in everyday life. When we get up in the morning, the first thing we do is unlock our smartphone using facial recognition. Apple's Face ID, for example, covers our faces with 30,000 invisible infrared dots and registers every single feature – machine learning algorithms



now compare the scan with the data already stored. Your streaming provider will then almost certainly provide you with a personalised playlist for the perfect start to your day – tailored to your taste in music thanks to AI. And meanwhile you're probably planning the fastest route to work with your AI-driven navigation app. You haven't even left the house yet, but you have already encountered AI several times.

How AI Can Help Reduce Food Waste

AI applications have the potential to be trained on specific problems. The Cologne-based company Foodforecast is also taking advantage of this and is declaring war on avoidable food loss. In Germany, about 12 million tonnes of food end up in the rubbish every year, of which almost 7 million could be avoided. Approximately 35 percent of this waste is generated in the supply chain. Bakeries in particular find it difficult to predict exactly what their customers will want every day. According to the WWF, 1.7 million tonnes of baked goods do not find their way over the counter in Germany every year as a result. Foodforecast's software uses both internal data from the bakeries, but also external data such as weather or holidays. AI recognises patterns in this and works out the "perfect" order proposal. According to the start-up, it already prevented 490 tonnes of food waste in 2021.

The "Breakthrough of the Year"

For more than 50 years, scientists have been trying to solve the mystery of protein folding – and now artificial intelligence has apparently succeeded. It is called AlphaFold and was developed by the British company DeepMind, a subsidiary of Google's holding company Alphabet.

Proteins are involved in virtually all important activities that take place in the human body. They are able to perform a variety of different functions – far more than other types of biomolecules. However, they do not remain one-dimensional, but fold three-dimensionally to become functional – similar to a key that fits into a lock. The number of configurations that a protein can fold into is beyond our imagination.

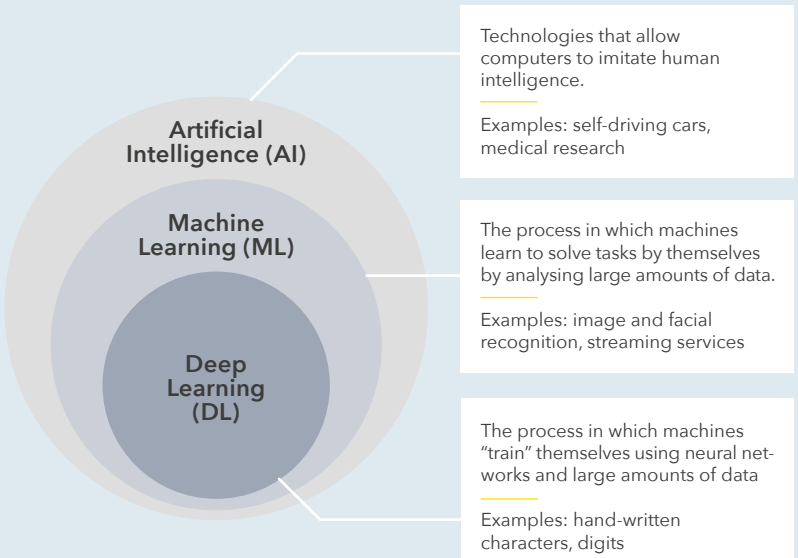
That's where AI comes in. Before AlphaFold, only about 17 percent of the 3D structures were known, and took decades of experimental methods to determine. Thanks to AlphaFold, we now know almost all of them – about 98.5 percent. For many experts, it was the first time that AI had solved a serious scientific problem. Initially trained with data sets, the model has maximised the flow of information at each subsequent step. DeepMind has created a freely accessible database with thousands of protein structures – millions more are to follow. This is expected to provide breakthroughs in medicine (especially drug research), but also in other areas such as food science or biotechnology.

The American scientific journal *Science* has declared AlphaFold the first AI model to be the "Breakthrough of the Year". We will also need AI as a positive "turbo" for problem solving with regard to other challenges as well. This development may not be to everyone's liking, but we probably cannot afford to do without the technology.

> However, for the valuable information not to swamp us, AI is needed as a regulating dam.

SUB-CATEGORIES OF ARTIFICIAL INTELLIGENCE

Artificial intelligence is based on the basic principles of "thinking", "learning" and "autonomy"



Source: Capgemini

Innovative Solutions for Our World of Tomorrow

KNOWLEDGE-BASED SOCIETY

Stride, Inc.

USA

The term "lifelong learning" now seems to be well established in our vocabulary. The US company Stride, founded in 2000, is particularly relevant and in tune with the times. Stride considers learning a lifelong journey that does not end with graduation. That's why the technology-based education company offers curricula, software systems and educational services, and uses the advantages of the networked world for its own venture – high-quality as well as personalised online learning solutions for learners, school districts and companies.

1,8 °C | 48 | 100 %

CLIMATE AND ENERGY

Itron Inc.

USA

Founded in 1977 in the USA, Itron is convinced: "How we manage energy and water will define this century." This is presumably why Itron has dedicated itself to creating a more resourceful world. The technology and service company provides solutions for measuring, managing and analysing energy and water consumption. Its proven portfolio of smart networks, meters, sensors and insightful information services is used by more than 8,000 customers in over 100 countries, enabling a more efficient supply infrastructure.

2,1 °C | 53 | 88 %

WHAT ARE FUTUREMOVERS?

Futuremovers are companies that successfully respond to worldwide megatrends and develop solutions for global challenges.

They use future-oriented concepts to replace outdated business models and at the same time achieve a positive footprint. They are building smart megacities, enabling the energy revolution, making use of the potentials of the circular economy or developing sustainable mobility platforms.

Knowledge-Based Society

Companies that develop learning technologies through new media, provide even peripheral groups with access to education, personalise education and promote learning across all age groups.

Climate and Energy

Companies that develop innovative products and services to do with efficiency, storage and distribution in the renewable energy sector.

URBANISATION AND KNOWLEDGE-BASED SOCIETY

Airtel Africa Plc

UNITED KINGDOM

Sub-Saharan Africa is home to a young population, a growing urban middle class with a need to connect with each other and the global economy – creating increasing demand for mobile voice and money services. Founded in 2018 and with its head office in London, the company's strategy is to offer a model that provides affordable telecommunication services to reduce the digital divide and improve financial inclusion. 128 million customers already benefit from it – rapid expansion is expected.

1,7 °C | 77 | 100 %

URBANISATION

East Japan Railway Company

JAPAN

The company name gives it away: East Japan Railway is active in the field of rail transport services. However, the Japanese all-rounder operates in many more segments. The company is also active in the retail, lifestyle services, real estate, hotel and information technology sectors. With the "Move UP" 2027 vision, the JR East Group wants to simplify people's lives, offer seamless mobility and connect its main business pillars. Good prospects for tomorrow's mobility as a service.

1,6 °C | 63 | 100 %

URBANISATION

Warehouses De Pauw SCA

BELGIUM

We take the constant availability of necessity goods for granted (at least so far). But what does it take to ensure that our everyday consumer goods are provided at all times? The answer: intelligent supply chains. The Belgian company WDP provides the core component for this with its "Warehouses with Brains". WDP leases logistics properties (total portfolio 5.5 million m^2) at 245 locations. It thus enables its customers to respond flexibly to economic requirements and promises them excellence in terms of storage, production and distribution.

1,7 °C | 64 | 100 %

Urbanisation

Companies that promote a positive spread of urban lifestyles – taking into account current and future challenges. On the one hand in the growth and transformation of cities, on the other hand in the infrastructural development of rural regions.

WARMING POTENTIAL

GLOBALANCE FOOTPRINT®

MEGATREND EXPOSURE

* Disclaimer on the cover page

We Are Shaping the Cities of Tomorrow Today

HOW CAN WE CREATE MORE SUSTAINABLE AND HABITABLE CITIES? – For the longest time, the challenge for cities has been to promote the complex coexistence of different social backgrounds and structures, but the "melting pots" of tomorrow will have to meet far more requirements.

The total area of all cities covers just two percent of the globe – a fraction, you might think. Making the influence such a fraction can have all the more astonishing. Our cities generate over 80 percent of the global economic output, consume 75 percent of the world's energy and produce 80 percent of all CO_2 emissions. One in two people already lives in a city today and as many as 70 percent of the world's population will call urbanised areas home by 2050.

But let's look at it positively: cities provide great leverage for more sustainable development.

Opportunities upon Opportunities

We already encounter combined mobility in the cities of this world today – we use a wide variety of means of transport to suit our personal (sustainability) taste and the list of choices is getting longer and longer. A number of cities have also recently been given a green lick of paint. Smart concepts combine nature and technology. Resulting in planted façades that regulate the temperature and improve the air quality, and smart surfaces that generate energy. Basically, new technical possibilities will significantly reduce energy consumption and a smart grid will intelligently redistribute the excess energy

produced by houses. We are also getting more and more sophisticated sharing offers that declare war on ownership and particularly appeal to the "connected" generations. It will also be this very networking that will increasingly make us citizens active co-designers of big cities.

Quality of Life Meets Sustainability

The Japanese electronics company Panasonic is pioneering Sustainable Smart Towns (SST). It already completed its third project this year in Suita (northern suburb of Osaka). It is promoting multigenerational living, modernising healthcare using AI and rethinking mobility on a 23,000 square metre site – roughly equivalent to three football pitches. Maximising the use of renewable energy is one of the most important principles underlying how all three SSTs are run. Suita even wants to become Japan's first urban settlement that gets 100 percent of its electricity from renewable energy sources.

Still in the "test run" phase today, the SST programme could soon serve as a transnational blueprint.

A Reality Check as a Wake-Up Call

But while visionary cities have made breakthroughs in recent years, some are still plodding along the environmentally damaging path of growth, repeating familiar failures. To change course, the World Resources Institute tackled the painful subject head on and published the "Seven Transformations for More Equitable and Sustainable Cities" report in 2021. The project over several years highlights seven critical urban transformations in the areas of infrastructure design and delivery, basic supply, data collection, urban employment, finance, land management and governance. The report is based on innovative research that focuses on real people's experiences. A reality check as a wake-up call and guide.

> Smart concepts combine nature and technology.

Borderless Solidarity – Solving Global Challenges Globally

Knowing that people have more pull when they join forces, a group of mayors from almost 100 cities teamed up to form the "C40" network, which spans all continents from L.A. to Lima, Nairobi, Madrid, Mumbai, Yokohama and Auckland. The promising thing about it: the member cities all earn their membership through action. This is because C40 works primarily on performance-based requirements, not membership fees.

The C40 Leadership Standards for 2021-2024 ensure that member cities are on track for a carbon-free future. Other working groups were set up this year. Among others, the "Global Mayors Task Force on Climate and Migration", which deals with the impact of the climate crisis on migration in cities. Another ray of hope was the announcement at the UN Climate Change Conference in Glasgow that more than 1,000 cities and municipalities from all over the world have joined the "Cities Race to Zero" and pledged to limit the global temperature increase to 1.5 °C. As we are already shaping the cities of tomorrow today.

THE GLOBALANCE VIEW

Investments are sustainable if they reflect megatrends, such as urbanisation, and are part of the solution to pressing global challenges. For example, we invest in companies or green bonds that build much-needed urban infrastructure for sustainable transport, energy, food and data on a large scale, or in microfinance institutions that support the underserved, who often work in informal sectors in cities in the South.

Photo: @SolarImpulse, Jean Revillard, Rezo

Protecting the Environment Is a New Business Opportunity

"Building an Efficient World"

Our world is changing drastically, and we Europeans are faced with immense uncertainty at the moment, especially in the field of energy procurement. Energy is becoming more scarce and the prices are climbing ever higher. You were also faced with a certain kind of "energy shortage" in your flight around the world with Solar Impulse. How do you see the current situation in this context?

That's an apt comparison. When I started the Solar Impulse project, aviation experts told me it was impossible, that the sun would not provide enough energy to fly day and night. And this is the paradigm of our world. It is always about availability and production: if we cannot produce enough, it won't work. But it should be the opposite. If we can't produce enough, we should save our resources, consume less and be more efficient instead of producing more. And that is what we did with Solar Impulse. We coped with the energy the sun provided by designing a plane that was efficient.

And what are the implications for our current situation? What can we, for instance, learn from the war in Ukraine?

Less gas, less oil coming from Russia, and everybody's first reaction is to desperately try to find another supplier instead of saying: "Let's be efficient, let's save, let's stop wasting energy with outdated and inefficient infrastructure." It is also no different in the food crisis. Half the food produced worldwide is lost between production and consumption. Our world is appallingly wasteful.

So, you mean to say that supply would be sufficient if we were to optimise the existing technologies and become more efficient?

Yes. We waste three quarters of the energy we produce simply because our processes and systems are inefficient. Thermal engines have an efficiency of 27%. The Solar Impulse electric

engines were at 97%. And it's the same everywhere. Our heating systems are also very inefficient. We don't need to sacrifice economic growth or our quality of life. If we replace and modernise all our infrastructure, the level of production we have today is more than sufficient. We could reduce consumption by increasing efficiency. The increase in efficiency would pay for the upfront investment. To put it in terms of economics: we would then have an economic growth that is not bound to consumption, but to efficiency. Protecting the environment is a business opportunity.

> Instead of looking for other sources of fossil energy, we should work to increase our efficiency.
>
> Bertrand Piccard

Your foundation Solar Impulse has provided support to more than 1,400 companies with new ideas. The goal was 1,000 solutions. What is your next goal?

We will continue to give our support to new solutions, as we constantly receive new ideas and concepts from companies. I would also like to fly around the world in a hydrogen-powered aircraft. With a 150-metre long, completely solar-powered, absolutely clean solar zeppelin. It will be an epic journey, in the course of which I will be speaking to schools, universities, governments and big corporations to spread the message of how important it is to explore new ways to thinking and acting to protect the environment.

How can we accelerate the transition to more sustainability?

One of the things that need to happen is a change of the legal frameworks on which the old, legacy infrastructures are based. As things are right now, anyone can emit as much CO_2 into the atmosphere as they please. The big emitters can always say: "You accuse us of polluting, but look: we meet all the required standards and are in compliance with the legal requirements. What we do is perfectly legal." That needs to change. The regulations need to provide for incentives. We need to change laws that restrict or impede the introduction of innovations and new concepts to the market. For instance, there are many countries that simply do not allow innovative systems in public procurement processes.

You're a father of three daughters. What do you think the world will look like for them in 20, 30 years?

There are quite a few possible scenarios. We might have not been able to do enough to change things and must pay for this complacence with a worsening of our quality of life. Or we will do what needs to be done, not tomorrow but today, we will become more efficient, commit to a circular economy, to renewable energies and stop with this unconscionable wastefulness. This is the only way to keep the damage in check. That is what we have to aim for.

For on the road, the interview is available as a podcast and can be read in full length: globalance.com/en/news-trends/podcast-bertrand-piccard/

ABOUT

Bertrand Piccard is a Swiss explorer and psychiatrist. In 1999, he became the first person to fly non-stop around the world in a balloon. After the world's first successful circumnavigation of the earth in a solar-powered aircraft, he founded the Solar Impulse Foundation in 2016. The father of three daughters is a UN Special Ambassador, Special Advisor to the European Commission and author of various books.

Twelve – a Pioneer in Climate Solutions

A COMPANY DOES A NUMBER ON FOSSIL FUELS – Fossil resources are the foundation of our modern world. From fuel to textiles and plastics or cosmetics – almost everything today is based on petrochemicals or petroleum. With well-known consequences for our climate.

David Hertig
Founding Partner and Head of Investment

The US company Twelve was created from a Stanford University spin-off in 2015. The specially developed technology makes it possible to produce valuable ingredients and materials directly from the air – specifically from the CO_2 it contains. The process can be understood as a kind of industrial photosynthesis, which binds the carbon dioxide in ingredients.

The Twelve technology therefore replaces materials that were previously obtained from refined oil. The US company sells products such as foams for running shoes, polymers for car fittings or ingredients for detergents under its own label CO2Made®. The team of electrochemical experts, material scientists and engineers now works with renowned industry leaders such as Mercedes-Benz and Procter & Gamble. The company is even working on a synthetic rocket fuel for NASA.

We like Twelve. The company is a futuremover and operates at the interface of the climate and energy as well as resource scarcity megatrends. This innovative use of CO_2 prevents new emissions, closes the carbon cycle and thus contributes to a future without fossil fuels. The Twelve technology is an important pillar in achieving the net zero commitments of governments and companies worldwide.

The currently privately owned company's shareholders include well-known names such as Munich Re, Microsoft and Capricorn. A financing round in July 2021 raised nearly USD 60 million to commercialise the technology on a large scale.

TWELVE IN GLOBALANCE WORLD KEY FIGURES

1.7 °C	WARMING POTENTIAL
77	GLOBALANCE FOOTPRINT®
100 %	MEGATREND EXPOSURE

Photo: iStock

Twelve uses carbon transformation technology to make the world's most important chemicals, materials and fuels from air, not oil.

* Disclaimer on the cover page

Breathing New Life into Old Electric Car Batteries

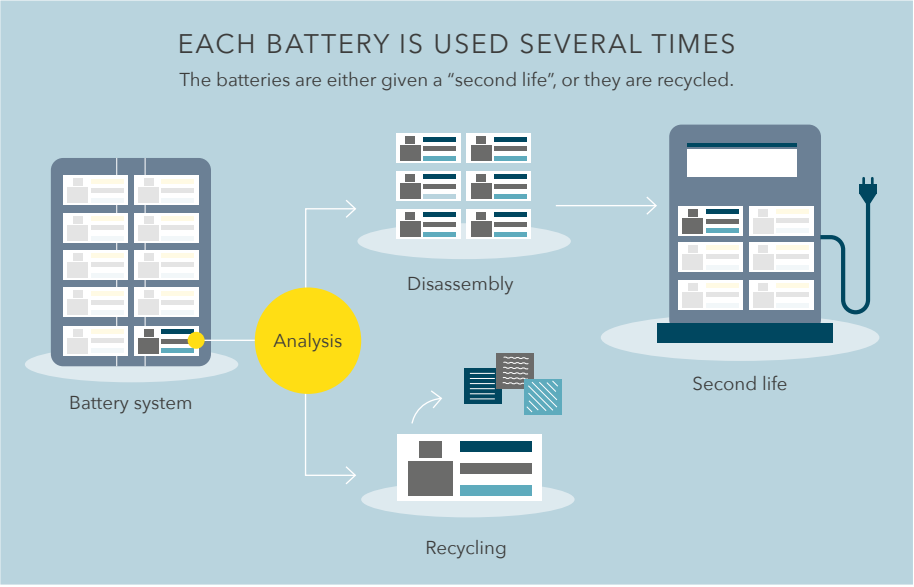
WHY GOING ROUND IN CIRCLES CAN ALSO BE POSITIVE – Electric cars are going to be a part of our future, but at the moment, the batteries are simply not sustainable enough. But the myth of non-recyclable electricity storage is hardly going round any more. In fact, rechargeable batteries are seen as a model for the circular economy.

As children, we probably all rubbed batteries at one time or another to produce one last gasp of power. Even then we knew they have a limited lifespan. This also applies to modern car batteries, only the options for "resuscitation" are more attractive as the scarce resources such as lithium, cobalt, copper, nickel or manganese are too valuable. The fact that the global stock of e-cars was already 17.4 million at the end of 2021 and that some forecasts promise as many as 300 million by 2030 suggests that recycling is indispensable.

Recycling in the Fast Lane?

The return rate for e-car batteries is still manageable at the moment. However, this will change as more people switch to the more sustainable alternative. Then more and more batteries will have to be replaced that no longer provide the original performance after a while. Sharp rises in lithium prices and limited lithium reserves, as well as CO_2 emissions from the production of new battery cells, are driving recycling forward from both an economic and an environmental point of view. Manufacturers have a justified interest in this from an ethical point of view too because all too often these resources are still mined under questionable conditions.

> The "resuscitation" of batteries is more attractive as the scarce resources are too valuable.



Recycling companies and car manufacturers are therefore working flat out on systems to give batteries a "second life". In a pre-selection process, it is determined whether the battery can still be alternatively used or not (see chart). If this is the case, it is dismantled and used elsewhere. A calculation by the Boston Consulting Group shows that a drive battery with 60 kWh capacity designed for 1,500 discharges can still deliver 18 megawatt hours of electrical charge at the "end" of its days. It could still serve a home for around 15 years as a stationary energy storage device (e.g. electricity from solar systems). Products like the Tesla Powerwall therefore have a better energy balance.

New EU regulations for more sustainable and ethical batteries, which stipulate a minimum level of recovered resources, as well as the planned "battery passport", which is expected to give more transparency over their entire life cycle from 2026, will also give the circular economy another boost.

Photo: iStock

A true role model: Copenhagen is considered one of the few bicycle-friendly metropolises.

Climate Solutions as an Opportunity for Economic Growth

RECORD TEMPERATURES, FOREST FIRES, FLOODS AND LIFE-THREATENING DROUGHTS – The consequences of climate change are already evident today. We cannot allow ourselves to continue with "business as usual". There are enough positive examples. We need role models and the necessary tools to reduce global warming.

Imagine you are watching an Olympic Games competition. One highlight is the awarding of medals afterwards. But how would you react if the winner's podium remained empty? Probably with great astonishment.

However, the astonishment is quite modest when it comes to the Climate Change Performance Index ranking by the NewClimate Institute and the environmental protection organisations Germanwatch and Climate Action Network. The first three places in the annual ranking have remained completely vacant since it was introduced in 2005.

While no country is yet seriously on track to achieve the 1.5 degrees Celsius target with the current level of effort –

> All that is needed now is to use the right tool on the right adjusting screws.

which is why Gold, Silver and Bronze have so far remained in the medals cabinet – the 60 largest emitters continue to make progress on climate action. According to Niklas Höhne from the New-Climate Institute, the latest index clearly shows that the race to zero greenhouse gas emissions has begun. For example, Norway achieved the outstanding rating "very high" in the "Renewable Energy" category. Hydropower, wind and solar energy are being ambitiously expanded there. In Denmark too, engineers are working flat out on a climate-friendly future, which was rewarded with fourth place in the ranking. One more reason to take a look at the "big climate neutrality laboratory".

Look, It's Working for the Danes

The world's first Ministry of Environmental Affairs was established in Denmark in 1971. As early as 2012, there was a large consensus in the country that they wanted to phase out fossil energy sources by 2050 at the latest – long before the rest of the world seriously addressed the issue and defined clear targets. The pioneers of off-shore wind farms have always led the way. Nowhere else are so many households hooked up to renewable district heating, and the capital Copenhagen is considered one of the few bicycle-friendly metropolises. It's no wonder that more than half of the adult population rides a bike every day.

The Danish economy also looks on course to gain a great opportunity. At a time when more and more countries want to become climate neutral, those who have tested all these technologies and can deliver them are naturally at an advantage.

While the Amager Bakke waste incineration plant has been "disposing" of the whole of Copenhagen's waste, generating energy from it and supplying around 220,000 households with electricity and district heating for some time now, work is currently being done on the subject of "hydrogen" 15 kilometres to the south-west in Avedore. A so-called electrolyser is to be built there, which can produce hydrogen from electricity. The electricity comes from the nearby wind turbines, of course.

An artificial energy island is also to be built in the North Sea – at a cost of EUR 30 billion. The wind farms all around are to generate as much electricity as ten nuclear power plants. The electricity is to be distributed from there or converted directly into hydrogen at Denmark's largest construction project. One vision would be: ships docking there and refuelling with hydrogen.

For classic manufacturing countries, achieving the goals may be a little more complex, but Denmark is still excelling with visionary power, quick implementation and drive. A guiding light from the north.

THE GLOBALANCE VIEW

The climate crisis is relevant to investors: from a risk perspective, it is important to avoid sectors or companies that cause the problem and are under political and economic pressure. Globalance, on the other hand, invests in sustainable energy sectors (renewable energy, energy efficiency and energy storage), low-emission modes of transport, precision agriculture, etc. "Low carbon" products and services are growing rapidly in all the sectors mentioned above. However, technologies with effectively "negative emissions" are only just beginning (defined as technologies that remove net CO_2 from the atmosphere).

We Have What We Need

We all know the (future) scenarios should we not succeed in limiting global warming to 2 degrees Celsius. Uninhabitable stretches of land, tipping elements in nature or a lack of food are just a few examples. Although the development looks better today than it did ten years ago, the current course would still bring us a warming of about 3.2 degrees Celsius.

Around 2,000 scientists contribute to the preparation of the Intergovernmental Panel on Climate Change (IPCC) Assessment Reports, which are published every six to seven years and summarise the state of scientific research on climate change. In addition to the first two parts of the latest IPCC report, which show that man-made climate change exists and what the consequences might be, the recently published third part gives us an understanding of where we currently stand. Continuing as before is not an option, but we have all the know-how and all the technologies to achieve the climate targets.

We are in possession of the necessary equipment. All that is needed now is to use the right tool on the right adjusting screws. For example, carbon-intensive industries must be moderated or completely replaced. Emissions from infrastructure that cannot be replaced must be pulled out of the atmosphere by technological intervention – companies like the Swiss start-up Climeworks are leading the way. The goal should be to make these tools scalable so they can soon be used across the board.

Although it will be expensive to mitigate climate change and deal with the consequences, the cost of doing so will never be as low as it is today.

When Your Thumb Has a Mind of Its Own

HOW TO GET AWAY FROM DOOMSCROLLING – We swipe and tap our smartphones almost in a trance-like state. Positive news is often poorly represented, but we nevertheless fritter away our time. Let's make news consumption more positive.

"The dose makes the poison." Although this quote by Paracelsus dates back a few centuries and has its origins in medicine, it more than aptly describes today's use of smartphones. Most of us now have a toxic relationship with these little everyday accessories – a curse and a blessing in our pockets. But what is the right dose?

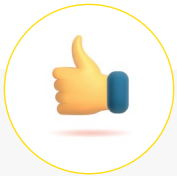
Less Scrolling, More Flight Mode

The device, which can undoubtedly make our everyday lives easier if we use it correctly, is picked up by us on average 85 times a day – the three hours of mobile phone use on average have to add up somehow. Push notifications, alerts and headlines lure us into the depths of reporting, algorithms then ensure that we stay in it for as long as possible. According to cyberpsychologist Catarina Katzer, the most important ingredients for this time-consuming cocktail are "hype and outrage". We consume negative news more intensively, so the "good news" falls by the wayside.

It may be a primal instinct to want to recognise any potential danger, but in most cases the new form of information overload leads to incomprehension, anger and powerlessness. Wars, pandemics or environmental disasters can be followed in real time – dramatic footage gives us the feeling of being right in the thick of the action and helpless at the same time. A state that does not exactly exude optimism, but in fact causes frustration. But is this really necessary?

The "Right" Dose

Digitisation has progressed at a rapid pace – we don't learn how to use it correctly beforehand, but while using it. To avoid emotional overload, the mobile phone should at most serve as an alarm clock in the morning. There is also no need for upsetting news before going to bed, otherwise this is unconsciously on our mind while we sleep. During the day, we should set fixed times and consume consciously – after all, we don't constantly keep opening a newspaper again and again. If you want to prevent this, you can even set up a usage limit for certain apps. It would be advisable to do without it completely during productive phases, as using it constantly interrupts our workflow and reduces our brain capacity. Let's be brave and also allow for boredom once in a while – to boost our creativity.



4 TIPS FOR SMARTER SMARTPHONE USE

❶ Use statistics apps to analyse your own usage behaviour. A look at the numbers can be frightening – and often leads to a more conscious use of mobile phones.

❷ Do not read countless different articles on the same topic. Tear-jerking headlines and promising teasers are tempting, but the information content for current news hardly differs at all.

❸ Don't fall for the constant "seductions" of apps that invite you to unlock the screen. Turn off push notifications.

❹ If the positive news does not come to us (in the desired quantity), I guess we have to go to it. Apps like the one from *goodnews.eu* offer a "daily dose of optimism".

Photo: Claudia Link

Lauren Wildbolz

Entrepreneur, plant-based expert and top vegan chef

…as an **entrepreneur**

What have you learned for yourself as an entrepreneur and top chef?
What I have learned about myself is that I am very disciplined. Not just trusting blindly is something I have learned thanks to others.

How important will nutrition be in future?
Our nutrition has always played a major role. The question is more how we can solve the huge impending problem of a growing world population's insatiable appetite for animal products. Reduction & innovation would be my answer.

If I were to found (another) start-up, it would be …
Then it wouldn't be just one start-up, it would be several more. Since I'd like to work until I'm at least 80, the chances are not that bad.

…when **investing**

What has been your best investment so far?
There are so many! But certainly the tenacity I had to take our patisserie start-up KUBO (vegan desserts for restaurants) to the next level as part of the exciting collaboration with the Deliciel company.

What is important for you, when investing?
I have mainly invested in my company Future Cuisine GmbH to date and see the success of my company as a sensible investment. When investing money, it would be important for me to invest in companies that are doing something meaningful and innovative for our planet. I first became aware that investing money can be a dirty business thanks to the insightful cooperation with Globalance Bank.

What would you change if you were to become queen of the financial markets?
I would introduce a fair CO_2 emission and H_2O consumption tax worldwide, as well as a ban on any unpaid use of commons (e.g. water sources, fish, etc.).

… **personally**

Are you optimistic or pessimistic about the future?
Optimistic, provided we succeed with reduction & innovation (and a world war doesn't break out).

How do you refill your energy reserves when your personal power level is low?
Laughing and relaxing with my daughter and partner, and doing sports.

What I still want to learn:
To be able to handle money even better, it almost seems to me that we're not really taught that.

Inspiring and Promising Entrepreneurs

WHY WE NEED INNOVATIVE FOUNDERS – Many young companies are sprouting up – and that's a good thing. We need a pioneering spirit and determination more than ever in these challenging times. We introduce you to two start-ups offering solutions for change.

Anyone who thought the pandemic would slow down the development of business start-ups was mistaken. In Germany, investment amounts for start-ups almost tripled in 2021 and 11 percent more start-ups were recorded than in the previous year. Growth of 8 percent compared to 2020 was also registered in Switzerland. Moreover, Europe alone was able to produce 100 unicorns last year – this mythical creature represents a goodwill of USD one billion.

But why this run? One reason for this is undoubtedly the challenges of our time. Complex issues need to be confronted with groundbreaking innovations, which are often delivered by creative, enthusiastic and solution-focused entrepreneurs. Even if a large number "fail" at the first attempt, all sides benefit from the experience, which can in turn lead to new approaches.

yamo.bio.ch

YAMO

"The future eats plant based." This is how the Swiss start-up founded in 2016 promotes its plant-based snacks for children. Healthy for kids and our environment. The organic ingredients come from organic farming, no sugar is added at all and the cold pressing (HPP) used replaces the heat sterilisation that is often the norm. This technology produces 64 percent less CO_2 emissions, uses 39 percent less water and records an energy saving of 54 percent. This is not just to the liking of children and the climate, but also the Swiss Economic Forum (SEF), which presented Yamo with an award this year.

KULA BIO

Synthetic nitrogen fertiliser is responsible for 5 percent of global CO_2 emissions and pollutes groundwater. The start-up Kula Bio from Boston offers a green alternative with its biofertilizer Kula-N. The next-generation ecological product naturally boosts nitrogen in the soil. Kula Bio's process makes fossil fuels obsolete and captures carbon as microbial biomass. Added bonus: Kula-N is cheaper than conventional fertiliser.

* Disclaimer on the cover page

All-In-One: Both a Pioneer and a Leader

GLOBALANCE ACHIEVES BACK-TO-BACK WINS – The latest awards from *BILANZ* business magazine as one of the winners among Swiss private banks and from WealthTech100 as one of the 100 most innovative companies clearly show: Globalance offers much more than classic private banking.

Applying double standards – usually not a good idea. Having your cake and eating it too – difficult. But being successful in two different "worlds" – obviously quite possible. But see for yourself how tradition and the future go hand in hand at Globalance.

Tradition: *BILANZ* Award

The business magazine *BILANZ* has once again ranked Globalance in a top position among about 100 banks, awarding us the second place among private banks.

For its 14th private banking rating, *BILANZ* once again went undercover in search of the best offer in Swiss private banking. The renowned jury examined around 100 competitors over a period of six months and analysed around 60 criteria relating to interaction between clients and relationship managers, quality of the investment solution, transparency, costs, risk disclosure and portfolio structure.

Future: WealthTech Ranking

Never before has the process of identifying the world's most innovative providers of technology solutions for digital transformation in wealth management, private banking and financial consulting been as competitive as this year. This sector has seen rapid growth in the recent past and is an integral part of the "new world" in current market development – in which Globalance plays a crucial role. For this reason, the panel of analysts and industry experts selected us from more than 1,200 companies and placed us on the list of the 100 leading WealthTech companies – and as the only bank in the ranking.

This list puts the spotlight on the next generation of solution providers who are shaping the future of the investment industry by giving them the recognition they deserve. The classification is intended to help executives and investment professionals assess which digital wealth management and financial advisory models have market potential, are most likely to succeed and have a sustainable impact on the sector

> We meet the standards we have set for ourselves as a futuremover in the financial market: top ranking in the *BILANZ* and a place among the top 100 global innovators in wealth management.
>
> Reto Ringger, Founder and CEO

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