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THE
# Futuremover
SUMMER 2023


# Challenge Future
## Full Innovative Power Ahead

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**PODCAST**
More about this issue's contents in the podcast by Board member Christina Kehl:
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# Challenge Future – Full Innovative Power Ahead

My grandmother was born in 1916 and had experienced a lot in her life. She lived to be over 80 and watched the world change around her. Ninety years later, my daughter was born and if she stays healthy, I think there is another 80 years of life ahead of her, full of potential and opportunities.

But the future prospects and speed of change are fundamentally different from the years my grandmother was able to experience.

Living conditions, geopolitical constellations, the climate and technological innovations in particular are changing at a breathtaking pace. Never before has humanity had so many opportunities and positive perspectives. But never before have the challenges we face been as great as they are today either.

> Mankind has never had as many possibilities.

So is the glass now half full or half empty? Instead of philosophising about this question, we should focus on how we can tackle the future. Let's explore and use the new opportunities to make life and our planet's future sustainable.

In this issue of the *Futuremover* magazine, we would like to give you an insight into this dynamic future. We present exciting companies and solutions, show you what is already possible today, and which innovative ideas and initiatives are in the pipeline. Be inspired and discover how we can shape a future worth living in together.

**Reto Ringger**
Founder and CEO

# Challenge Future
## Full Innovative Power Ahead

LEAD ARTICLE

### Shaping Tomorrow

Climate change, scarcity of resources, population growth. The list of challenging developments is long – but the time frame to take countermeasures is almost non-existent. So the motto of the hour is: full innovative power ahead. Which pacesetters can get us to our destination on time and why capital is part of the solution. **Page 6**

INNOVATIVE SOLUTIONS

### Our Futuremovers

We put our futuremovers on the map for you. A round of introductions to global companies that are successfully responding to megatrends, developing solutions to challenges and thus replacing outdated business models with their future-oriented concepts. Spin the globe with us – on **page 8.**

FINANCE

### Sustainability Pays Off

Resilience is a buzzword we have come across quite often recently. Hardly surprising – we have certainly gone through quite a few crises. Sustainable investment strategies could serve as a teaching example to explain the term. Why? You can find out on **page 10.**

ENERGY

### The Wind Is in Europe's Favour

There has been a lot of talk about the energy transition. But when will "action" emerge from this talk? This has already been happening with regard to the development of renewable energy in recent years – but with the handbrake on. Read how this is to be solved now and what role the North Sea plays in this on **page 12.**

NET ZERO


## Achieving the Goal with Real Design for the Future

How are we going to reach a state where no additional greenhouse gases enter the atmosphere? A question that should be answered as soon as possible. Good news: solutions have already been put in place. Find out what these are and what the personal carbon budget has to do with King Charles and his grandson on **page 14.**

POSITIVE DISRUPTIONS

## How Nature Inspires and AI Can Protect

Successful transformations that are realised forcefully and make the tried and tested obsolete can offer tremendous added value. We must therefore not let positive disruptions go unused – this opportunity is too great to miss. Read about which of these kinds of changes were inspired by nature and how AI can help us move forward on **page 20.**


RESOURCES & ENVIRONMENT

## The Circular Economy as a Problem Solver

Resources are becoming scarce, consumption is increasing. An uneasy combination, considering that we humans are expected to have used up the earth's natural resources for this year by June. Making it all the more important for the circular economy to be turning much faster now. See who is giving this a boost in particular and how we can also contribute to it. **Page 16**

START-UPS

## Start-Ups as Drivers of Innovation

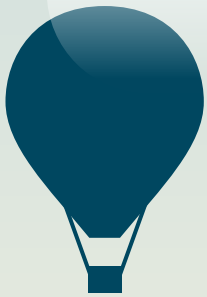
Young companies are more than table tennis and flat hierarchies. The emergence of these is considered a key factor for technological, economic and social progress in a society. They drive innovation, shape new business models and force long-established competitors to rethink. We introduce you to three dynamic start-ups from different sectors. **Page 22**

FACTS & FIGURES

## Positive Sustainability Developments

Our world is changing. The challenges are increasing. That is why we will need numerous positive sustainability developments in future. We are already encountering some of them today. Would you like some facts, figures and data on this? No problem, just turn to **page 24.**

# Shaping Tomorrow



WHETHER IT'S AT START-UPS OR LARGE CORPORATIONS: STRATEGIES HAVE CHANGED – Companies around the world are venturing the steep climb towards more sustainability. And with good reason: it points the way to how we will shape our future.

There is no serious future scenario in which climate change and scarcity of resources will not come to a head. These phenomena will be part of our lives and companies, economies and societies are adapting to them. Innovations and disruptive solutions in particular play a significant role.

We are already trying to integrate sustainable engagement into our everyday lives as best we can – this is not always an easy undertaking. But looking in the rear-view mirror and assessing the status quo always helps in shaping the future. Today, we are already driving more and more electric cars, we are happy to order vegetarian food during our lunch break, and solar panels on house roofs are no longer a strange sight. Even though most of us probably still see room for improvement in ourselves, we are all living much more forward-looking lives than we did a few years ago. Because a great deal has happened in the meantime.

This virtually all-encompassing long-term trend is also reflected in the economy. Parallel to the changing lifestyles of us consumers, it is currently shifting its focus globally. More and more companies are converting their business model to sustainable future viability and thus contributing to change. But future challenges will not be met at a sprint – the approach will be more like an ultra-marathon at high speed. So the right pacesetters are all the more important.

> More and more companies are converting their business model to sustainable future viability.

**Today's Pacesetters – Full Innovative Power Ahead**

Examples of successful transformations so far are as plentiful as fish in the sea – but in contrast to the sea dwellers there are more and more of them. In the EU we have been able to increase the share of renewable energy in electricity production to 22 percent (+9%) in the last seven years. This change is not enough, but still indicates a positive trend. The environmentally friendly alternatives are ready – ready to be used to replace fossil energy sources. The planned mega power plants in the North Sea could serve as true pacesetters for wind energy in this regard.

Even the construction industry, the elephant in the climate crisis, is working on a better carbon footprint. For example, secondary raw materials are already being increasingly used today with the help of a circular economy. A building material register, like the one being used in Heidelberg, could also

drive the "urban mining principle" in other cities in future. And even concrete, the grey climate polluter, is also visibly changing towards a more compatible building material, thanks to innovative companies like neustark, which are even working on a "net zero concrete". The young Swiss company and ETH spin-off uses recycled concrete as carbon storage, making it possible to significantly improve the climate footprint of new buildings.

We are also encountering disruptions more and more frequently. There's no doubt, these drastic changes, which make the tried and tested obsolete in no time at all, can quickly seem a bit scary. However, there is always a reason why some new technologies catch on so rapidly and forcefully – they work. Artificial intelligence has already turned out to be a true game changer in countless areas in the past. Is the newcomer ChatGPT developing into an all-star straight away? It certainly seems that way in many areas. And this disruption can even intensify the pace in environmental protection. ChatGPT can be used to monitor carbon emissions or preserve our biodiversity by analysing unimaginable amounts of data such as scientific papers or government reports.

So you can already see, there are pioneers, pacesetters and rethinkers galore. For example, the concept of conserving resources is even finding its way into the textile industry. Upcycling and clothing repairs are even coming into fashion at big players like On and Patagonia. And coffee lovers no longer have to feel guilty about their coffee to go because of their environmental awareness. Because start-ups like RECUP are stirring up the market with great innovative power, forcing existing companies to rethink and giving us an environmentally friendly alternative along the way.

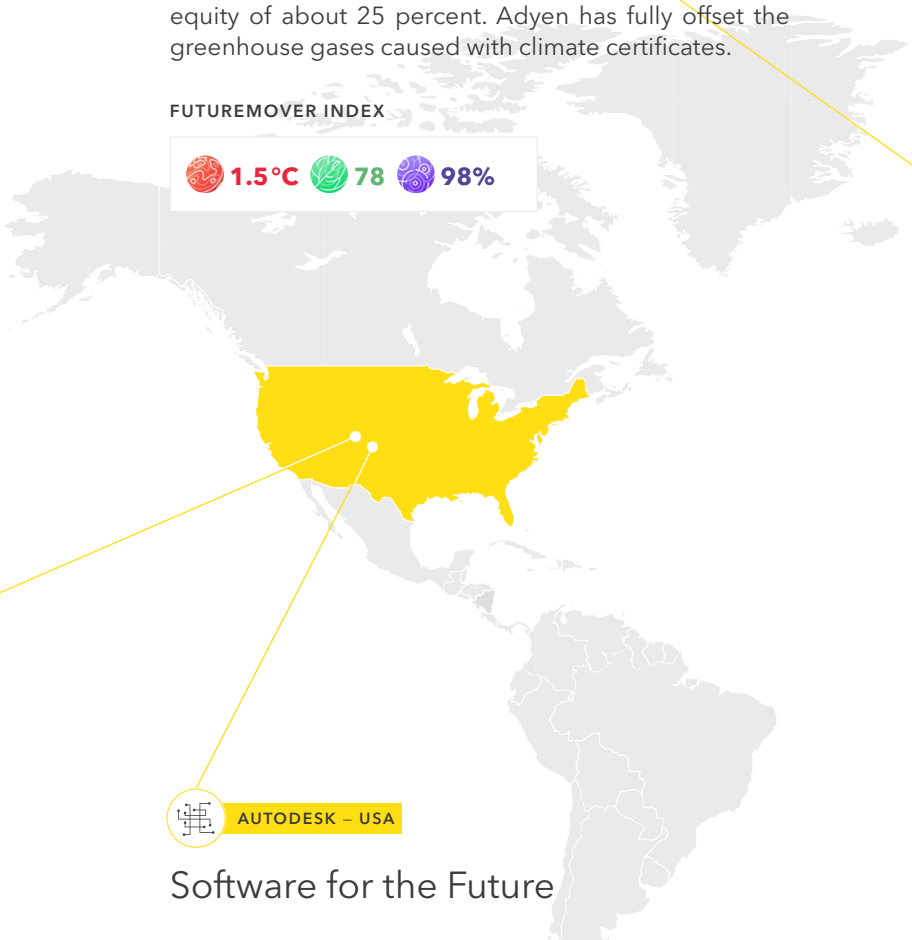
> The investment sums required also offer private investors an attractive environment.

**Capital as Part of the Solution**

Capital is needed to further establish sustainable design for the future as a binding and effective compass. According to a 2023 assessment by Bloomberg New Energy Finance (BNEF), by 2040 the global economy will need five times as much annual funding as in 2022. The stability and profitability of future-oriented and sustainable investments show that this investment environment is also attractive for private investors. This opens up investment opportunities that pay off and make it possible to have an impact on the whole world. They speed up urgently needed developments and provide answers to the most pressing questions of our time. If the capital is managed sensibly, it becomes a significant piece of the solution puzzle.

# Our Future-movers

We introduce you to companies that successfully respond to worldwide megatrends and develop solutions for global challenges. These are our futuremovers. They use future-oriented concepts to replace outdated business models and at the same time achieve a positive footprint.



ADYEN – NETHERLANDS

## Payment Made Easy

**DIGITISATION** — The Dutch company Adyen promises clarity in the maze of payment methods. Whether it's credit cards, mobile wallets or payment services such as TWINT: all payments go to one single platform with Adyen. The company founded in 2006 by Pieter van der Does and Arnout Schuijff currently generates an annual revenue and profit growth of around 30 percent with this technology. This growth also justifies the return on equity of about 25 percent. Adyen has fully offset the greenhouse gases caused with climate certificates.

**FUTUREMOVER INDEX**

1.5 °C 78 98%

WASTE MANAGEMENT – USA

## Using Waste as a Boost

**CONSUMER SOCIETY** — Waste Management Inc. recognised the value of waste as early as when it was founded in 1987. Since then, it has been providing environmental services in the field of waste management and is therefore still at the cutting edge today. Waste Management offers waste collection, waste transport and disposal, recycling and waste to energy conversion. The company reports stable profit margins of around 30 percent, with profits growing by 10 to 15 percent annually. It was founded in 1987 and has its head office in Houston, Texas.

**FUTUREMOVER INDEX**

1.6 °C 56 80%

AUTODESK – USA

## Software for the Future

**DIGITISATION** — What will a property look like one day? In what way can a machine be used? Autodesk answers such questions with its software, which improves the development, construction and utilisation of buildings and machines using digital models. Revenue is currently growing by around 10 percent per year, profit by as much as 15 percent with high margins. Autodesk also has an unusually high free cash flow, which gives the American company great entrepreneurial freedom. Founded in 1982, the company has its head office in San Francisco.

**FUTUREMOVER INDEX**

1.3 °C 78 100%

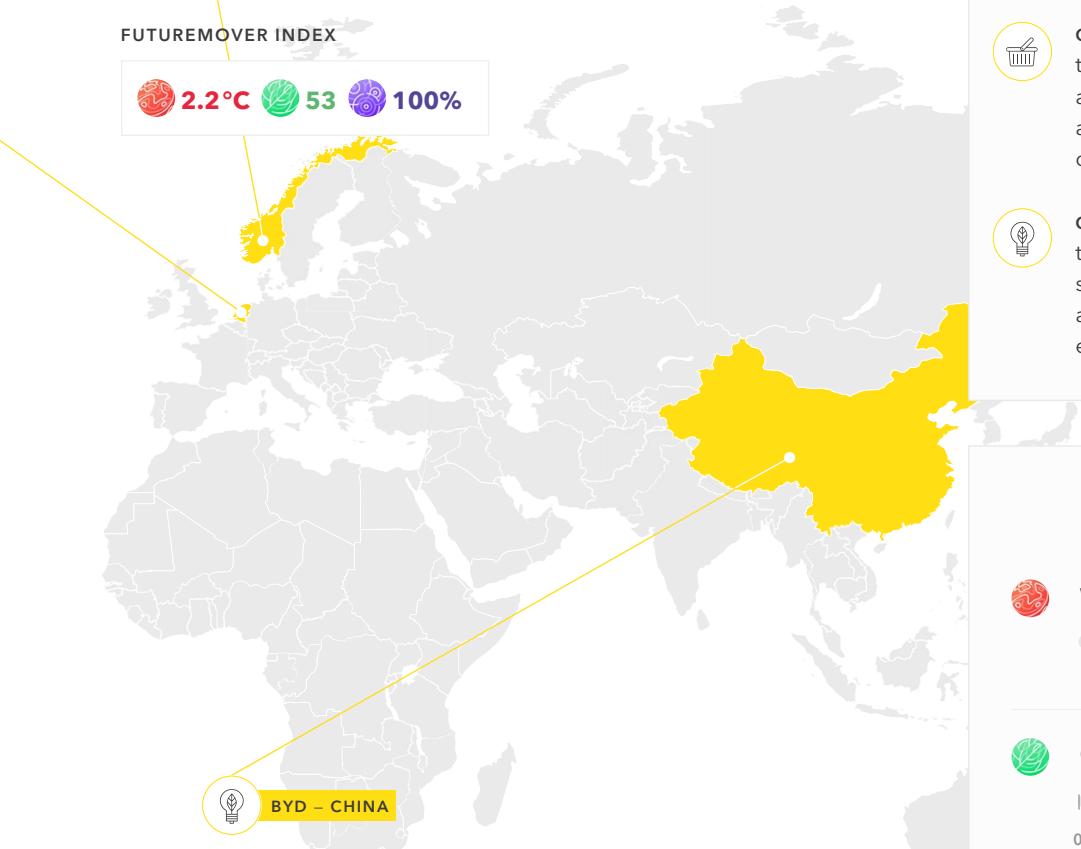
NORDIC SEMICONDUCTOR – NORWAY

## Intelligent Communication Technology

**DIGITISATION** — Switch on the oven, check the photovoltaic system's electricity production or start the hoover on the go: many of our everyday devices are wirelessly connected to us. Nordic Semiconductor ASA is one of the leading companies developing the technology behind this. The Norwegian company was founded in 1983 and employs around 1,300 people worldwide. The company expects revenue to grow by 20 percent annually from 2024. It also benefits from solid margins and has considerable financial resources for research and development and acquisitions.

**FUTUREMOVER INDEX**

2.2 °C 53 100%



BYD – CHINA

## All-Rounder for E-Mobility

**CLIMATE AND ENERGY** — BYD no longer produces combustion engines, but it is the world's largest manufacturer of electric vehicles and the batteries they require. In addition, BYD masters the core technologies of the entire industrial chain of modern vehicle construction. The Chinese company produces rechargeable batteries, photovoltaic products and components for mobile phones in addition to electric and hybrid cars. The annual revenue and profit growth is between 30 and 50 percent.

**FUTUREMOVER INDEX**

3.4 °C 60 100%

### TOPICS

**DIGITISATION** — Companies that drive the digital, automated and data-driven revolution of business and society.

**CONSUMER SOCIETY** — Companies that are driving the transformation into a compatible consumer society in the areas of lifestyle, leisure, luxury and consumption in old age.

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

### FUTUREMOVER INDEX

Warming Potential

2.7 °C

Globalance Footprint®

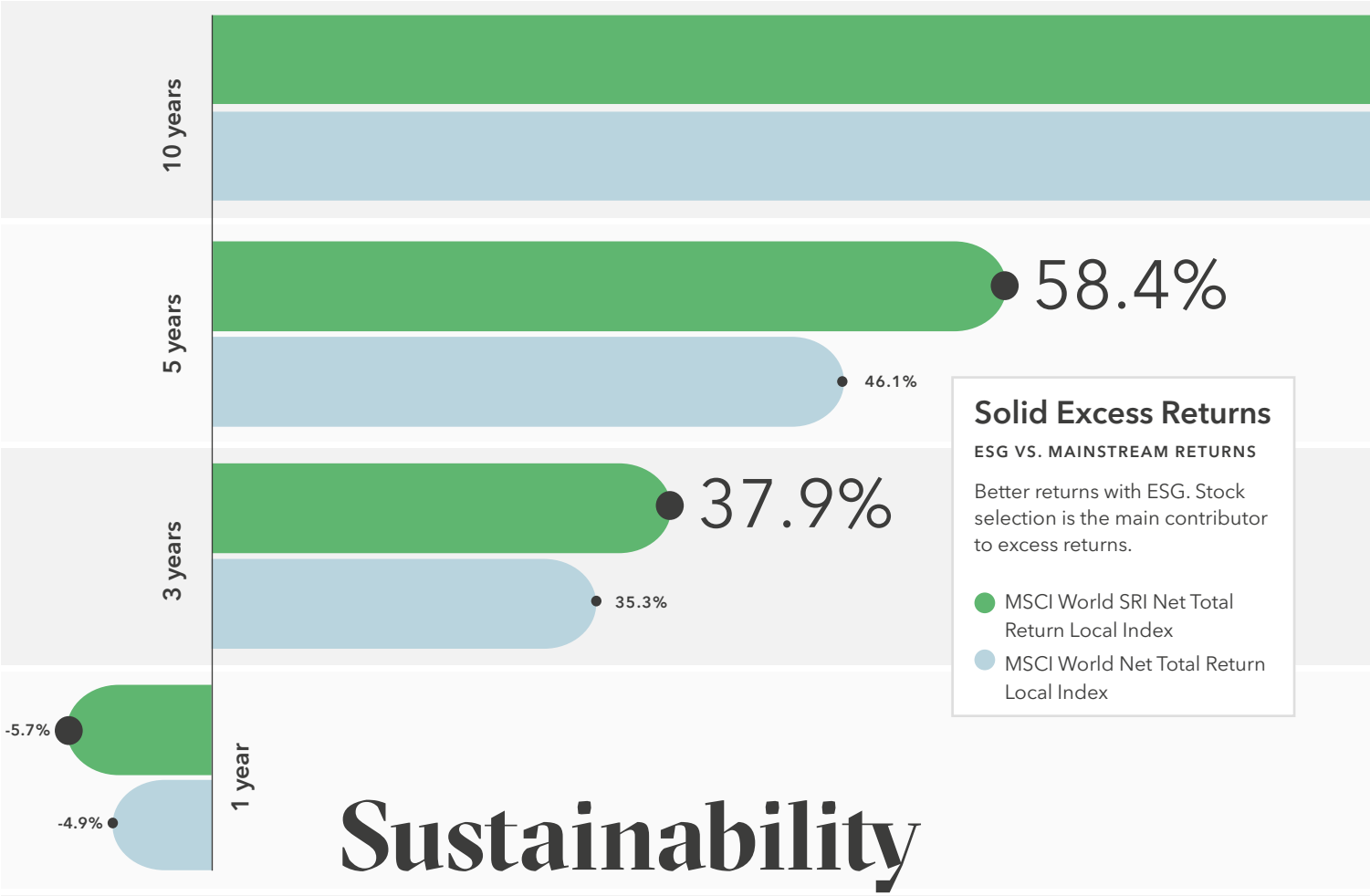
0 60 100

Megatrend Exposure

0% 62% 100%

Paris Climate Agreement: 2.0 °C
MSCI's Global Benchmark Index

* This does not constitute a buy recommendation. Disclaimer on the cover.




Source: Bloomberg, as per 28.02.2023

# Sustainability Pays Off

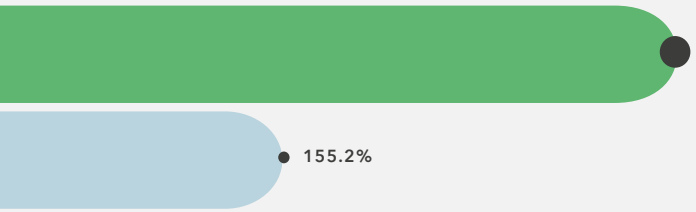
ESG HAS PROVED ITSELF AS A CRITERION FOR BETTER RETURNS – The ESG approach has even proven its resilience during a multitude of crises.

First things first: sustainable equity strategies beat the broad market in both the long and short term. This was the result of a comparison of the MSCI SRI global sustainable equity index with its conventional counterpart MSCI World. According to this, the forward-looking SRI outperformed the mainstream world equity index by a whopping 20 percent over a ten-year period. Even with an investment horizon of three (+2.6%) and five years (+12.3%), sustainability paid off as a strategy.

But the investors' motivation to invest sustainably is not only financial. The monetary return is further enhanced by the positive impact on the economy, society and the environment. Sufficient capital in the right channels drives innovation and helps solve problems.

**Stock Selection More Important Than Sectors**

So what makes sustainable investments fundamentally more successful than conventional ones? The selected business models are on the one hand future-oriented and on the other hand also sustainable in an economic sense. With this combination, the selected companies are making a significant contribution to the necessary transformation of our world and they are also attractive investments at the same time. The excess returns demonstrably stem from the selection of individual stocks and not from the overweighting of individual sectors. A good two-thirds of the excess returns within five years was consequently attributable to stock se-




# 175.2%

Portfolios with good ESG ratings perform better than the mainstream.

lection. The sector weighting, on the other hand, played a subordinate role.

Even crises such as the global financial crisis in 2008, the euro crisis in 2010 and, most recently, the COVID-19 crisis have affected ESG* investments less in recent years. As the chart shows, the share price also suffered on the MSCI SRI after these events, but less so than on the MSCI World. The only exception was last year, 2022, which was due to the Ukraine war and the related energy crisis. This exceptional geopolitical situation gave fossil fuels unprecedented excess returns in the short term, benefiting the broad world equity index, but the MSCI SRI much less.

* ESG = Environmental, Social & Governance

## Beware of Diluted Indices

But be careful: not everything claiming to be ESG has the same amount of ESG in it. While the MSCI SRI approach only admits the top 25% per sector in terms of ESG, the admission hurdles for the MSCI ESG Leaders and MSCI ESG Screened approaches are much more lax: for example, the best 50 or even 90 percent are included in the respective index. The higher the percentage of selected companies, the greater the dilution and the more similar the composition is to that of the conventional world equity index. The fact that this dilution is at the expense of returns can be seen in the performance over the past ten years.

But even the best ESG approach is not immune to loopholes. By selecting the best companies from each sector, fossil fuel players are inevitably finding their way into the index. The crux: even the "best" coal-fired power plant among its peers is still a coal-fired power plant. ESG therefore has its limits with this best-in-class model.

## New Solutions in the Starting Blocks

Under the leadership of the Swiss Confederation, experts from the sector have therefore developed a solution that takes the sustainability of investments further and is aligned with the Paris Climate Agreement. The so-called Swiss Climate Scores take into account a company's greenhouse gas emissions, its share of fossil fuels and its strategy for global warming, among other things. Those who achieve the targeted score also have credible climate management and are committed to the global net-zero target. This finally creates the necessary transparency for investors – a long overdue comparability that Globalance already offers its clients today.

### THE GLOBALANCE VIEW

ESG approaches have an advantage over conventional, pure market cap-weighted approaches thanks to successful stock selection. The excess returns are demonstrably due to the consideration of ESG criteria in the selection and investment process. The selected business models are more future-oriented and at the same time more economically viable. Companies with operational weaknesses and reputation risks can be identified and weeded out in good time due to weak ESG ratings. For investors, it is important to realise that shares with good ESG ratings perform significantly better on the stock market than companies with weak ratings.

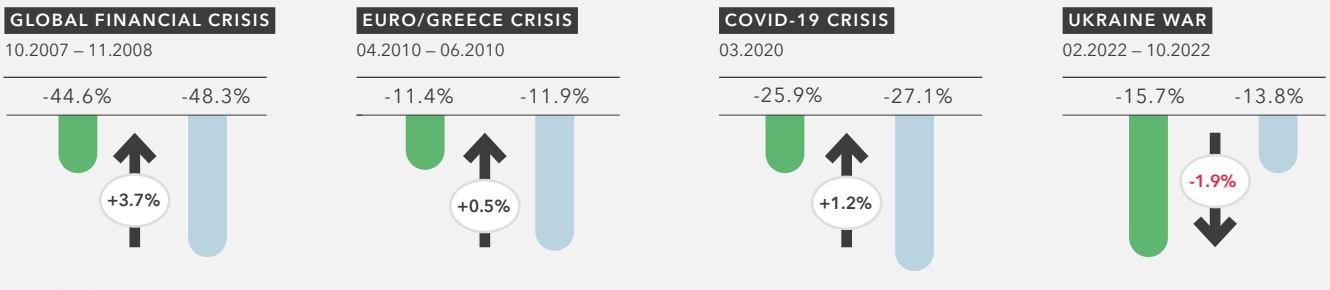
Nevertheless, ESG approaches can still be optimised. Globalance extends the relative view with an assessment of a company's absolute impact. Only the absolute view makes it possible to select those companies that are already relying on the right technologies today and are no longer weighted in the old world of fossil fuels.

## ESG in Times of Crisis

**BETTER 3 TIMES, WORSE ONCE**

Unique constellation: the Ukraine war (energy crisis) is the exception. ESG more stable in other crises.

- MSCI World SRI Net Total Return Local Index
- MSCI World Net Total Return Local Index




Source: Bloomberg

# The Wind Is in Europe's Favour

A FRESH START FOR THE ENERGY TRANSITION – Stormy times usually don't bring good news, but that could change with the planned mega power plants in the North Sea.

Alongside the sunny prospects of solar energy, wind power will be another cornerstone of the energy transition – which now urgently needs to be ushered in on a grand scale.

While the true extent of energy dependencies has only become apparent in recent months, the negative impacts of fossil energy sources have been known for some time. Oil, gas, coal, etc. are mainly responsible for climate change. The term energy transition was introduced back in the 1980s to minimise carbon emissions and conserve resources – the dream of a sustainable energy supply. However, the metamorphosis towards alternative energy is far from complete, as the faltering development of the past few years shows. Although the share of renewable energy in global electricity production increased by 7 percent between 2015 and 2022, the total is only 12 percent. In the EU, this rate looks somewhat more respectable at 22 percent (an increase of 9 percent), but it must nevertheless be improved rapidly if we are to achieve the ambitious climate targets.

The North Sea in particular offers great energy potential for this – which could finally be exploited now.

**Wind of Change?**

Soft soils, relatively shallow water depths and strong winds: the North Sea is made for modern wind farms. Thanks to technological progress, wind turbines are becoming more powerful and submarine cables more efficient, which is why the idea of the North Sea as a "green power plant" should no longer remain a utopia. A group of nine neighbouring countries is planning an offshore wind power plant with a capacity of 260 gigawatts (GW) – almost five times as much as is produced worldwide today and enough to supply almost 200 million households in Eu-

"Dogger Bank" to produce 1/3 more energy than conventional turbines

2050: wind power plant in the North Sea to produce approx. 260 GW ≙ electricity for approx. 200 million households

rope with electricity. What sounds like a potential game changer could be just that. Economic historian Nikolaus Wolf is certain: "Energy in abundance attracts industry." A new coastal economy could emerge: local companies that used to supply the offshore oil and gas industry have now shifted their focus to environmentally friendly customers.

Nordic countries are increasingly attracting energy-hungry battery plants and data centres. On the German North Sea coast, there are plans to build plants that convert ammonia into hydrogen, which is easier to transport and supplies factories in nearby industrial parks. Even parts of steel production could shift north if hydrogen replaces coal or gas in the manufacturing process. But not only electricity and hydrogen will flow through the seabed highway, $CO_2$ will also find its way there. The carbon dioxide from sectors that are difficult to decarbonise can be pumped into depleted gas fields. In Rotterdam, the "Porthos" project is intended to advance this type of carbon capture and storage (CCS).

**When a Real Design for the Future Emerges from Sustainable Transformation**

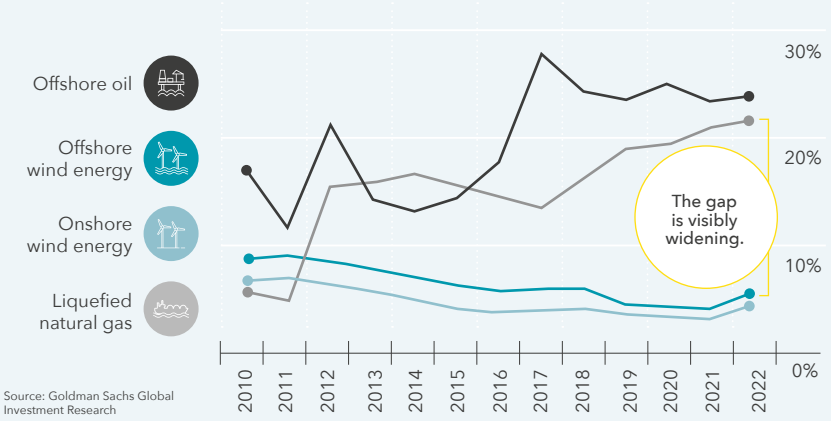
"Dogger Bank" is the name of the largest offshore wind farm to be built off the east coast of England. Compared to conventional turbines, these are expected to produce a third more energy and supply a total of 4.5 million households with electricity. The project is a cooperation between companies and energy groups from France, Great Britain and Norway and is symbolic of the green spirit of optimism on the high seas.

The North Sea energy system could therefore grow into a veritable archipelago in the future. Ambitious companies are already positioning themselves and investors are recognising their opportunities. For example, the world's largest turbine manufacturer, Vestas, is closing a plant in China and setting up shop in the north. The Danish company Topsoe also states that its orders already amount to 86 GW of green energy.

If cooperation between countries continues to succeed and bureaucracy does not slow down the pace, this project could drive green business giants in Europe. This powerful joint project also has the potential to serve as a pioneer for other parts of the continent, such as the Iberian Peninsula with its huge solar potential.

## FOSSIL COSTS MORE

The divergence between the capital costs of renewable and fossil energies continues to increase. New renewable energy projects are benefiting as a result of this.




Source: Goldman Sachs Global Investment Research

### THE GLOBALANCE VIEW

The capital markets are ahead of politics: in the energy sector, the spread between the cost of capital for oil and gas projects (today around 20% p.a.) compared to renewable energy (today around 5% p.a.) has widened by more than 10 percentage points over the last five years. This in turn leads to a historic turning point in energy investment: for the first time, more capital was invested worldwide in the production of renewable energy than in the extraction of oil and gas in 2022.

# Achieving the Goal with Real Design for the Future

NET ZERO IS ONE OF THE MOST IMPORTANT GOALS OF OUR TIME – to avoid irreversible damage from climate change. But how are we going to reach a state where no additional greenhouse gases enter the atmosphere?

"Ich will Spass, ich geb Gas" (Put the pedal to the metal and have fun) is a German popular song from the 1980s that sings the praises of light-heartedness. If we look at the average carbon budget per person today, it is mainly the grandchildren of the baby boomers dancing at that time who will have to put on the brakes, if we want to achieve net zero by 2050. The need for transformative approaches and investments are therefore inevitable.

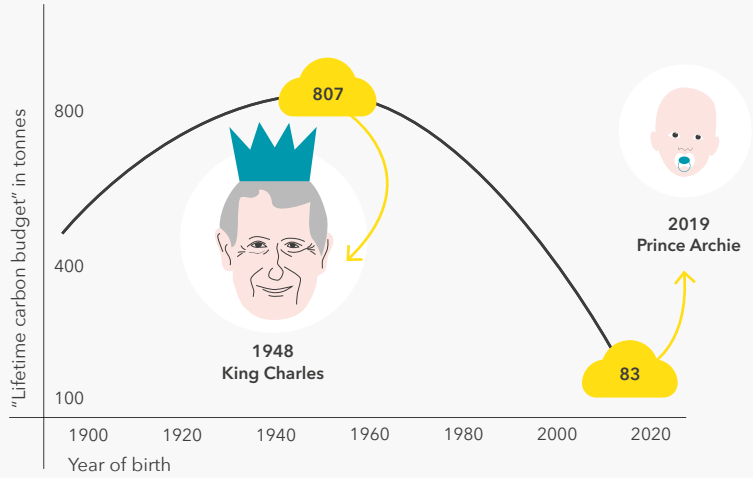
Carbon budgets are usually only talked about in connection with companies or countries, but this maximum amount can also be calculated for individual citizens. Carbon Brief, for example, published such an analysis using emissions data, population trends and climate models.

The result taking the following example: while King Charles III, born in 1948, still has a "lifetime carbon budget" of 807 tonnes for mobility, food, housing, etc., grandson Archie should only emit 83 tonnes – assuming the temperature increase is to be limited to 1.5 °C.

To ensure that the net-zero target by 2050 does not remain just a nice-sounding dream and that such target budgets are not exceeded, emissions must be significantly reduced in the building sector, transport and industry in particular.

WHAT DOES NET ZERO MEAN?

The lifetime carbon budget has decreased continuously over the last decades to achieve the 1.5 °C climate target.




Source: Carbon Brief; Guardian Graphic

## Net Zero Has Its Price

If we want to achieve these ambitious targets, a lot of capital has to be channelled in the right direction. The Bloomberg New Energy Finance 2023 calculations clearly show the investment needs that will have to be met in the coming years to achieve this target (see chart on the right). Annual investments in areas such as renewable energies, sustainable materials or electrified transport must already be tripled by 2030 compared to 2022. In the decade up to 2040, the volume will have to be increased fivefold to around USD 6,900 billion per year.

## Changes in Materials and Closed Loops – a Duo for the Future?

While the energy transition is progressing and will make a major contribution to net-zero consumption, the advances in low-emission materials and the circular economy should also pick up speed.

The production, use and disposal of industrial materials such as steel, aluminium, cement, etc. are responsible for almost a quarter of all global $CO_2$ emissions. To achieve net zero, countries and companies will intensify both the introduction of environmentally friendly methods for producing these materials and the circular economy to optimise reuse.

Heidelberg could take on a pioneering role. The German city is preparing to become the first circular municipality in Europe. The "Circular City" pilot project is being driven forward with the help of the urban mining principle – a type of modern mining. A building material register turns the city's building stock into a raw material store. A programme developed by the EPEA environmental institute calculates and records the material composition of all properties. The quantity and quality of recyclable materials are already known for future building demolitions or refurbishments and can be planned into new projects. According to the EPEA, the raw material substance of buildings in Germany as a whole amounts to 15 to 16 billion tonnes – the "urban raw material stock" even increases to 29 billion tonnes if civil engineering is included.

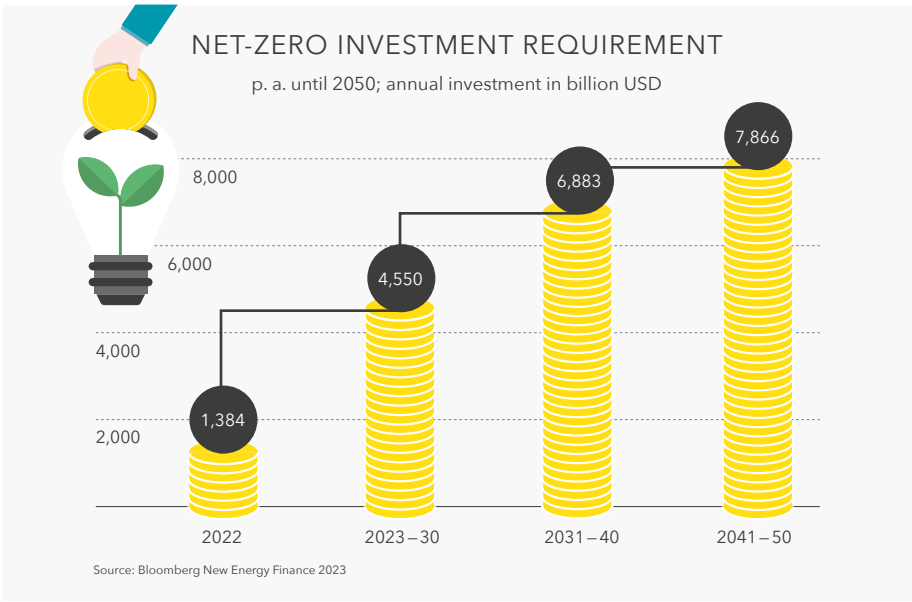
Closing the cycle in this way should not remain an isolated case. Other cooperation models are being considered.

**Construction Must Go Greener**

New production methods, emission avoidance technologies and closed-loop recycling have already emerged in recent years. Existing companies had to rethink and start-ups were able to jump into completely new business models. For example, the young Swiss company and ETH spin-off neustark uses recycled concrete as a carbon storage, making it possible to significantly improve the climate footprint of new buildings – there is even talk of "net-zero concrete" from 2025. This could store the same amount of carbon that is released during production.

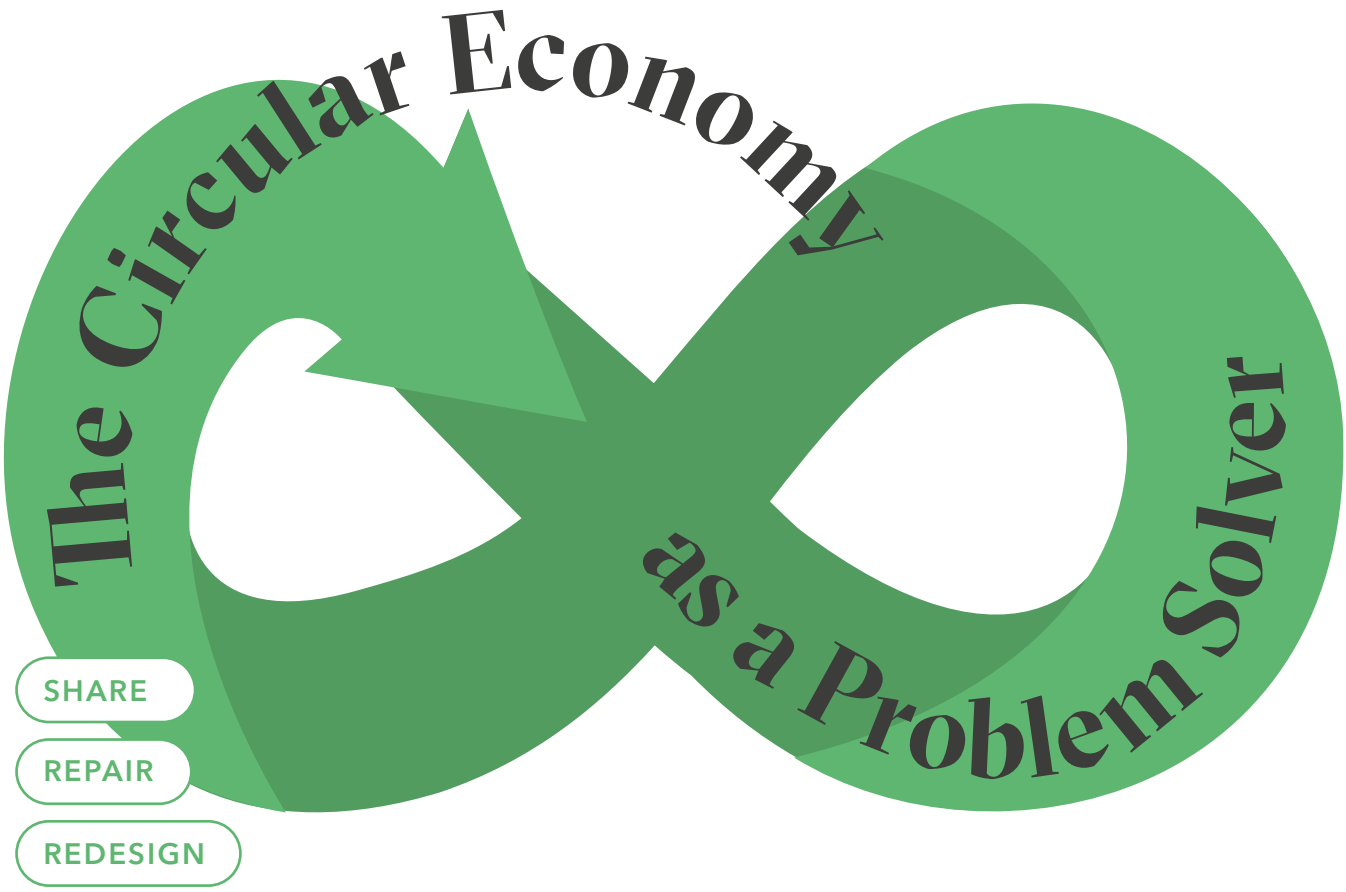
The market for low-carbon building materials is changing, as are many other sectors. In addition to a pioneering spirit, improved financing, infrastructures and regulations will be crucial for introducing new technologies on a large scale – because this is how sustainability is turned into a design for the future.

> The capital has to be channelled in the right direction.




THE GLOBALANCE VIEW

From an investor's perspective, decarbonisation is one of the greatest current investment opportunities. According to estimates by the International Energy Agency (IEA) and Bloomberg New Energy Finance, several trillion US dollars must be invested annually to achieve net zero by 2050. The majority of funding will come from the private sector. A good 70% of this will go to electrifying global transport and renewable energy, followed by grid infrastructure for power transmission and distribution, according to the latest outlook from BloombergNEF. For investors, now is the time to set the course and focus on companies, sectors and markets that will benefit from these developments. Investments that are in danger of becoming obsolete must be disposed of at the same time.




ENVIRONMENTAL AND CLIMATE PROTECTION ARE BECOMING MORE AND MORE SUITABLE FOR THE MASSES – also by continuing to use what already exists longer and further developing what has been tried and tested. The current initiatives to combat wasted resources are proving effective and are also inspiring new business model innovations.

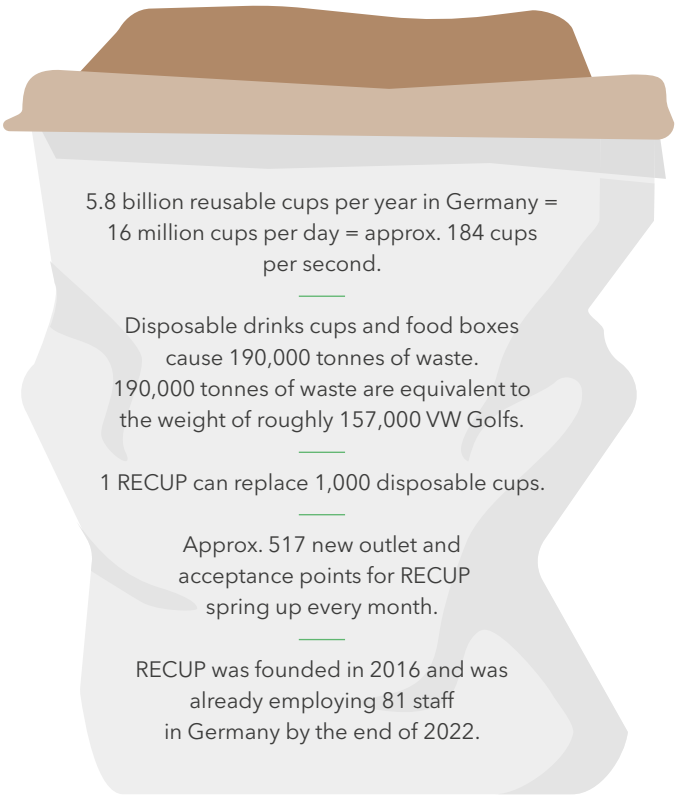
From PET bottles to skyscrapers, every object produced needs resources. While a single PET bottle is less of a problem in itself, all of them together are very much so: every year, we produce 460 million tonnes of plastic on our planet – over 350 million tonnes of which end up in the rubbish. Then there are cars, food, furniture, clothes, appliances and all the other smaller or larger consumer pleasures. The fact is: we live on credit and consume more resources than the earth can provide.

**Once a Necessity, Today a Virtue?**

New approaches are being developed by innovative companies to counteract our resource problem. The mindset from ways of life that were common in the past may also serve as a source of inspiration for developing solutions: our grandparents' generation took care of their things, repaired everyday objects, lived from their own garden. More expensive purchases were shared within the family or the neighbourhood. But how can our society, which has become as accustomed to rapid consumption as it is to regular disposal, be switched back towards longer product cycles? Do grandmother's recipes for life still have a place in our world?

Yes, in an adapted form. Today's visions take the best from earlier times and adapt them to current circumstances. With one difference: what was a necessity then is a virtue today. So, for a voluntary sense of responsibility to succeed in our everyday lives, we need concepts that are as convenient as pos-

sible. And they do exist, as the textile industry proves, for example. With pioneers like Patagonia having paved the way with its environmentally conscious repair service, other players are now jumping on board. The sportswear manufacturer On wants to produce most of its shoes out of $CO_2$ in a few years' time. Ingenious engineers have developed a process for this, which, put in simple terms, works like this: high-carbon emissions from industry are further processed so that they can be filled into the shoes' outer soles in the form of a foam. On has also set itself the target of recycling the majority of its products and reusing the materials contained in them. The company is offering a subscription service for the recyclable shoes under the name Cyclon. Subscribers simply return the worn shoes. And On makes new shoes out of them.




Sources: Deutsche Umwelthilfe, RECUP Impact Report

**Reuse – Disposable Is Not the Way**

An exciting second-hand market has established itself in recent years in the smartphone industry, which is known to process mineral resources that are particularly worthy of protection. According to estimates by the analysis company International Data Corporation, 282 million refurbished smartphones were sold worldwide in 2022. By 2026, this figure is expected to rise to over 400 million. Companies like rebuy or asgoodasnew check used mobile phones, replace defective parts or the battery and sell the devices at a lower price.

In Germany alone, around 13 billion disposable cups and packaging find their way onto the streets every year in the take-away sector – a colossal consumption of resources. The start-up RECUP has been turning this one-way street into a roundabout with a modernised business model since 2016. Today, the company already offers Germany's largest reusable system for the catering industry. The recyclable RECUP can replace up to 1,000 disposable cups in the course of its life – for its culinary counterpart, the REBOWL, it is up to 500 food packages. And the sophisticated deposit system already works without any major hurdles: thanks to the 21,000 outlets and acceptance points so far.

> We find solutions outside our comfort zone.

**Give the Cycle a Boost!**

The main goal of this emerging circular economy is one thing above all: to use existing products for as long as possible. This does not only include repairing and reusing them, but also sharing them. Platforms such as Sharely or frent.me allow thousands of everyday objects to be hired in the immediate vicinity – not every household needs a cordless drill or an orange squeezer.

The key to all these initiatives remains people's mindset that a longer life and the effort involved are worth it. As this is the only way for the circular economy to develop its full impact and for us to reduce the negative balance on our resource account.

THE GLOBALANCE VIEW

The innovation and scalability of relevant circular economy systems are part of the Globalance Footprint assessment. We select companies that achieve a significant reduction in the consumption of valuable materials in particularly challenged industries. Take Panasonic, for example: high-purity iron as well as copper and plastics are recovered from old televisions, air conditioners, refrigerators and washing machines at its own Eco Technology (PETEC) Centre in Japan. Or the futuremover TOMRA, which operates around 80,000 PET collection points in over 60 different countries.

How RECUP Is Making a Virtue Out of Necessity

# "Going the Reusable Route Together"

**Seven years ago, you made a virtue out of necessity by founding RECUP and declared war on environmentally harmful single-use packaging with an innovative deposit system. How did this come about?**
Fabian and I both had the idea independently of each other during our studies. Fabian, who studied in Malmö, came up with the idea of abolishing single-use cups as part of a university project to improve the university's sustainability – but his professor at the time didn't think the idea was "relevant enough" so Fabian took the topic with him for after graduation. I also had the idea during my studies. By chance, we ended up at the same person's, and so ultimately together, and decided to tackle the task side by side. In November 2016, we started our pilot project for reusable cups in Rosenheim, Germany. The system was well received by the 26 test partners and was followed by 50 more partners in Munich in May 2017. RECUP and REBOWL are now available at over 21,000 outlets in my country and our system is the market-leading reusable solution for the catering industry in Germany.

**Assuming I were the owner of a café, why would I get excited about the reusable cups and bowls from RECUP, besides the sustainability benefits?**
For RECUP partners, the reusable system is cheaper than the single-use system from about just twelve to-go drinks served in the RECUP or from the sixth take-away meal in the REBOWL per day. Catering businesses also become part of a high-profile business network: 21,000 partners throughout Germany have already joined our reusable solution, thereby positioning their businesses as modern, sustainable and consumer-friendly.

Customers can return the reusable cups and bowls to any partner catering business, creating a close-knit reusable network throughout Germany. Every age group is familiar with the deposit principle, it does not need to be explained first and it does not involve any obstacles in the form of app downloads or providing data. Anyone can join in and catering businesses can offer a straightforward sustainable alternative to single-use waste.

**RECUP works with well-known companies such as Ikea, Burger King, Alnatura, etc. What was the most impressive experience for you in collaborating with such big players?**

"We are all responsible for maintaining purpose with our actions."

Photo: RECUP GmbH

# “Every age group is familiar with the deposit principle.”

With some of the big players, we had a very long lead-up until rollout – perseverance and staying power paid off here. ;-) An impressive experience for me, for example, were the advertising budgets for the launch and the reach in social media when we started with the collaborations.

**Recently, former US President Barack Obama was a guest in Zurich and filled the Hallenstadion. You were part of the panel of forward-looking entrepreneurs and executives shaping the future. What role does purpose play for you and how can we move purpose to the forefront of the economy as a thought pattern?**
We founded RECUP as a commercial enterprise to achieve our purpose of waste prevention using our own income. Most companies were initially founded with a clear purpose, from producing high-quality technical equipment to the best sports shoes for competitive athletes and providing secure investments for people who want to provide for their retirement. The prerequisite for high quality, reliability and, in the end, profitability is a long-term focus and mindset. We are increasingly seeing this purpose being pressurised or completely replaced by the short-term focused purpose of maximising shareholder wealth, and the people working in the business being referred to as a headcount of resources. Quality is lost and the external impact of one’s own business activity is not taken into account. For me, purpose is not something you just write on the website like a sustainability goal. Purpose is at the core of everything we do, the foundation of our business model and the fuel for our impact. Thought patterns alone are not enough. The economy is made up of the people working in it. We are all responsible for maintaining purpose with our actions. And if we feel that what we are doing is not contributing to the long-term purpose, we can quit. In times of skills shortages, this is also a powerful tool to bring the focus on purpose and sustainable business back to the forefront of the economy.

Read the in-depth interview and more about the impact of RECUP.

**At the beginning of the year, the compulsory reusable packaging for catering businesses came into force in Germany. This is a political requirement in the spirit of conserving resources – and is bound to spur on your business model. What basic laws do you think are still needed to actually achieve net zero?**
To achieve net zero, the next desirable step would be a single-use tax or, ultimately, a ban on single-use products in the catering industry, as has already been in place across the EU for some single-use plastic products since 2021.

**Our ambition at Globalance is to invest exclusively in a sustainable and forward-looking way – “Swiss banking with a mission”. What do you want from the financial markets in future?**
I would like to see favourable financing conditions for those companies that want to make a difference. First and foremost though, it is important to prevent the greenwashing of sustainable investments, which may lead, unfortunately, all too often, to an abuse and ultimately loss of the investors’ trust.

**We see start-ups as drivers of innovation. They propel necessary transformations and force established players to rethink. What advice would you give to courageous young entrepreneurs?**
My tip: go where the pain is. Act quickly and honestly in difficult phases and always tackle important things immediately – procrastination is useless. ;-) What’s more: feedback is a gift, especially criticism – progress can be made very quickly with regular, honest and constructive feedback.

## FLORIAN PACHALY

Florian Pachaly was born on 23 June 1995 in Rosenheim, Germany and completed a dual business administration degree in 2013 after leaving secondary school in Rosenheim with a university entrance qualification. Shortly before he finished his studies in 2016, he founded the company RECUP together with Fabian Eckert. Today, RECUP is the market-leading reusable solution for the catering industry and is represented at over 21,000 outlets throughout Germany. Florian Pachaly was named Social Entrepreneur 2022 at the German Startup Awards and accepted into the Obama Foundation Leaders 2023 programme.

# How Nature Inspires and AI Can Protect

PURSUING THE SHEER IMPOSSIBLE – Whoever does this either remains unsuccessful or hits the jackpot. Researchers all over the world are working on technologies that are difficult to imagine today, but have huge potential. Weighty sources of inspiration: nature and artificial intelligence.

Due to evolution, we can still learn a lot from nature, as the animal and plant kingdoms are so much older than us humans and have always adapted to changing circumstances in an exemplary manner.

The Velcro® fastener, for example, invented by the Swiss George de Mestral in 1951, has its origins in burdock weed, the small barbs of which de Mestral had to laboriously remove from his dog's fur after walks in the forest. And the lotus flower's ability to repel water and dirt has long been exploited by industry. The German botanist Wilhelm Barthlott's findings of constructing surfaces like those of the exotic plant are still used today in lacquers and on façades, among other things.

The still young science that deals with technological development taking nature as a model is called bionics – a neologism made up of biology and electronics.

**The Cloud in a Flower**

Disruption means drastic change. Something completely different takes the place of what we know. Before new ideas gain widespread acceptance, they are naturally often difficult to imagine. Disruptions have the thankless status of only becoming recognisable as such once they actually achieve success. Some current projects therefore seem quite futuristic. For example, the Data Garden by Cyrus Clarke and his team. They have found a way to convert data into a biological format and use it in plants in this way. Digital data, whether it is an image file, a text or an

mp3 file, can be represented as binary bits (0 and 1). According to Clarke, these can be stored in molecular form and injected into plants as a liquid. The beautiful vision: huge data centres, which already consume more $CO_2$ worldwide than aviation, are to be replaced by environmentally friendly gardens as data storage facilities.

**ChatGPT: Helping to Protect the Environment?**

Artificial intelligence, when used correctly, can be a real game changer in many fields – including environmental science. Which tree species should be planted to adapt a forest area to climate change? How can waste sorting be further optimised so we get an even better recycling rate? How can future generations be better prepared for the new challenges? Or how can freight transport be made even more climate-friendly? Questions which AI can provide suitable answers to – quickly, precisely and taking unimaginable amounts of data into account.

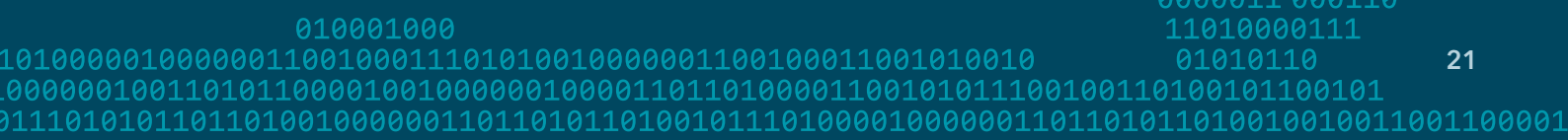
The "Generative Pre-trained Transformer", currently better known as ChatGPT, can possibly do more than just write texts and answer specific questions. The cutting-edge natural language processing (NLP) model holds significant disruption potential in a number of industries. For example, in the field of education: Khan Academy, a Californian non-profit organisation that provides free digital learning materials, shows with its AI-in-the-classroom approach how GPT-4 can become an assistant for teachers and a personal AI-assisted tutor for students. At the moment, there is still a lot of debate about whether it is the devil's tool or a blessing for the future. Probably a bit of both is tucked away in it.

But with the ability to understand, generate and classify texts, ChatGPT can be used to improve sustainability efforts. Data analysis is automated and provides insights that would otherwise be difficult to discover.

ChatGPT can be used, for example, to monitor carbon emissions or biodiversity change by analysing text data such as government reports, news articles and scientific papers. As environmental research often generates extreme amounts of data (sensor readings, satellite images, text data) from various sources. Identifying patterns and trends in this data can provide valuable insights into existing or emerging environmental problems – and, at best, offer solution approaches.

Positive disruptions never arise from just one source of inspiration. Therefore, we can continue to learn from the past and from nature without having to close our eyes to innovative transformations. Because we can use all the help we can get to meet the challenges of the future.

> Disruptions only become recognisable as such once they achieve success.



# Start-Ups as Drivers of Innovation

The emergence of new companies and innovations is considered a key factor for technological, economic and social progress in a society. Start-ups and innovation are closely linked.

Young companies gain a competitive advantage over their larger competitors with the help of innovations. This often leads to competition on the market, resulting in better products, services and prices for consumers. Established players are challenged, promoting efficiency in existing industries, breaking traditional business models and driving progress.

Moreover, start-ups are beacons of hope for the protection and preservation of our planet. It will be difficult to address climate change with conventional technologies and practices. Instead, new, disruptive solutions are needed to limit global carbon emissions to net zero by 2050. It is our pleasure to introduce you to three such players.

SOLAR FOODS – FINLAND

**Net Zero Using Air Proteins**

The Finnish food tech start-up, founded in 2017, aims to revolutionise the world's food supply by making food independent of land use. The company's business model is based on the production of a high-quality, sustainable and climate-friendly protein product that virtually only requires air and electricity to produce it.

The proprietary technology called "Solein" uses a fermentation process that mimics photosynthesis. In this process, biomass is cultivated using carbon dioxide, water and nutrients. The result at the end of the process is the air protein in powder form, which is rich in essential amino acids. Solein powder is an ingredient in a wide variety of foods, for example meat substitutes, pasta or bread.

One of its main advantages: the protein's production process uses renewable energy sources, so fertile farmland or water resources are not needed. Even taking the space requirements of the solar cells used for energy production into account, Solar Foods needs just one tenth of the land area required for the same amount of protein from soya.

The ingenious twist to the whole thing: the sustainable protein powder uses the $CO_2$ that is harmful to the climate itself as a raw material and thus contributes twice to achieving the net-zero targets.

Photos: solarfoods.com, carboncure.com, blueplanetsystems.com

Start-ups led by women are still underrepresented in the start-up ecosystem. Just 2.3% of venture capital funding went to start-ups founded by women in 2020.

There are an estimated 500 million entrepreneurs and 100 million start-ups worldwide.

Technology is the most popular sector for start-ups (38%), followed by health (15%), finance (11%) as well as energy and environment (10%).

CARBONCURE – CANADA

**The Grey Building Material Fossil Is Becoming More Climate-Friendly**

Roman engineers were making caementum from burnt limestone and volcanic ash as early as in the 3rd century BC. Two millennia later, we are still doing the same. However, mankind consumes about 30 billion tonnes of concrete per year worldwide today. This produces more than half a tonne of carbon dioxide per tonne of cement, which means that cement production today accounts for about 8 percent of all carbon emissions.

The majority of $CO_2$ harmful to the climate is produced while drying the limestone. Therefore, industry cannot compensate for its poor climate footprint even by using renewable energy. In addition to new building technologies (3D printing), substitute materials (wood) and more efficient concrete, the focus is shifting above all to carbon capture and storage. There are currently at least half a dozen start-up companies aiming to make concrete a significant store for atmospheric $CO_2$.

One of the most established start-ups is the Canadian company CarbonCure, which has already sold more than 700 systems for installation in concrete plants worldwide. These inject carbon captured from industrial sources into concrete mixes. In the process, the carbon is permanently bound in the form of solid calcium carbonate nanocrystals, which also increase the strength of the concrete and thus reduce the cement content. Overall, the grey building material's carbon footprint is improved by around 10 %.

CarbonCure's goal: to save 500 million tonnes of carbon annually. Tech giants Microsoft and Amazon have also recognised the potential of the technology and are among the company's shareholders.

BLUE PLANET SYSTEMS – USA

**Drastic Reductions**

Blue Planet Systems in California is determined to make even much more drastic reductions possible. The company does not focus on the cement content, but on the fillers (sand or gravel), which make up the largest part of the concrete volume. The process starts with any calcium-rich waste product, such as concrete rubble from a demolition site, soaked in a proprietary "capture solution". Then, the material is directly exposed to any emission source, such as the escaping flue gas from a cement kiln, power plant or steelworks. The solution draws the carbon directly from the flue gas and binds it. The end result is a granulate that consists of 44 percent calcium carbonate. This is used as a filler and thus enables a concrete that has bound at least as much carbon dioxide as was used for its production – 670 kilograms per cubic metre.

Europe also has a thriving start-up scene, with London, Berlin and Paris among the top start-up hubs.

Around 300 billion US dollars is invested in start-ups worldwide every year.

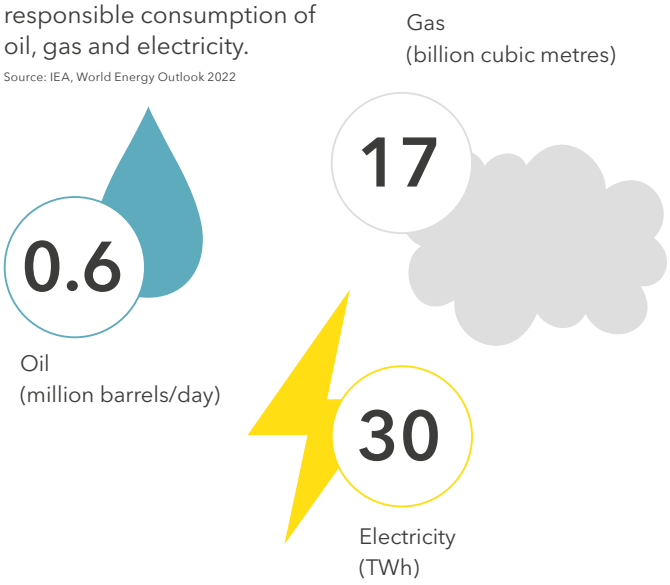
In 2022, the most unicorns (start-ups valued at more than 1 billion US dollars) were in the US (865), followed by China (224) and India (108).

* This does not constitute a buy recommendation. Disclaimer on the cover.

# Positive Sustainability Developments

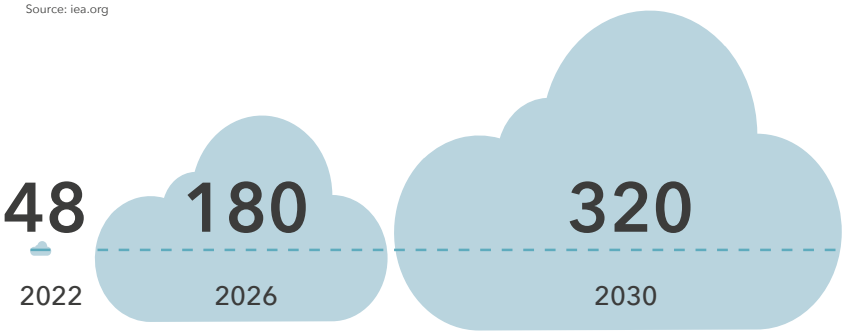
**We can all contribute to a net-zero future.**
Large amounts of fossil-based energy could be saved globally per year through the responsible consumption of oil, gas and electricity.

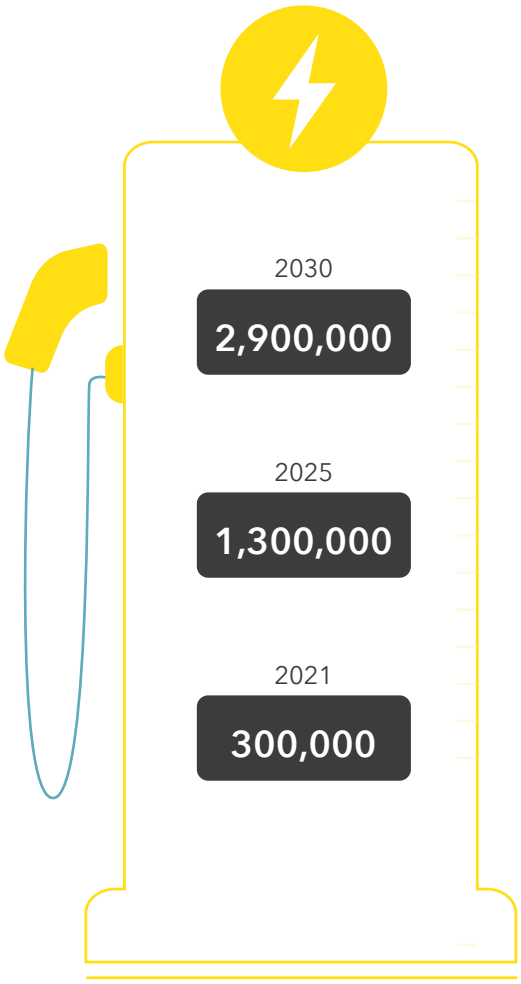
Source: IEA, World Energy Outlook 2022




**Carbon dioxide ($CO_2$) capture and storage as support on the path to achieving net zero.**
Capacity of the already operational as well as planned carbon capture and storage industry, in megatonnes (Mt) of carbon per year.

Source: iea.org



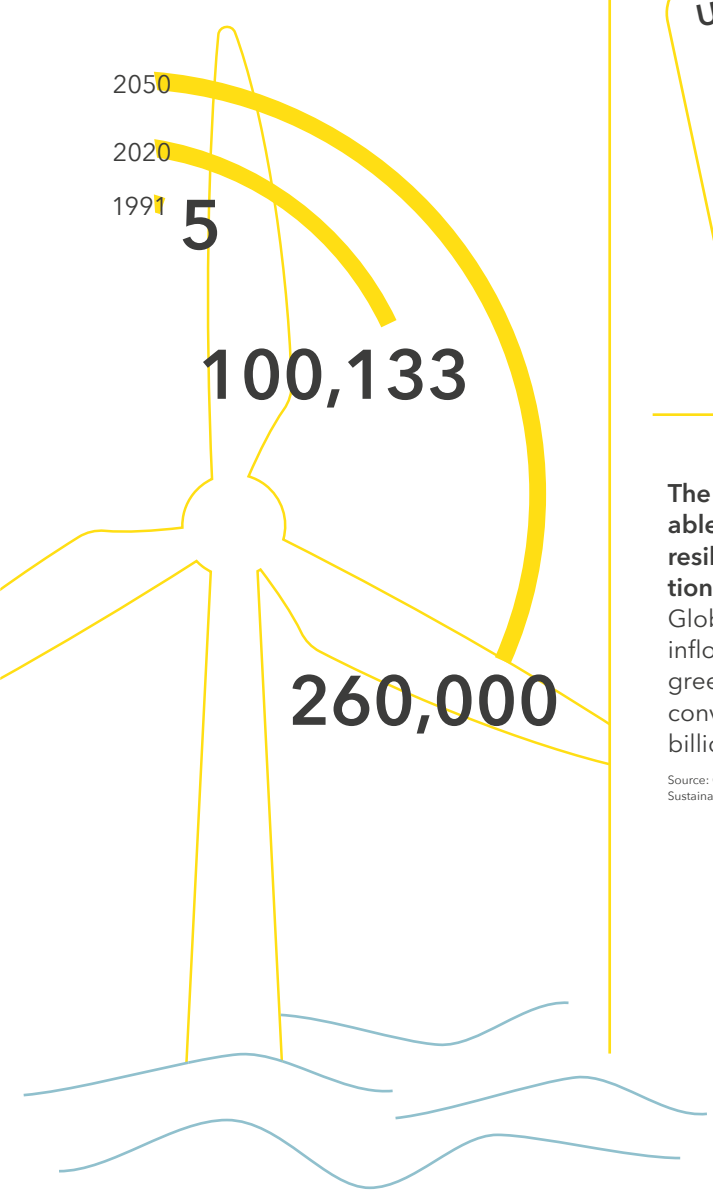

**Public charging stations for electric cars in Europe.**
Development of the number of public charging stations for electric vehicles in Europe.

Source: virta.global

BYE-BYE, STAGNATION – Our world is changing, the challenges are increasing. Which is why we will need numerous positive sustainability developments in future. We are already encountering some of them today. But the numbers speak for themselves anyway.

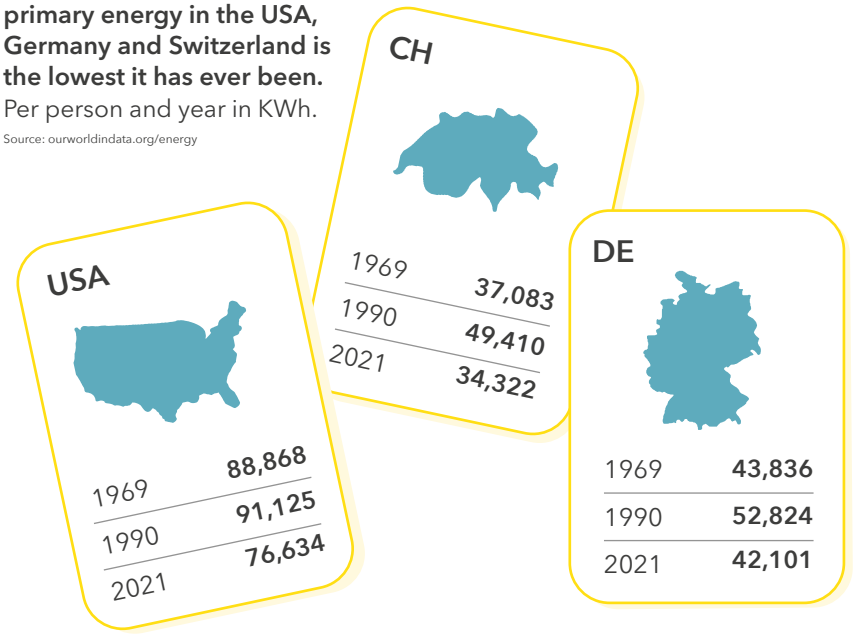
**The North Sea becomes a mega power plant for renewable energy.**
Production of offshore wind energy in the North Sea, in MW (megawatts).

Sources: orsted.com, sciencedirect.com, economist.com




**Per capita consumption of primary energy in the USA, Germany and Switzerland is the lowest it has ever been.**
Per person and year in KWh.

Source: ourworldindata.org/energy




**The inflows into sustainable funds are more resilient than with conventional funds in 2022.**
Global development of inflows and outflows in green funds compared to conventional funds, in billion USD.

Source: Goldman Sachs (2023): Sustainable Investing – from Ambition to Execution

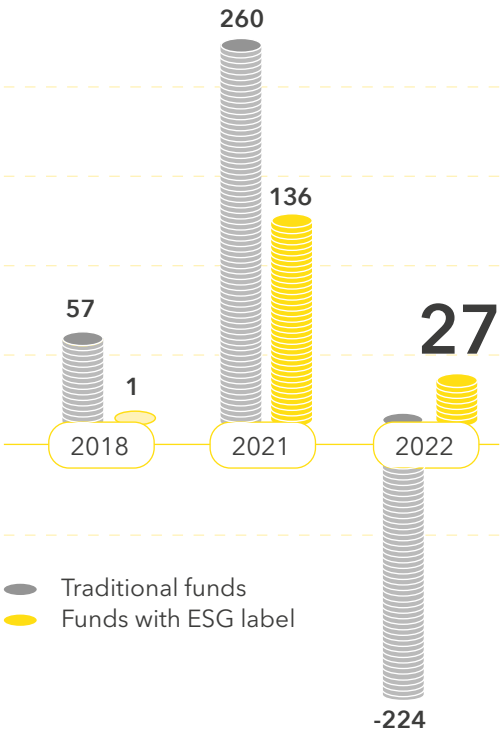


Photo: Samuel Truempy

# Tanja Zimmermann-Burgerstein

CEO Antistress AG,
Burgerstein Vitamine

Die wichtigste Anlage ist unsere Gesundheit!

T. Zimmermann

## … when **investing**

**What has been your best investment so far?**
My children. Our families should be our focus, that is where we leave a big footprint, of ethics, respect, appreciation, etc.

**What is important for you, when investing?**
To invest in a product or company share where I understand the background.

**What would you change if you were to become queen of the financial markets?**
After the CS debacle – take a closer look. I am stunned by the inequalities carried out on the backs of investors through greed.

## … **personally**

**Are you optimistic or pessimistic about the future?**
I am an optimistic person, I worry sometimes at the moment, but I also know that the very next morning the world can look completely different. We have to learn to enjoy the little things again.

**How do you refill your energy reserves when your personal power level is low?**
With my hobbies, my family, outdoors and surrounded by loving people.

**What I still want to learn …**
Work less without a guilty conscience.

## … as an **entrepreneur**

**What have you learned for yourself as an entrepreneur?**
After a low, there is always a high. You have to see challenges as opportunities. As a woman in a leadership position, you should remain authentic, take your place with self-confidence and have the courage to do something different to what is expected.

**How important will sustainability be in future?**
It must be of prime importance. However, the focus should be much more on the small successes. This is the only way to achieve the big climate target and get everyone on board.

SWISS CLIMATE SCORES

# Globalance Leads the Way Once Again

At Globalance, we generally welcome initiatives that promote sustainable developments. If it is then also in the area of the climate compatibility of financial investments, we particularly welcome it. As pioneers for sustainable and future-oriented investments, it is therefore with great pleasure that we say: "Grüezi, Swiss Climate Scores."

The Swiss Climate Scores were launched last year by the Federal Council and the Federal Department of Finance. They provide meaningful and comparable information on the climate compatibility of all financial investments. A clear commitment by Switzerland and its financial market to reduce greenhouse gas emissions to net-zero by 2050.

> Globalance is the first Swiss bank to have implemented the Swiss Climate Scores.

**We Support the Confederation's Initiative**

In March, we were the first Swiss bank to publish the Swiss Climate Scores for all of our assets under management, including our investment funds. But why are we actually doing this?

Climate change threatens nature, society and the economy in equal measure. The financial market and its stakeholders have a shared responsibility to be part of the solution because investments have a major influence on the achievement of climate targets. With the Swiss Climate Scores, there is now a catalogue of criteria based on the latest international knowledge: in our view, this is good support for private and institutional investors to make it easier to recognise the climate compatibility of financial products.

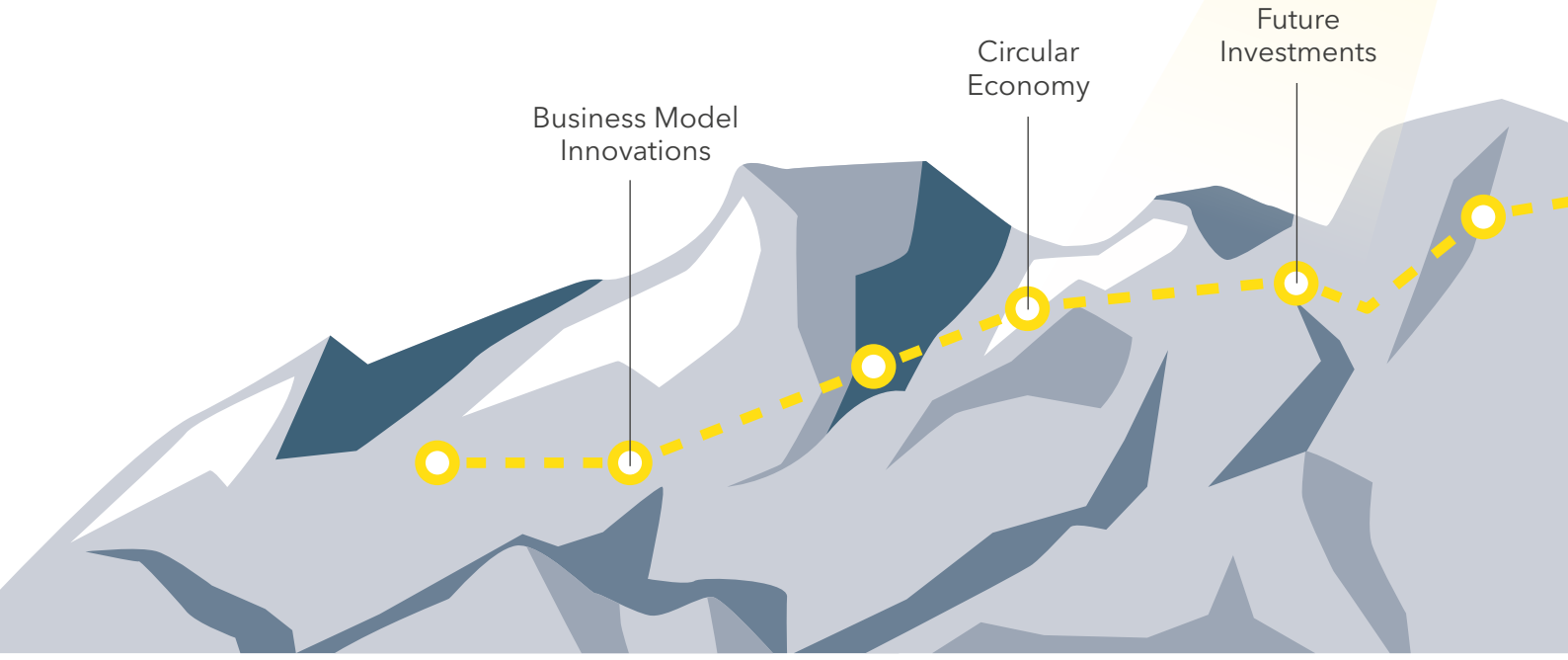
We have focused on future-oriented investments since our foundation – transparency and comprehensibility for our clients have always been a high priority. The return-oriented focus on business models that make a significant contribution to solving climate change using innovative technologies or products has always been an integral part of our investment strategy. It is therefore all the more pleasing to now disclose these results so they can be compared using the Swiss Climate Scores.

**Globalance Portfolios Show: the Bar Could Be Even Lower**

Climate risks rarely find their way into our portfolios. We focus on low-carbon business models at an early stage in order to minimise "decarbonisation risks" and prevent potential write-offs. Thanks to these selection criteria, our climate scores are excellent. All portfolios we manage are below a warming potential of 2 °C and fall below the MSCI World benchmark by 60 percent. Globalance has shown the way.

**globalance.com/swiss-climate-scores**

Photo: iStock



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