The *otto group* sustainability magazine in cooperation with GEO

NOW

A STITCH IN TIME
How can Bangladesh's garment industry be made safe?

FIELD STUDY
Can any farm become an ecological oasis?

YOU ARE THE FUTURE
A digitalisation initiative strengthens employees.

Heading in the right direction

Acting sustainably means not letting yourself be diverted from your path. A magazine about courage, milestones and an attempt to save the world.

HOW DOES SOMETHING

Jens Schröder, Editor-in-Chief of German popular science magazine GEO, and Alexander Birken, CEO of the Otto Group, on the unusual collaboration that led to this magazine.

Photography:
AXEL MARTENS

Words:
JENS SCHRÖDER, ALEXANDER BIRKEN

Jens Schröder: Well, it's certainly a little unusual for the two of us to be standing here doing an editorial for a joint magazine: the CEO of a retail group and the editor-in-chief of a popular science magazine.
Alexander Birken: Unusual, yes. But new kinds of partnerships can be refreshing too. Especially when you discover you share values that you want to promote – using the abilities of both sides.
Schröder: Yes, that was the case here too, as it turned out. But at the beginning, it was quite a bold step for both sides.
Birken: That's true. There are some excellent communications experts here in our Group. But a company obviously doesn't have the unclouded perspective it takes to research and narrate stories from an external, journalistic standpoint.
Schröder: … and for us, doing a magazine with a commercial partner was unknown territory. You can't help wondering beforehand whether it's going to be a tightrope walk. Will the "others" want to make all the decisions? Is that compatible with how we see ourselves, with the idea that we have to evaluate all the facets of a story?
Birken: And? Is it?
Schröder: Yes, now I can say it is. And it helped that sustainable development is an issue that both sides are seriously concerned about. Stories like the one about sustainable cotton (p. 34) or the F.R.A.N.Z. project – which aims to reconcile conventional and ecological agriculture (p. 12) – are the kind of stories we could run in any normal issue of GEO. They definitely give you food for thought. It doesn't really matter whether the ideas come from a company founder, a scientist or activists – the main thing is that they're inspiring. In a "normal" GEO we'd obviously have gathered examples from a greater number of different stakeholders. But then again, there was no shortage of suitable topics within the Otto Group.
Birken: I think the story about sustainable forest management (p. 90) or the impact of a tragedy like Rana Plaza on Bangladesh (p. 66) could easily have been featured in a "real" issue of GEO too.
Schröder: But only talking about individual projects wouldn't do justice to the bigger picture. There's a very fundamental dimension to the whole issue of "sustainability and business" – a meta level, if you like.
Birken: Of course. There comes a point when you have to ask yourself: how can economic activity and sustainable development go together at all? The first 25% reduction of CO_2 in a production process might be a win-win situation and save you a lot of money. But going further than that can sometimes be very costly. It's a clash of objectives, and it's vital to be open and transparent about it. There's

LIKE THAT WORK?

Jens Schröder and Alexander Birken in The Forest, a social space at the Otto Group headquarters in Hamburg – just one of many areas available to employees for creative thinking, networking or interdisciplinary collaboration.

no point in cheating. Let's be honest: it takes more than advertising slogans. You have to take a clear position.

Schröder: But a major retail group isn't the same thing as a local wildlife conservation group. It has to sell products. That's its sense and purpose.

Birken: Yes, it's a dilemma and there's no way round it: there's a lot of potential for conflict between upholding values and creating value. Prof Dr Michael Otto and Ranga Yogeshwar have a really frank conversation about that starting on page 22. But I'm absolutely certain that, if a company doesn't offer a convincing solution, it won't survive in the long term. Ethical consumption used to be a niche. But nowadays, whether or not a company shows credible commitment in this area often plays a crucial role in the customer's choice of product. So a company's attitude doesn't just affect the purchase decision, it's increasingly becoming a "licence to operate" as well. Half-heartedness isn't tolerated: greenwashing doesn't work any more. As a business, you simply won't survive if you compromise your values for the sake of globalisation.

Schröder: Speaking of values – there are different approaches… We discussed whether, for the purposes of this magazine, we should only look at sustainability from an ecological angle or include other facets as well.

Birken: … and I think we were quite right to take a broader view. In 2021, corporate responsibility extends far beyond the ecological and social quality of a company's products and services. A clear position and foresight are what's needed. Anything that helps transform our society and make it fit for the future is part of that. How does a company take its employees along on this journey? Which "future of work" fits with the values that make protecting natural resources a priority as well – and how do we get there? In the magazine, for example, we present the group-wide learning initiative we've introduced for our employees – a very systematic programme by the name of TechUcation (p. 82). Digitalisation doesn't have to leave anybody behind.

Schröder: That would be an example of social sustainability.

Birken: … yes, we want to revive the social discourse about corporate responsibility in the age of digital transformation and team up with stakeholders from business, politics, science and civil society to outline a way forward for value-oriented corporate action for the benefit of all in the future.

Schröder: A cross-sector dialogue on sustainability. That's what we've been doing too: a retail group and a popular science magazine. It turned out pretty well, if you ask me.

Birken + Schröder: We wish all our readers an enjoyable and informative read!

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Photos: Cover Justin Kauffman/Unsplash.com, P. 4/5 GMB Akash, Claudia Meitert, Axel Martens, David Maupilé, Peter Rigaud, Romina Rosa, Maria Schiffer, Jonathan Torgovnik, Jonas Wresch

ON THE RIGHT TRACK

Sustainability is a word that can easily make us feel helpless. Where should we begin? The people behind these 10 projects from all over the globe didn't worry about that. They just went ahead and made a start. A trip around the world.

Words:
ANNIKA LASARZIK

① A VILLAGE DRIVES CHANGE

"Our village is called Sprakebüll and has just under 250 inhabitants – and more than 20 electric cars, including the *Dörpsmobil* (Villagemobile), which anybody can borrow for €2.50 an hour. We bought the electric cars three years ago, out of pragmatism: there are two wind farms near the village, which are co-owned by the locals. But the turbines were standing still a lot of the time, the grid was being used to capacity by conventional power. Now the surplus electricity powers the electric cars, and the citizens' wind farm subsidises the leasing rates with €100 a month. Anybody who finds that too expensive can use the *Dörpsmobil*, which is co-financed by the municipality. It's parked in the middle of the village, with its own charging station, and is booked online. Normally the mobility transformation is all about big cities, but we're showing what creativity and community spirit can achieve in rural areas. Sure, there were reservations at first, but in the meantime more and more villagers are leaving their own car at home. And at the ripe old age of 71, I'm switching to an electric car too. We're saving 40 tonnes of CO_2 a year here. More and more municipalities in northern Germany are getting their own *Dörpsmobil*. If we can do it, anybody can!" *Karl-Richard Nissen is mayor of Sprakebüll in the German state of Schleswig-Holstein – a village that has been operating an electric car-sharing scheme as part of the state-wide Dörpsmobil initiative since 2016. The electric cars are booked and paid for via the MOQO app developed by Aachen-based company Digital Mobility Solutions. The project is sponsored by non-profit organisations like the Akademie für die Ländlichen Räume.*

② BIOGAS INSTEAD OF KEROSENE

The idea is simple: since 1992, rural families in Nepal have been using biogas made from cow manure for heating instead of wood and kerosene. Under the Biogas Support Program, the country's government – aided by the NGO atmosfair – has overseen the installation of approx. 350,000 biogas stoves. That saves time and money, is good for the families' health, protects the environment and is kind to the climate: the women no longer have to spend hours looking for firewood or inhale poisonous smoke when cooking, which can cause serious respiratory disease. One plant saves up to three tonnes of CO_2 as compared to an open fire. And fewer trees are felled too, which helps counteract soil erosion and the loss of biodiversity in the Himalayan country.

③ WETLANDS TO THE RESCUE

Bergwaldprojekt is a non-profit organisation that organises volunteer projects for protecting the forest – on the German island of Rügen in the Baltic Sea, for example. But despite the island's popularity with tourists, the project is anything but a holiday: it involves hard work with pickaxes and spades – in the wetlands. The volunteers are helping to turn a climate killer into a wonder weapon by rewetting the drained wetlands in Jasmund National

Photos: Dörpsmobil Schwedeneck e. V., atmosfair, Bergwaldprojekt e. V., Wege aus der Einsamkeit e. V., Finlit Foundation

Park, which covers approx. 3,000 hectares: dry wetlands release huge amounts of greenhouse gases, whereas in their natural state they absorb more climate-damaging CO_2 than any other ecosystem in the world. And as reservoirs, they even provide protection from sometimes catastrophic flooding. Over 95% of all peatlands in Germany have already been destroyed, accounting for approx. 5% of the country's CO_2 emissions. But it doesn't take much to make a difference: a pickaxe and muscle power are a great way to start.

4 SENIORS LEARN TO SURF – ON THE INTERNET

"To begin with, they're afraid more than anything else," says Dagmar Hirche from Hamburg. "Afraid of crashing the internet if they press the wrong key." The 63-year-old teaches seniors how to use smartphones, tablets and social media. With her charity Wege aus der Einsamkeit, she's been committed to helping the elderly combat loneliness for years – through more digital participation, for instance. She gives talks, runs internet courses in senior living facilities and is highly critical of the fact that many such residences still don't have wifi. In these pandemic times, Hirche's dedication is all the more appreciated: every morning since April 2020, she's been holding Zoom parties with readings, talks or chair-based yoga to help seniors feel less isolated. In YouTube videos she explains how to use the smartphone camera, what flight mode is or how the corona alert app works. Demand is huge, says Hirche, and there are still nowhere near enough comparable offerings. "Our world is becoming increasingly digital. We have to make sure we don't leave the elderly behind, otherwise we exclude them from public life."

A PICKAXE AND MUSCLE POWER

5 FOR A DEBT-FREE WORLD

The problem: approx. 7 million people in Germany are heavily in debt; budgeting properly can be a challenge – for young people too. Jana Titov, Jannik Steinhaus and Sebastian Richter, three young employees of financial services provider EOS, which is part of the Otto Group, want to tackle this social problem at its core. The idea: in order to raise children's awareness of the importance of handling money responsibly at an early age, analogue and digital teaching materials were developed for pupils in grades three to six. There are knowledge cards that explain financial terms, for instance, as well as fun tasks based on everyday life and an online learning portal. And now? Prof Dr Michael Otto, Chairman of the Otto Group Supervisory Board, was so impressed with the idea that the three young co-founders now work for their own EOS-affiliated startup: the Finlit Foundation, a non-profit company within the

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EOS Group. "Who can better promote a debt-free world through prevention than financial experts like us?" says Jana Titov. Since the beginning of the 2020/21 school year, teachers have had free access to the materials for use in the classroom and online. Over 9,700 children in around 100 schools have been reached in the first six months since the rollout in October 2020.

6 TAKE THE TRAIN, ENJOY THE GAIN

Long-distance travel without flying? Can't be done? Yes it can! Founded by 19-year-old Elias Bohun from Austria, Traivelling organises train journeys to destinations as far away as Japan or Vietnam.

How did you hit on the idea for the travel agency?
Bohun: When I finished school I wanted to go to Vietnam. Because of the terrible carbon footprint of a flight, I spent three months researching how to get there by train: 16 days there, three weeks back. That's when I realised how enjoyable train journeys are – and how insanely complicated they are to book.

Sceptics would argue that travelling by train is expensive and uncomfortable.
Bohun: Not true! In Eastern Europe and Asia, trains are both cheap and comfortable. You sit in big compartments so it's not as cramped as on a plane. And you see more too: the tundra, the steppe, the Gobi Desert.

Which routes can you recommend?
Bohun: The night train from Munich to Prague for €30. Or the Trans-Siberian Railway through Russia for €100. The great thing about slow travel is that you get to know the locals instead of being stuck in tourist hotspots.

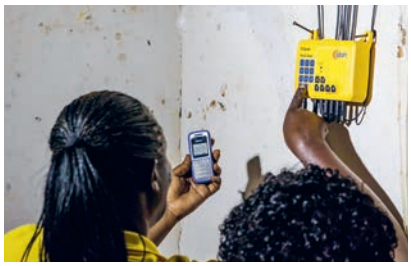
Your first year in business coincided with a pandemic – how are you surviving the crisis?
Bohun: It was a difficult year. A lot of things were cancelled; we were only able to organise a few trips through Europe in the summer. But we used the time to set up an online booking portal. I'm sure the slow travel trend will continue after corona: the pandemic has taught us how important it is to appreciate what it means to have time for something. So why not do that on a train journey through far-off lands?

7 AQUA-AGENTS

How many litres of water does it take to produce a pair of jeans? That's precisely the kind of question the Aqua-Agents look into on their mission to discover what a fascinating element water is. Children in grades three and four are equipped with an agent's kit containing tasks embedded in little stories, and get to deepen their knowledge on field trips to wastewater treatment plants and waterworks. The programme was designed according to the principles of Education for Sustainable Development and has won multiple awards.
In 2020 – just as the project was celebrating its 10th anniversary – a lot of things were different. Schools had to close, separating the Aqua-Agents from their kits, and excursions were cancelled. But environmental education works online too, as demonstrated by the Special Agent initiative in November: free digital materials and videos enabled the children to learn at home.

Photos: Elias Bohun, Aqua-Agents office, Azuri Technologies, Vic Hinterlang/Soil, Ipso

They developed ideas for raising awareness of just how vital it is to protect and conserve our resources, coming up with presentations, posters, games or WhatsApp chain messages. And the Environmental Foundation Michael Otto, which initiated the Aqua-Agents project, is planting a tree for every class that participates. Today it's clear that although digital learning certainly can't replace the classroom experience, it can be a valuable addition. Which is why, in future, the Aqua-Agents will work with both analogue and digital elements so that as many children as possible can become junior water experts.



⑧ SOLAR POWER FOR AFRICA

More than 600 million people in sub-Saharan Africa live without electricity because there aren't enough power stations or supply networks. No electricity means no lighting, no radio, no way to charge a mobile phone – and being cut off from information. Azuri PayGo Energy is a company that specialises in selling solar modules in combination with a basic set of simple electrical devices: LED lights, a rechargeable radio, a mobile phone charger, a torch – and the aforementioned solar panel. Customers use their smartphone to pay the total costs of $270 in small instalments spread over 18 months, which works out to 50 cents a day. After that, the clean energy is free. The costs are often shared by several households. Today the solar kits are being used in 12 African countries and supplying 750,000 people with electricity. The idea has received various accolades, including the UN's Momentum for Change award.

⑨ DRY TOILETS AS GREEN LIFESAVERS

Push a button, flush, forget – second nature in industrialised countries, a luxury in the island state of Haiti. About a third of the population doesn't have a toilet. That's not just a violation of human dignity, it's a health risk too: disease spreads like wildfire, hundreds of thousands have contracted cholera over the last 10 years. Aid organisation Sustainable Organic Integrated Livelihoods (SOIL) has developed a practical solution: dry toilets. Instead of flushing, the faeces and urine are separated, disinfected at composting facilities and turned into fertiliser to provide an inexpensive alternative to chemical fertilisers, which the local farmers can barely afford. What's more, land that has been lying fallow due to environmental damage can be farmed again, and harmful greenhouse gases are reduced.

GREEN POWER FOR 750,000 PEOPLE

⑩ WHEN REFUGEES HELP EACH OTHER

They've survived war, flight and displacement. But the memories remain. Many refugees in Germany are traumatised. And it's difficult to find help quickly: there are long waiting lists for therapy, not to mention the language barriers. This is where Ipso – International Psychosocial Organisation can help with its low-threshold counselling concept. People who have fled themselves spend a year training to become psychosocial counsellors. After three months of intensive training, these "Ipso Counsellors" gain on-the-job experience, including in refugee facilities. The benefit: they speak the same language and know their clients' culture – and because of their own experience, they know the best way to provide support. Mainly active in Afghanistan until 2016, the organisation has been establishing a network in Germany ever since, with financial support from Prof Dr Michael Otto. Today the psychosocial counsellors work in Ipso Care Centers in Hamburg, Berlin and Erfurt and are available online at www.ipso-care.com. While the counselling is no substitute for trauma therapy, such a long and in-depth treatment journey isn't always necessary. Thanks to Ipso, the clients now have somebody to talk to – somebody who will listen and show them they're not alone in a country that's still strange to them. For more information go to www.ipsocontext.org.

Online or offline?

What's the best way to shop if you want to impact the environment as little as possible? The answer is easy – as long as you stick to a few simple rules ...

Words:
VERONICA FRENZEL

German consumers are characterised by two things: they love to shop online and they want to impact the environment as little as possible. But in the media and in public opinion, online retail keeps popping up as a climate killer, even though the experts have clearly stated that shopping online doesn't harm the environment any more than shopping at a physical store. On the contrary: "By paying attention to just a few things, online retail can be far better for the environment than bricks-and-mortar retail," says Leo Ganz of the German CleanTech Institute (DCTI). The Otto Group and Hermes commissioned the environmental scientist to compare the carbon footprints of online and offline retail, and his findings were confirmed by business experts at the University of St. Gallen in Switzerland.

They show that online retail is already kinder on the environment for the most part than bricks-and-mortar retail – when you compare transport distances, including returns. This is because most Germans take their car when they shop rather than doing so on foot or by bicycle, the ecological way – even if the store isn't much more than a kilometre from their home. And instead of shopping when they're out anyway, like on their way to work, they make an extra trip. Due to these car trips, the CO_2 impact of shopping in a bricks-and-mortar store is higher, on average, than the impact of shopping online. A parcel delivery van, by contrast, usually carries more than a hundred parcels on a single delivery route, which clearly shoots far less CO_2 into the atmosphere. In Germany, transporting a mobile phone that was purchased online produces no more than 310g of CO_2 whereas a phone from a physical store produces at least 450g; a sofa ordered from an online retailer produces 8kg of CO_2 while one from a furniture store produces 8.5kg.

How do I shop? How are my parcels delivered? And what exactly am I buying?

There are a few things all of us can do to make online shopping more eco-friendly too. The main thing to concentrate on is reducing transport distances even more by bundling our purchases, buying everything we need at once from the same online retailer and double-checking our choices so we don't have to send anything back.

It's also very important to plan the delivery well. If we're not going to be at one address all day, we should have our parcel delivered to the nearest in-store parcel shop, to a reliable neighbour or to a nearby store that has an arrangement with the online retailer. If they're not pressed for time, the parcel delivery people can take the most eco-friendly route, assisted by dynamic data processing. Some online retailers are making deliveries more efficient by packing small,

Photocredit: Brooke-Lark/Unsplash.com

lightweight products in such a way that they fit into a letterbox. An idea from the US has struck a chord in Germany too: DHL wants to install extra-large parcel delivery boxes in apartment buildings or front gardens. Some online retailers and logistics firms are meanwhile offering customers environmentally friendly delivery by cargo bike or electric van. But deploying climate-friendly vehicles across the board will ultimately require political action. Sustainable mobility concepts could facilitate and even accelerate eco-friendly transport. In London in October 2020, Ford and parcel delivery service Hermes teamed up to test a model that combines delivery vans with pedestrian couriers in order to deliver parcels faster and, by using fewer vans, more sustainably in big cities.

Online retailers are also constantly developing digital tools to make online shopping as eco-friendly as possible. The goal, first and foremost, is to avoid things being sent back by helping customers make the right choices in the first place. Detailed product descriptions, lots of (good) photos, zoom-in features for fabrics and details, and personal consultations via chat or telephone are already the norm among the industry giants. Some retailers issue pop-up warnings when customers order different sizes of the same piece of clothing; others set up CO_2 footprint accounts for each customer to achieve the same thing.

Currently, the main reason people return things is that clothing sizes vary from one manufacturer to another. Nearly every brand has its own standards, and clothing and shoes are the most common returns because they just don't fit. So as they wait for the fashion industry to standardise sizes, online shops are developing tools that allow them to individually advise customers on which size to buy. They use models who try on clothing from their range, process customer feedback about how the various sizes fit and compare this information with data from earlier purchases. Virtual dressing tools, which the Otto Group uses, for instance, are another way to help customers find the right size: you specify your measurements and an avatar shows you how a particular piece of clothing would look on you. ●

How to shop more sustainably online

Don't send things back
Select what you want to buy carefully. Choose an online shop that provides detailed product descriptions or helps you find the right size based on earlier purchases.

Bundle your purchases
More parcels mean more deliveries – and higher CO_2 emissions.

Be there to receive your parcel
Don't choose a specific time window and don't select faster delivery options. This way, the delivery person can choose the best and most efficient route and load the van in such a way that as many parcels as possible fit in. Have the parcel sent to your office, to an automated parcel locker or to a neighbour if you can't be home all day to receive the delivery.

Choose a climate-friendly delivery option
Choose the eco-option, if there is one, and have your parcel delivered by electric car or cargo bike.

Buy sustainable products
Finally and most importantly: buy items with a small CO_2 footprint. It's not hard to research manufacturing processes and materials online. The best and most convenient way is to choose an online shop that provides details of its materials and production processes on the website.

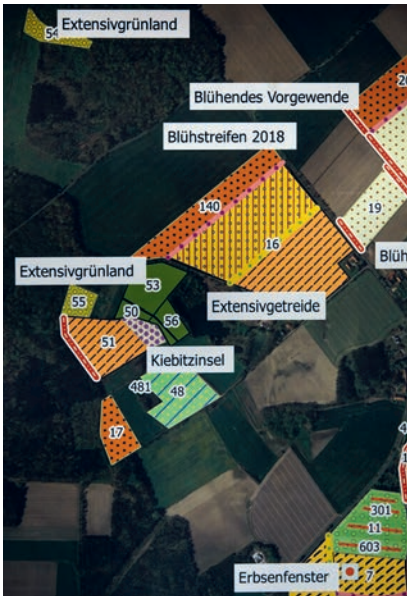
Photography: **DAVID MAUPIL** Words: **VERENA LUGERT**

The Hartmann family's field experiment

For five years now, farmer Jochen Hartmann has been trying out alternative methods of cultivation on his fields – and getting paid to do it. He even leaves some areas entirely to nature. The result? It's breathtaking – and could well catch on.

It's a clear morning, the smell of autumn hangs in the air, earthy, damp, like windfall, like bonfires. The day before, Jochen Hartmann, 40, a farmer from Rettmer in Lüneburg, northern Germany, gathered his crew to bring in the harvest. Tonnes and tonnes of potatoes are now safely stored away in the climate-controlled warehouse: €200,000 worth of potatoes in huge cage pallets stacked all the way up to the ceiling. Hartmann planted the seed potatoes with his machines in spring, watered the shoots and plants, protected them from pests and disease right the way up to the harvest, right up until he took the potatoes out of the soil. Out of the soil that has been giving and giving for so many years: the first written mention of the estate is from the 14th century. Jochen Hartmann's farm is a tightly organised business. It has to function: it's optimised, efficient. Beneath the pointed gable of the farmhouse, the hands of the clock set into the brick wall mark the passing of time, accurate to the minute. For decades now, Ursula Hartmann, the senior boss and Jochen Hartmann's mother, has been serving lunch to the workers gathered round the big table in her kitchen on the dot of twelve. "We keep a careful eye on the time here," she says. "We're very particular about that." The clock dictates the rhythm of the day. And the seasons structure the cycle of the year; spring, summer, autumn and winter determine when it's time to sow and time to harvest, just as they have for decades, for centuries. The Hartmanns are the 19th generation of their family to farm this land. They grow grain, rapeseed, sugar beets and potatoes. And they keep chickens in a huge pen where they're free to roam to their hearts' content, under trees and in the meadow. Their eggs – like the chickens themselves, who are destined for roasting or soup – are sold in the pretty farm shop, along with rustic bread, fine liver sausage and egg pasta. "In 2020, demand for our free-range chickens doubled because of corona," says Hartmann. "The pandemic increased people's awareness, and the eggs were always sold out by lunchtime." With his glasses, measured movements and calm voice, Jochen Hartmann seems more like a teacher or university lecturer than a farmer. Like 88% of all German farmers, he runs his agricultural enterprise the conventional way: intensively. He has 180 hectares of land, the equivalent of about 250 football fields. He uses fertilisers and pesticides. He has big fields, optimised to make maximum use of the productive arable land. "That's the only way a farmer can survive nowadays," he says. And gets into his car. We set off for the fields right behind the farmhouse. He drives us around his huge property. "You need to get a yield out of every single square metre of soil." To be profitable.

But you need fallow land as well, as conservationists keep telling us in ever louder voices. For biodiversity, for the farmland birds, insects, worms and plants that keep the ecosystem in balance and the soil healthy so that it can sequester lots of CO_2. Biodiversity doesn't thrive on huge, monotonous fields; it thrives in meadows, on the edges of fields, on embankments, in stone walls and hedges. Buffer strips and fields that are farmed less intensively are vital for ground-nesting birds like partridges and skylarks, which are becoming increasingly rare because fallow land has virtually disappeared from the modern landscape. It's almost non-existent in the highly optimised agriculture of the 21st century, because profitability and wild meadows aren't compatible, economy and ecology aren't friends. And because price dumping makes it increasingly difficult for farmers to turn a profit. Conventional farmers are fighting back against the tougher rules on fertiliser and insect protection imposed by Germany's Ministry for the Environment. And the Minister of the Environment, Svenja Schulze of the Social Democratic Party, sympathises with the farmers' protests: "When they're being paid 69 cents for a litre of milk and knockdown prices for meat, it's virtually impossible for farmers to protect the environment, ensure clean drinking water and preserve biodiversity as well," she says. To make things worse, the world market price for potatoes dropped rapidly in 2020 – corona made it almost impossible for people to get together, nobody was eating chips – or French fries – because there were no parties, no open-air concerts, no local festivals and only very restricted access to leisure facilities. The price pressure is terrible for farmers. It's only natural for them to try to get the maximum possible yield out of their fields when the harvest brings less and less money.



One-tenth of Hartmann's farmland (in colour) is now a "field experiment". Now birds like lapwings are nesting here.

Organic farms that make more gentle use of the soil only account for 12% of German agriculture. Even though the farming transformation, or the greening of agriculture, is a clearly defined political objective, it will take time. Time that is running out at breakneck speed. Not just for skylarks and lapwings, but for us humans too, because conventional farming has a significant impact on climate change.

According to a Europe-wide monitoring scheme, the number of farmland bird species in Europe has declined by 56% since 1980. This figure, published by the European Bird Census Council, corresponds more or less exactly to the >

observations of the German Environment Agency for Germany. There are hardly any partridges left, and the skylark, starling, lapwing and tree sparrow populations are declining as well. The number of insects is dropping rapidly too, the beetles that are eaten by the birds, that decompose dead animals like voles and birds, aerating the soil and enriching it with nutrients. The humus of healthy agricultural soil is the most important CO2 reservoir of all in this part of the world. Today, 2.5bn tonnes of carbon are sequestered in the ground in Germany – about 11 times the amount of CO2 that the country emitted in the year 2016. The number of farmland birds and the degree of species diversity allow conclusions to be drawn about how well the soil ecosystem is functioning and the thickness of the humus layer. And that's another reason why the drastic decline in the numbers of farmland bird species is so alarming: it's a clear indication of the lack of sustainability in land use. The less sustainably the soil is used, the less humus it contains and the lower its storage capacity.

The German government has set itself the ambitious goal of increasing the share of organically farmed land from 10.1% today to 20% by the year 2030. That would mean the current area would have to double and grow by about two million hectares. Somewhere between 30,000 and 40,000 new organic farms would have to be established – within the next nine years. That's virtually impossible in such a short time – and yet it's far too slow when you consider that, just since 1980, the number of farmland birds has declined by about 15% – per decade. That would mean an overall decrease of more than 70% by 2030. And even if the challenging goal is met, the amount of organically farmed land in 2030 would still only account for one-fifth of all agricultural land; the remaining four-fifths would still be farmed conventionally.

Figures, percentages and forecasts like that are enough to strike fear into your heart. Or fill you with a sense of helpless resignation because the fight seems so hopeless. The David of organic farming

10.1%
of Germany's agricultural land ...

... is organically farmed. The target of 20% by 2030 is virtually impossible to achieve. What can be done?

doesn't stand a chance against the Goliath of conventional agriculture; no amount of agility, cunning or ingenuity can change that. It's the size of the area alone that will decide how quickly species disappear. And the grim truth is that conventional farms currently account for 89.9% of Germany's agricultural land.

But what if we dare to imagine the impossible? If we make a positive out of a negative? Turn the fixed way of seeing things on its head, change the perspective? Make the categories less rigid, stop finger-pointing and forget old stereotypes about who the enemy is? Then truly great things could happen. Because it's conventional farming that holds the key to the solution, not organic farming. If it were possible to win conventional agriculture over to protecting biodiversity, nature conservation would have a genuine superplayer on its team. To begin with, that sounds absurd, like putting the fox in charge of the henhouse. Because after all, it's intensive, conventional farming that's responsible for the steep decline in biodiversity in the first place – because of pesticides, herbicides and the creation of gigantic fields with no fallow land, hedges or meadow strips in between. And above all because of the extreme use of fertilisers – which is still within legal guidelines, even though Germany regularly exceeds the recommended limit for nitrate in groundwater and therefore faces future fines of up to €857,000 from the European Commission. Per day.

But if conventional agriculture were to actively participate in protecting biodiversity even to a small degree, it – and not organic agriculture – could become the solution to the problem. Because even the smallest measures have an incredibly powerful impact when implemented on almost 90% of agricultural land.

Is it possible to persuade efficiency-minded farmers to convert a certain percentage of their land to wildflower strips, meadows or buffer strips in order to restore habitats for endangered species? To create skylark plots in the middle of fields – i.e. unploughed, unplanted spaces where skylarks can nest and find food? We clatter along the farm tracks with Jochen Hartmann, past black, harvested fields and along the edge of a wood. Hartmann stops by a wild meadow, right next to his neat and tidy fields. "That's one of the wildflower strips I've planted in the last five years," says Hartmann. We get out and walk into the autumn meadow. The morning mist is still hanging in the air, the dew glitters on the autumn-brown foliage of the marigolds, wild mustard and phacelia, a blue-flowering plant commonly known as Bee's Friend. Hartmann strips a few parchment-like pods off the wild mustard and rubs them between his fingers until the seeds are cupped in his hand. He points to the dry, withered plants, the stems of which will decay as autumn progresses, and points to the nodes on the stalks. "That's where the beetles and hoverflies lay their eggs," he explains. Nature needs disorder, it needs anarchy. The chaos that conventional farming has eliminated. Hartmann is in the process of re-establishing that disorder, even if on a tamed and moderate basis: Hartmann has converted 11% of his farm into fallow land, planted wildflowers on the edges of his beet and potato fields, left meadows full of caraway and ribwort right in the middle of his fields, like islands. In the five years he's been doing it, he says, his understanding of agriculture and nature conservation and the mutual dependence between the two has changed fundamentally. "There are more insects, I've definitely noticed that. Especially useful ones, like ladybirds, which keep the pests on the sugar beet in check. And in spring there were 12 partridge chicks, which is something you don't often see any more," he says, "and a young >

Alpacas and mountain goats: the Hartmanns love trying new ideas on their farm

Amazing diversity: marigolds, wild mustard seeds, campion and Bee's Friend. Today, all these plants are thriving again on the farm near Lüneburg. Cyclists stop to take photos of the idyll. But most importantly of all, the plants provide a habitat for insects and other animals and improve the quality of the soil.

10
farms are trialling ways ...

... to combine conventional agriculture with nature conservation.

pheasant!" Not to mention the beauty of the blooming meadow strips that prompts cyclists to stop and get off their bikes to take photos.

But how did this turnaround come about? How can Hartmann suddenly afford to use 11% of his arable land for measures that promote biodiversity? The reason is F.R.A.N.Z. – a project that promotes the protection of biodiversity in agriculture that Hartmann's farm is participating in. F.R.A.N.Z. (Future Resources, Agriculture and Nature Conservation) is a dialogue and demonstration project that was initiated by the Environmental Foundation Michael Otto and is jointly coordinated with the German Farmers' Association. The accompanying ecological research by the Michael Otto Institute of NABU (the Nature and Biodiversity Conservation Union, one of the oldest and largest environmental associations in Germany), the University of Göttingen and the Thünen Institute of Biodiversity examine the impact of the measures on flora and fauna, while the socio-economic research by the Thünen Institute of Rural Studies observes and analyses the funding policy framework and the Thünen Institute of Farm Economics focuses on the costs of the individual measures.

The goal of the 10-year pilot project is to increase the diversity of species in Germany's agricultural landscape – with the involvement of 10 conventional demonstration farms. F.R.A.N.Z. promotes various nature protection measures that were developed together with the participating farmers, who receive assistance and advice from their regional farmers' associations and cultural landscape foundations. F.R.A.N.Z. promotes a range of measures – fallow plots, wildflower areas, island plots for farmland birds, areas dedicated to the extensive farming of cereals like winter rye, winter wheat and spring barley, and non-intensely managed grassland – by compensating the farmers for loss of yield or any increased expenditure associated with implementation, such as machinery costs or seed: Jochen Hartmann receives an average of €800 per fallow hectare per year from F.R.A.N.Z. What's so special about the project is that it doesn't just bring the Federal Ministry for the Environment and Nature Conservation together with the Federal Ministry of Food and Agriculture and combine ecological and socio-economic research. It also brings the German Farmers' Association and NABU together – two players who have actually always been adversaries – and unites them in pursuit of a common goal. In the past, the roles of both sides were always clearly defined: the mighty Farmers' Association represented conventional agriculture, while NABU saw itself in the role of Robin Hood, fighting for nature and organic farmers. And the protection of biodiversity has always been a particularly sensitive issue between the two: NABU criticises conventional agriculture for its major contribution to species decline, while the Farmers' Association counters that its members have to make a profit somehow. In principle, there's no reason why agri-environmental measures financed by Germany's federal states shouldn't compensate farmers across the country for diminished crop yields and make conservation economically feasible for conventional farmers. But reliable numbers are needed first: do the measures have a quantifiable impact? Does nature really benefit? With its ecological and socio-economic approach and long project duration of 10 years – until 2026 – F.R.A.N.Z. is systematically investigating the real impact of the measures to promote biodiversity – not only in terms of conservation, but in terms of how they affect the operating practices of the participating farms as well. F.R.A.N.Z. is, quite literally, a field experiment. One that gets conservationists and conventional farmers to sit down round the same table.

At this particular table in Hartmann's large dining room, there are representatives of both parties: Hartmann, the conventional farmer, and biologists Liesa Schnee and Laura Sutcliffe, members of the ecological research team from the University of Göttingen that's accompanying the F.R.A.N.Z. project. Björn Rohloff is here too, from the Stiftung Kulturlandpflege, a foundation that promotes nature and landscape conservation. The 10 farms participating in the project were selected by the Farmers' Association. The overall project is financed by the Landwirtschaftliche Rentenbank (Germany's development agency for agribusiness), the Ministry of Food and Agriculture and the Federal Office for Agriculture and Food, as well as by the Federal Ministry for the Environment and the Federal Agency for Nature Conservation.

Selected from across Germany, the participating farms were chosen in part because they are typical of their region, and range in size from family businesses with 70 hectares of land all the way to what was once a state-owned Agricultural Production Cooperative in the former East Germany with 1,700 hectares. Every demonstration farm receives support and advice for the implementation of the conservation measures, and once a year these meetings are hosted by the farmers on site.

Hartmann, Schnee, Sutcliffe and Rohloff are taking a break for lunch; gathered round the big table, they're enjoying the venison soup that Ursula Hartmann has just served up. It comes as no surprise to learn that Jochen Hartmann shot the deer himself. His mother takes a tray of herb baguette out of the oven, puts it on the table and refills the water glasses. It's cosy here in the farmhouse dining room – and peaceful. As everybody devours the soup and warm bread, there's not a trace of the old antagonism between conservationists and conventional farmers. "This kind of teamwork would have been unthinkable in the past," says Hartmann, who is one of the >

10 farmers from across Germany selected for the project. "Six years ago, when I applied for F.R.A.N.Z., other farmers would shake their heads and say: 'What? You and NABU?'" says Hartmann with a laugh. But the fact is that F.R.A.N.Z. is bringing NABU and conventional farmers together, helping them understand one another and discover and appreciate each other's knowledge resources – and that's probably one of the project's most valuable side effects. Without losing sight of practicality and yield, Rohloff, Sutcliffe and Schnee discuss how conservation can be embedded in the day-to-day running of Jochen Hartmann's farm, involving him in their deliberations as an equal and valued partner. "When we talk to the farmers and are involved with their economic considerations, it helps us understand them better," says Rohloff after lunch, as the four of them bend over to study the land register maps and plans of Hartmann's fields that are spread out on the table again. Hartmann wants to create more wildflower strips – even though you'd think the very idea of a wildflower strip running right down the middle of a field would be enough to give a farmer who wants to use every square metre stomach ache. But since Hartmann has been seeing the rapid increase in insects and farmland birds in his wildflower strips over the last five years, he's become a passionate fan. Beetle banks are the latest project on the Hartmann farm: four very long mounds, about 80cm high, hundreds of metres long – 1.7km in total – flanked on both sides by 3-metre wide wildflower strips. "The beetle banks have a south side and a north side, so they provide both a warmer and a cooler habitat." The mounds are an ideal nesting place for beetles and other insects. "You can see that it works with the naked eye: just look at all the little holes in the earth mounds," says Hartmann. And this year, Sutcliffe and Schnee will be using scientific methods to analyse which new plants and insects have established themselves.

Hartmann values the expertise of biologists Sutcliffe and Schnee and landscape conservationist Rohloff. A lot of farmers aren't familiar with the scientific side of protecting nature, because topics like biodiversity and conservation aren't part of the curriculum for agricultural training and degree courses. And the Chamber of Agriculture can't advise farmers on conservation either, because their focus is more on agricultural engineering. And yet there are many conventional farmers who are interested in protecting nature and would like to contribute to species diversity, says Rohloff, especially if their economic security were guaranteed by funding for the conservation measures. He firmly believes that a substantial number of farmers would opt to use their land more sustainably if agri-environmental measures were more accessible and less bureaucratic. The existing programmes are full of rigid regulations. But F.R.A.N.Z. is more flexible; besides looking out for nature, it looks out for the famers' interests too and is all about trying things out rather than dictating. "If we don't feel bossed around, there's a lot we farmers can make possible," says Hartmann. Jochen Hartmann isn't a closed-minded conventionalist; he's not one of those farmers who sprays pesticides by the hectolitre without a moment's hesitation, thinks "organic" is newfangled nonsense and couldn't care less about what happens after he's gone. Hartmann is young, he has a little son. And he's always taken a keen interest in soil ecology. He devotes a lot of time and attention to humus and earth, gives talks, attends soil seminars and humus symposiums all over Germany and as far away as Switzerland. And he likes trying out new things, which is why he applied to be part of F.R.A.N.Z. in the first place. He's very impressed with how the collaboration has worked out. "I've never felt like I was just supposed to make my land available and wasn't allowed to have a say in anything. Quite the opposite: with F.R.A.N.Z., my practical knowledge is valued, because after all, the field experiment is ultimately a test to see how feasible the conservation measures are," he says. Through trial and error, through adopting or rejecting individual approaches, the project farmers and ecologists want to find out which measures have which effects – together. "And I realise there's been a change in my way of thinking over the last five years," says Hartmann. "To start with, I thought about the best way to incorporate conservation into the existing growing conditions. Whereas now I often look at it from the opposite angle: how can I adapt my farming methods to the optimal conservation conditions?"

Laura Sutcliffe, part of the ecological research team from the University of Göttingen, advises Jochen Hartmann on what he can try out on the areas reserved for the **F.R.A.N.Z. project.**

Now Hartmann's reporting on how things are going with his skylark plots, the 1,600 square metre areas of his grain fields that are left unseeded so that skylarks can land on the bare patches and look for food.

Ornithologist Martin Flade refers to measures like the skylark plots or wildflower strips as "purely cosmetic". Protecting a few birds here and there won't do any good if the fundamental structure of conventional farming doesn't change, he says. What's really needed, according to Flade, is a change of system, from conventional to organic. F.R.A.N.Z. counters this criticism with the ticking clock analogy: for many species of birds and insects, time will simply run out before it's possible to implement a change of system. So the first steps have to be taken within the existing system. Conservation measures can have a major impact even within conventional agriculture, as demonstrated by the F.R.A.N.Z. project's first interim report, presented in November 2020 after the first three years of the project. The ecological research is already showing positive tendencies in terms of the efficacy of measures that >

Conservation and agriculture – for the Hartmanns, the two things now go together.


The family has been farming its land for 19 generations.

could be incorporated in environmental programmes at state level, even though the statistical analysis has not been completed yet. In the case of F.R.A.N.Z. wildflower strips that have been established for several years, for instance, the groups of organisms included in the research show a two- to three-fold increase in species diversity as compared to crop fields without such measures. In relation to wild plants, that means an increase of 90%; among birds there has been a 200-300% rise, while the hare population has doubled. The F.R.A.N.Z. measure of growing "islands" of extensively farmed cereals within large maize fields as refuges for farmland birds has proved particularly effective for the skylark – the population density of this endangered species is now 7.5 times higher.

F.R.A.N.Z. aims to use the testing and evaluation of measures like wildflower strips or windows of pea crops to gain insights that benefit both nature and the farmers. The learnings could help make the publicly funded agri-environmental measures more effective and ensure farmers are appropriately remunerated for protecting biodiversity. "But the politicians have to understand what it's all about too," says Jochen Hartmann. "Protecting biodiversity is for the common good – but it happens on our land. That's why the decline in yield has to be compensated for, as a matter of principle, not just now, within the F.R.A.N.Z. project." In his opinion, it will eventually be the same story with regard to the CO2 sequestered in farmers' land. That benefits the common good too, and the farmers should be compensated for it accordingly. How much CO2 the soil can store depends on the humus content, and sustainable farming and biodiversity have a measurable impact on the amount of humus. If, in the near future, a price label is attached to CO2 emissions, then those who store CO2 in agricultural land must be paid a price for doing so. These credits could then be sold as certificates on the stock exchange, for instance, as suggested by German agricultural magazine Agrarheute. In that way, protecting biodiversity, which increases the humus content and results in higher CO2 storage capacity, might eventually be financially worthwhile for farmers as well.

Runner beans now grow on farmer Jochen Hartmann's **experimental fields.**

Once the meeting is over and Sutcliffe, Schnee and Rohloff have said their goodbyes, we go outdoors again, to the fields. It's now late afternoon and the sun is bathing the land, the fields and the meadows in its milky autumn light. There are pumpkins lying on the black earth; here too, Hartmann took a trial and error approach and grew the most unusual varieties he could find. The results are all sorts of shapes and sizes of squash, bright green, orange and glowing white; some have ridges, others are shaped like pointed hats or freckled, as if they were wearing collars, fancy trims and frills. Hilke and Jochen Hartmann's son Tjark is playing in the field, he and his friend run off towards the chicken wood. That's where we're going next too. Hilke joins us. She enjoys experimenting just as much as her husband, and the chickens are her domain. They're kept outdoors, between the rows of trees. They have plenty of space to roam and sleep in the mobile henhouse, which is moved around at regular intervals to ensure the ground doesn't become too contaminated with chicken manure and help prevent the spread of disease. "The chickens love those rows of trees in the field over there. When they were suffering from the heat in the hot summers we've had recently, they were able to stay in the shade. But the soil loves the trees too," says Hartmann. The practice of planting rows of trees on arable land in combination with field crops on the strips of land in between is known as alley cropping or agroforestry. Because their roots fix nitrogen and therefore fertilise the soil, trees can regenerate the land and make it more productive. They also act as windbreaks, reduce erosion and keep the earth moist.

The chicken wood has nothing to do with F.R.A.N.Z., but it's typical of Hartmann: he tries things out, doesn't always stick to the familiar way of doings things and comes up with solutions that you'd be far more likely to associate with organic farming than conventional agriculture. "It's important to be open to change," says Hartmann. If Tjark, Hartmann's blond-haired son, should decide to follow in his father's footsteps, he'll be the 20th generation of the family to farm these 180 hectares. He'll have to make his way in an industry that is confronting huge, radical change in the face of climate change. Hartmann stands in his autumn meadow. He's optimistic. Hartmann has won various accolades for his commitment, including a Green Heart of Lower Saxony award for Project of the Year 2020 and the Sustainability Prize of a regional bank in 2019. He wants to use the money to plant more trees in the chicken wood. "And there'll be enough left over to buy a few nest boxes for little owls and kestrels," he says. He's expecting the new occupants to move in soon.

And what about the other farmers who initially found it so hard to believe he was teaming up with NABU? Now they want to know how they can be part of F.R.A.N.Z. too. Because the project is causing quite a buzz. And a lot of humming and chirping too. ●

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FOR A BETTER WORLD

A sunny afternoon in Berlin. Ranga Yogeshwar and Professor Dr Michael Otto meet for an interview that turns into a discussion on the great issues facing humanity. How can we stop climate change, how fair can the digital, global world be, what lessons can we learn from the corona pandemic?

Photography:
PETER RIGAUD

Questions:
YORK PIJAHN

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Dr Ranga Yogeshwar is one of Germany's best-known science journalists, Prof Dr Michael Otto one of the country's most prominent entrepreneurs. The two men have known each other for years and look at sustainability very differently. What has to change in order to save our planet? What do we have to do right now? They got together for an almost three-hour conversation at the Futurium in Berlin, a kind of research centre and indoor science adventure near the main station. A perfect place to talk about the future.

Mr Yogeshwar, why is sustainability important to you?

Yogeshwar: I became a grandfather in January 2020; my grandson is called Emil. When I held him in my arms, I realised that Emil will very probably live to experience the 22nd century. And that means we have to shape a world that's still worth living in when Emil is an old man. What about you, Dr Otto?

Otto: My wake-up call came back in 1972. That's when The Limits to Growth was published – the Club of Rome's first report on the state of humanity. At the time, I was friends with Eduard Pestel, one of the Club of Rome's founders, and I still vividly remember how incredibly important I thought the book was back then. And that hasn't changed to this very day. The book raises awareness of the fact that our resources are finite. It's a call to action. But to me, that doesn't just mean focusing on politics or industry. No: we're all called upon to act. Everybody has to start with themselves. That's why I began initiating individual projects like sustainable cardboard packaging in the Otto Group all those years ago, as well as reviewing our product range with an eye to sustainability. At the beginning, people thought I was crazy.

Yogeshwar: Besides The Limits to Growth, there was an environmental study commissioned by then president Jimmy Carter called Global 2000. I read it together with friends back in the 1980s. And our feeling was, "Hey! We have to do something!" That feeling was what fuelled my decision to work as a journalist. If you take stock today, Dr Otto, now that the world has learned about the limits of growth and knows about studies like Global 2000, what's your take? What's the bottom line?

Otto: This will hardly come as a surprise, but I'm sorry to say that the bottom line is disappointing. Up until this point, we still haven't started acting in a goal-driven way despite all we know about environmental destruction. So if we want to make sure the world is still worth living in for future generations, it's time for us to step up. I've got grandchildren too, you know, and I want them to grow up in an intact world. We have to take responsibility for that – now.

WE KNOW A LOT – BUT DON'T DO ENOUGH

How come the population at large is only really starting to sit up and take notice of climate change now?

Yogeshwar: I think it's because we're having a change of heart. We sense that the entire system we live in doesn't work any more. On top of that, I think a lot of people are feeling dissatisfied with our lifestyle: we're realising that consumerism doesn't bring us the kind of happiness we've always hoped for. We're seeing that progress for its own sake leaves us lacking something. And that something is fulfilment.

Otto: In our experience, that longing for fulfilment is particularly apparent among the young people who work for us or who very deliberately apply for a job with us. It's a search for meaning. These people realise that our problem isn't a knowledge deficit – it's an action deficit. But in business and politics, people often don't act until they're under pressure – because they're afraid of losing customers or voters, for instance. On the other hand, during the initial phase, protecting the climate will result in economic and social burdens as well. That's why broad discussion and support for the issue in society at large are so important – to send a signal to politicians and the business world, so to speak.

But why does it take so long for people to actually change their behaviour?

Yogeshwar: Because we're lazy. We want to consume, we drink coffee, we buy ourselves sweaters like the one I'm wearing now. It's just that I can't tell where the coffee comes from simply by looking at it, and the same goes for the wool the sweater's made of. Consumption is abstract. When I buy something, I get a product and a price – but no story. True, there are all sorts of certificates and stickers, but a normal consumer is totally out of their depth when it comes to knowing which label means what. Products are declared eco-friendly when they're anything but. Before Covid-19 I travelled a lot by plane for work, and flying very definitely harms the environment. Yet there's still such a phrase as "climate-neutral flying". And that phrase is quite simply a lie.

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“Why does it take so long for people to actually change their behaviour, Mr Yogeshwar?”

“In my opinion, the solution lies in quality-driven growth.”

Bio
Prof Dr Michael Otto

Entrepreneur Prof Dr Michael Otto has turned the Otto Group into an internationally operating retail and services group that numbers among the most successful of its kind in the world today – and which acknowledges its social and environmental responsibility. Born in 1943, the economist served as Chairman and CEO of the Otto Group from 1981 until 2007 and has been Chairman of the Supervisory Board ever since. As early as the 1980s, he declared environmental protection a corporate goal; in the 1990s, he became one of the first business leaders in Germany to expand online retail. Otto is also a committed philanthropist who advocates and promotes the common good. Two of his foundations are particularly worth mentioning: the Aid by Trade Foundation, which was established in 2005, and Foundation 2º - German Businesses for Climate Protection. In 2014 he transferred his controlling interest in the Otto Group to the Michael Otto Foundation. As a recipient of numerous honours in recognition of his environmental and social engagement, Otto is among other things an honorary citizen of Hamburg and a Member of the International Club of Rome. He has also been awarded the Federal Republic of Germany’s Great Cross of Merit with Star.

Otto: The reason the fight against climate change is making such slow progress is that it's not perceived as an immediate threat. We're focusing on other issues, like the coronavirus. It's just like after the financial crisis and the euro crisis: as soon as the pandemic hit, there were loud voices saying we should put climate protection aside for the time being, because active climate protection means making investments. And yet now is precisely the right time to seize the chance and press ahead with the modernisation of the economy, to make it resilient to risks and climate-neutral. That also means seeing climate protection as a modernisation project for the economy and making it a business model. Climate protection shouldn't be treated as something that we can only afford when times are good. And as for your assessment of consumption's role: obviously it plays a decisive part when it comes to resources like energy, water and raw materials. But by itself, abstinence isn't a solution either. That's not the kind of message that would persuade people to behave sustainably. In my opinion, the solution lies in quality-driven consumption and latest studies show that the pandemic has made people more aware of products' inner value and their own consumer behaviour. Quality-driven consumption has entered the mainstream. That's why companies need to find a way to produce their goods more sustainably and present customers with corresponding offerings. Products have to last longer and be both repairable and recyclable. The goal must be a circular, quality-oriented economy. And I say it's doable.

THE SHOPPING PRINCIPLE UNDER SCRUTINY

Yogeshwar: I'm not suggesting everybody should only have one sweater in their lifetime, I'm talking about the importance we attach to consumption in our lives. The German car industry spends around €1.5 billion a year on PR and marketing. All that just for the message: "You have to buy a car." We're being professionally seduced into buying things we don't need, it never stops. We've got our priorities wrong. I don't share your hope that "business as usual" with lots of sustainability in production will do the trick.

Otto: I'm not advocating that we should carry on as we are! Of course it would be ideal if people consumed consciously of their own accord, but we don't have the time a change of mind like that would take. That's why, in my opinion, we need regulation. The impact that a product's manufacture and transport have on the environment has to be factored into the price. Take meat, for example: I don't think that appealing to people to eat less meat because it's healthy and good for the environment will change things quickly enough. Instead, we have to make ethical farming internationally binding and price it in. I know people will argue that meat will be much more expensive as a result. Of course it will – a lot more expensive, even. And you know what: that's a good thing. When I was growing up, we only ever had a roast on Sundays. When I read that pigs are to be given one square metre more of pen space by 2040, I can only shake my head. Not because it's wrong, but because it's nowhere near ambitious enough.

In many cases the sustainability message is also a message about abstinence. And in the long term, that's not an easy message to sell. What might a positive sustainability message sound like?

Otto: The message from the business world could be: sustainability makes sense for all of us and the values we hold are guided by the common good. But the final decision as to whether a fair, sustainable product, a meaningful product if you will, one that's tied to values, will catch on or not – that decision lies with the customer.

Yogeshwar: It has to be about the gains, about the benefits. Both in terms of awareness and, ultimately, time too. When I was growing up in India, it would have been inconceivable to imagine people spending their weekends strolling through town and going shopping. As if shopping were a value per se. I still find your attitude contradictory, Mr Otto. It's as if there were two Ottos. One who's been championing the environment for years, and another who gets to the end of the month and wonders how the sales figures are doing. To paraphrase Goethe: there are two souls dwelling in your chest, wouldn't you say?

Otto: No, just the one. And it's convinced that the two things can be reconciled by practising sustainable business. That maxim probably won't work in developing countries to begin with, because there it's a question of meeting basic needs and achieving a certain degree of prosperity. That's inevitably linked with quantitative growth. But here in Germany and other industrialised countries, we need qualitative growth.

Yogeshwar: Right, one good sweater is better than three poor-quality ones. But what are you doing about the consumerist jingle that never stops playing in the streets of our cities? And only ever says: "Buying things makes you happy."

Otto: I understand what you're saying. But as a company, we can't change the entire market on our own. We can draw attention to things and act in our sphere of influence with all the passion and experience and strength of our Group. Yes, we're big, but we're not omnipotent.

Yogeshwar: And if you were crowned "King of the German Business World" tomorrow, what would you do?

Otto: I'd put an end to society's throwaway mentality. With our group of companies, we pursue the goal of a circular, >

quality-oriented economy. You can see that from the standards we adhere to at Otto.de, the sustainability collections of our subsidiary Bonprix or About You's second-hand shop. But it's also obvious if you take a look at our company Manufactum, which sells long-lasting and repairable products made by small craft businesses. In a nutshell, its philosophy is this: "OK, it's not cheap, but it's produced by a craft enterprise that can make a living from it and works in an environmentally friendly and resource-efficient way. And this product will last – for a long, long time." I think that's good.

Yogeshwar: I see Manufactum as evidence of something else. It's a conscience-soothing narrative designed for customers with lots of money to spend. A lot of the things in the product portfolio are superfluous. It's got more to do with the romantic longing of a good-paying group of buyers for yesteryear.

Otto: I see it very differently. Fountain pens that are made by hand in small factories, gardening tools that last for ages and decent quality outdoor clothing – those things aren't superfluous, and certainly not obsolete; they're the kind of things that will play a much bigger role in future. And a high-priced product that lasts for a long time is less expensive than a cheap product that breaks more quickly and has to be replaced twice in the same space of time. The fact that people are willing to consume more sustainably and pay more for it definitely has something to do with a deeper understanding of our world as well. I think education is the key here – in the sense of educating people about sustainability. Ten years ago, my environmental foundation launched a really exciting project called Aqua-Agents. It's currently running in four German states and provides a playful way for third- and fourth-grade pupils to discover what a fascinating element water is: they visit waterworks and wastewater treatment plants, investigate life in rivers, and are equipped with an agent's kit containing a mini-lab designed for children. What happens is best described as a change of consciousness. The kids develop a love for and appreciation of nature. That's vital, because later on in life people only protect what they love and appreciate.

Nowadays we're always talking about change that has to happen within a narrow timeframe. As a system, is democracy actually capable of that kind of change?

Yogeshwar: Above all else, change requires hygiene in the way a society communicates. What do I mean by that? Well, over the last few decades we've permitted a way of communicating that's driven by economics, because first and foremost social networks are a business model. The exploitation of agitation instead of journalism. What do I mean by that? We're entering a phase where clear thought disintegrates in a sea of sometimes contradictory information. When it comes to sustainability, the most dangerous thing is allowing the media to confuse us to the point where even the most basic facts, like manmade climate change, are called into question. A society that can no longer communicate truthfully will have a hard time getting its priorities right.

Otto: I agree with you. Right now, society is more divided than ever before, and the way we communicate has never been more divisive. Social media play a part in that, certainly. But the reasons go deeper. The changes we're experiencing and having to cope with are so momentous that a lot of people are worried about their future. In times like that, simplifiers and ideologues have it easy.

HOW CORONA WILL CHANGE THE WAY WE LIVE AND WORK

The coronavirus pandemic has brought about all sorts of changes; has it resulted in any positive ones as far as sustainability is concerned?

Yogeshwar: Definitely. Online shopping has a huge impact because it reduces the carbon footprint – at least in most cases. But the consequences obviously go much further than that: a friend of mine, an architect, says that the construction of stores has dropped to virtually zero and there's been a sharp decline in office construction too. I don't think we'll ever entirely return to the pre-pandemic system where people commuted from the suburbs to the city so they could sit in an office all day. In North Rhine-Westphalia, Germany, traffic density dropped by a third during the corona crisis. Perhaps we'll see a kind of flight to the countryside, which would be interesting because we've been neglecting our villages pretty badly. I believe we'll discover it as a high-quality living model. It would mean living in much closer contact with nature, and that doesn't just do us good, it changes our awareness of the environment. I've been living that way myself for a few years now; the village where my family and I live only has 120 inhabitants. It's fantastic.

And what other changes do you think corona will bring about?

Yogeshwar: Well, besides the obvious consequences of a pandemic, there are a few intriguing questions to be asked. If online retail grows as strongly as we've been seeing, who will dominate it? Digitalisation has a tendency to result in monopolisation. How can we shape these business models in such a way that there's public participation? What's more, our feeling for work will change with so many of us teleworking from home. Just watch a Zoom conference: it's impossible to say who's the boss any more. The trappings of power are disappearing: a big office, a company car, a designer suit – suddenly, none of that matters. That will be interesting for big companies, because how can >

"Above all else, change requires hygiene in the way a society communicates."

Bio

Ranga Yogeshwar

Physicist Ranga Yogeshwar is possibly the best-known science journalist in Germany. Born in Luxembourg in 1959, he spent the first years of his life in India, his father's native country. He studied experimental particle physics and astrophysics in Aachen before entering research, including a period at CERN in Geneva. In 1987 he began working as a science editor for public broadcasting company WDR in Cologne, where he developed numerous TV programmes and became a well-known presenter of shows like Quarks & Co. Most recently, he headed the science department at WDR. He has been an independent author and journalist since 2008. Yogeshwar's bestselling books have been translated into many languages and won more than 60 prizes.

you create team spirit when people no longer work in the same place and hardly see each other any more?

Digitalisation can be an opportunity driver. But digital transformation can only work if it benefits everybody. How can we ensure that?

Yogeshwar: I think digitalisation is an epochal change. Let me give you three examples of what I mean. I spent my childhood in India. Books were expensive, you were never really informed. These days, if a little girl in Mumbai has a smartphone with internet access, she has the same information at her disposal as a little boy here in Berlin. For the first time in the history of humanity, we all have the same level of information – if we want it. Second: digitalisation has changed the direction of flow. Things are upside down; the mass media have become the media of the masses because nowadays we're all actors and players in these media, whereas in the past only a small group of people was involved in creating media content. Third: mass involvement is also evident in the field of industrial production. That's because we can involve consumers to a much greater degree and because consumers can give us their feedback much more quickly. The next and very exciting step is this: how can we use the internet and digitalisation for purposes other than profit maximisation? Because that's what has happened over the last few years: the reason that the internet companies – the Big Five in the US and the two or three major players in China – are now among the most valuable companies in the world is that they use digitalisation for commercial purposes. But how else can we use the internet? Digitalisation is an opportunity for genuine cooperation, as we've seen to some extent in the case of Wikipedia. It's an opportunity for the world to work together. I see huge potential in that.

THE OPPORTUNITIES AND RISKS OF DIGITALISATION

Mr Otto, you're head of a group of companies that's intensely focused on digitalisation. It's a term that's associated with both hopes and fears. How do you convince more than 50,000 employees to go along with it?

Otto: The digitalisation of a traditional company is a gigantic task. We were lucky in that we put our entire product range online back in 1995. At the time, there were only 250,000 people with internet access in Germany – and only a few thousand of those were our customers. But right from the start, I was convinced that the internet was the future. So we had plenty of time to get to grips with the technologies and the changes that have to take place in people's minds. Today our Group company OTTO makes 97% of its revenue from online sales,

so we've accomplished a huge transformation. Digitalisation calls for major changes. Not just in terms of the processes, the way the product range is put together, or things like speed and openness, but in terms of the entire way we work together and lead as well. It was with that knowledge and the aim of securing the Otto Group's future viability for the long term that we proclaimed our Kulturwandel 4.0 (Cultural Change 4.0) for the company in 2015. And it's resulted in a lot of progress, not just technologically but, most importantly of all, culturally too. It's changed the way we work together. Today, every employee can and should take responsibility and have a say in what that means. At the same time, the classic leadership role has changed completely: it's evolved from controller to coach and enabler. To put it briefly: even before corona we'd made the kind of epochal change Ranga Yogeshwar was talking about and are implementing it on an ongoing basis.

How do you eliminate employees' fear of those changes?

Otto: Independently of hierarchies, age or which division they're in, it's important to train every single employee and acquaint them with the necessity of lifelong learning. That's why we have a group-wide training initiative that teaches a

Time to discuss the future: Prof Dr Michael Otto and Ranga Yogeshwar at the **Futurium** in Berlin, a mixture of museum and indoor science adventure.

consistent basic understanding of the most important aspects of digitalisation. These days we don't need any staff for catalogue marketing because the catalogues are being phased out. We need experts in online marketing. And it wouldn't make any sense at all to replace our experienced employees. Retraining them is the path we've chosen. It's important to eliminate people's fears about losing their job or being out of their depth.

Mr Yogeshwar, among other things your latest book is about the consequences of digitalisation, and you quote former Google CEO Eric Schmidt: "We know where you've been. We can more or less know what you're thinking about." By "we", he means a global corporation that gathers data. What happens when a small number of companies gather so much knowledge about their customers?

Yogeshwar: The first thing that happens is that monopolies establish themselves. We have to ensure that companies like the Otto Group are protected. Because they can be as agile as they like, but in the end the winner takes it all. And from a global perspective, the winner is more likely to be Amazon than Otto. In my opinion, we need something along the lines of competition legislation that's specifically designed to prevent data monopolies. A hundred years ago, we used competition laws to limit the power of oil giants like Rockefeller. And I'm a passionate advocate of doing something similar about the big digital companies, because diversity is a quality in itself.

Otto: The monopolisation of data has to be stopped, I see it the same way as Mr Yogeshwar. But it goes without saying that, in the digital age, we in the Otto Group work with large quantities of data as well. Should we use that data? Yes, but for the customer's benefit. How can we make sure that happens? Through transparency. We have to tell the customer what kind of data we have and why we have it. When it comes to handling customer data, we're very different to Amazon. And in several other ways as well: Amazon has 30 million items in its assortment; they're perfect at things like processing and logistics. But because of its size, Amazon can no longer respond to customers in an individual way. We do it differently. We're much more service-oriented, which includes providing a personal, round-the-clock telephone service. We have our own delivery service that doesn't just bring and connect your new washing machine, it takes the old one away and disposes of it sustainably as well. We have to shine a brighter spotlight on what sets us apart from the competition – like the fact that we've been making our product ranges more sustainable for many years now and monitor the supply chain for compliance with social and environmental standards. There's something else I'd like to say about how we use data. Data helps us to personalise our offerings for customers. The same way it used to be in a good, very personally run boutique. When Mrs Smith came in, the sales assistant would say: "Hello Mrs Smith, the new collection has just arrived. I've put a couple of things aside for you – I know what you like." That's the kind of thing you can do nowadays when you use data in a responsible way.

Yogeshwar: In your case, I have no doubt that you are handling data in a decent way. But the point I'm making is about something else: market dominance through data. Google Maps just turned 16 and has achieved a market-dominating position because nobody has the other maps on their radar any more. The maps show restaurants, including reviews. And God help you if the reviews aren't good. That's surveillance capitalism, the purpose of which is to influence people's behaviour with the help of data. We need to get a lot better at defending ourselves against that.

KNOWLEDGE FOR THE NEXT GENERATION

Can acting ethically be a competitive advantage for companies?

Yogeshwar: I don't think that complying with ethical norms alone will be enough to survive economically over the next >

few years. It will take much stronger action on the part of policymakers to protect our companies. According to a study published by the OECD, 37% of all scientists and engineers will come from China in 2030, 26.5% from India and just 1.4% from Germany. In the long term, that means we're heading towards a world where the majority of expertise will exist outside of the western world and be linked with ethical beliefs that are very different to our own. What I'm getting at is that technology developed by a Chinese engineer will always be a reflection of that person's convictions. We won't get anywhere by saying schools ought to do this and universities should do that, because those systems are sluggish. So if tomorrow were Christmas, my Christmas wish for you and your fellow businesspeople would be this: more spaces like the Futurium – the "House of Futures" we're sitting in now. If you go down to the basement, you'll see an armada of 3D printers where youngsters can give the technology a try. We need a lot more places like this, where people can learn in a non-school setting.

Otto: My son and his wife are in the process of developing a project that's very close to their hearts: LIFE HAMBURG. Among other things, it will bring daycare, school, coding and co-working facilities together under one roof and enable a new, very practice-based kind of learning. There will be a cross-generational campus with laboratories, workshops for digital innovations, startups and lots of other things. But issues like physical, mental and emotional wellbeing will also play a role, which is why they're planning mindfulness spaces as well as sports facilities. And it's all meant to appeal to as many people as possible. The whole thing is a beacon project; if it works it can be multiplied.

RESPONSIBILITY FOR THE AFRICAN CONTINENT

Yogeshwar: It sounds as if we could use more Michael Ottos.

Otto: I'm sure my son inherited my genes and my conscience to some extent, but he and his wife were the ones who established the foundation for this project. In my opinion, it's the right path to take. Although in my case, a lot of the projects closest to my heart centre on Africa. My daughter has lived in a lot of African countries and implemented some great social and environmental projects there. As for me, it was a WTO conference in Cancún in 2003 that triggered my engagement in Africa. There were some small cotton farmers from three West African countries. They were demonstrating against the subsidies that the US was giving its farmers and which were leading to extremely low world market prices for cotton. The West African farmers simply couldn't compete. As a result, a lot of farmers were giving up their land and moving to megacities, where they ended up straight in the slums. That's when I realised that, as a company with a major focus in the textile sector, we ought to exert more influence because we have a responsibility to the cotton producers as well. That prompted the idea that we could make an important contribution by training small farmers, and support them by sourcing special, sustainable cotton from Africa. In the meantime, they're using better and more sustainable methods of cultivation and producing higher yields – which also means they're earning a higher income. And the children can go to school.

Yogeshwar: Which countries are you doing that in?

Otto: A total of 10 countries; more than 900,000 African smallholders are benefiting from the initiative. If you include their family members, that's almost 6 million people. It's all about helping people to help themselves. We're strengthening women's role in their communities as well. Today 20% of the cotton farmers we've trained are women – who, by the way, often produce better yields than the men. In this case it seems as if the women are particularly disciplined about implementing their newly acquired knowledge. And on the whole, if the children can go to school and the farmers are making a good living, they and their families don't leave the villages and move to the cities, which are already overflowing as it is. Happily, it's also proved to be a successful measure for tackling the root causes of migration as well.

Yogeshwar: Would you venture a prediction on Africa's future?

Otto: Above all else I see the opportunities Africa offers by virtue of being a young continent. Its young people want to work, they want to achieve something. And that's precisely the opportunity they should be given. That means making investments in African countries. We're already seeing that some countries are introducing really good developments, like Ethiopia or Rwanda. We're also seeing them take paths towards functioning democracies, like in Botswana. Our job is perfectly clear: we have to provide support, we have to help. Obviously there are still plenty of problems, like strong population growth. Africa's population will double by 2050. In my opinion, there are two approaches for slowing it down. First: educate girls and women. And second: improve prosperity.

Yogeshwar: Yes, I think you're right: more prosperity will result in lower birth rates. And in a wider sense, that's sustainability too. Thanks to digitalisation, we'll be able to exchange knowledge and work together better. But do you know what else would help? We shouldn't just exchange goods and information, we should take responsibility for one another as well. In the end, perhaps everything revolves around just one word: empathy. ●

"We should take responsibility for one another, Dr Otto. In the end, perhaps everything revolves around just one word: empathy."

Zambian cotton farmer **Wisdom** (right) and her neighbours. Due to new growing methods, they now harvest more cotton than in the past.

WHEN AFRICA BLOOMS

Cotton farmers in Zambia used to barely earn enough from the harvest to live on. Then, in 2005, Prof Dr Michael Otto started Cotton made in Africa, a sustainable initiative that not only improves yields but protects the environment too.

Photography:
JONATHAN TORGOVNIK

Words:
CHRISTOPH CADENBACH

The woman the people in the village call "Wisdom" rose with the sun at 5am, just as she always does. She prayed, ate breakfast and then walked down the hill towards her field, surrounded by a savannah landscape and reddish-brown earth. It's the same route taken by her parents before her, from whom she inherited the field and farm. A rhythm that has stayed the same for generations. And yet, for the past seven years, Vainess Chamyolo has been doing things differently from how they've always been done and continue to be done in this part of Zambia. She can lecture on soil fertility and organic pesticides, which is how she acquired the nickname "Wisdom". Wisdom's story is also the story of a remarkable initiative that connects African smallholders like her with the rest of the world: Cotton made in Africa.

It's midday now, the sun is blazing and the temperature has risen to over 30°C. Wisdom sits in the shade of a fig tree, one of the few trees with green leaves far and wide, resting from the hours she has spent in the field. She's wearing a T-shirt and a bright blue wraparound skirt, and has a green scarf tied around her head.

Her farm consists of a few simple buildings: two masonry huts with corrugated metal roofs, one with unfinished walls, the other with window frames missing glass. Beside them are two traditional round houses with thatched roofs, where the cooking is done over an open fire. Beyond them lies the outhouse. There's no mains electricity and no running water. The nearest neighbour lives several hundred metres away and to get to the well you have to walk a kilometre.

Zambia is one of the most underdeveloped countries in the world. More than half the population works in agriculture, like Wisdom, not counting the children who help out after school. According to the World Bank, almost as many, about 58%, live below the so-called poverty line, meaning they live on less than $1.90 a day. Life expectancy is low: for women, it's an average of 65 years and for men, 59, according to the World Health Organisation. One reason for this is HIV: of Zambia's 16 million inhabitants, roughly 1.2 million are infected with the virus. Zambia hasn't been spared the current Covid-19 pandemic either: infection rates are rising rapidly because the health system is too poorly equipped to handle the pandemic. Zambia is a country rich in mineral resources, especially copper, but also diamonds. However, as in other countries in sub-Saharan Africa, this only benefits a handful of inhabitants.

Vainess Chamyolo, 48, aka **Wisdom,** is optimistic about the future thanks to Cotton made in Africa.

Good to know

Alliance Ginneries
is one of 10 big Zambian cotton companies that provide farmers with seeds and pesticides.

Aid by Trade Foundation
is a non-profit organisation founded by Prof Dr Michael Otto in 2005. It is based on the principle of helping people to help themselves, and Cotton made in Africa is one of its initiatives.

But if you look at Wisdom's farm closely, you can see the signs of the prosperity that she's worked so hard to achieve over the past years: a solar panel on the roof of one of the houses glitters in the sunlight. It provides the electricity for a television that stands across from the couch in a small, tidy living room.

Many people in the village were surprised to see Wisdom doing so well because she runs the farm on her own. Her sons, some of them still at school, have helped her with the work ever since her ex-husband, their father, left the family about 11 years ago. Wisdom's youngest son is 13 and the eldest is 22. She herself is 48, but looks younger, although her face is marked by the weather and the work in the fields.

Wisdom owns four hectares of land, an area about the size of five football fields. She grows maize in two of them, and on the other two, soya and... cotton, her "most profitable plant", as she says. It's also the plant she knows the most about. She knows, for instance, that cotton puts down deep roots and takes different nutrients out of the soil than maize does. So every two years, she plants the cotton on a different hectare, a process known as crop rotation in agriculture. Wisdom says that this is something her parents didn't know.

Cotton seed on the way to the field. **The farmers procure the seed from the same company that later buys and exports** their cotton. Farmers don't pay for the seed until after the harvest, which means they don't have to take out loans.

Today is a special day because yesterday it rained for the first time in months. For Wisdom, that means the start of a new season, a new beginning for which she thanked God in her morning prayers. She doesn't linger beneath the fig tree for long.

The way to her field leads through an arid landscape. The bushes and the few scarce trees look like skeletons. The rainwater must have drained away quickly into the cracked earth. When Wisdom says everything will be green a few days from now, it's hard to believe.

Her eldest son is waiting in the field with a pair of oxen hitched up to a plough. When the rainy season begins, it's time to sow the seeds. The plough makes a straight furrow in the earth. Wisdom and the two women from the neighbourhood who are helping her today walk slowly behind the plough, their backs bent, eyes on the ground and the sun beating down on the backs of their necks. Wisdom begins by shaking fertiliser onto the soil, a mixture containing minerals such as nitrogen, phosphorus and potassium. Not a lot, "just a bottle cap full for each plant hole", she explains. One of the women behind her scatters three or four cotton seeds on top. The third woman uses a hoe to cover the seeds with a little bit of soil. They repeat this every 30cm or so. The furrows themselves lie about 90cm apart. These distances are important, Wisdom says. Just like the small number of seeds. In the past, they used to sow many more, she says, "But if the plants are too close together they just end up competing for nutrients."

Wisdom and her neighbours **sowing seeds.** Thanks to the new farming methods Wisdom has learned, she doesn't need nearly as many pesticides and the yield is still higher than it used to be.

It's sweaty work, all season long. Once a year, Wisdom treats herself to the luxury of a tractor. Very few people in this area own one themselves. Shortly after each year's harvest, she hires a tractor to plough under the old stalks and stems that remain lying in the field. Over the next months they rot, enriching the soil with nutrients. No sooner is the last season over than preparation for the new one begins. >

Wisdom and her **neighbours make organic pesticide** from thorn apples. It protects the plants from the cotton bollworm.

Where did Wisdom learn to farm like this? The question leads us to the Zambian companies that buy the cotton from the farmers before processing and exporting it. Before each new season, Zambian cotton farmers usually sign a contract with one of these firms in which they agree to deliver their harvest to the company in question. In return, they receive cotton seeds and training in how to fight pests beyond spraying them with pesticides. Only when the season is over do the farmers have to pay for the seeds and pesticide – the dealers finance everything in advance so that the farmers aren't forced to take out expensive loans.

Since 2006, Wisdom has been signing her contracts with Alliance Ginneries, one of Zambia's 10 cotton companies. In 2013, Alliance Ginneries began cooperating with the German Aid by Trade Foundation and its Cotton made in Africa initiative. The initiative's goal is to permanently improve living conditions for cotton farmers in sub-Saharan Africa. Its activities are not based on donations but rather on the principle of helping people to help themselves – through the dynamics of trade, in this case. Essentially, the farmers are trained to raise crops in a more efficient and environment friendlier way. At the same time, the initiative has created a network of demand: international textile companies agree to buy a certain amount of cotton, which they determine themselves, from Cotton made in Africa. This gives them the right to sew the "Cotton made in Africa" label on to the textiles they produce so as to communicate their commitment to consumers. The licensing fees for using the label are reinvested in the areas of sub-Saharan Africa where the projects are located.

The seeds of the **cotton plant** shortly before Wisdom and her neighbours start planting.

Wisdom's cotton might be used to make the T-shirts and sweaters sold by Hugo Boss or Aldi, two of the initiative's more than 60 business partners. Or those sold by online retailer OTTO. It was Prof Dr Michael Otto, Chairman of the Otto

Group's Advisory Board, who launched the Aid by Trade Foundation and with it, the Cotton made in Africa initiative.

When the first shoots appear roughly one week after planting, Wisdom begins checking the cotton plants almost daily because they grow very fast. She pulls out the weaker plants so that the stronger ones get more nutrients, and she keeps an eye out for pests. Aphids can become a problem as soon as the leaves appear; they suck the juice out of them with their proboscis. The other big threat in this part of Zambia comes from the cotton bollworm, says John Tembo, an agronomist and the man in charge of Alliance Ginneries' business in Zambia.

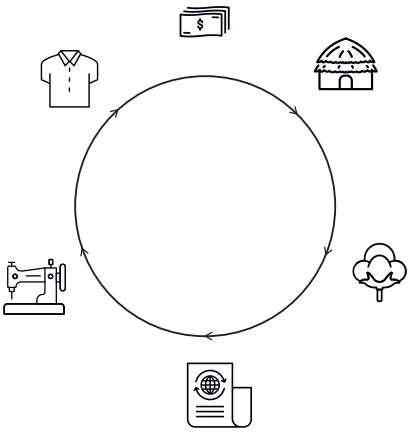
The name bollworm is misleading because the pest is actually a caterpillar. It eats the leaves of the cotton plant and especially the bolls or seed capsules, the same part of the plant that farmers like Wisdom want to harvest. Cotton plants bloom after just a few weeks, and in the spot where the blossoms die, green bolls form, which burst open when they're ripe to reveal the fruit, the actual cotton: pale, almost white fibres that cling to the shrub and, unsurprisingly, look and feel just like cotton wool balls. If the fibres aren't harvested, they eventually detach themselves and are carried off by the wind, which distributes the seeds hidden between them across great distances.

A bollworm can eat up to 12 bolls a day, says John Tembo, i.e. the majority of what a cotton plant produces. Once the caterpillar, which can grow up to 4cm long, has eaten its fill, it buries itself in the earth to pupate. When the following rainy season comes along, it emerges from the pupa as a moth, which lays its eggs on the stems and leaves of the newly sprouted cotton plants. The caterpillars hatch and the cycle begins all over again.

In the past, Wisdom used to spray chemical pesticides on the cotton plants the moment they poked their heads out of the ground. It's what her parents did and what her neighbours still do. Not on a needs basis, but regularly, every other week. They called it "calendar spraying". Wisdom didn't use to wear protective clothing either, and after she finished spraying, she sometimes felt as if she had the flu.

John Tembo trains farmers for Alliance Ginneries, teaching them the new, more effective growing methods. He later takes delivery of the harvest.

The money returns to Africa



Cotton grown according to the Cotton made in Africa standard is traded worldwide. Then it's made into textiles, for which companies and brands pay a ***licensing fee****. The Cotton made in Africa initiative uses this money to fund training programmes and community projects in Africa.*

Few plants in the world are sprayed with pesticides and insecticides as often as cotton, which is particularly susceptible, especially to infestation by insects, and is often grown on very large areas of land. Monocultures are considered to be magnets for pests.

These days, Wisdom still uses chemicals, but now she wears a dust mask, goggles and rubber gloves. She doesn't feel ill afterwards either. And before she reaches for a pesticide, she checks to make sure it's really needed. She counts the number of pests on each plant to see if they have exceeded critical levels. If the infestation is less severe, she uses organic pesticides. Employees of Alliance Ginneries taught her how to make them.

One of the plants is found locally, on her farm even, so she doesn't have to grow it: solanum incanum, also known as thorn apple, is a species of nightshade native to the countries of the Middle East and sub-Saharan Africa. It's a bush that bears a yellow fruit about the size of a mirabelle plum, which Wisdom dries and pounds with a mortar and pestle. She mixes the resulting powder with water and sprays it on her cotton plants. Using chilli peppers is another possibility, says John Tembo, as they ward off pests in a similar way.

Wisdom says she now only uses about half the chemical pesticides that she used to in the past. This saves her money too, because solanum incanum doesn't cost anything.

Crop rotation, economical sowing, organic pesticides – is that all it takes? No, says Wisdom. The decisive factor for determining a good harvest or a bad one, prosperity or poverty, is the weather. Her field is only watered when it rains. If the rainfall is spread evenly across the long rainy period from November to May, she can harvest up to 1,000kg of cotton from a hectare of land. Everything has to fall into place. In the 2018 to 2019 season, >

Employees of Alliance Ginneries check **the quality of the cotton** at the ginning plant in Kafue, outside Lusaka.

when it only rained from mid-December to March, she harvested 330kg. A devastating year. In the 2019 to 2020 season, she had roughly 600kg, because it rained from mid-November until the beginning of April. An average year. The price Wisdom gets for her cotton depends on world market prices. These have recently fluctuated between 1.6 and 3.7 Zambian kwacha per kilo, the euro equivalent of between 6 and 14 cents. The 330kg she was able to harvest in the 2018 to 2019 season earned Wisdom 1,200 kwacha, or around €45 at the current exchange rate.

The fact that Wisdom has been able to prevail despite the vicissitudes of her business can perhaps be explained by her enterprising spirit. Meanwhile, in order to reduce her dependency on nature, she also works for Alliance Ginneries as a distributor. This means signing up new farmers, delivering the seeds and pesticides and paying the farmers at the end of the season for the cotton they deliver to Alliance Ginneries. Performing these services earns her extra money: in the 2019 to 2020 season she made 2,100 kwacha or about €80.

It's not just the farmers who make organic pesticide, Alliance Ginneries does too. First the **yellow thorn apples** are dried, then they are pounded into a powder, which the farmers later mix with water before spraying it onto the cotton plants.

Returning from the field, Wisdom looks tired, but she's still fully focused. You can easily imagine her sitting among her neighbours and explaining the benefits of more effective farming methods and organic pesticides to them. After all, that's part of her job as distributor too. Wisdom was trained by an Alliance Ginneries employee and now she trains others.

Her grandparents were teachers, she tells us, and they founded a Christian school in the area. Unlike most of her neighbours, Wisdom speaks English. She went to school until age 18 and was planning to go to university to study medicine. Shortly before graduating, the bus she was in was involved in an accident, and Wisdom spent the following three months in hospital. She says her hip never

The **raw cotton** arrives in Kafue in bags, after which it is cleaned and deseeded.

fully recovered, and to this day, she walks a bit stiffly and somewhat bow-legged.

During the 2019 to 2020 season, Wisdom was responsible for 19 farmers, who she educated about things like the importance of the right root depth and how to deal with the cotton bollworm. Thanks to people like Wisdom, Alliance Ginneries has been able to provide basic training to around 31,000 farmers and has contracts with nearly 40,000. That's slightly more than 10% of all cotton farmers in Zambia.

It's difficult to measure how effective such training really is. At the end of the day, as John Tembo also says, it's the rain that ultimately determines how the harvest turns out. And that's why he considers climate change to be one of the biggest threats to Zambia's cotton industry.

At least for Wisdom, the efforts of Alliance Ginneries have paid off. She's been able to expand her farm with the money she earned from growing cotton, and now plants aubergines and tomatoes for herself and her sons. She keeps chickens and pigeons, has 14 cows and recently acquired 40 goats, which she co-owns together with several women from the neighbourhood. Supported by Alliance Ginneries, the Aid by Trade Foundation covered the cost of purchasing the livestock. "It gives families more sources of income and makes them less dependent on the harvest," John Tembo explains.

Unlike so many farmers in sub-Saharan Africa who migrate to the city in the hope of finding a better life, Wisdom can't imagine leaving. "A farmer's work is good," she says. "Here, I have fresh air and fresh food. The only people who benefit from the city are those with an education."

If things go as planned, Wisdom wants her sons to be able to decide one day between the country and the city. She's saving money so that they can fulfil the dream she had as a young women – and attend university. ●

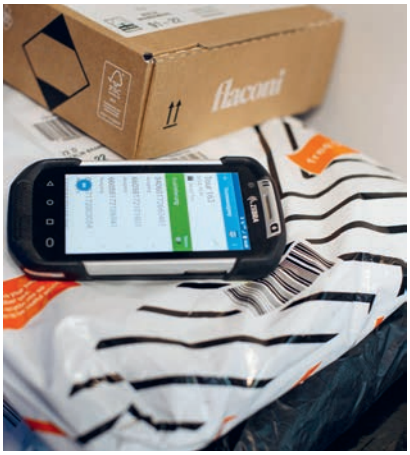
For more information go to:
www.cottonmadeinafrica.org/en
You'll also find a variety of videos about the inititative and an overview of all the projects that Cotton made in Africa has made possible.

Delivering change

According to estimates, almost 4 billion parcels will be delivered in Germany in 2021. What's needed are eco-friendly ways to get all the online orders to the customer. By drone, robot or tram. How is Hermes tackling the problem?

Photography:
MARIA SCHIFFER

Words:
FABIAN DIETRICH



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Every morning, they swarm out to prove that many of the delivery vans still driving through the streets of Berlin today will soon be superfluous. The air is bitingly cold, but that doesn't bother Marcus Vallenthien (28). When he's cycling through the German capital's Prenzlauer Berg district in this kind of weather, he looks like a Ninja warrior: only his eyes and nose are visible, the rest is swathed in black.

Before setting off, he meets up with the other couriers at the Hermes depot: fist bumps by way of greeting, loud music to keep out the cold, their work for the day stacked up in blue boxes in front of them. Hundreds of packages from Zalando, H&M, Pull & Bear, DM, all waiting to be delivered. "It's crazy how much people are ordering," says Marcus Vallenthien.

Automated parcel lockers, self-service booths and in-store parcel shops are overflowing, the streets are clogged with double-parked vans. And all because people are ordering more online than ever before.

Even before the pandemic hit, parcel volume in Germany was already increasing year by year. Corona turbocharged that growth. An estimated 3.9bn parcels were delivered in 2020, up from 3.65bn in 2019. Management consulting firm Oliver Wyman expects that number to rise to as many as 9bn packages by 2028. Everybody wants their parcel delivered straight to the door. Preferably right away, a second after making the purchase. And free of charge, obviously. But how is that supposed to work?

In the beginning, bike couriers were made fun of. But that's changed. Because they could well be one of the keys to solving a major problem. Across the globe, parcel services are facing a dilemma.

From a micro hub in Berlin, **Marcus Vallenthien** cycles through the city delivering parcels. But instead of using a conventional cargo bike like his colleague, he rides a model by the name of Armadillo: a bike with an electric motor, six wheels and a cargo box. Cargo bikes and Armadillos are a particularly efficient option – especially when it comes to delivering small packages over distances of up to 3km. According to a 2015 study by the German Aerospace Center, cargo bikes could take over 85% of all courier trips in urban areas.

The last mile to the customer. That's the problem everybody's trying to solve right now

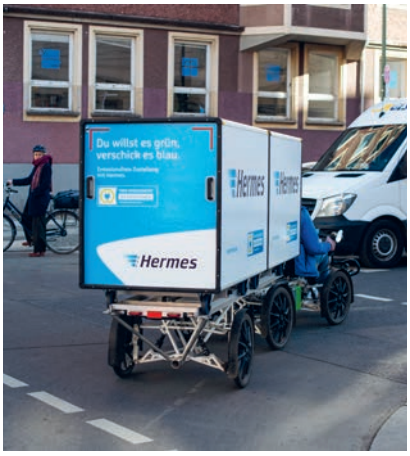
Precisely because their business is booming, they're encountering more and more difficulties with the "last mile", as the final stage of the parcel's journey is known: the stretch from the local depot to the recipient.

That last mile decides everything. It decides whether and when a parcel arrives and whether the customer is happy. It decides whether a parcel service provider makes a profit. And it plays a part in deciding to what extent the emissions associated with delivery can be reduced and whether industrialised countries will eventually win the battle against the climate crisis.

"The pressure is coming from lots of different directions," says Michael Peuker, Sustainability Manager at Hermes Germany. "The last mile presents us with a great many challenges: road congestion, a shortage of drivers, a lack of parking spaces, protecting the climate and particulates."

In 2020, the year of corona, planes, cars and vans often stood idle. That's why emissions were lower than usual. But aside from this exceptional situation as a result of the pandemic, the transport sector is the only area of the German economy where greenhouse gas emissions haven't dropped since 1990. About a third of car and van traffic in cities is caused by goods and delivery vehicles, although courier, express and parcel services (CEP) only account for 6%. So using new technologies and smarter delivery methods to reduce this traffic and its emissions seems like an obvious approach.

Many firms have already realised that looking to combustion engines for a permanent solution won't work. Although Deutsche Post DHL Group wants to >


Du willst es grün,
verschick es blau.
Hermes


ResearchGate
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Emissionsfreie Zustellung
mit Hermes.
100% ENGAGEMENT
Hermes

gradually discontinue in-house production of its Streetscooter electric van, for instance, the company is sticking to its target of zero-emission delivery by 2050. Hermes wants to achieve that in the inner cities of Germany's 80 biggest urban areas by 2025 and, among other things, has already ordered 1,500 electric vans from Mercedes-Benz to help it reach that target.

Beep, beep, beep: Marcus Vallenthien aims his scanner at the barcodes on the parcels in the boxes and loads his trusty conveyance. He packs a few "Sorry I missed you" cards as well. At first glance, his vehicle – a cargo bike that goes by the name of Armadillo – looks like a bad joke: barely recognisable as a bike any more, it's actually more like a truck that's been shrunk and given pedals. "To start with people gave us funny looks, but in the meantime they've got used to us around here," says Marcus Vallenthien. As strange as it might look, the Armadillo is in fact vastly superior to normal cargo bikes. It can take and transport two containers, each with 1m³ of cargo space and a payload capacity of up to 300kg. And it goes without saying that an electric motor assists the courier when the going gets tough.

Surprisingly fast, agile and easy to park. But electric cargo bikes have drawbacks too: they need maintaining every two weeks.

It's not just a question of protecting the environment. There are economic reasons why companies like DHL, UPS or Hermes have to think about new ways to deliver as well. The last mile swallows up 50% of the costs for transporting a parcel. It requires the most staff, the most vehicles, the most time. Even though the overall delivery rate is very high (in Hermes' case, 94% of parcels are delivered at the first attempt), deliveries to the front door can nevertheless be frustrating for both sides. The courier goes to an address, rings the bell and nobody answers. The recipient comes home and has to start tracking down their parcel – which could well be at a depot a long way from home. And because the sector is booming, all the companies are desperately looking for couriers who are willing to take on the back-breaking job. In the long term, the competition will lead to higher wages. Some are already predicting that, in future, there will be an extra charge for delivery to the door because it will no longer be profitable otherwise.

In Hamburg, Hermes tested the use of beer crate-sized robots for delivering parcels

All over the world in the last five years or so, a great deal of effort has been invested in rethinking delivery models. Companies everywhere are working feverishly on new ways to master the last mile. Amazon, Google, DHL and other firms are experimenting with drones. In Hamburg, Hermes has trialled the Starship robot, a self-driving delivery vehicle: about the same size as a beer crate, it navigates the city on six wheels. In Frankfurt and the French city of Saint-Étienne, trams have been tested as a means of delivery. And in Mumbai, the dabbawalas who bring the city's workers their lunchtime food are delivering parcels for an Indian online retailer as well. In China, the focus is on establishing large-scale pickup centres where recipients get their parcels delivered to a kind of locker. In Switzerland, there are plans for a fully automated underground transport system, with the first tunnel scheduled to open in 2031. Automotive parts manufacturing company Continental has even unveiled an autonomous vehicle that releases a pack of robot delivery dogs at every stop. Which ideas are realistic and which are just pie in the sky is gradually becoming clear. Take drones: they're certainly spectacular. In a much talked-about 2016 experiment near Cambridge, England, for instance, Amazon flew a streaming stick and popcorn to a customer within just 13 minutes. In practice, however, drones are probably more suitable for deliveries to islands and remote mountain villages than for a city like Berlin. Like robots, they can't yet transport enough parcels to make them commercially viable – it's that simple. On top of that, there are restrictions and regulations to be complied with – in the vicinity of airports, for instance. What's already working are pickup points, parcel shops, electric vans and bikes.

A better organised last mile is of interest to policymakers too. Take a new model being piloted in the Japanese city of >


royals & rice
Hermes

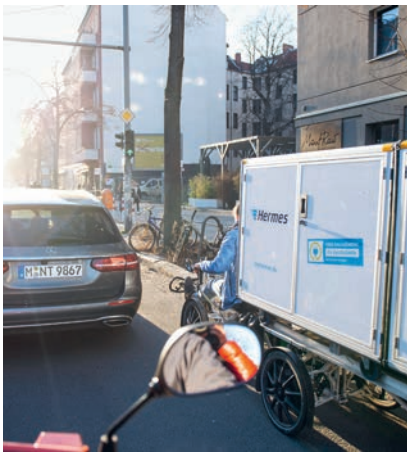
Yokohama, where all parcels destined for the Motomachi shopping district are brought to a central square. From there, a cooperatively funded service provider distributes them to 500 stores and 850 private customers using vehicles powered by natural gas. Delivery traffic in the area has been reduced by 70%.

The KoMoDo micro depot in Berlin – from where, initially in a pilot phase, Marcus Vallenthien and the other couriers set off on their Armadillo bikes to deliver parcels – was likewise a government-organised project. Sponsored by Germany's Federal Ministry for the Environment, the KoMoDo was made available to competitors Hermes, DHL, DPD, GLS and UPS in summer 2018 so that each of the firms could test using cargo bikes for transporting parcels.

"For us it was a case of revisiting the idea of cargo bikes," says Hermes Sustainability Manager Michael Peuker. "We experimented with it 10 years ago and failed. But there are totally new models and technologies on the market now. KoMoDo showed us that it can work. In our trial delivery area, we were able to replace three vans with cargo bikes, virtually one to one so that only one van was still needed – for bulky packages."

Back in 2015, the German Aerospace Center's Institute of Transport Research investigated how competitive cargo bikes are versus cars or vans. The project, entitled *Ich ersetze ein Auto* (I Can Replace a Car or Van), concluded that, in urban areas, 85% of courier trips could be accomplished by cargo bikes. At the moment, vans only perform better in the case of longer distances and very large, bulky items. But when parcels are delivered within a radius of 3km, cargo bikes are a competitive or even better alternative. And if fines for double parking were enforced more strictly, the benefits of cargo bikes would be even greater. What's more, the couriers don't need a driving licence, which makes it easier to recruit new staff.

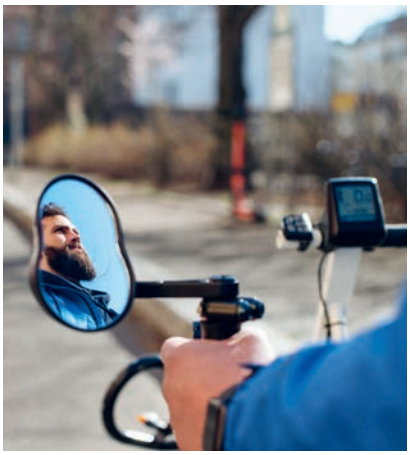
Cargo bikes certainly have benefits, but there are drawbacks too. At least for now, they need maintaining every two weeks. As compared to cars, that's too often. In order to properly serve a city with a combination of bikes and electric vans, companies would need a large number of micro depots within just a few kilometres of each other. But in major German cities like Hamburg, Munich or Berlin, space is becoming increasingly scarce and expensive. Yet space could well end up being the decisive factor in who succeeds in the competition for the last mile. Whereas it used to be more a question of having large depots with good transport connections located outside urban centres, the crucial thing for logistics companies nowadays is to be as close to the addressees as possible. So what could be more obvious than repurposing cars into storage space? VW has already announced that owners of certain models will be able to have parcels delivered to their car boot in future, and DHL is planning a massive expansion of its PackStation network of automated booths. Zalando is experimenting with paying money to private individuals who accept deliveries for other people. And Hermes is banking on "growing by sharing": the logistics specialist is cooperating with regional delivery companies so as to utilise its existing vehicles more efficiently and have access to depots in central urban locations that could potentially be served by cargo bikes in future. "In Berlin we're collaborating with PIN AG, a private mail delivery company. PIN has the space, we have our parcel shops – or PaketShops, as they're called in Germany: that's why we hit on the idea of joining forces," says Pouyan Anvari, head of Hermes' Berlin division.



From the saddle, to the box, to the bell, to the customer. Marcus Vallenthien and his cargo bike are virtually unbeatable for short-distance deliveries.

According to a study, 85% of courier trips in urban areas can be accomplished by cargo bikes

After the pilot phase at the KoMoDo micro depot, Hermes decided to carry on exploring the new approach. In 2021, the company will be taking part in a similar publicly sponsored project in Hamburg. And in Berlin, Hermes has already set up its own infrastructure for cargo bikes. "We had nothing but positive experiences with the KoMoDo micro depot. We believe in the idea, have set ourselves an ambitious climate target and are confident that delivering parcels with cargo bikes will be commercially viable as well," says Pouyan Anvari. The Berlin fleet has been expanded to 20 vehicles and four new micro depots have been established. In the meantime, the cargo bike couriers deliver approx. 2,000 parcels a day for Hermes. Marcus Vallenthien is also convinced that the future belongs to bikes: "I'm sure I'm not the only Berlin citizen who's sick and tired of all the traffic on the roads. Apart from larger vans, I don't think cars have a place on city streets any more." ●




„HABEN WIR
UNS NICHT
SCHON MAL
GESEHEN?!“
OTTO

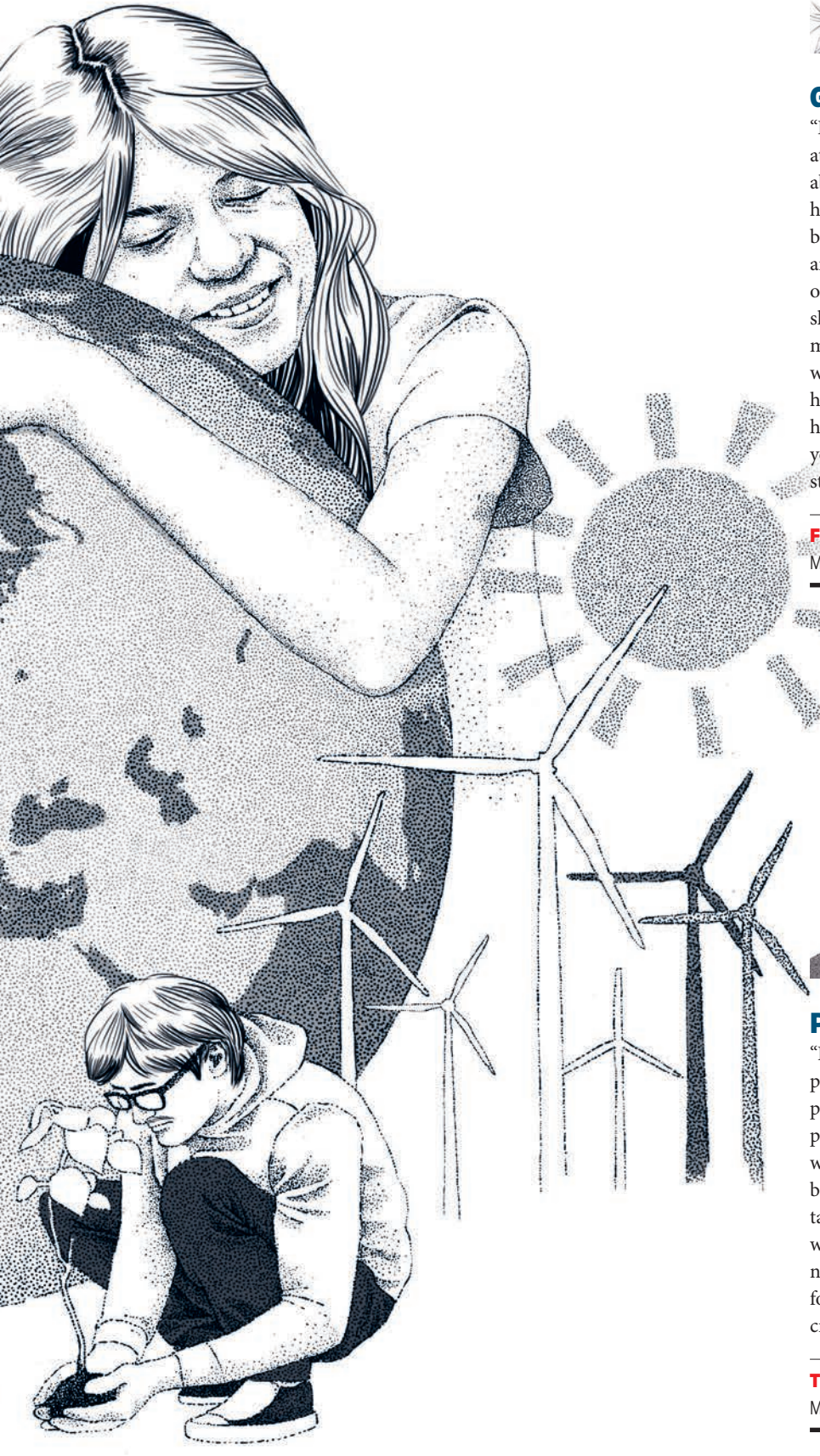
“To me, doing business sustainably and living a sustainable life basically means assuming responsibility.
I am deeply convinced that we can change the world if everyone gets involved, contributes what they can and tries to be part of the solution.”

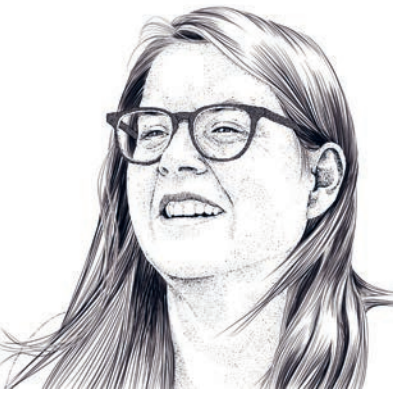
Alexander Birken, CEO of the Otto Group

All together now

Can we make the world a better place together? These Otto Group employees didn't wait to be asked, they just got started. Twenty-three small projects that make a big difference.

Illustrations: ***ROMINA ROSA*** *Words:* ***JOCHEN PIOCH***





Growing a green thumb

"Before I began editing the garden catalogue at Manufactum, I didn't know much at all about plants or growing vegetables. Today, I have an allotment garden, write a gardening blog and harvest lots of homegrown fruits and vegetables. I love gardening and being out in nature. I also like to experiment and share what I've learned with the readers of my blog: how to build nesting aids and dead wood hedges for wild bees and hedgehogs, how to grow fresh vegetables in winter – and how to use the tubes from all the toilet paper you hoarded during the corona lockdown as starter pots for tomatoes."

Franziska Baumgärtner, 43, Editor, Manufactum, Waltrop, North Rhine-Westphalia

Packaging: who needs it?

"I've been living virtually plastic-free for the past two years. It's easier than you think! My partner is very involved with environmental protection, and she got me thinking. Together, we've learned to buy soap in bars instead of bottles, unpackaged rice and pasta, which we take home in our own containers, and wrapper-free dishwasher tabs. Now we almost never put anything in the separate 'yellow bag' for recyclable waste, except perhaps an empty crisp bag – everyone has their weaknesses …"

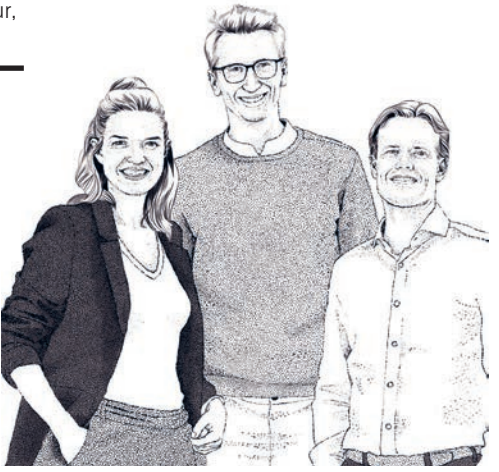
Timo Kinder, 30, Agile Coach and Scrum Master, Empiriecom, Burgkunstadt, Bavaria

Moving mountains

"I'm on the advisory board of Nepalhilfe Kulmbach, a charity that helps children in Nepal, particularly girls, to improve their prospects in Asia's second-poorest country. We make sure they can attend school, have enough to eat and enjoy a longer childhood. I'm in contact with Niru, the girl I sponsor, via WhatsApp. She lives in Malekhu at the foot of the Himalayas. I've never actually been to Nepal, but I see myself as part of the ground staff. I look after the homepage, organise and provide support. Which just goes to show that, if you want to become involved with something, you don't have to carry the weight of the world on your shoulders – every little commitment counts!"

Sabine Hölzel, 49, Senior Buyer, Baur, Weismain, Bavaria

"We're doing something that's close to all our hearts."



A different kind of giving

"A group of us from the office sponsor children in group homes run by the Caritas charity. We organise festivities with go-kart races and various games in the summer, at Christmas we get the children things that they've put on their lists. Having personal contact with the children is more important to all of us than just giving money anonymously. And we love receiving beautiful pictures as a thank you. Happiness shared is doubled – that's a saying that is absolutely true."

Hanka Klinger, 49, Customer Service member, Otto Relation Center, Dresden

Managing money is something you can learn

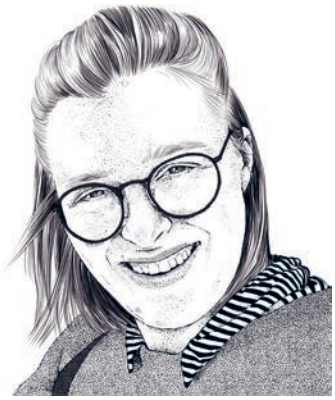
"Working for EOS, we've seen people so heavily in debt that they're up against the wall. Many have never learned how to handle money properly. So to help people avoid falling into debt in the first place, we established the Finlit Foundation, a non-profit organisation to improve financial literacy. We knew we wanted to start early, so along with our education partner, we developed classroom teaching materials for grades three to six. We also offer webinars for teachers and distance learning courses. Within six months of getting off the ground in October 2020, we had reached over 9,700 children. How we got to that point is interesting too. We started out by entering the project in an EOS ideas competition, and came fourth. Refusing to be daunted, we shared our vision with the CEO of the EOS Group, which is when things took off. Together with him, we presented our idea to Prof Dr Michael Otto, Chairman of the Otto Group Supervisory Board, who agreed to support us. We then spent months refining the concept while still working for EOS. Today, we work for the Finlit Foundation full time, doing something that's close to all our hearts."

Jana Titov, 34, Managing Director, Finlit Foundation, Hamburg **Sebastian Richter,** 42, Managing Director, Finlit Foundation, Hamburg **Jannik Steinhaus,** 26, Project Manager, Finlit Foundation, Hamburg

Everyone needs a helping hand

"I didn't plan to get involved, it just happened. My elderly neighbours, many of them with physical limitations, kept asking me to help them. It's not rare for senior citizens to be poor and lonely in Moscow. So I help some of them with their shopping, take their dogs for a walk or even water the plants. It makes them happy and it makes me happy too. Helping those around you is much easier than you think."

Natalia Ivanova, Head of Operational Marketing Group, Bonprix Russia, Moscow



Keeping memories alive

"I first stayed at the Schullandheim Neuwerk am Turm hostel with my classmates 20 years ago. Ever since, the redbrick building on Neuwerk, a North Sea island off Cuxhaven, has had a special place in my heart. A group of us, parents, teachers and former students like myself, now run it as a self-catering facility. We cross the Wadden Sea by horse-drawn cart or ferry several times a year to fix up the building and maintain it. I recently re-painted the bedrooms and kitchen, for example. From home, I also handle the marketing and look after the website."

Lara Mögle, 32, Marketing Manager, OTTO, Hamburg

"Did you know that a bee has to fly around the world three times in order to make a jar of honey?"

The sweetest hobby

"I had my first colony of bees when I was 12. While I was a trainee at Baur, I was allowed to keep four colonies in an old orchard on the company premises. I've been putting on my beekeeper suit twice a week after work ever since. The honey is sold in the canteen, with a label designed by a colleague. I've encountered nothing but enthusiasm and support – and even have a few emulators. When you're a beekeeper, you learn to appreciate nature in a different way: Did you know, for instance, that a bee has to fly around the world three times in order to make a jar of honey?"

Lukas Porzelt, 23, Campaign Manager, Baur Group, Altenkunstadt, Bavaria

Two birds with one bottle

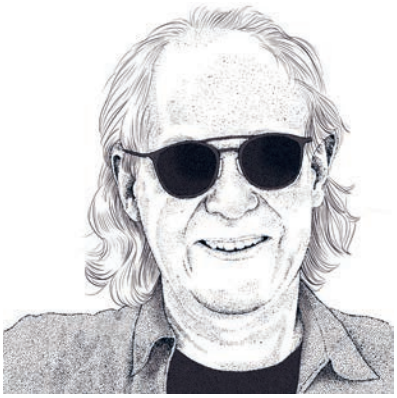
"For years, walking around the office, I was irritated by the empty cans and bottles that my colleagues left all over the place. If I said anything, people mostly just hid them in a cupboard. You can change that, I thought, and so I set out bins for collecting the returnables. We now take them to the supermarket on a regular basis and donate the money to a good cause – sometimes a children's hospice, sometimes Hanseatic Help. And as an extra bonus, our office is tidier now too."

Dirk Rosenberger, 36, Works Council Chairman, Hanseatic Bank, Hamburg

Hermes points the way

"How should companies get involved? By holding up a cheque for the cameras once a year? We think there's a better way. Lisa did her master's thesis on the way firms form lasting partnerships with charities. At Hermes today, we combine theory with practice by sharing our knowledge and expertise with Hanseatic Help, an association that supports homeless people and refugees. We put out collection boxes, encourage colleagues to donate clothing and everyday items, and provide contacts for those who want to work as corporate volunteers. Even during the corona lockdown, we still managed to fill lots of pallets with donated items. And many of us volunteer our time and skills outside of work. Marc, for instance, gives talks, sharing his logistics expertise: When I send a relief shipment, how do I secure it? How do I get clothing and other donated items across the ocean? This way, we bring supply and demand together."

Lisa Femerling, 28, Social Responsibility & Compliance Manager, Hermes, Hamburg **Marc von der Fecht,** 48, Head of Procurement, Hermes, Hamburg



"Thanks to the wifi connection, employees can book the garden as a meeting room."

A garden to be proud of

"When we built the first plots behind our office building and started planting organic tomatoes, zucchinis and peppers, it was a project for associates who enjoy gardening for their own supply. Eleven years later, it's now a full-fledged community garden with trees, a lounging area and a fence to keep away deer, raccoons and rabbits. Thanks to the wifi connection, employees can book it as a meeting room. We've also become more community orientated and donated 160kg of fresh vegetables to our local food bank last year. It's been a good journey and we are very proud of our garden."

J. Mattes, Product Regulatory Coordinator, Crate and Barrel, Northbrook, Illinois

Perseverance pays

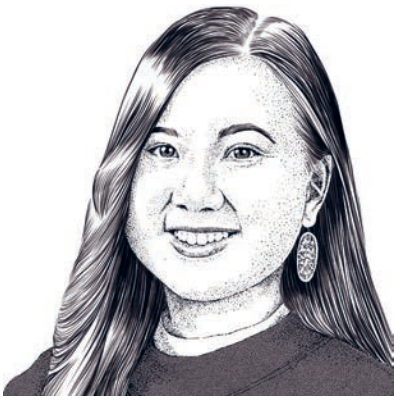
"For years, I've been advocating the use of sustainable paper at Baur. Our customers still rely heavily on printed advertising material, which we produce in large print runs, but our aim is to do it with as little impact on the environment as possible. Three years ago, we set ourselves the goal of printing all our mailings on FSC®-certified paper. Meanwhile, we've managed 99.9% – the remainder will follow soon."

Thomas Schwarzmeier, 54, Team Leader Production & Support, Baur, Burgkunstadt, Bavaria

Bottle caps to the rescue

"Every day, we unscrew bottles and tubes and, for the most part, throw the plastic caps away, even though they can be recycled. I've put out some boxes at work so I can collect the plastic caps. Once a week, I drive them over to an acquaintance who delivers the material to a recycling company that shreds hard plastic to make car batteries. For every tonne of raw material produced, €200 is donated to a specialist clinic here in Salzburg, Austria, that treats children suffering from skin disease. Last year, my colleagues and I helped to produce nearly four tonnes of shredded plastic, which makes me very proud."

Sylvia Dizdarevic, 54, Customer Service Supervisor, Unito, Salzburg



A bruise? So what!

"I'm a member of foodsharing, a German non-profit initiative that saves perfectly good fruit and vegetables from being thrown away. I regularly sort through supermarket leftovers and distribute what's still edible in the neighbourhood or give it to social institutions. If only one apple is bruised, why discard the whole box? It's crazy! At Risk Ident, we're also more careful these days about ordering too much fruit for the fruit basket, and if we do – we give it to foodsharing. It's a rewarding way to make a difference because you're tackling it in such a hands-on way."

Tram Reichart, 33, Head of Human Resources, Risk Ident, Hamburg

"Volunteering outdoors gives me a feeling of peace and a sense of freedom."

Guide to the jungle

"It's very hard for refugees to find a job in Germany. Starting an application email with the wrong form of address is enough to put them at a disadvantage. Newcomers are also frequently discriminated against, quite openly. The WorkIt initiative, which I've been running for two years, helps refugees find their way in the job-hunting jungle. We teach them how to write their applications and ensure that qualified workers are given appropriate positions and paid accordingly. My most rewarding experience was when a young man, who now has a job, recognised me on the street and thanked me."

Jason Kilby, 20, Customer Service intern, Otto Group IT, Hamburg

Free as a bird

"I'm a bird lover, so years ago I began protecting cranes in the north of Hamburg for the Nature and Biodiversity Conservation Union NABU. Today I'm a ranger at a 'crane station', which means I patrol the area, collect data and help to recreate a natural habitat for the endangered birds. Volunteering outdoors gives me a feeling of peace and a sense of freedom. And you can see that we've made progress: there are now 20 times more cranes in the Duvenstedter Brook nature reserve than there were in the 1980s."

Timo Depke, 53, Senior Marketing Manager, OTTO, Hamburg

A heart for the homeless

"You're not only responsible for what you do, you're responsible for what you leave undone as well, that's my motto. And it's the reason I've been helping the homeless for many years. As a member of the Bergedorfer Engel (Bergedorf Angels) I provide food, clothing and hygiene items to people without shelter or with very little money. Every other Sunday, we set up our stand on the Reeperbahn in the red-light district of Hamburg, and some 300 people regularly stop by. I can only encourage others to help people in need! There are so many ways to do so."

Felicitas Bohm, Outsourcing Manager, Hanseatic Bank, Hamburg

"As the children grow, they get to watch 'their' tree develop."

Worn but worthy

"Do we have to keep throwing out clothes that have barely been worn? And why is it so hard to give used clothing away? At Heine, myself and a group of other trainees introduced a project connected with Platz schaffen mit Herz, a used clothing initiative established by OTTO in 2014. Anyone who's clearing out their wardrobe at home can bring in their used but still wearable clothing and put it in the boxes we provide. Later, we trainees deliver it to Platz schaffen mit Herz. With every donation, you help to support non-profit organisations and projects."

Franziska Stiegele, 24, dual study trainee, Heine, Karlsruhe

Of trees and toddlers

"Sustainability is our job. But even in our private lives, we kept thinking about how we could pass our appreciation of our ecosystem on to our children. That's how the idea for the One Child – One Tree initiative came about. Every time a new baby is born in the Witt Group, we plant a sapling in an area of forest not far from our Weiden offices. Recently, Douglas firs for the most part. On top of that, the Witt Group donates a sum of money to the Schutzgemeinschaft Deutscher Wald forest preservation federation. Each young family receives a certificate and a baby welcome package. As the children grow, they get to watch 'their' tree develop too. The project helps preserve German forests, which aren't doing very well in some places. And we're helping our children connect with nature, something that's too often neglected these days. We've been very encouraged by our employer's willingness to donate to our cause – and by the fact that other companies in the Otto Group have shown interest in taking part."

Ellen Goes, Project Manager Corporate Responsibility, Witt Group, Weiden, Bavaria
Alexander Meidinger, 36, Project Manager Corporate Responsibility, Witt Group, Weiden, Bavaria

An intergenerational friendship: Ms Ella and me

"Every two months or so I visit Ms Ella at a retirement home. She'll soon be 92. We met eight years ago as part of a social project organised by the Witt Group. It soon became clear that neither of us was interested in singing songs or playing cards – we just wanted to talk. We've remained close ever since, and gone through ups and downs (we hardly saw each other last year due to corona). I'm fascinated by the things she tells me about life, and I've learned quite a bit about commitment and responsibility." *Editor's note: Ms Ella sadly passed away shortly before we went to print. After consulting with Olivia Janosch, we decided to publish the piece anyway as a tribute to the close connection and friendship between Ms Ella and Olivia Janosch.*

Olivia Janosch, 41, Art Director Corporate Design, Witt Group, Weiden, Bavaria

Devoted to the outdoors

"When our logistics centre closed and I was in danger of losing my job, I reinvented myself – by pursuing my love of nature. I trained as a fruit tree gardener and beekeeper, and learned all about plant diseases. Today, I only work at Heine part time. In my 'spare time' I maintain local orchards, give talks on plant protection and hold seminars that take place at my beehives, where I keep 25 colonies. It's the perfect antidote to working in an air-conditioned office – and I can help protect the environment too."

Heike Speck, 58, Logistics Administrator, Heine, Karlsruhe

"I'm there when the police arrive with news of a death and I stay behind when the officers leave."

The book of diversity

"Members of the LGBTIQ community still experience antagonism, especially in the countryside. That's why my friends and I founded the equality Oberpfalz e.V. society, which promotes tolerance and dialogue via regular get-togethers, campaigns and hopefully soon our own Christopher Street Day. I've persuaded my employer to communicate its own, exemplary approach to diversity more boldly by publishing a book describing the Witt Group's values of inclusion regardless of ethnic origin, belief, disability, sexuality, gender or age."

Daniel Fischer, Business Intelligence Developer, Witt Group, Weiden, Bavaria

First aid for the soul

"I help people who are going through a difficult time. For the past three years, I've been a member of the Order of St John's (Johanniter) crisis intervention team, which offers assistance to those who have witnessed accidents and suffered bereavement. I'm there when the police arrive with news of a death and I stay behind when the officers leave. It's the kind of work that requires a lot of sensitivity and tact: who needs a hug in their hour of despair? And who would prefer me to start making funeral arrangements? If I can provide comfort and support in a situation like this, I don't need money or flowers as a gesture of appreciation."

Diana Kirscht, 50, Collection Services Administrator, EOS Group, Hamburg

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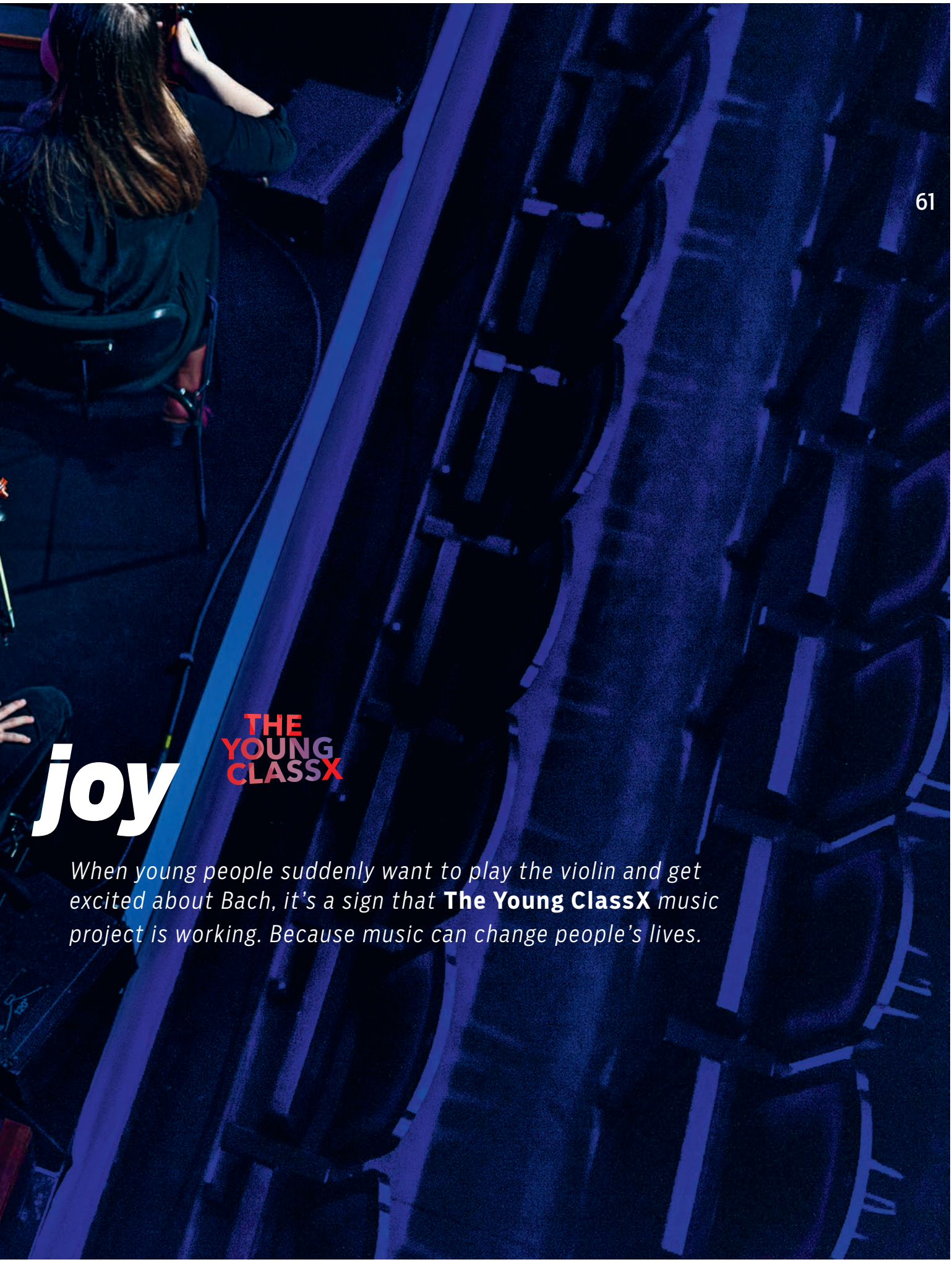
Unmistakably happy: **Nima Asadollahi Ali** in Hamburg's Laeiszhalle concert hall. The Young ClassX helped him to cultivate his talent.

Ode to



joy

THE YOUNG CLASSX

When young people suddenly want to play the violin and get excited about Bach, it's a sign that **The Young ClassX** *music project is working. Because music can change people's lives.*

Photography:
AXEL MARTENS

Words:
ANNIKA LASARZIK

Tehran, autumn 2001. An eight-year-old boy lies sprawled in front of the television. Suddenly, he makes a discovery that will change his life. A concert, a woman playing the violin. The boy can't tear his eyes away from the screen. His father enters the room and watches his son for a while, before asking: "Nima, would you like to play the violin?"
Hamburg, summer 2017. A 10-year-old girl is sitting in her music lesson at school. She's in grade five. The children sing a song. She's new here, and everything still feels strange. But all of a sudden, she shakes off her fear and sings loudly and clearly, as if no one else were listening. Later, her teacher says: "Angelina, there's a choir for children who can sing like you."

Years later, the boy and the girl are on stage in a glittering concert hall, surrounded by spotlights. In the orchestra, right at the front, Nima – now a young man of 26 – with his violin in his hand. In the choir, further back, Angelina, now 12. Jubilant voices rise to a crescendo, the applause goes on and on. Nima and Angelina have been feverishly awaiting this night for weeks. It's a big event, The Young ClassX's 10th anniversary concert in the Laeiszhalle concert hall in Hamburg. The paths these two young people have taken to get here couldn't have been more different.

It's a rainy October day, a few short months before the concert. Nima stands surrounded by instruments in a small room in the basement of a school in Hamburg, giving a violin lesson. He's one of 19 "assistant coaches" who instruct other The Young ClassX scholarship recipients so that they can learn to play an instrument for free. "Look," says Nima, as he swings his violin up on to his shoulder in a single fluid movement and draws the bow smoothly across the strings. A deep tone begins to swell, spreading through the room like a warm blanket. "Loosen up a little and have fun!" says Nima, laughing, but the 10-year-old beside him mumbles: "Can't play it anyway." Nima raises an eyebrow. "Have you practised? You won't get anywhere if you don't make an effort!" His pupil frowns and pushes her violin back under her chin. She drags the bow across the strings, back and forth, scratching out a tone that wobbles across the room. Nima holds up his hand. "Nope, that's not working. Pay attention to your wrist!" And then they play together, the pupil uncertainly, her eyes on her teacher, his upper body swaying gently in time with the music. They play until her grip loosens, her movements become more fluid – and her bow stops scratching.

Making an effort, going places: Nima knows all about that. When he was 16, he travelled to Germany by himself, with only his violin and an invitation to audition at a music school in Berlin. The audition went smoothly, even though "hello" was the only word Nima understood. But then the school rejected him. He did have talent, the examiners said, but he would never get through school if he didn't speak German. Nima takes the train to Hamburg, intending to fly back to Iran. But on the telephone his father says: "Don't come back, son. You have no future here as a musician." When he talks about it today, Nima's eyes stray into the distance as if he were still at the station, the receiver in his hand, his stomach clenched in fear.

He knows in his heart that his father is right. A trained opera singer, he had to give up his dream. In Iran, artists face repression and there isn't much funding available, so to support his family, Nima's father sold spare car parts instead. Nima occasionally helped him, sitting in the basement sticking barcodes on packages for hours on end. The violin changed everything. His father sold his piano to buy Nima the instrument he was longing to play, enrolled him in music school in Tehran, sent applications out to six German music schools – and bade his son farewell. "My father," Nima says today, his voice full of pride and wistfulness, "sacrificed so much. I can't disappoint him."

So Nima tries to make his way in Hamburg. He's granted asylum and housed in

"Don't come back, son. You have no future here as a musician."

a group home. He finishes school, even qualifying for university entrance. In retrospect, it all sounds perfectly straightforward, but Nima refers to it as "the most difficult time": he grapples with government agencies, gets bullied by his classmates, changes schools and is often ill. Wanting his own apartment, he looks for a long time but finds nothing. Depressed and aggressive, he withdraws into himself. The future, once so promising, now looks gloomy and empty. For years, he doesn't touch his violin. The memories it evokes of his homeland are too painful to bear.

Nima tells me all this sitting in a café in Hamburg, his legs crossed comfortably and a triumphant smile on his face. The kind-eyed, slender young man in front of me seems cheerful and relaxed. How can that be?

His life takes a new turn in late 2014. By chance, he hears about the Felix Mendelssohn Youth Orchestra, which has been under the auspices of The Young ClassX since 2013 and where around 100 young people from ages 10 to 27 make music together. Nima gathers his courage and phones up to ask whether they're looking for another violinist. Prof Clemens Malich, the conductor, who is also head of the The Young ClassX instrumental music and orchestra modules, accepts him immediately and becomes Nima's mentor. The rehearsals provide structure in Nima's life, and giving concerts in front of big audiences strengthens his self-esteem. On tour with the orchestra, Nima gets to know the country and even performs for the German President at Bellevue Palace. He now feels that he is part of something big. Looking at his violin these day, he still thinks of the past, but of the future too.

While training to be an assistant coach for The Young ClassX, Nima discovers that his future lies elsewhere, far from the big stage. He doesn't want to be a star. Instead, he wants to pass on what he's picked up over the years, how to keep going when things get tough. He wants to teach music and motivate others. Today, he's in his >

And who's that? It's Angelina Alberg. Her gift for singing was discovered at her school and she's been part of The Young ClassX choir programme ever since. But what's perhaps more important: music has helped the 12-year-old girl to feel good about herself and thrive.

sixth semester, studying violin at Hamburg University of Music and Drama. His studies, the rehearsals, the teaching: It's all hard work, says Nima. "But I'm no longer alone. If I have a problem, people are there."

It's a Tuesday evening in January and people are finishing work all over the city, but the day is nowhere near over at the Otto Hahn school in Jenfeld. This is where the Youngster Ensemble is rehearsing for The Young ClassX anniversary concert. A couple of children cross the brightly illuminated auditorium and climb on to the stage, where the choir director is passing out sheet music and giving a short pep talk: "Lots of people will be coming, but if you're standing at the front, just remember that all of them are having a great time. Because of you!" Some of the children giggle, but Angelina doesn't move. Dressed in jeans and a T-shirt, her brown curls pulled into a ponytail, she stands straight as a rod, her hands folded in front of her. She looks serious, even reverential, as the choir starts singing the first song. Then, almost imperceptibly, her arms begin to swing, her shoulders move back and forth, her knees loosen and she rocks from side to side. By the second song, her whole body is moving in time with the music, like a pendulum. Angelina laughs.

Singing is good for body and soul, according to the experts. It loosens the muscles and levels out stress hormones. You can observe this just by watching Angelina. She joined The Young ClassX in 2017, has sung in Hamburg's famous St. Michael's church, performed for the mayor at the town hall and worked with singer-songwriter Rolf Zuckowski. Doesn't she have stage fright? "Yeah, a little," she says, packing up after rehearsal, her cheeks still rosy from the singing, "But now I know what to do." She breathes deeply a few times, sings the words softly to herself so she doesn't forget them. Once, while singing a solo, she forgot some of the lines. "I just kept singing made-up English words and nobody noticed."

Angelina wasn't always this confident. Going into secondary school, she was extremely shy and full of self-doubt, she says. She didn't like being the centre of attention, even though all she ever wanted was to sing. She would have loved to have been given a solo, even back in primary school,

Nima no longer wants to be a star. He wants to pass on what he's learned: how to keep going when things get tough.

but she was never picked. And she was far too shy to put up her hand and volunteer. Her heart would be beating too fast and her inner voice asking too loudly: What will the others think? Am I even good enough?

Angelina is one of those children who looks calm and composed and grown up. Not a child that stands out, one you might easily overlook. But Angelina's teacher Maria Ludwig-Petersen, who leads the Youngster Ensemble and is co-head of The Young ClassX choir module, recognised the quiet girl's talent straight away. She persuaded Angelina to join her school choir and later, the Youngster Ensemble. "I would never have done it on my own," says Angelina. Sitting in the common room beside her mother, who'd been waiting for her there, Angelina doesn't look the least bit tired even though she got up at six, sat in school until 3.30pm and is now off to swimming lessons. Isn't her schedule a bit too full? Angelina hesitates, weighing her words: "Singing doesn't make me tired, it gives me new energy. I have to sing." Her mother can't figure out where Angelina's love of music comes from. "She's been singing for as long as I can remember, it was never quiet at home." It doesn't run in the family, she says. But naturally, she takes her child to choir practice in the evenings after work and kisses her on the cheek before every performance. "I can see what singing in the choir has done for her. She's much more easy-going and open."

"Singing doesn't make me tired, it gives me new energy."

So does she want to be a musician when she grows up? Such a typical grown-up question; Angelina smiles indulgently. Perhaps, but all she cares about right now is "the feeling" she has when she sings. And what's that feeling like? Angelina's eyes light up and her words come thick and fast: "Everything loosens up inside, I feel com-

The Youngster Ensemble is more than a choir for Angelina. It's a community where everyone's OK the way they are.

pletely free and all my worries disappear." Every once in a while, she starts singing without even noticing it. Like when she's having trouble with her homework, when her head is buzzing and her body needs to surrender control for just a minute. There's something magical about the way Angelina talks about singing. She's fully focused, as if electrified. And at the same time far away, as though the music were resounding in her thoughts.

Angelina's smartphone blinks to announce the arrival of a WhatsApp message. The Youngster Ensemble group has lots to discuss: When's the next rehearsal, which songs still need work? When you sing with The Young ClassX, you become part of a special community. The Youngster Ensemble in particular brings together children from different areas of Hamburg who would probably never meet otherwise. "In the beginning it was weird, but we soon made friends through the music. In a choir, everyone's OK the way they are," says Angelina, and you can tell that she's talking about herself as well. It's OK to be quiet and inhabit your own world. "Nobody laughs if you hit the wrong note. We help each other instead." These days, she volunteers for solos without hesitating for a moment. Knowing that others will notice her mistakes doesn't scare her any more. It makes her strong.

And then, weeks later, in February 2020, the big moment in the Laeiszhalle concert hall finally arrives, a mellow rendition of What a Feeling just before the finale. Angelina is quiet and composed again. Then her clear, velvety voice soars above the other voices, which merge into a quiet hum. In the orchestra, Nima picks up his violin, ready for the conductor's cue. The final note subsides and there they stand, the girl from Hamburg and the boy from Tehran. Angelina will throw herself into her mother's arms after the concert. Nima will think about his parents and send pictures.
This moment belongs to the two of them alone. They have both travelled far, crossing borders and boundaries. Here they stand, united by what they love: music. ●

THE YOUNG CLASSX

The initiators

The Young ClassX *universe is big and colourful. The youth music project co-sponsored by the Otto Group and the chamber ensemble Salut Salon introduces children and young people to classical music and supports their musical education, regardless of their social background. It offers free music lessons to those who wish to learn a musical instrument and sponsors school choirs around Hamburg. Exceptionally talented young people can join the Youngster Ensemble choir or the renowned Felix Mendelssohn Youth Orchestra. Over the past 11 years, the multiple-award-winning project consisting of four modules has supported around 30,000 children and young people in grades 5 to 13 at more than 100 schools. Then the pandemic struck, and for most of 2020, the possibilities for making music together were limited. Even so, by maintaining safe distances and meeting in small groups, the youth orchestra was able to continue rehearsing. School pupils and university students like Nima Asadollahi Ali, who teach children and young people to play an instrument on a voluntary basis, had to teach online some of the time. Individual school choirs could rehearse if the school had a room big enough and everyone followed the rules. Other choirs took a break, like the Youngster Ensemble where Angelina Alberg sings. No one working for* **The Young ClassX** *was furloughed. Alexander Birken, CEO of the Otto Group, who is also co-founder of* **The Young ClassX,** *was very clear at the beginning of the pandemic when he said: "Everybody keeps working, all the more so during a crisis." Behind the scenes, new concepts had to keep being developed, only to be discarded again and replaced with the next. In December,* **Sounds like X** *was launched – a digital stage for* **The Young ClassX** *featuring living room concerts, clips of actual performances and tutorials on how to tune a musical instrument. Music brings people together – even at a time like this.*

For more information go to:
www.theyoungclassx.de
You'll find concert dates and a video interview with Nima Asadollahi Ali

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Is this a good thing?

Bangladesh has held the world's attention since the Rana Plaza garment factory disaster. Is it ethically responsible to keep producing clothing here? What has changed in recent years? We asked five industry insiders for their opinion ...

Ashraf Ul Islam,
Senior Auditor, Astra Supply Chain Services, Dhaka. Among other things, he makes sure that factories comply with safety standards.

Michael Dumke,
CEO, Otto International, Hong Kong

Nazma Akter,
founder of the Sommilito Garments Sramik Federation, a garment workers union with 70,000 members, Dhaka

Photography:
GMB AKASH

Words:
HANS-HERMAN KLARE

Dhaka, Bangladesh, 24 April 2013, 8.45am. In Savar, about 25km northwest of the capital, a nine-storey building collapses, burying thousands of people beneath it. Rana Plaza houses a shopping centre, offices and garment factories. The day before, deep cracks appeared in the walls of the building. Shops and a bank remain closed as a result. Many garment workers are afraid of entering the premises that morning, but their bosses insist that they proceed to the upper-floor factories to start work at 8.30am. Fifteen minutes later, many of them are dead: 1,135 people lose their lives in the disaster and 2,438 are injured. Rana Plaza becomes a symbol of all that can go wrong in the garment industry. And the Rana Plaza catastrophe prompts the lasting improvements that have followed since.

Ashraf Ul Islam: I was just opening my laptop when I heard the news. It can't have been later than nine o'clock when it appeared as breaking news on the television. Shortly afterwards, the telephone rang. It was my mother asking: Where are you? Are you safe? I knew of people who worked nearby. When I phoned them, they told me it was like an earthquake.

Michael Dumke: I was here in my office in Hong Kong when I heard about it. Our local office in Bangladesh informed us immediately. Our first question was naturally: Is it one of the factories we work with? Fortunately, it wasn't. As the details emerged and we began to realize the scale of the catastrophe, our dismay grew. And with it a pressing need to address things within the company such as: How are the factories we cooperate with equipped? What condition are they in? And very soon, the crucial question arose: Should we continue producing in Bangladesh or go elsewhere instead? We discussed this with our headquarters in Hamburg, of course, and decided to stay. Leaving would have sent the wrong signal.

Nazma Akter: I left home the moment I heard about the disaster. On my way to Rana Plaza, I met people who said that at least 2,000 workers were buried beneath the rubble. When I arrived, I saw a man who'd lost a leg and many people lying on the ground, seriously injured or dead. We knew we had to do something.

Thea Hoffmann: I was still in China when I saw what happened on the news. It was awful. I phoned my colleague who was responsible for Bangladesh at the time. We obviously also talked about the effect this would have on our social compliance work.

Rubana Huq: I heard about it, saw what had happened on TV and drove there straight away. My telephone didn't stop ringing. Many were prepared to help. We gave people food and other things that they desperately needed.

On the morning of 24 April, just after the women sat down to start work on the upper factory floors, the power shut off. Massive generators kicked in. The building, which was never designed to hold hundreds of heavy garment-making machines, began to shake. Then it collapsed.

Rubana Huq: Before you take over a production building, you inspect it, look at how it's equipped and review the floor plan. You don't ask structural questions, you're not an engineer. But the owner of the Rana Plaza building ignored all of the warnings, even the large cracks in the walls.

Thea Hoffmann,
Director Global Quality and Compliance, Otto International, Hong Kong

Rubana Huq,
President, Bangladesh Garment Manufacturers and Exporters Association (BGMEA), Dhaka

"People who worked near the building told me: it was like an earthquake."

Ashraf Ul Islam

Michael Dumke: It wasn't a typical factory building that collapsed but a commercial one that accommodated shops and a bank, plus several floors of garment factories. It wasn't built to hold so much heavy machinery. For us, it was important to find out whether we were producing garments in similar buildings. To gain an initial overview, we immediately contacted our suppliers through our office in Dhaka. Shortly afterwards, we sent engineers over from Hong Kong to inspect our local production sites.

Ashraf Ul Islam: There's a lot we can monitor. And we were doing that even before the disaster at Rana Plaza. But it's also a matter of trusting the authorities. We've had regulations to deal with things like that in place since 2006. Most of the earlier laws dated from colonial times, before the garment industry existed.

Thea Hoffmann: At the time of the disaster, we had auditors in local factories checking compliance. They were mostly concerned with working conditions and incidences of child labour, not so much with the structural quality of the buildings. After Rana Plaza, we started thinking about and analysing the situation in factories in other countries that produce goods for the Otto Group. In China, for instance, the rules are much tighter and the oversight is stricter. China has lots of space and tends to build single-storey factories rather than several on top of each other like at Rana Plaza.

In the hours and days that followed, the rescuers consisted chiefly of neighbours and other workers who put themselves at great risk trying to free people from the rubble and searching for survivors. Many of them would later criticise the soldiers and professional rescue teams for not doing enough to help those whose moans and cries could still be heard.

Nazma Akter: We union leaders immediately sat down and began to arrange meetings with local people and the international community. We wanted to find out what had happened as quickly as possible. And we helped out by taking care of the donations.

Ashraf Ul Islam: We spent the following days glued to the television, watching the rescue efforts unfold. Every day, we saw bodies pulled out of the rubble, but also people who were still alive. If I remember correctly, they even found someone still alive after 17 days. Most of the people searching through the wreckage were local garment workers. They didn't have any training, they were just helping.

Five months before Rana Plaza, on 24 November 2012, a fire broke out in the Tazreen factory in the north of Dhaka. Unable to get out because the emergency doors were obstructed or locked, 112 people died and more than 200 were injured.

Nazma Akter: We were able to do a lot at Rana Plaza because we had started improving conditions in the garment industry after the fire in November. I knew from experience how bad things still were in many of the factories. When we protested the conditions, I was beaten by police and blacklisted. But even if Tazreen was only five months earlier, we couldn't have imagined that an entire building would collapse.

Ashraf Ul Islam: Sometimes, as evidently happened in Tazreen, there are misunderstandings between managers and workers. A fire alarm is triggered. Often, it's a false alarm. Managers aren't trained to evacuate people every time, false alarm or not. And then if the doors are blocked, it's a disaster waiting to happen.

Rubana Huq: The fire in Tazreen was terrible, no question. And Rana Plaza was worse. But Bangladesh isn't the only country where awful things like this occur. Nobody talks about that. >

In April 2013, while the rescuers were still recovering bodies, the protests started. Thousands of workers and their families marched through the streets of Dhaka, demanding better working conditions and punishment for those responsible. There was also rioting. Headlines around the world carried news of the disaster, and there were calls to boycott the companies that produced in Bangladesh. Even 8,000km away in London, protesters gathered in front of a Primark store to demand consequences.

Nazma Akter: People were absolutely furious here in Bangladesh. They were grieving for their loved ones. I joined the protests, expressed my outrage and gave television interviews. During one of the marches, I was hit by a rock and broke my leg.

Thea Hoffmann: I wasn't familiar with Bangladesh back then, but I can imagine how concerned the workers were about workplace safety after a catastrophe like that. We also reflected on what had happened, of course, and thought about how to improve things in the future. You have a responsibility when you produce goods in a country. But we in the Otto Group were already very involved with our manufacturers at the time and had an on-site team of social coordinators.

Rubana Huq: I could understand the international reactions and what people were feeling. We were in shock and grieving too. But it wouldn't be fair to only blame the manufacturers. We don't deny that we also made mistakes, and we have always been forthright with the big brands and the auditors. Bangladesh is primarily known as a garment industry hub and Rana Plaza was probably the result of low-cost production methods. We found it shameful that foreign firms were far more concerned about the possible damage to their image than about what had just happened.

Ashraf Ul Islam: The protests didn't surprise me. And the international response was justified. But I was afraid that our country's biggest industry would suffer. And with it, the entire nation. Many women work in the garment industry. They're usually poor, from the countryside, and they go to the city to support their families. This is empowering and strengthens their position in society. We already have enough poverty. The problem would only have got worse if the garment factories had been boycotted and closed.

Within days, the pressure increased for the Bangladesh government to do more than it had been doing. Politicians, delegates from the International Labour Organization (ILO), a specialised agency within the United Nations, representatives from international companies, union leaders and representatives from the garment industry convened. The result of their deliberations was the Accord on Fire and Building Safety in Bangladesh, an agreement concluded in May 2013 between global brands, manufacturers and trade unions to create and guarantee a safe, healthy garment industry. It was to be underpinned by regular, comprehensive inspections whose results would be publicised, democratically elected committees in the factories to address problems, as well as training programmes and funding to help pay for improvements at the production sites.

> ***"The problem would only have got worse if the garment factories had been closed."***
>
> Ashraf Ul Islam

In 2014, in an additional move in response to Rana Plaza and fatal garment factory accidents in Pakistan, the German Development Ministry launched the German Partnership for Sustainable Textiles, a multi-stakeholder initiative aimed at improving conditions across the textile and garment industries worldwide.

Nazma Akter: International pressure was crucial in order for things to happen. As a union, we participated in the talks. The Accord was a big step in the right direction. And I know what I'm talking about: my life in the garment industry began in 1986 when I was 11. My mother sat at the sewing machine and I was her assistant, bringing her fabric or taking it away. Sometimes I did that 14 hours a day, seven days a week. There were 800 people working on one floor, often in rear courtyards or sheds, they weren't actual factories. It was hot, crowded and poorly lit. Nobody could have cared less about safety. I have a sister and two brothers, our family needed the money. I worked there until I was about 18.

Ashraf Ul Islam: I began working for Astra in October 2013 after the Accord was finalised. Astra is a subsidiary of Otto International that monitors compliance with social standards in the garment industry. I received extra training to get me up to par and then we began our audits, i.e. checking that factories complied with the new rules. Increasingly, we show up at factories without giving them advance notice. Not even our driver knows where we're going until we get in the car. We keep an eye out for obvious violations, such as child labour or blocked emergency exits, but we're also interested in the state of the sanitary facilities or what overtime arrangements have been made.

Thea Hoffmann: In a situation like that, it feels good to have been with the Otto Group for so many years because the Group has always taken labour standards seriously and made sure they were complied with. Since Rana Plaza, we've been looking at various issues even more carefully and in greater detail. We were very involved with the Accord and how it came about, and have worked with factories to make sure they comply.

In autumn 2013, after Rana Plaza, the Otto Group didn't just spell out its requirements more clearly and step up inspections, it terminated contracts with two factories that failed to adhere to the agreement. Bangladesh is one of the Otto Group's main producers of textiles today. The Group collaborates with 45 factories.

Thea Hoffmann: There are different social standards that have to be adhered to. A zero tolerance rule applies to some of them, like child labour, for instance. If a manufacturer is unwilling to make the

Making garments in **Dhamrai, where working conditions are now regulated by the** Accord on Fire and Building Safety in Bangladesh.

basic changes needed to prevent children from working in its factories, we terminate the contract. We require factories to concern themselves with these children's schooling. And we check to make sure a child isn't sent back to work. In other areas, we require improvements within a set time frame and follow up.

Michael Dumke: Fundamental violations are immediately followed by a conversation with the factory owner, in which we insist that they be remedied and never reoccur. In other instances, we set deadlines and check that they've been adhered to. If not, our contractual agreement comes to an end.

Thea Hoffmann: There are two parts to the auditing process these days. Social auditing is done according to international standards and usually takes place once a year. On average, an audit is completed in a single working day, but it all depends on the size of the operation. An important part of the inspection process is visiting a factory unannounced. Two auditors drive to the factory on the list. One goes to the front door while the other stands guard at the back, just in case. We look at the personnel files and the payroll, walk through the factory and talk to the workers. If anything arouses their suspicion, the auditors carefully double-check. In addition, the factories are inspected by international, independent external auditing firms.

The auditors working for Otto International don't just inspect factories where the Otto Group procures its goods, they also perform audits for other international companies.

Michael Dumke: Factory owners have meanwhile developed a completely different awareness of the issues. At least the ones we work with. If a manufacturer refuses to cooperate, they can probably still work for Russian or Chinese customers or the local market.

There are about 5,000 garment manufacturers in Bangladesh. They employ some 4 million people. Not all the business owners are happy with the new standards, the inspections and the associated costs. Some of them dodge the rules by illegally employing subcontractors: a factory signs a contract with an international >

The Bangladesh garment industry

More than **5,000 companies** produce garments in Bangladesh. They employ over 4 million people, 80% of them women. The garment industry is one of the country's main economic sectors. The export volume stands at 80% and is valued at $40 billion. Since the beginning of the garment industry boom about 20 years ago, Bangladesh's share of global garment manufacturing has risen every year. Today it's the biggest garment manufacturer for the EU after China. Nearly all the big international brands produce clothing in Bangladesh, especially European companies such as **Adidas, H&M, Inditex (including Zara), Metro, Tchibo, C&A and the Otto Group.** Bengali Nobel Peace Prize winner Muhammad Yunus considers working conditions in Bangladesh very difficult and is critical of the low pay. Nevertheless, he's convinced that the garment industry offers women in Bangladesh a unique opportunity to free themselves from family constraints and escape poverty.

Safety standards are monitored by auditors who arrive at the factories unannounced. Ashraf Ul Islam, right, is one of them.

company and then uses a factory the company knows nothing about.

Rubana Huq: Subcontracting is no longer possible, we've achieved full transparency. Garment manufacturers can't hide if they want to export goods. Of the 1,955 manufacturers we're involved with, 1,450 are direct exporters. All of them adhere to the standards.

The minimum wage has doubled since Rana Plaza. It's now 8,000 taka a month, or nearly €78.

Ashraf Ul Islam: That's the starting salary. Experienced workers earn more. The average monthly wage today is probably over 10,000 taka.

Rubana Huq: We've created a mechanism in which the government raises the minimum wage. It's quadrupled over the past 11 years. If we look at the export price curve, it doesn't favour higher wages. And it doesn't cover the millions of dollars we've invested in safety standards and greener or cleaner production methods either. Covid-19 caused a massive drop in production and earnings. In an industry of 4 million workers, only 70,000 have been laid off since the outbreak of the pandemic and 40,000 of those have been rehired. But export prices have fallen 5% since last September.

Nazma Akter: We need wages that people can live on. Poor nutrition is a problem, especially among women in the garment industry. Clean drinking water is often scarce and sanitary facilities are inadequate. And what are mothers supposed to do with their children? Who takes care of them when the women have to work long hours just to be able to feed their families? Factory owners always say they can't pay more. But they're responsible for paying their workers enough to live on. International firms bear a responsibility here too.

Michael Dumke: The debate about a living wage – a minimum wage that's enough to live on – is very complex. Solving the problem isn't just a matter of companies paying higher wages, governments are also called upon to do their part. And not just in Bangladesh. Minimum wage increases have to be governed by legal provisions that define what a living wage is in that particular country and determine whether it can be achieved, regardless of the work in question. We're already doing something that might sound utterly banal to western ears: checking to see whether factory workers are actually being paid. Whether they receive their wages at the end of the month. This is important in the current crisis because many factories are receiving fewer orders and it goes without saying that workers shouldn't have to suffer because of that.

Employers in Bangladesh are complaining that improved safety standards and higher wages are creating higher costs and reducing the country's competitiveness on the international market. At the same time, they say, they're under immense pressure from international fashion companies to keep prices down.

Ashraf Ul Islam: That's where the big challenge lies. It costs a lot of money to install sprinkler systems, for instance. Still, I have the impression that many business owners understand that investing in safety precautions and better working conditions today will pay off in the future. Thanks to the Accord, we're probably applying stricter standards than

Although wages are low, **working in the factories can help** women escape poverty, says Nobel Peace Prize winner Muhammad Yunus.

those found in many factories around the world.

Michael Dumke: The main reason we went to Bangladesh initially was because of the price, of course. That's no longer the case. The articles produced there are elaborate. So we're also interested in the quality that Bangladesh produces.

Rubana Huq: We have to ensure the same standards for the entire production chain around the world. The absence of similar standards and the corresponding monitoring makes it difficult for us to remain competitive, and many leading manufacturers deny outsiders access to their premises. Headline news from Bangladesh is always negative. It seems like we're always the target, presumably because our economy is so dependent on the garment industry. That's definitely not fair.

Michael Dumke: My impression is that, in Bangladesh and India in particular, some suppliers take their responsibility very seriously. Others have certainly only bowed to the pressure because they'd have had to close otherwise. But the first group do what they do out of a sense of conviction.

"We need wages that people can live on."

Nazma Akter

In June 2020, the RMG Sustainability Council (RSC), a national organisation, took charge of the Accord's local operations in Bangladesh. Led by retailers, unions and members of the national garment industry, all of whom have an equal say, the RSC continues to create safe working conditions in line with the Accord.

Ashraf Ul Islam: The standards haven't changed – the RSC carries out fire safety, electrical and structural inspections just as before. We have a good setup on the ground and can monitor inspections with our own team. This is a big advantage for the Otto Group. But as in many other countries, we also have to deal with corruption. That's why having the Accord and international supervision is so important and so helpful.

Rubana Huq: Unlike the original Accord, the new committee has six of our producers on it. We're convinced that the garment industry should be part of it, because we're part of the intended reforms too. Instead of having rules and regulations imposed from above, the stakeholders are collaborating for the benefit of everybody involved.

Nazma Akter: I'm neither optimistic nor pessimistic right now, I'm just waiting to see what happens. Union work is still very difficult. But our government understands our concerns and wants to improve women's lives.

For non-government organisations (NGOs), a particular concern is that garment manufacturers will increasingly pressure the government to do less. Their argument: the garment industry is responsible for 80% of the country's exports, so manufacturers wield enormous influence. And the fear is that they will try to lower standards in the garment factories.

Rubana Huq: Our members are above reproach. Working with the Accord and Alliance for Bangladesh Worker Safety >

Union leader Nazma Akter (right) thinks a minimum wage of $200 a month would be fair.

over the past years, we've established a cooperation model and proven that it's successful. We manufacturers aren't an isolated group that only represents our own interests. International brands and trade unions are also part of the equation. If difficulties arise, we have to address them and remedy them together.

Michael Dumke: Right now, we're observing things as they unfold. I can understand the Bangladeshis when they say they're not just a developing country, there are certain things they can do on their own. And I can appreciate them asking why manufacturers in China, India or Turkey aren't held to the same standards. Some of the garment factories that we work with in Bangladesh are among the best in the world. They don't need to fear comparison with other countries.

Thea Hoffmann: We accompanied the inspectors from the new monitoring body on their first factory visits, and we had the feeling that the job is being done just as well as before. In a country like Bangladesh, there's always a chance that certain members of the garment industry will exert too much influence on the government. The Otto Group will continue to insist that the standards agreed to are upheld and will not lower its expectations. This is extremely important to us, and it goes without saying that we remain fully committed to working towards improvements.

Rubana Huq: We have to find a way to maintain standards without continuously raising costs. We have no problem with international companies sending us engineers, for instance, to help us in our efforts. We also want qualified local people to be involved. We're in a position to solve our own problems here in Bangladesh. We appreciate the international expertise and we're cooperating with organisations like the ILO, but we must overcome the mindset that says international experts are superior.

Corona poses big challenges in Bangladesh too, with contracts being cancelled and people losing their work. It's difficult to protect people from the virus in a poor country like Bangladesh, where there's very little testing for Covid-19 and nothing like a comprehensive vaccination campaign.

Ashraf Ul Islam: Of course everyone comes to work in the factories. What else are they supposed to do if they want to survive? We're working with the country's health services to create guidelines that will make the workplace safer. Incidentally, we're also trying to compile data on where infections are taking place. We're primarily interested in finding out whether there's been a big outbreak somewhere.

Nazma Akter: Many workers are being paid less because the companies are earning less. And workers who complain are still being threatened or arrested.

Michael Dumke: We're all stuck where we are, either here in Hong Kong or in Otto Group offices elsewhere in the world. The global textile industry has suffered from the worldwide lockdown. But you have to remember that in a country like Bangladesh, people view the coronavirus very differently. They have diseases like dengue fever. Many people work as day labourers to support their families. They can't afford to think about possible health risks. Of course Covid-19 is an issue and a risk, but it's viewed differently than in the west.

Rubana Huq: Orders are down 30% to 40%. Buyers are suspending payments.

Accord on Fire and Building Safety in Bangladesh

The unprecedented agreement between the international trade unions IndustriAll and Uniglobal and 200 international fashion companies was prompted by the tragic collapse of the **Rana Plaza building** in April 2013. The Accord's shared objective was to create sustainable working conditions in the garment industry. Each company, in cooperation with the Accord's management, obliges their suppliers to eliminate shortcomings in their factories. An **Accord body,** financed by the companies, was set up in Bangladesh to this end. Over the following years, it independently monitored safety conditions and other aspects in well over 1,000 garment factories.

In 2018, the agreement was replaced by a **Transition Accord** in preparation for a possible transfer of responsibility to a national monitoring body. In 2020, with the responsible parties in Bangladesh on board, a national **RMG Sustainability Council (RSC)** was founded, a joint body led by retailers, trade unions and, this time, the manufacturers themselves. The goal of the RSC is to continue the work and the achievements of the Accord long term and to implement an industry standard in Bangladesh in accordance with global safety criteria.

By the end of 2020, some **1,650 production** sites had been monitored by roughly **38,000 safety inspections.** More than 90% of the violations have been remedied to date. Nearly 600 factory safety committees and over 1.8 million workers have received training. The independent, confidential complaints system introduced has so far been used by 1,300 workers to report safety shortcomings or instances of discrimination.

The Otto Group has been a member of the Accord's steering committee since 2015 and is now also on the board of the RSC.

Right now, we don't know what will happen.

Thea Hoffmann: Suppliers have been under increasing pressure ever since the pandemic began. We have a good relationship with our local suppliers and they appreciate the benefits of a long-term business partnership. So particularly in difficult times like these, we're working together closely, focusing on the ways corona is affecting individual workers, supporting processes to protect them and suggesting measures that will reduce the risk of infection.

According to a World Bank study, many conditions for garment workers have improved since the Rana Plaza catastrophe, but not all and not everywhere.

"We will insist that the standards agreed to are upheld."

Thea Hoffmann

Ashraf Ul Islam: We still don't have regulations governing workplace accidents. Many workers complain that they aren't adequately protected if they fall ill or have an accident. That's why we'd like the ILO's Employment Injury Benefits Convention to apply here. Serious accidents can always occur. Once, many years ago, when a fire broke out at the factory where I was working, I had a lucky escape myself.

Nazma Akter: European and US companies should be paying fair prices. They're getting good quality for very little money, after all. If you ask me, the minimum wage should be $200 a month.

Michael Dumke: Some people are under the misconception that if an article of clothing costs a lot it means it was produced under favourable conditions. And that if you buy cheap clothing, you're partly responsible for the poor conditions in the factories. The truth is that a garment worker receives the same pay regardless of whom they're producing something for. So if you want to buy responsibly, you have to look carefully at what a company does. The Otto Group began getting involved with working conditions in manufacturing facilities 30 years ago. In Bangladesh too, we've contributed to improved standards at our suppliers' factories. We ceased doing business with two factories when that proved impossible.

Thea Hoffmann: Bangladesh's government ought to do a lot more. And it's up to consumers too. They're the ones who decide how much they're willing to spend on a pair of jeans or a T-shirt, and who they buy them from. If they shopped more conscientiously, for instance, and only chose brands that care about working conditions in the countries of production, it would have a positive impact. Consumers have to (re)gain respect for the manufacturing process and the product they're buying.

Rubana Huq: It all comes down to sustainability. And platforms like Better Buying are making an important contribution in that respect. They evaluate companies, publish reports and share them with everyone. If our national companies are expected to buy better cotton, make our suppliers transparent and make everything we do more visible, it can't just be a one-sided effort. International brands have to make their buying practices transparent too, as far as possible. And consumers have to stick together to make that happen.

Thea Hoffmann: We're working harder to increase supply chain transparency, in Bangladesh too. And at the very least, we want the standards of the past few years to be complied with and preferably improved wherever possible. In a country that's already suffering the effects of climate change – widespread flooding during the monsoon season, for instance – we have to concern ourselves with environmental factors as well. Where and how can we save energy? What happens to the wastewater? What dyes do our suppliers use? When it comes to issues like these, all the stakeholders in the supply chain have an important role to play. The government is also called upon to create a legal framework that supports improvements in environmental protection. ●

Photography:
AXEL MARTENS

Interview:
NINA HIMMER

“NO ONE CAN SAVE THE WORLD BY THEMSELVES”

The man rolling up his sleeves here is Dr Tobias Wollermann. He’s a musician, a physicist and the Otto Group’s new Chief Sustainability Officer. His task is to make the group of companies with its 52,000 employees more sustainable. Where does he start? And how does he resolve the conflict between profit motive and ethical consumption?

Wollermann believes consumers are ready for change. **In other words: they're prepared to pay more** for sustainable products.

Are you fond of The Four Seasons by Vivaldi?
Yes, very. Why?

The NDR Elbphilharmonie Orchestra has modernised the piece in an extraordinary way. It has reworked the score, incorporating current weather data to make climate change audible. Spring and Summer merge into each other more and Autumn and Winter reflect the rise in natural disasters by being played more fiercely. The passages reminiscent of birdsong have been deleted entirely to musically call attention to the extinction of species. What does climate change sound like to you?
As if the thunder is still a long way off. At least when I listen to the climate crisis with society's ears. I hear faint, billowing, gloomy sounds that slowly swell and soar and become more dominant, like a crescendo. You can sense the imminence, that we're moving towards a cymbal crash. It's a little bit like in a film when the music is suspenseful and full of foreboding: You know something is going to happen soon.

For more than a year now, you've been in a position to co-direct developments as chief sustainability officer of a global corporation. How does one get that kind of job?
I don't think there's a recipe. My longstanding predecessor was a historian and political scientist, whereas I studied music and physics. After that, my experience focused more on the academic and cultural spheres, albeit always at the interface with business. My connection with the Otto Group goes back many years to when I set up and managed The Young ClassX, their biggest arts project. It was a good way to get to know the company and the people who work there. But sustainability is in fact a new topic for me. When the offer came, I had to decide whether I wanted to strike out in an entirely new direction again. I was very attracted by the prospect of taking on responsibility in such a fundamental field where viewing things holistically plays an important role and the focus is on humans and nature. My previous work has taught me how to inspire people and get them excited about a particular subject.

Sustainability is a big concept, but one that frequently lacks substance. It's often sacrificed to profit in the end. So is your job ultimately a thankless one?
The concept is in fact very difficult to pin down, but most of all, it's extremely complex because, fundamentally, it's about balancing values against economic viability. You have to fill it with life, take it seriously and be consistent in your thinking. Some companies, for instance, claim climate neutrality when they are actually just buying their way out with carbon-offset certificates. Claims like that are counterproductive, of course, and create confusion for consumers. Avoiding or reducing emissions is far more effective and should be the primary goal. But it's expensive. I'm convinced that sustainability is a real concern for the majority of people. It's a core issue of our time and a catalyst for new, circular business models. These will be crucial, since we have gone beyond our planet's limits and our natural resources are coming to an end. Companies that fail to commit to sustainability will not survive. I think turning a profit will increasingly become linked to sustainable business practices. For me, speeding up this development is a meaningful and gratifying task.

How exactly are you doing that?
By affirming our tradition. We've reduced CO_2 emissions at our locations and in connection with transport by more than 50% since 2006 and boosted the share of sustainably produced cotton in our own products to nearly 100%. So we're not jumping on the bandwagon – quite the opposite, in fact. We're one of the pioneers of sustainable business practices. That's why our companies attract so many young people: they want to work for us because they're convinced by our commitment.
Second, by setting ourselves measurable, publicly verifiable goals. The Group and its companies are currently undergoing a fundamental transformation initiated and supported by our new sustainability strategy, which covers seven areas: Climate Protection, Supply Chain, Materials, Circularity, Employees, Consumers and Digital Responsibility. Long-term goals such as full climate neutrality by 2030, for >

Bio
Dr Tobias Wollermann

Dr Tobias Wollermann was born in 1975. He studied music and physics at Osnabrück University and plays the piano, clarinet and saxophone. So far, most of his professional life has been spent imparting knowledge. After graduating, he joined the ***Center for Information Management and Virtual Teaching virtUOS****, where he integrated innovative technologies into teaching methods and worked in the Research Department of Music & Media Technology. Later, he switched to the Popakademie Baden-Württemberg.*
He first came into contact with the ***Otto Group*** *in 2008 when he was director of* ***The Young ClassX*** *youth music project. In 2020, he became head of the Otto Group's Corporate Responsibility division. As an active committee member of the Partnership for Sustainable Textiles and the Foreign Trade Association of German Retailers (AVE), he is involved in developing sustainable solutions for the entire industry. But for Dr Wollermann, life wouldn't be complete without music: he is chairman of the music committee of the Association of Arts and Culture of the German Economy and on the board of The Young ClassX association and the European Union Youth Orchestra Foundation.*

“SUSTAINABILITY HAS TO BE PART OF ALL OF OUR PROCESSES, IT HAS TO PERMEATE EVERY DEPARTMENT.”

instance, and short-term goals like, say, using 100% green energy at all of our locations, have been established for each area.
Third, by encouraging our employees to participate. Sustainability has to be part of all of our processes, it has to permeate every department and become an integral aspect of our daily work, from executive level all the way to trainees. To help us on this journey, our shareholders have created a vision for the entire Otto Group: Responsible Commerce That Inspires. We will help to fill it with life by implementing our Code of Ethics, a navigation tool reflective of the beliefs that we developed jointly with many of our colleagues and with which we intend to join the discourse. It's particularly important to me for all of our roughly 52,000 employees to be involved in a constructive way and to ask the right questions: Do we treat our suppliers fairly? Can we use less water when dyeing our textiles? You can't shy away from uncomfortable conversations if you want to change something.

What's the most painful part of this change?
The part where economic viability and sustainability collide. If, for instance, you want to introduce climate-neutral shipping, you have to ask yourself whether you're prepared to shoulder the additional costs? What do they add up to when you're talking about millions of shipments? How will that affect the bottom line? Or say you want to invest more in second-hand fashion but there isn't much demand yet. It might be several years before customers accept sustainable business models in some areas.
Sustainability is very expensive initially. And it nearly always involves long-term investments with no immediate return. But if you weigh up the risks and opportunities and factor the ecological and social impacts within the supply chain into the price as real costs, the decision to switch to sustainable business practices shouldn't actually be too difficult.
It takes courage and perseverance and you can't stop halfway and say: Let's not do this any more. But you also have to be able to recognise unfeasible ideas. The purpose of a company is and always has been to make money, otherwise none of your noble goals will come to anything.

The trend report on ethical consumption recently published by the Otto Group paints quite a rosy picture.
It certainly does! The study shows that consumer attitudes have changed fundamentally. For 70% of Germans, ethical criteria are now an essential part of their purchasing decision. When buying a product, 60% would consider bearing part of the cost of its impact on the environment and climate change. And over 80% want to make the leap from a throw-away society to a circular economy. The coronavirus crisis is actually helping to fuel this change because of the brutal way it has exposed business relationships and dependencies.

But a trend isn't necessarily a turnaround …
You can't disregard the say-do gap in surveys, naturally: people will agree to something on paper but make a different decision in front of the shelf in a shop. I'm still confident that we can take advantage of the current momentum in society, and that it has potential for a genuine paradigm shift.

The study also indicates that many people would like to consume less. That's good news for the planet, but is it good for business?
It depends how you define business. We also want to move away from a take-make-waste mentality and towards quality-driven, circular business practices. It's very important to us to ensure that the goods we trade comply with sustainable criteria. At the same time, we're focusing on new types of rental, sharing and subscription models. We're testing many new business models and ideas. Bonprix is currently developing cradle-to-cradle certified products with two of its suppliers that are scheduled to launch this year; About You is trading in used clothing, Manufactum is focusing on durable products that can be repaired and Limango is involved in a pilot project in connection with the circular economy. We're also testing various ecological approaches to production, such as water-free dyeing methods for our textile products or fibres that don't have to end their lives as insulation material or cleaning rags but can be used to make new clothing.

If I go shopping at Otto.de, I still see a lot of products that are neither ecologically nor fairly produced.
Hold on! All of the goods we sell have to meet certain social and environmental requirements. It's true that we haven't reached our goal yet by any means, but we're getting there. The Otto Group is a very large, heterogeneous conglomerate and, as such, faces particular challenges: 30 major groups of companies – among them OTTO, Hermes, Bonprix, MyToys, Witt, Baur, Manufactum – belong to the Group, as well as roughly 100 online shops. We would be further along if we only had our own brands, but we also sell our partners' products, which complicates things. Here too, we're pushing for more sustainability. And if you don't limit yourself to scratching the surface, things get particularly challenging. Supply chains are a good example. A refrigerator involves around 50 different producers, for instance, whereas our contractual relationship is with a single business partner. It's a similar story with textiles. Our business partner produces them at a final production factory, but they're dyed, printed and fitted with zippers elsewhere. What are the conditions there? Monitoring an entire supply chain, including pre-suppliers, and recording and analysing all the environmental and labour-related data, is a challenge. Especially as the industry standards for each area aren't

The **change is most painful** at the point where economic viability and sustainability collide.

"THE CURRENT MOMENTUM HAS POTENTIAL FOR A GENUINE PARADIGM SHIFT."

uniform. This is certainly something that still needs work, and we're putting a great deal of effort into finding industry-wide solutions that don't overwhelm our suppliers and are as effective as possible. This is something we are quite happy to communicate because our main objective is transparency and credibility.

Speaking of credibility: a year ago, German climate activist Luisa Neubauer was offered a job by Siemens, which she turned down. Would the Otto Group have fared as badly?
We're lucky to have many ecologically aware, super-smart young people working for the Group, including many women. We've been dealing with the topics of sustainability, ecology and the environment for more than 30 years, so we have a long tradition on which to build, shored up by facts, figures and KPIs (Key Performance Indicators).

The Fridays for Future activists are demanding stricter climate protection laws. You, on the other hand, once said: "Governments should motivate people and companies rather than treating them like children." Is saving the world really something we should leave up to companies?
No one can save the world by themselves, not even companies. We've had good experiences with alliances and initiatives made up of people from industry, civil society and politics. We co-founded the Brussels-based BSC Initiative, we're active members of Germany's Partnership for Sustainable Textiles and we're a signatory to the Accord on Fire and Building Safety in Bangladesh. We're also involved with the Cotton made in Africa initiative through our Aid by Trade Foundation and within the framework of Foundation 2° – German Businesses for Climate Protection, which was co-founded by Prof Dr Otto. These alliances are often more effective than government regulation because industries know their own processes best and government regulation results in a lot of bureaucratic hurdles. But we naturally also need statutory provisions to create an equal playing field for all participants in the market. These shouldn't be limited to Germany, either. In short, we need global solutions. Anything else is doomed to fail.

Would your 14-year-old self have taken to the streets with the Fridays for Future movement?
Definitely.

And now for the litmus test: Do you practice what you preach with regard to sustainable living?
It's more a Greta test these days, isn't it? Since I took the job, lots of people have been wondering: Will this guy live by the same standards he sets for the company? I've certainly been trying to for many years, using green energy and public transport, not travelling by plane within Germany, buying food that's in season and grown regionally, mostly from farm shops and at farmers' markets. I'm definitely not a fashion junkie either, just ask my wife!

I'd rather ask her if there's anything else you could be doing.
I can tell you that myself: I could eat less meat and fish or pay more attention to the quality and source of everyday products. And then there's the matter of my company car. At least it has an electric vehicle number plate …

Although that's not exactly uncontroversial, is it?
Electric cars are just a step along the way. But an important one, because the main thing is to leave the combustion engine behind. Five years from now, chances are that something else will be leading the way. Hydrogen, for instance. The automotive industry is in a test and experimentation phase just like the rest of us. Some things will catch on, others won't. But first you need the courage to just go ahead and do it. ●

For more on the Otto Group's commitment to sustainability go to:
www.ottogroup.com/en

Open up the laptop, **discover a new world.** All approx. 52,000 employees are to take part in the TechUcation programme.

A date with Elon Musk

For many people, the leap into the digital age can seem frightening at first. And that's hardly surprising: how's it all supposed to work? Blockchain? Artificial intelligence? Thanks to a revolutionary learning initiative, the employees of the Otto Group aren't just getting acquainted with the digital future in a clever, human-centric way, they're also being invited to play a role in shaping that future. So what's the thinking behind it? Read on ...

Illustrations:
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It's an early Monday afternoon in February 2020 when Andreas Schaffarczyk encounters Elon Musk for the first time. Schaffarczyk works at the Hückelhoven logistics centre, a Hermes parcel hub with a 300-strong workforce not far from the German-Dutch border where more than 65 million packages are sent on their way every year. A native of the area, Schaffarczyk is a keen amateur golfer and cycling enthusiast and has tattoos of a skull and crossbones, billiard balls and the date when he met his wife on his forearms. At the logistics centre, he's responsible for sealing the standard freight containers known as swap bodies; he's also a member of the Works Council and has just become a father again. Even so, today the 51-year-old is making time to listen to the founder of PayPal and Tesla. After all, says Schaffarczyk, "Musk has achieved a lot in life; I'm sure I can learn something from what he has to tell me."

And he's right: on this Monday afternoon, Schaffarczyk hears how the exceptional entrepreneur is reimagining entire industries. He learns what disruption means and what Elon Musk understands by it and why you should tackle stagnating sectors if you really want to change something. Once the founder of multiple companies has taken his leave, Schaffarczyk makes a few notes. Then he closes his laptop, reaches for his handheld scanner and sets to work: he's on late shift today.

A great many encounters like the one between Andreas Schaffarczyk and Elon Musk took place in the Otto Group last year. They're part of a comprehensive lifelong learning initiative by the name of TechUcation, which the Group has launched with the aim of taking itself and its workforce on an express journey into the digital age. A journey which, if all goes well, will result in curiosity and enthusiasm rather than fatigue and disenchantment. But that's not all: the initiative is aimed at the entire workforce, from warehouse workers all the way to the Executive Board. It involves nothing less than a complete digital update for a group of companies that's worth billions and has approx. 52,000 employees in more than 30 countries across the globe. And if Susanne Kertelge is to be believed, it's the only way forward.

Logistics centre worker **Andreas Schaffarczyk** was interested, but sceptical too. Today he says the learning programme was simply "amazing".

Susanne Kertelge, Corporate Responsibility Lead Society, was convinced that it's essential to include all employees in the digital change process.

"Over the last few years we've repeatedly asked ourselves: As an organisation, are we really capable of reacting fast enough and changing sufficiently to actively shape the digital transformation?" says the Otto Group's Corporate Responsibility Lead Society. "If not: How do we go about shaping a cultural change that challenges and encourages us to rethink the ways we work and behave? And above all: How can we make sure we really do take all colleagues along with us on this journey?"

A lot of companies are asking themselves similar questions right now. The answers tend to be sobering. Although 90% of the German business world sees digitalisation as positive across the board, the majority nevertheless rates their own company's digital transformation status as, at best, satisfactory. Many feel the same way about digitalisation >

as they might about a tooth that needs filling: they know they really ought to do something about it, but they're pretty sure it's going to hurt. So they put it off for as long as they possibly can. And that only makes things worse.

For Thomas Ramge, that's hardly surprising. "There are quite a few individual and organisational obstacles to be overcome before companies can really digitalise," says the expert on artificial intelligence and former fellow at the Weizenbaum Institute, a German collaborative project that investigates all aspects of digital change. One of those obstacles, he adds, is the poor usability of many IT applications, which continues to cause a great deal of frustration and resistance among users. At the same time, the additional value delivered by digital solutions is often not sufficiently clear to the individual employee. And top managers who vehemently demand a "digital mindset" but still insist on having their emails printed out can be a hindrance too, says Ramge. "But more than anything else," he emphasises, "digitalisation calls for a culture based on dismantling hierarchies and sharing information. It's impossible to achieve digital change without cultural change."

And because that's the way it is, the Otto Group comes to the decision to prescribe this learning programme across the group and make it obligatory for every employee. It's been developed together with Masterplan.com, a startup from Bochum, Germany, that's just two years old at the time. Masterplan's core product is an online learning platform where, based on the principle of the famous TED Talks, experts explain a wide range of aspects connected with the working environment in professionally produced videos – from how to launch a startup and online retail methods all the way to the basics of programming. In total, the Masterplan curriculum contains about 180 hours of concentrated expertise; the Otto Group can select the topics that

TechUcation expert **Christopher Werner** hopes the programme will strengthen employees' "self-learning skills".

are the most relevant for its employees and supplement them with up-to-date content and themes specific to the Otto Group at any time.

In early September 2018, the retail and services group launched the TechUcation pilot phase with 400 participants. Andreas Schaffarczyk is one of them. The Works Council representative is a go-getting individual with wide-ranging interests who feels drawn to topics like New Work, labour law and conflict resolution techniques. But he's not what you'd call a digital native. "In my old firm, people like me were called lusers," laughs the 51-year-old. "It's a combination of user and loser – basically anyone who can't get their head round digital technologies. And that's precisely why I thought I ought to be one of the people who try TechUcation out for us."

And so, sitting in his Works Council office one spring day in 2019, Andreas

He used to be considered a "luser". Now he's training to become a learning coach for his colleagues.

Schaffarczyk opens his laptop and enters his password. His first attempt to log on to the Masterplan site fails ("My first thought was: See, you're just too stupid!"), but the second time he's successful. Schaffarczyk is impressed: instead of the dry PowerPoint presentation he'd been expecting, he finds a highly diverse group of experts waiting to take him on a lively guided tour through the digitalisation jungle. Boring? No way! The content on offer? Amazing! The biggest eye-opener? "The realisation that, nowadays, knowledge really is available any time, any place. And that every one of us has to learn how to navigate this ocean of information."

At the Otto Group headquarters, that's precisely the effect the TechUcation organisers have been hoping for. As part of the internal Learning Experience Team, Christopher Werner and his colleagues are the driving force behind the group-wide digital learning initiative. He talks about the "profound cultural change" and "key premises" that his company has committed to. One of those premises is "learning is productive". At first glance, that might sound pretty self-evident. But in practice, it means that Otto Group employees are explicitly expected to take the basic TechUcation course during work time – a decision that costs the Group a "mere" 10 x 52,000 working hours – and that doesn't even include the costs associated with the organisation and technical implementation of the initiative. "Self-learning skills" are another of the premises. In Christopher Werner's words: "We want each of our employees to be able to find out for themselves what they need in order to still be able to perform their job well two to three years from now. What our company needs is a common starting point from which to embark on our digital future. Everybody should have an idea of what things like blockchain and artificial intelligence are. And every colleague should be given the chance to understand the opportunities that digital business models entail. That's what TechUcation is all about."

The programme includes 180 hours of learning videos. Andreas Schaffarczyk is mainly interested in labour law and New Work. The new knowledge can be accessed from anywhere.

Susanne Kertelge, whose remit includes Digital Responsibility in the Otto Group, is already looking further ahead. Beyond TechUcation, what can the Otto Group do in terms of digital education, for instance, and the future of work? When it comes to the big questions associated with digitalisation, it actually goes without saying that we need close collaboration and joint action in conjunction with other stakeholder groups in society. In the "Initiative ZukunftsWerte", for instance, representatives of the Otto Group get together with decision-makers, doers and thinkers from business, science, politics and civil society to discuss how organisations and stakeholders can shoulder their digital responsibility for society and shape the digital transformation in a value-oriented way – preferably together. Why not make valuable experiences with digital learning available to others, for instance? Why not encourage teachers to adopt a digital mindset in a similar way – e.g. with specially produced learning videos? In fact, Kertelge's colleagues are currently conducting talks with Hamburg's education authority on that very subject.

As for the Otto Group itself, approx. 60% of active white-collar users in Germany, Austria and Switzerland had already completed the basic digitalisation course by the turn of 2020/21. At the same time, however, there are still some employees who haven't logged into the programme yet, despite having access. "Obviously we have our sceptics," says Andreas Schaffarczyk, "but I always tell them: Now you've got the chance to find out what it can do for you. And you even get to do it during work hours."

Schaffarczyk himself finished his 10-hour basic course some time ago, thereby automatically gaining access to the learning platform's entire offering. This second level is far more extensive and a completely voluntary option that employees can use on an independent and self-organised basis. Now, whenever Andreas Schaffarczyk logs on to TechUcation, an intelligent learning algorithm suggests courses that might be relevant for him. Learning hacks help him translate what he's learned into his day-to-day work, coordinate with colleagues, learn more efficiently and try out ideas.

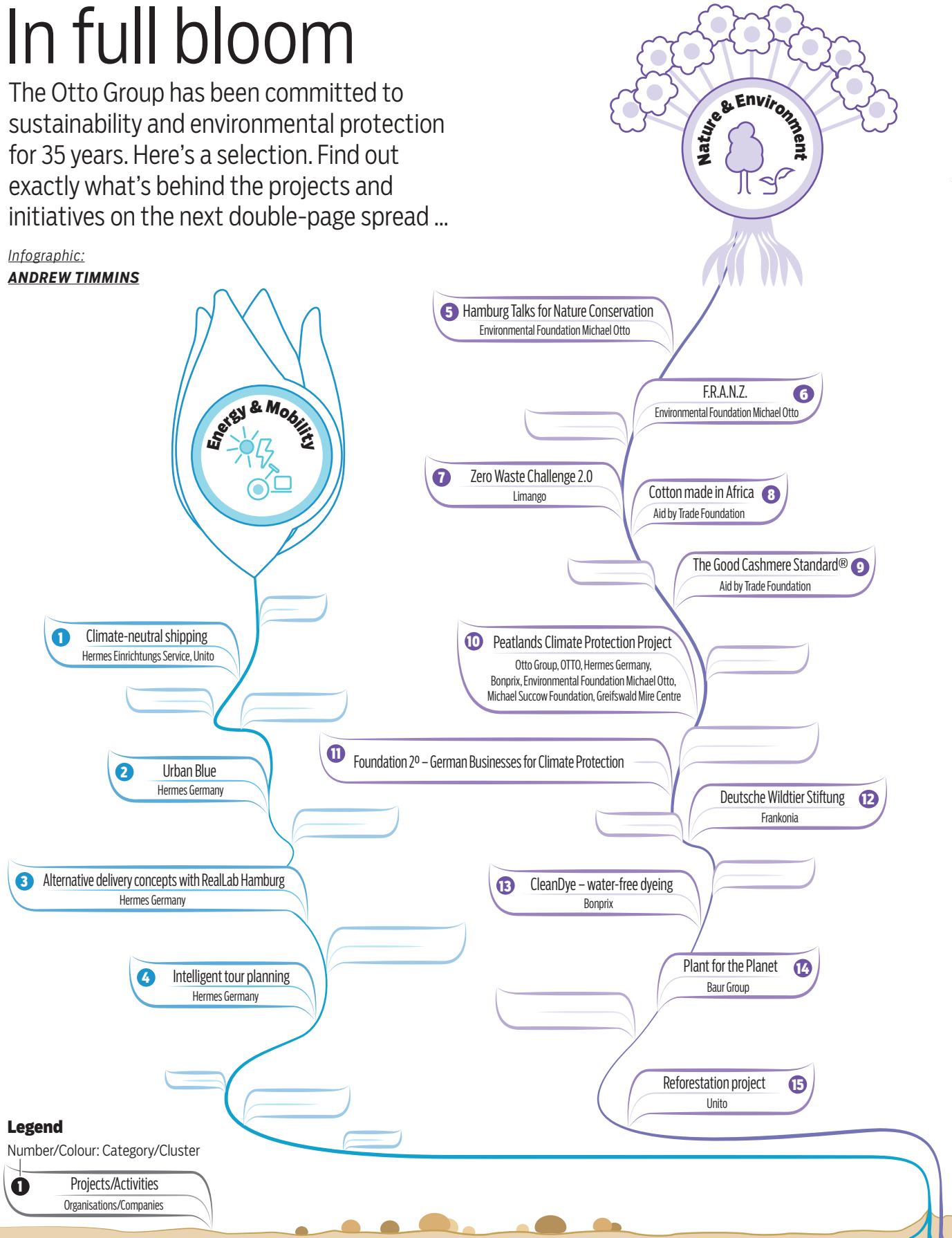
He doesn't actually have much time for that, however, because right now he's also taking part in a programme to become an Otto Group Learning Coach – a colleague who helps other colleagues learn. Parallel to that and in conjunction with an interdisciplinary, cross-hierarchy and cross-company team, he's preparing an adapted TechUcation programme for the Otto Group's almost 10,000 blue-collar employees, who include his colleagues at the logistics centre. That's quite a challenge, because up until recently many of those colleagues had neither a laptop nor a work email address, which you need to log on to the platform. And it's already clear that the learning videos need to be produced with subtitles in Turkish, French and other languages to ensure that every driver, every warehouse worker and every dispatcher understands their content. Multilingual resources also make sense because the rollout for the Group's international employees is scheduled for late 2021. The aim is for all Otto Group employees to have completed the TechUcation curriculum by the end of next year.

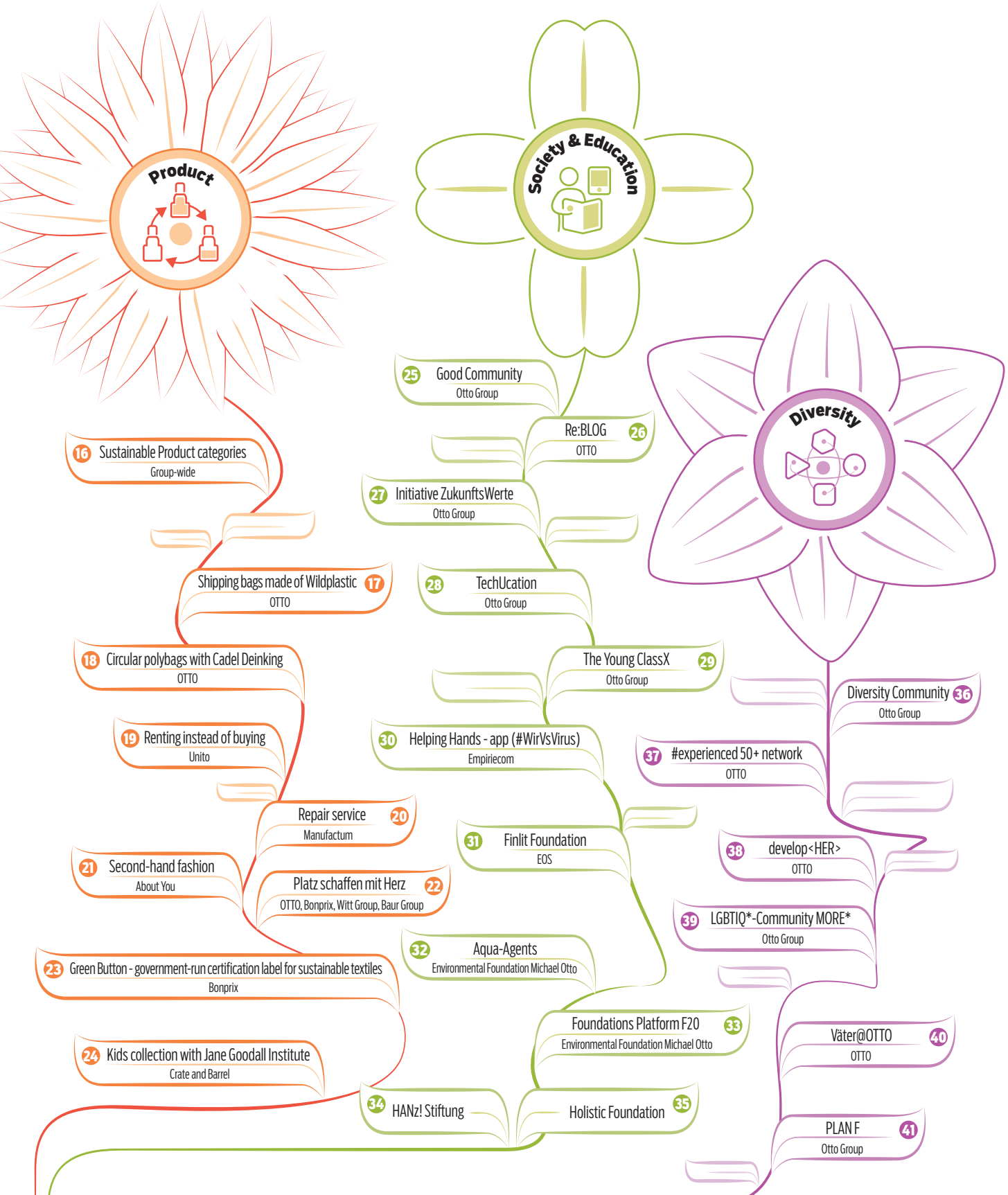
For Schaffarczyk, it's clear that this can only be the beginning. "Now we have the tools to join in and have a say when digital topics come up. Now it's a question of turning learning into doing." He's planning to have concrete discussions about just that with colleagues at other logistics centres. There are a few things that could be improved in terms of the handheld scanners used at the logistics centres, for instance, as well as the logistics software. Schaffarczyk has a few ideas ... ●

In full bloom

The Otto Group has been committed to sustainability and environmental protection for 35 years. Here's a selection. Find out exactly what's behind the projects and initiatives on the next double-page spread ...

Infographic:
ANDREW TIMMINS

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ENERGY & MOBILITY

1. Climate-neutral shipping

The Hermes Einrichtungs Service offers its consignors complete CO_2 offsetting for the emissions resulting from transport. The emissions are offset by supporting selected climate protection projects in Costa Rica, Mali and Malawi. The Unito Group also offers CO_2-neutral delivery for all brands.

2. Urban Blue

Making inner-city areas greener and cleaner – that's the goal of the Urban Blue sustainability initiative by Hermes Germany. The programme for e-mobility and alternative, emission-free drive technologies and delivery concepts has set itself the target of zero-emission deliveries in Germany's 80 biggest inner-city areas by 2025. First and foremost, Hermes is focusing on electrically powered and alternative delivery.

3. Alternative delivery concepts with RealLab Hamburg

In a partner project with RealLab Hamburg, Hermes and other parcel logistics companies are testing a micro depot for goods logistics with the aim of reducing inner-city traffic and emissions. Parcels are temporarily stored at the micro depot before being delivered to customers with cargo bikes.

4. Intelligent tour planning

Together with startup Graphmaster, Hermes Germany has introduced a new, fully digital tour planning system for parcel deliveries. The heart of the software is an intelligent navigation system based on learning algorithms, with the capability to create customised route adjustments even before a traffic jam develops.

NATURE & ENVIRONMENT

5. Hamburg Talks for Nature Conservation

Since 2004, the Environmental Foundation Michael Otto has been organising the Hamburg Talks for Nature Conservation and bringing representatives from science, business, civil society and politics together around the same table. The aim is to stimulate social debate on important environmental issues, raise awareness of nature conservation concerns and develop solution strategies.

6. F.R.A.N.Z.

Biodiversity is an important basis for intact ecosystems and therefore also for agriculture. However, growing global demand for agricultural products is often inconsistent with the preservation of species diversity. The F.R.A.N.Z. dialogue and demonstration project aims to resolve this conflict by trialling nature protection measures that can be integrated with farming practices.

7. Zero Waste Challenge 2.0

Organised into small teams, Limango employees avoid generating packaging waste with their lunchtime meals for a period of two weeks. The purchase and preparation of the food are documented and posted, and participants receive information, tips and tricks about zero waste during their two-week "shift".

8. Cotton made in Africa

Cotton made in Africa (CmiA) is an internationally recognised standard for sustainable cotton from Africa. Since being founded by Prof Dr Otto in 2005, CmiA has been committed both to protecting the environment and to improving living and working conditions for small farmers and ginnery employees.

9. The Good Cashmere Standard®

The Good Cashmere Standard® is an independent standard for sustainable cashmere launched by the Aid by Trade Foundation. It aims to improve the welfare of the cashmere goats, the lives of the farmers and their communities and the environment in which they live.

10. Peatlands Climate Protection Project

Peatlands sequester twice as much CO_2 as all the world's forests together. The Otto Group has joined a cooperation with partners from the fields of science and nature conservation to promote the restoration of German and European peatlands. Besides linking climate protection, nature conservation and biodiversity measures, the project also proposes methods for the permanent fixation of CO_2 in peatlands.

11. Foundation 2° - German Businesses for Climate Protection

Foundation 2° was initiated in 2012 by Prof Dr Otto and prominent German business leaders who are committed to ambitious climate protection. The Foundation is named after its most important goal: limiting average global warming to well below 2 degrees celsius.

12. Deutsche Wildtier Stiftung

In support of the Deutsche Wildtier Stiftung (German Wild Animal Foundation), Frankonia sponsors projects for the protection of indigenous wild animals, including rescuing fawns and protecting chamois and wild bees.

13. CleanDye – water-free dyeing

As part of an innovation joint venture, Bonprix has built a factory in Vietnam that uses the world's first-ever water- and process chemicals-free textile dyeing technology. Called DyeCoo, it replaces water with carbon dioxide, 95% of which is recycled once the process is completed. This saves approx. 25 litres of water per T-shirt.

14. Plant for the Planet

The Baur Group trainees, who are known as the B.our Team, have created a sustainable cotton bag; a tree is planted in the region for every bag sold.

15. Reforestation project

With its Universal brand, the Unito Group is running a reforestation project with a high degree of customer participation: a tree is planted for every particularly energy-efficient household appliance sold. More than 55,000 saplings have been planted in the almost 10 years since the project began.

PRODUCT

16. Sustainable Product categories

Shopping sustainably should be as easy as possible. That's why our companies identify sustainable products as such in their online shops, for example with the Sustainable label from OTTO, Sheego Cares from Sheego or Sustainable Product in the case of Bonprix.

17. Shipping bags made of Wildplastic

OTTO has entered into a cooperation with Hamburg startup Wildplastic. The company collects wild plastic from the oceans off of Haiti, Nigeria or India. In future, OTTO's shipping bags will be made out of this material. The collectors are paid fair wages that give them the prospect of a better life.

18. Circular polybags with Cadel Deinking

Together with Spanish startup Cadel Deinking, OTTO is testing how a closed loop for used plastic can be established at its returns-processing facilities in order to produce recycled polybags for shipping.

19. Renting instead of buying

Thanks to a cooperation with startup Grover, customers of the OTTO, Universal and Quelle brands in Austria can rent selected tech products instead of buying them. With the sharing concept, Unito gives everybody the option of taking a more responsible approach to resources.

20. Repair service

For more than 30 years, Manufactum has been offering an alternative to the throwaway mentality by selling environmentally and socially responsible products that are worth keeping and looking after. And should anything actually break, customers can have the products repaired and the parts replaced.

21. Second-hand fashion

Launched in late 2020, the Second Love range gives About You customers the option of shopping for used clothing. That's in tune with the zeitgeist and helps the environment.

22. Platz schaffen mit Herz

Do good by donating a parcel full of clothes – that's the idea behind "Platz schaffen mit Herz".

Every parcel donated supports a non-profit organisation, and all the clothes donated either find a new home or enter the recycling loop.

23. Green Button – government-run certification label for sustainable textiles

It should be as easy as possible for customers to consume sustainably. The German government's Green Button label provides reliable orientation and is used for products such as the Bonprix baby collection.

24. Kids collection mit Jane Goodall Institute

US Group company Crate and Barrel is collaborating with the Jane Goodall Institute, a global conservation organisation. The result: a kids collection of furniture and toys that aims to spark children's curiosity about the animal kingdom and adventures in the natural world.

SOCIETY & EDUCATION

25. Good Community

Whether it's upcycling tips, information about the Climate Strategy or new approaches for the circular economy: in the Good Community, Otto Group employees discuss and exchange ideas on how we can make our world more sustainable and look for supporters for worthy causes.

26. Re:BLOG

OTTO's sustainability blog gives customers wide-ranging insights into the various dimensions of sustainability – from travel to food, from fashion to DIY.

27. Initiative ZukunftsWerte

With its "Initiative ZukunftsWerte", the Otto Group wants to actively shape a framework for a value-oriented digital transformation in close collaboration with other players from business, science, politics and civil society and move forward together – from talking to doing.

28. TechUcation

The group-wide continuing education initiative by the name of TechUcation aims to give the Otto Group's approx. 52,000 employees a comprehensive understanding of digitalisation and spark their enthusiasm for lifelong learning – independently of hierarchies, age or which division they work in. The initiative is based on a self-learning approach and is completed during work time.

29. The Young ClassX

The initiative by the Otto Group and the Salut Salon chamber ensemble enables children and youngsters to immerse themselves in the world of music. They might find themselves in the spotlight as a singer or musician, can find out what it means to discover their voice or learn an instrument, and will very definitely embark on a journey that inspires their imagination and teaches them about themselves.

30. Helping Hands –app (#WirVsVirus)

Initiated as part of the German government's #WirVsVirus hackathon in March 2020, the Helping Hands team, consisting of Empiriecom employees, volunteered to develop a free neighbourhood support app. It brings people who need help with their shopping together with neighbours who are willing to lend a hand.

31. Finlit Foundation

With the Finlit Foundation, EOS aims to improve young people's financial literacy and prevent them from getting heavily into debt. The first initiative, which goes by the name of ManoMoneta, focuses on children aged 9 to 13. ManoMoneta partners with schools and teachers to raise students' awareness of just how important it is to handle money responsibly.

32. Aqua-Agents

An educational programme that provides a fun and intriguing opportunity for children in grades 3 and 4 to explore the diversity and importance of water for humans, nature and the economy while encouraging them to have the self-confidence to ask questions, find answers and develop solutions as part of a team.

33. Foundations Platform F20

More than 45 foundations from 12 countries have come together to create the Foundations 20 platform, an alliance that calls for more climate protection and a global renewable energy revolution. The goal: the implementation of Agenda 2030, climate protection projects and the expansion of renewable energies.

34. HANz! Foundation

The Hamburg training network HANz! is an initiative that supports and sponsors youngsters from difficult circumstances and helps them get started in working life. The initiative conducts a close dialogue with the young people to identify their interests and strengths.

35. Holistic Foundation

The Holistic Foundation was established by Benjamin and Janina Lin Otto in 2018 with the goal of collaborating with numerous partners to support the development of new solutions for a common future. The focus is on holistic solution strategies in the fields of learning, wellbeing, vocation and the environment.

DIVERSITY

36. Diversity Community

The Otto Group Diversity Community aims to give more importance to diversity and inclusion across the entire Group and take a broad-based view of diversity in every respect, with the focus very much on the "Charta der Vielfalt", a corporate initiative to promote diversity in companies and institutions. The Community strengthens existing networks and seeks an exchange with other initiatives, decision-makers and authorities beyond the boundaries of the Group.

37. #experienced 50+ network

#experienced is a network for experienced employees that aims to make the 50+ generation and its potential more visible and promote intergenerational exchange. The network raises awareness of future demographic developments and points out what ought to change in society and the corporate world.

38. develop<HER>

develop<HER> is a series of events by the female business network PLAN F. The goal is to give women access to the tech world, break down barriers and identify potential. But the events aren't only aimed at the company's female employees: they're open to any woman interested, regardless of her professional background.

39. LGBTIQ*-Community MORE*

MORE* is the Otto Group's queer network and is committed to safeguarding the interests of the LGBTIQ* community (lesbian, gay, bisexual, transsexual, intersexual, queer, nonbinary) and promoting an unbiased attitude to sexual identity. The network helps create and uphold "safe places" for LGBTIQ* people in Otto Group branches across the globe and to position the Otto Group as clearly pro-diversity and anti-discrimination – both internally and externally.

40. Väter@OTTO

Väter@OTTO is an open platform that gives fathers the opportunity to swap their experience and knowledge within the Group. The goal is to play an active paternal role that permits intense involvement with the development of children and the family.

41. PLAN F

PLAN F is the Otto Group's Fe*Male network and has set itself the goals of achieving equal opportunity at all levels of the company and enabling women to develop their full potential for sustainable corporate success. PLAN F makes a valuable contribution towards overcoming systemic and cultural obstacles at OTTO and in the Otto Group.

In addition to the projects listed here, the Otto Group is also active in numerous alliances, memberships and organisations. They include Save the Children, the CDR Initiative of the Federal Ministry of Justice and Consumer Protection, Fashion for Good, Fashion Industry Charter for Climate Action, Social Accountability International, Sustainable Apparel Coalition, Partnership for Sustainable Textiles, Handelsverband Deutschland, B.A.U.M., amfori BSCI, Bangladesh Accord, Textile Exchange, Fur Free Retailer, Forest Stewardship Council, Value Balancing Alliance, World Future Council etc. ●

Sarah's JOURNEY

A piece of furniture has already come a long way by the time it reaches the proud owner's home. The FSC® label aims to make that journey more transparent. We accompanied a little bathroom cabinet by the name of "Sarah" – from the forest where the wood comes from all the way to the logistics centre.

Forester Axel Freude with his working dog in Duisburg City Forest. This is where Sarah's journey begins …

Photography:
JONAS WRESCH

Words:
ODA ALBERS

An ivy-clad birch has been marked in neon pink. Forester Axel Freude taps on the trunk: "It will be felled soon. And then it might end up as a 'Sarah.'"

Axel Freude and Stefan Jeschke are foresters in Duisburg City Forest. Jeschke is in charge of the northern part, his colleague Axel Freude is responsible for the southern section. The entire 1,500 hectare area is certified with the FSC® label for responsible forest management. That means the trees growing here can be turned into FSC-certified furniture, provided the entire production chain, or the chain of custody as it's known in the trade, is verified as clean by external auditors. Then, later, the label will be displayed on the product. Perhaps on the "Sarah" cabinet made by W. Schildmeyer, a furniture producer in Bad Oeynhausen, Germany. We want to track and understand "Sarah's" certified sustainable production chain: from the tree in Duisburg City Forest to the wood chip suppliers north and south of it, from there to the particle board producer in an industrial park in Gütersloh, then on to the medium-sized furniture company, and finally to the parcel that Hermes delivers to the customer's doorstep. It will turn out to be a journey full of surprises, on which we encounter everything that makes the current debate about sustainable furniture so intriguing.

But first things first: FSC? What does that actually mean? The FSC label is issued by the international non-profit organisation of the same name; FSC stands for Forest Stewardship Council®. It was founded by environmentalists in 1993 in order to protect the world's forest ecosystems by implementing environmental and social standards (see box). The NGO's strapline says it all: Forests For All Forever.

The requirements for certified forest management alone are numerous: 10 key principles that apply across the globe and 70 criteria, enough to fill 55 pages of A4. And further conditions are attached to the label itself and the production chain. But what makes an FSC forest differ- >

ent than any other? Can you actually see the difference? "Definitely," says forester Axel Freude. Accompanied by his working dog and his colleague Stefan Jeschke, he's showing us around his territory. Mixed woodland surrounds six big lakes. The autumn foliage is so thin that we can see a sandy beach, play equipment and changing rooms. A public pool in an FSC forest? Is that environmental protection? Jeschke grins. "Yes, the indigenous people of Duisburg have rights too, you know." And it's a fact: the label requirements cover the needs of the local population as well. The forest has to be accessible to people.

Then Jeschke's face becomes more serious: "We're worried about those beeches over there. They can't cope with climate change: their bark is cracking, they're dying. And the spruce stands have almost been destroyed. After the hot, dry summers of 2018 and 2019, the damage was already the worst that's been seen since World War II. And then 2020 was much too dry as well. The damage to the trees is really dramatic."

Jeschke explains that this is not an isolated case: "There's so much timber lying around in Germany right now that if you put the log trucks end to end they'd go round the world three times – and it's only getting worse." The reforestation that's now required is designed to promote biodiversity, which means no monocultures. And preferably indigenous species, according to the label criteria. But you have to see which species are actually able to cope with the changing climate, says Jeschke. Maybe the black walnut, the common walnut, the robinia.

Part of the FSC forest isn't allowed to be managed at all: "It's left totally untouched," Freude explains. That applies to 5% of the total area – in Duisburg it's actually 7%. "And even in the managed areas, as you can see here," says Jeschke, pointing to a fresh tree stump in the middle of the forest, "only individual trees are taken out, there's no clear-cutting of entire areas."

Jeschke turns towards an old beech: "And this is what's called a biotope tree. That means trees that are partially hollow or have deep knotholes where bats can live. Or trees with rotten branches that provide a habitat for beetles." The FSC rules state that a certain number of those trees have to remain in place as well. FSC-compliant forest management means being kind to parts of the forest too.

But how is it possible to build a new piece of wooden furniture while still being kind to the forest? By using by-products from the timber industry and using the tree multiple times – that's the solution the Sarah model is based on: all the furniture Schildmeyer produces is made of particle board that contains both freshly cut and recycled chips from reclaimed wood. Cascading is the technical term for multiple use of a raw material – in this case wood. The tree is meant to be kept in the economic system for as long as possible in order to be used sustainably: a first life as a solid wood door, then years or decades later a second and third life as chips in particle board before eventually being turned into heating fuel.

The log yard at the Pieper sawmill in Olsberg. The wood chips produced here will later be turned into particle board. The Reiling recycling centre just a few kilometres away also produces wood chips – although in this case, out of discarded and broken up furniture. A conveyor belt takes the ground up wood away.

It's then **transported to the particle board factory** by truck. If the doors are opened so much as a crack, the wood billows out in a dust-like

That's precisely the kind of recycled wood the Reiling company produces. Located in the Bönen industrial park to the northwest of Duisburg, its factory specialises in processing reclaimed wood. The facility is right next to the A2 autobahn. The roar of the traffic mixes with the noise of the delivery trucks and shredders. It's raining cats and dogs. Reclaimed wood is piled up in tall heaps that tower 7 metres into the air. Surrounded by pallets, a slatted bed base juts into the grey sky, broken ladders are thrown on top of discarded highchairs. The things we all throw away. "In the past, most of it ended up at the dump, but nowadays recycling means that even a particle board gets a second life," says facility manager Amela Keranovic.

Recycling yards and companies from the surrounding area unload their reclaimed wood on Reiling – graded into different categories: A1 and A2 are for non-toxic items – fruit crates, huge wooden cable drums, kitchen worktops or long-span shelving – that can be recycled into furniture or for housing construction. The rest is disposed of or processed into shavings that are used to fuel combined heat and power plants – including the company's own.

Isabell Pieper, junior director of the sawmill. Many trees have died due to the lack of rain and there's more wood than required.

In order to recover the material for particle boards out of rubbish, the reclaimed wood is first chopped into pieces measuring 20-30cm, after which a magnet extracts any screws, hinges or fittings. Then a conveyor belt brings the wood up to the sorting cabin, where three employees remove any impurities that the magnet couldn't deal with by hand – coatings, plastic, bits of carpet. "Only then is it ready for the mill – the heart of our facility," explains Keranovic. "It's ground into different >

At the **Pfleiderer company,** the wood chips are dried in a huge rotary drum, as if in a massive hairdryer. The boards are cut to size by cabinetmaking company Schildmeyer.

sizes – coarse chips for heating fuel, fine ones for particle board." The belt clatters on across the yard and drops the chips into the warehouse, where the mountains of raw material await collection beneath a high metal roof. The particle boards that the Sarah cabinet will eventually be made out of contain 40% reclaimed wood and 60% virgin material.

The virgin wood chips are produced by the Pieper Holz sawmill in Olsberg automatically, so to speak – as a by-product of its timber processing operations. The family-run company is located in idyllic surroundings in the Hochsauerland district of North Rhine-Westphalia, between half-timbered houses, rolling hills and spruce forests. Even from a distance, you can see the rows of stacked trunks on the snowy slope: the log yard. But the apparent idyll is deceptive. "We've just expanded the yard because we've got so much timber – way too much, in fact," explains Isabell Pieper, the boss of the sawmill. "The trees have fallen victim to the drought and the bark beetles. And now, after the third dry summer in a row, our landscape has changed dramatically: there are entire hillsides with no trees left standing. And entire

You can't compare FSC particle board to an organic egg. It's impossible to determine the wood's exact origins

hillsides where they're still standing but have already turned brown – they're totally infested with beetles." Those trees will soon be felled too, stacked in the log yard and then processed in the state-of-the-art sawmill: every trunk will be scanned and the cutting pattern digitally optimised. Under the saws there are conveyor belts that catch the falling chips in big sieves and transport them to the warehouse. The mountains of chippings look similar to the mountains of recycled chips at the Reiling faculty, just slightly lighter in colour. And they smell of fresh wood.

Pieper is a third-generation family business. Its practices are ecologically and socially sustainable – a photovoltaic system, its own combined heat and power plant, e-bikes for the staff. Even so, the company decided against FSC certification and is certified for a different sustainable wood label instead.

"FSC is virtually impossible here in the Sauerland. The monoculture spruce forests come in for a lot of criticism from FSC – rightly so, but previous generations didn't plant them for fun: the mixed forest was cut down after World War II as reparation payments," says Pieper Senior. Back then, spruce seemed like the solution – it grew quickly and provided the timber that Germany so urgently needed for its post-war recovery. "We've been working sustainably for generations, but a forest isn't like grain – you can't change what you grow completely from one harvest to the next. And anyway: try telling a farmer to leave 5% of their land unused." (For more on that topic, read our story about the F.R.A.N.Z. project on p. 12.)

There's something else that annoys Pieper Senior about the FSC system: "Timber from plantations in Latin America or the primeval forests of Russia gets the label and makes its way onto the German market. Yet our forest owners and companies that have been working sustainably for years are slapped with countless conditions and audits."

Pieper isn't alone with his criticism. Even Greenpeace, which co-founded FSC, ended its membership in April 2018

The decorative finishes that will give the cabinet its look later on are selected. To make sure all the parts fit together correctly, the cabinetmaker mills a groove into the wood.

because the FSC allowed the industrial clearing of primeval forests in Russia and the Congo Basin and certified the timber. But even so, as forest expert Dr Christoph Thies of Greenpeace explained at the time, the FSC is "still the only credible label for ecological forest management".

Even without the FSC label, Pieper supplies FSC-certified particle board manufacturer Pfleiderer in Gütersloh. Or the Pfleiderer Group to be more precise, one of the biggest particle board producers in Europe. So will there end up being non-certified virgin wood chips in the little Sarah cabinet? And won't that break the chain of custody, or CoC for short? Carsten Möser-Benz, head wood buyer at Pfleiderer, shakes his head. "No, the CoC is clean."

For one thing, the wood from Pieper complies with the criteria for classification as "Controlled Wood" and therefore the minimum requirements of the FSC label, even though the company itself isn't certified. And for another, there are two different methods for guaranteeing the clean flow of goods necessary for the label.

The first is physical segregation: certified and non-certified wood are processed and marketed in strict separation. Möser-Benz points through his office window to the rotary drum dryer in the huge industrial plant beyond; as tall as a house, it sends clouds of steam into the sky as it dries the chips. About 500 trucks full of wood come here every week, the factory produces 600 particle boards an hour. "The plant runs non-stop, seven days a week. We can't just stop it for a moment, give it a quick clean and then pour FSC wood into the hoppers. In our case, physical separation just isn't feasible, and it doesn't make ecological sense either."

The second option is what's known as the mass balance system. "And that has to be 100% transparent and accurate. If I buy 50 tonnes of FSC wood, I'm only allowed to sell exactly the corresponding amount of FSC-certified particle boards."

With this method, he continues, it would be wrong to think of the FSC particle board like an organic egg: taken by itself, the concrete object is not the result of a purely ecological production process. The mass balance system works more like the green power principle: if you buy green power, you're still supporting alternative energies even though you get the same power mix as everybody else out of your wall sockets rather than 100% alternative electricity. And in the same way, the FSC label means that the purchase promotes sustainable forest management, without the product itself having to originate from 100% FSC-certified forests or timber companies. What's more, Pfleiderer doesn't just have to document its wood purchases and outgoing goods, it also has to undergo an FSC audit at least once a year.

From an economic perspective, implementing the numerous FSC requirements is difficult, says Möser-Benz. But couldn't that be resolved in conjunction with the FSC? After all, the label is meant to take the relevant economic aspects into consideration as well. Möser-Benz thinks about that for a moment. "Yes, that's true. But it's important to remember that the FSC was originally founded by environmentalists. To this day, there's often a consensus among those who represent social and ecological interests, which means the business and industry representatives are outvoted." That's one of the reasons why another sustainable wood label originated in Europe in 1999, he explains: the PEFC (Programme for the Endorsement of Forest Certification), which was founded by the timber industry itself. That's the programme Pieper >

Furniture producer Schildmeyer packs the individual parts of the Sarah cabinet ready for shipping. So when will it be put together? Not today: the construction kit takes up much less space on its journey to the customer than the assembled cabinet would.

is part of. PEFC requires less monitoring and administration and allows businesses to have a bigger say.

This is precisely the area of tension in which the FSC furniture product Sarah is produced – between the conflicting priorities of business and ecology, of operating in the black and meeting green goals. Behind Carsten Möser-Benz's office, virgin and recycled wood chips from all sorts of forests and all sorts of reclaimed wood are on their way into the production plant. This is where the particle boards are actually made – on a non-stop production line: first, the chips are mixed with glue, scattered onto a forming belt and pressed into a mat. At this stage, the mat is about 8cm high, soft and airy. Then, using pressure and heat, the airy mat is compressed into a rigid continuous sheet – the finished particle board. The sheet is then cut into 5-metre lengths. Once it's cooled and sanded, the surfaces can be finished with veneers or laminates.

Plant 2, where the laminating takes place, is a three-minute drive away. It smells like the wood department at a DIY store. This is where the boards used to make Sarah get their decorative finish: a thin, brittle-looking paper. A machine quietly sucks the paper in and lifts it gently over the board. The temperature and pressure alone are enough to bond the two together. After about 30 seconds, the particle board begins to look like a proper furniture board. Later, on the website, the colour will be described as "mint". Suddenly, the Sarah cabinet seems surprisingly tangible and easy to imagine. Now the boards just have to be sawn and put together. Right?

That will happen about 60km further north: set between fields, houses and small businesses, the W. Schildmeyer company in Bad Oeynhausen uses the boards it sources from Pfleiderer to make bathroom furniture, coat racks and cabinets like Sarah.

Uwe Löhr, the company's sustainability officer, leads us past the production lines: precision-sawing really is the first step, then the edges are sealed and the holes for the fittings pre-drilled.

The workshop is on the next floor down. Suddenly, for the first time since the forest, it's quiet. Not a machine to be heard. Just a lone cabinetmaker checking the construction of a new prototype, a little office cabinet. Is this where Sarah is put together too? "No," says an amused Löhr, shaking his head, "we don't assemble furniture here at all any more." What? A cabinetmaker that doesn't make cabinets? Nowadays, explains Löhr, modern furniture makers are more like logistics companies. "And anyway, it wouldn't be sustainable to send Sarah to retailers fully built: that would mean more freight space, more packaging, more CO2"

The pinpoint precision of those logistics becomes clear when we visit Site 2 in Porta Westfalica, where the furniture parts are sorted onto the shelves of the high-bay warehouse. "Everything's digitalised. Only the computer knows what's where," says Löhr. The parts aren't gathered together until a customer clicks on Sarah to place an order. The company cuts and builds the packaging boxes itself: besides reducing the amount of cardboard and polystyrene used, that cuts down on freight space too. The construction kit, complete with instructions, is packed on mobile tables. We never got to see the Sarah cabinet in its entirety, and now it's disappearing again. The box is stuck down. Labelled. Done. A bit of a shame, but sustainable.

One thing is clear: Sarah is an upcycling product that's been optimised through and through. But is a piece of particle board furniture really more sustainable than something made of untreated, solid wood that lasts for decades? Yes, says Löhr. Modern particle board has nothing to do with the poor reputation of its 1980s predecessor. The glues are toxin-free. "And anyway, today's customers don't use their furniture for decades any more; on average, they only keep it for five to 10 years and then get rid of it," says Löhr. "It's a lot more resource-friendly to make a product like this out of wood scraps and recycled wood than out of solid virgin wood."

In part, the short lifespan of today's furniture is a consequence of our mobile society. But it also stems from

From the Hermes logistics centre in Langenhagen near Hanover, **Sarah – safe inside its flatpack** – makes its way to customers throughout Germany.

people's desire to furnish their homes in contemporary style at affordable prices. "What we can do," says Löhr, "is to make sure the furniture we produce for that market is made as sustainably as possible and guarantee its recyclability."

Ideally, after using Sarah for years, the customer will bring the cabinet to the recycling centre, from where it will go to a company like Reiling that turns the old wood into chips again. And who knows: maybe Sarah will end up as Sarah again.

The FSC certification is a challenge for the family-run Schildmeyer company too. It means upholding social standards for all 170 employees – the same wages for men and women, the organisation of a works council, occupational safety measures. Then there are the annual audits and the transparent documentation required for all goods flows. "One to two extra full-time jobs," says Löhr, estimating the additional staff needed to deal with the admin alone. Even so, he firmly believes that this is the right way to go: "Both politically and among customers, there's a growing desire for sustainability and transparency – and only the FSC label can communicate that credibly," says Löhr. "Particle board furniture containing reclaimed wood will play an increasingly important role," he adds. "There's too much timber on the market right now; it's being sold abroad and there'll be a shortage on the German market later on. As the climate changes and the clean energy transformation progresses, the raw material will become increasingly precious and scarce." Because there's less wood but more people interested in it, like the owners of pellet heating systems, for instance.

At the end of the strictly monitored CoC, Sarah leaves the furniture factory in a truck container. Every workday, in the early afternoon, the parcel is picked up and driven along the autobahn to the Hermes logistics centre, the hub in Langenhagen near Hanover.

There, in a huge hangar, the parcels are circling on a conveyor belt six metres above the ground. Most of them are for the steadily growing online trade.

From here, Sarah will travel to Hamburg, Bonn or the Wendland region. And from there, the parcel courier will bring the cabinet straight to us. To the customers. To its human users. Both to those who might not have even noticed the FSC label when they made their purchase, and to those who appreciate it, even if they don't always know exactly what it means – for the companies, the timber industry, the foresters, the forest – and our climate. ●

What's behind FSC®?

After the international Earth Summit in Rio de Janeiro in 1992, environmentalists were not satisfied with the results of the conference regarding forest protection – which is why they founded the Forest Stewardship Council®, or FSC for short. Its goal: to protect the world's forests for the long term while guaranteeing that wood is used in environmentally appropriate ways.

The Council is organised into three chambers with equal rights and powers: the environmental, social and economic chambers. They represent the interests of environmentalists, indigenous peoples and employees, companies and forest owners.

Today the international NGO is headquartered in Bonn and has over 800 members – associations, social sector organisations, unions, companies and private individuals.

FSC Germany *(Verein für verantwortungsvolle Waldwirtschaft e.V.) is based in Freiburg; its 219 members (as of January 2021) include independent environmental organisations like the* **WWF, BUND and NABU**, *forest owners and trade unions, but also companies like DIY chain* **Hornbach** *and, since 2006, the* **Otto Group.**

One of the goals of the Otto Group's Corporate Responsibility Strategy is to ensure that, by 2025, the furniture products of all its own and licensed brands, as well as those of strategically relevant third-party brands, are FSC-certified. In addition, the Group aims to keep increasing the share of FSC-certified paper it uses while simultaneously reducing the total volume of paper. In order to make all this possible, the Otto Group has been engaged in a stakeholder dialogue with FSC since 2018. This involves the Group advising furniture suppliers on switching to more ecological production practices and promoting the increased availability of FSC-certified wood. And how can a customer recognise wood and paper that meet all these standards? Certified products made of sustainable timber or paper carry the FSC label: three black letters under the outline of a tree.

Further information: www.fsc.org

For more on sustainability at OTTO, go to: www.otto.de/unternehmen/en/what-motivates-us/sustainability

The end of a long journey. And this is what Sarah looks like when it's built ...

Photo: OTTO

Photography:
AXEL MARTENS

Interview:
FÉLICE GRITTI

"CONSUMPTION? THAT'S NOT THE PROBLEM"

If everybody consumes less we'll have less packaging and not so many mountains of cardboard. Environmental problem solved? Nope, faulty thinking, says Michael Braungart, a chemist and one of the world's foremost packaging experts. In future, boxes, bags and packaging all have to be useful and not troublesome, says Braungart. He himself, incidentally, has never bought new packing material in order to send a parcel. And if he wants to send a book? That's easy ...


FLUR
Focus box

Mr Braungart, when you send a parcel, how do you pack it?
I use whatever materials I have at home, secure the parcel with some PVC-free tape and off it goes. I've never bought new packing material for something I want to send.

I doubt many people could say the same. According to the most recent figures published by the German Environment Agency UBA, the volume of packaging waste in Germany reached record heights in 2018, partly because people are increasingly shopping online. Last summer, Der Grüne Punkt (the German Green Dot waste collection system) reported an average increase of 10% in the packaging waste collected in yellow bins during the first few months of the pandemic, while in December, the Federation of the German Waste, Water and Raw Materials Management Industry reported a nearly 6% increase in packaging waste in 2020. Is the problem as serious as it sounds?
Yes, but only because most packaging materials aren't designed to be recycled. There are roughly 70 different types of plastic on the market and about 4,800 additives, auxiliary substances and pigments. This makes it almost impossible to recycle anything properly: it's down-cycling. And you can't do anything with the materials after that.

Paper, plastic, metal? **It doesn't matter, as long as the packaging can be recycled.**

Why not?
Because you have no idea what's in the recycled material. It ends up containing a cocktail of different additives that make it brittle. It's always inferior to the material you started out with. Perhaps it can be used to build noise barriers, but very often, it's not even worth incinerating. Filtering out the harmful substances is so expensive that the overall balance would be negative.

What about paper or cardboard? Not every product is packed in plastic.
Ordinary paper and cardboard aren't designed to be recycled either. In Germany, a printed product, like a magazine, still contains about 50 toxic substances that mean it can't be composted: print chemicals, coatings and surface sealants. The paper recycling process turns these substances into slurry, which is subsequently used in cardboard boxes as a filler. It makes them stronger – and impossible to compost.

You developed the cradle-to-cradle principle, which promises a world without waste. What would a cardboard box be like in a world like that?
It would have to start with a different way of producing paper. All the additives would have to be biodegradable. Then it's okay for the resulting slurry to be used as filler. After all, cradle to cradle means that everything stays within a biological or technical cycle: things that are durable, i.e. that don't change chemically, physically or biologically, remain in the technosphere as reusable materials. But things that degrade are returned to the biosphere. That includes paper, since cellulose molecule chains shrink with every usage. It's not possible to use paper for the same purpose more than seven or eight times. After that, it has to return to the biosphere. But to do so, it has to be biodegradable.

That sounds pretty complicated. You're saying biodegradable consumables would be composted in the biosphere to become reusable nutrients, whereas durable, non-biodegradable materials would circulate in the technosphere and be recycled by human hand: So what exactly would be the ideal packaging?
There's no one-size-fits-all solution. You always have to ask yourself this: What am I packing? The answer will be different every time.

For instance? If you were an online retailer, how would you package a book for shipping?
Assuming all harmful substances are ultimately eliminated from the paper production process, I would use old newspaper. It would be perfect, because books only require minimum protection. Then, eventually, the newspaper could enter the biosphere.

What about a T-shirt?
A good way to package textiles is with textiles: they're pretty impact-resistant anyway because they're soft. All you need then is outer packaging, and I would make that out of something that can be used to make something else later on. I call that "designing for reincarnation": when you factor a product's "next life" into the design from the start. >

Photo: Volodymyr Hryshchenko/ Unsplash.com

Bio

Dr Michael Braungart

Braungart is a chemist and process technician. But most importantly of all, he's ***Scientific Managing Director of EPEA*** *– an international environmental research and consulting institute based in Hamburg. Since its foundation in 1987, Braungart has been focusing on developing "eco-effective products", i.e. products that are harmful to neither humans nor the environment, but are instead a useful part of a cycle and can be reused again and again. Braungart developed this circular concept, which is also known as the cradle-to-cradle principle, with his research partner, architect William McDonough.*

"IT'S ABOUT INNOVATION, QUALITY AND BEAUTY."

Newspapers make good packing material**.** And good compost. Everything has to be recyclable.

We aren't going to be able to pack everything in newspaper and scraps of fabric. What type of plastic packaging do you recommend?
With plastics, it's important to use monomaterials to prevent downcycling. Nylon is ideal for packaging: it's a synthetic material that can be endlessly recycled and used for many different purposes. Nylon can be reconstituted without a measurable loss of material, so it's perfect for the technosphere. Already, there are plastics being made for the biosphere that are fully biodegradable. You can produce good plastic using PET made from starch or sugar or even expired cow's milk. I would also use metal packing material to a far greater extent.

Metal? For what kind of product?
Anything that needs to be protected well. Metal can be reused endlessly in the technosphere too – at least if the coating contains so few harmful substances that the metal can be recovered without too much effort.

To sum up: according to your vision, there's an appropriate packing material for every product, whether it's metal, textiles, plastic or old newspaper. And nothing would end up as waste because every type of packaging could be fully recycled, either because it's biodegradable or because it can be recovered and reused without any loss of quality. Correct?
Absolutely. The most important thing is knowing what's in the materials. Then we won't have any waste**.**

Wait a moment, you're saying that to avoid waste entirely, every material in the technosphere has to be used a first and a second time, then a third and a fourth – how is that supposed to work? It would require countless material streams and cycles.
Each piece of packaging, without exception, would have to be part of a deposit return system for both bricks-and-mortar and online retail. You would only get the deposit back if you returned the packaging to the retailer or to a reverse vending machine.

But that won't move the packaging along to the next stage of it's life.
That's where digitalisation comes in. You have to make the packaging, the material streams, trackable. That's the only way to make using the best quality material worthwhile, because you'll be certain of being able to reuse it. Every piece of packaging would require a marker of some kind that could be read by an infrared scanner, like a fingerprint, telling you what the packaging is composed of, what its characteristics are. This information would be processed at the point where the packaging is returned and entered into a database.

And then?
Then the industry could identify which material is available where and what's needed. Say a particular online retailer in a rural area of Brandenburg has a specific amount of packing material with specific characteristics that allow it to be shredded, for instance, and used as insulation. That kind of information would be welcomed with open arms. Or going back to nylon: it can be used in all kinds of different ways, such as the production of carpeting. It would be marvellous for carpet manufacturers if packaging were made of nylon.

But only if nothing else has been added to it?
Exactly. The packaging has to be such high quality that the material can enter the next stage of its life without degradation and without too much expense and effort – and it has to be clear exactly what's in it. It could then be reused again and again and not end up as waste. It's vital to understand that the packaging has a value of its own.

Forgive me, but the logistics sound incredibly complex. Wouldn't it be exorbitantly expensive?
Quite the contrary! It would mean huge savings in resources. The packaging wouldn't just be made of

Photo: Wherda Arsianto/ Unsplash.com

cradle-to-cradle material, it would be unbeatably cheap and, at the same time, better quality than the packing materials available today. There could even be other customers further down the line, like the carpet manufacturers I mentioned before. But you're right: in some cases, the logistical effort might not pay off – in sparsely populated areas, for instance. Packaging that's sent there would have to be suitable for the biosphere.

We've seen quite a few types of recycled packaging already, such as envelopes. Once you receive your shipment, you send them back. Isn't that a good start?
It's a nice idea, but it all depends on the material. Envelopes made of old lorry tarps contain some of the most horrible plasticisers and nastiest stabilisers, meaning you then have a problem with microplastics because the material abrades. Due to these toxic substances, it's not suitable for either the technosphere or for the biosphere. In the end, it becomes waste.

What about transport boxes?
They're made of the wrong material too. Those types of plastic are neither suitable for continuous reuse in the technosphere, nor are they biodegradable in the biosphere.

What's preventing us from making a radical shift in our thinking?
The fact that people think they're protecting the environment by destroying it to a lesser extent: Drive your car less! Produce less waste! You're not protecting anything, you're just not destroying it as much. We have to understand that the things we produce have to be – and can be – useful.

You once said that traditional sustainability turns the customer into an enemy.
That's because traditional sustainability tries to minimise consumption and tell the customer: Let's face it, you're the problem. Once you stop buying things, we'll have less waste. But consumption isn't the problem – the problem is one of materials management.

So you're advocating wastefulness?
I'm advocating a culture of generousness. A cherry tree in spring doesn't save anything, avoid anything, reduce anything – and yet it's useful all the same. We have to learn to be useful, not less harmful. It's about innovation, quality, beauty. If a product becomes waste, it has a quality problem. ●

More on the cradle-to-cradle-principle:
www.epea.com/en

Packaging
Here's what the Otto Group does

FOUR WAYS TO PRODUCE LESS WASTE
Each year, the **Otto Group** *uses roughly 26,000 tonnes of packing material. In 2020, it was probably even more because the coronavirus pandemic altered people's purchasing behaviour and fuelled online shopping. The packaging is primarily made of cardboard (21,000 tonnes) and plastic (5,000 tonnes). To reduce the impact on the environment, the Group pursues a four-pronged strategy: first, more recycled packaging material; second, less material overall; third, more reusable packaging; and fourth, closing loops. The cardboard boxes arriving at the Group's returns logistics centre, for example, are picked up directly by paper producers and made into new boxes. But most importantly, the company regularly tests new packaging ideas, such as shipping bags made of plastic waste recovered from beaches, for instance – in other words, they're made from material that is 100% recycled to make new packaging. At this point in time, the share of recycled material in many types of plastic packaging is considerably lower, and the* **Otto Group** *aims to increase it to at least 80%. This has already been achieved in the case of cardboard boxes. The level of recyclability is high, since the packaging is usually composed of a single material, making it easier to recycle. The aim is to achieve overall packaging recyclability of 95%; cardboard boxes are already at 98%. But the* **Otto Group** *is still a long way from cradle to cradle, i.e. the complete recycling of high-quality materials in either biological or technical cycles without forfeiting quality or generating waste. There is no nylon packaging, and the prospect of it being turned into carpeting later on is even more remote. The* **Otto Group** *shares the vision, but ultimately everything has to make sound business sense as well. In the short term, the experts say, the cradle-to-cradle principle seems virtually impossible to implement. However, they definitely consider it a goal worth striving for in the long term – and think the* **Otto Group** *is heading in the right direction.*

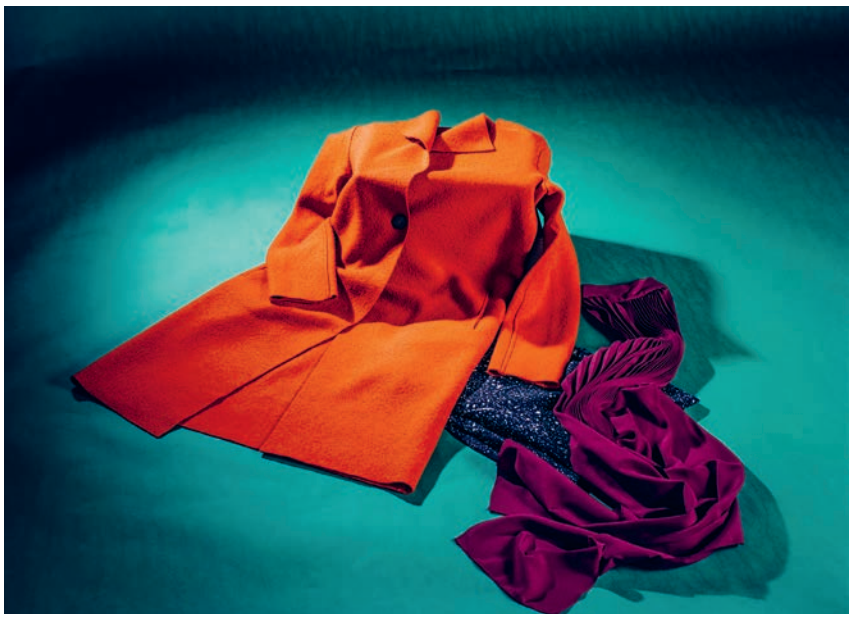
Not so fast

It's no secret that fashion can be a problem: all too often, our clothes are produced in questionable conditions, only worn for a short time and then thrown away. But it doesn't have to be like that, as these projects go to show.

Words:
FABIAN DIETRICH

Rent-a-look

The sharing economy is based on the premise that resources can be used more efficiently if we don't insist on having exclusive use of them. When it comes to apartments and cars, that's already perfectly normal. Transferring the idea to sustainable fashion, on the other hand, is still unusual. At the end of the day, however, dresses and shirts often spend months or years hanging uselessly in the wardrobe without being worn. That's what prompted Tina Spießmacher (32) and Linda Ahrens (33) to found Unown – a company that rents clothes out rather than selling them. The price depends on the value of the garment. A dress by the Oh Seven Days label, for instance, costs €12.50 for two weeks. Alternatively, you can opt for a monthly subscription of €69. "For that, you get three items of clothing every four weeks, plus another garment that we add to the package as a surprise," says Tina Spießmacher. "When it comes to selecting the labels, we don't just look for official standards like GOTS (Global Organic Textile Standard) or Fairwear, we look at how the companies work as well: Oh Seven Days, for example, one of our most successful labels, uses nothing but leftover fabrics from the fast fashion industry in Turkey that would otherwise be destroyed. And they produce the clothes right there in Istanbul, all under one roof."



My fair lady

Britain's Safia Minney (57) is one of the world's leading sustainable fashion pioneers. As far back as the early 1990s, Minney decided to stop buying products from companies that exploit people and the environment to make them. And because she was sure that there are plenty of others who want to do the same, she founded the People Tree fashion label. Ever since, she's been selling jumpsuits, T-shirts, underwear, tops, all of it often adorned with colourful, floral patterns. There's a pleasantly timeless quality to the cuts – the kind of thing that's destined to become a firm favourite and be worn for years. But for Safia Minney, it's the production conditions that matter more than anything else. All People Tree textiles meet rigorous fair trade standards: People Tree pays small farmers in developing countries a good, stable price for what they produce and also supports them with money for community development, like school projects. What's more, the vast majority of People Tree products are handmade by small, artisanal producers in Kenya or Bangladesh. Safia Minney sees herself not just as a fashion entrepreneur but as an activist who wants to share her message of fair fashion and less consumption with the world – and get it to listen.

Photos: Tomas Engel/ Unown, People Tree, Nudies, Giant Kelp/AlgnitKnite

How fair is fair?

When it comes to sustainability in the fashion industry, so much has happened in recent years that it's hard to keep track. Who can tell whether a firm really does comply with high standards or just claims to? And what happens if a company uses organic cotton but still exploits its garment workers? It takes a lot of research and expert knowledge to find out for sure. Australian company Good On You aims to make that easier and has invented a rating system that brings clarity even in grey areas. Besides established labels like Fair Trade, OEKO-TEX and GOTS, Good On You also analyses more than 50 smaller certification systems and digs through any documentation it can find on the public record. It's already rated more than 2,000 fashion brands based on three parameters: People, Planet and Animals. There are five levels of recommendation, ranging from "We Avoid" to "Great". The database is also extremely helpful for clearing up prejudices. H&M, for instance, gets a better rating than Louis Vuitton. And not all the major sports shoe producers are the same either: Adidas, for instance, beats Nike in the Planet and Animals categories. Details of how a label performs are available from www.goodonyou.eco or via the Good On You app.

Staying dry

The world's textile dyeing plants swallow the inconceivable amount of five trillion litres of water a year. A technology developed in the Netherlands has found a water-free way to dye synthetic fabrics with the help of liquid CO_2: DyeCoo. Bonprix has teamed up with partners to found the CleanDye joint venture and established a dyeing factory in Vietnam that relies exclusively on the water-saving process. Once the dyeing is completed, 95% of the CO_2 used is recycled. There's even an additional benefit: factories that use the DyeCoo method don't need any process chemicals either – another way the technology is kind to the environment.

Repairable jeans

Normally a fashion company's business relationship with its customers has a pretty clear-cut end: once the purchase is made, it's over. As for what to do with the clothing one, two or 10 years down the line, the customer is on their own. But Nudie Jeans aims to forge a bond with the people who wear its fashions – preferably for life. If the fabric becomes threadbare or holes appear – no problem: Nudie repairs old jeans for free – either at its stores in major cities around the world or at one of its mobile workshops. If you prefer to do your own mending, you get a repair kit to use at home. And if nothing but a new pair will do, you get a discount if you return an old pair. According to the company, its employees took in and repaired more than 60,000 pairs of denims in the last financial year.

A sea change: fashion made of algae

The founders of AlgiKnit are convinced that fashion companies need an alternative to cotton and synthetic fibres. And that alternative is kelp! Yes, kelp: the seaweed forms vast underwater forests and grows rapidly – up to half a metre a day; it can be cultivated in aquafarms in oceans across the globe and sequesters CO_2 far more efficiently than terrestrial plants. So kelp farms wouldn't just produce a good raw material, they'd do the climate good as well. And according to AlgiKnit, the fashions are compostable too. A few years ago, the firm demonstrated what the material can do by presenting the prototype of a futuristic-looking sneaker. It consisted of several layers of kelp mesh with different densities – a running shoe made of marine plants. And an ocean of possibilities.

Sea the difference

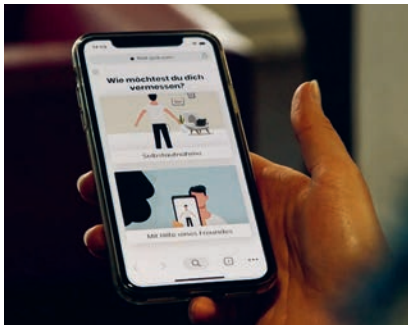
It's not exactly commonplace for fashion labels to market themselves with images of rubbish-strewn beaches and plastic-clogged oceans. But in Ecoalf's case, this pressing global problem is the crucial selling point. Founded by Spanish entrepreneur Javier Goyeneche (49), the firm specialises in upcycling waste into high-quality jackets, backpacks, shoes and trousers. Here's how it works: fishermen in Thailand and Spain sell their plastic bycatch to Ecoalf, who sorts and processes the rubbish and spins it into yarn that's then used to produce casual clothing. In Spain alone, more than 2,500 fishermen are involved with the project run by the fashion label and its foundation. According to Ecoalf, they've retrieved more than 600 tonnes of plastic from the ocean to date. And company founder Goyeneche is always on the lookout for new types of waste: he's thinking about making shoes out of shrimp shells.

Best agers

In the past, major fashion retailers didn't want anything to do with second-hand goods. Why would they? Used clothing stood for low prices and inferior quality. But that's changed. Online fashion shop About You, for instance, recently launched its own second-hand range under the name Second Love. The more than 350,000 items of clothing currently available are checked for authenticity and quality by professional second-hand partners before they are offered for sale online. And About You is by no means alone in taking this step: the resale market is growing by 15-20% a year and has already attracted many major firms. Levi's and COS have their own programmes. And Zalando has developed a system that enables customers to sell their used clothing via an app.

A fitting development

Can a smartphone video help avoid millions of parcels being sent unnecessarily? A company by the name of Presize believes it can – which is why it has developed an app that enables users to make a five-second video of themselves. All you have to do is switch your phone on, rotate around your own access and upload the video – it's that simple. Based on the video, which is used to create a kind of 3D scan of the body, Presize is able to recommend the right size when clothes are bought online. So ordering a pair of jeans in three sizes just to be on the safe side and sending two of them back may soon be a thing of the past. That saves time – and, more importantly, cuts down on returns. But there's more: the Presize system never stops learning because it can draw on ever greater volumes of data as its clientele grows. The Presize video technology is currently being tested for made-to-measure clothing but is soon to be available for off-the-peg fashion as well.



Made for all weathers

The story of Patagonia is the story of a man who never set out to be an entrepreneur – and only ended up becoming one by chance. Company founder Yvon Chouinard was a young, climbing-mad American whose original goal in life was to spend as much time as he possibly could in the great outdoors. Then he started selling pitons out of the boot of his car. He was aware of environmental problems even then, and warned in his catalogue that Earth's resources are finite. And because he spent most of his time in the fresh air, Chouinard soon started developing outdoor clothing. In the 1990s, the company narrowly avoided bankruptcy but then recovered and generated revenues of more than $1bn in 2020. Today, 1,500 employees around the globe work for its unconventional boss. His autobiography, entitled Let My People Go Surfing: The Education of a Reluctant Businessman, has been translated into numerous languages. In it, Chouinard explains how his actions have always been motivated by a strong attitude and ecological convictions – and why that was exactly the right thing to do. Patagonia has been donating 1% of its profits to environmental organisations since 1985 and using exclusively organic cotton since 1996. And when it comes to recycling plastic bottles to make fleece fabrics, Patagonia is an industry pioneer.

Soft and good

Over the last 20 years, global demand for cashmere has doubled – a major problem for retailers and the environment. On the one hand, the ultrasoft goat wool is increasingly likely to be fake. On the other, the grazing lands in China and Mongolia are in danger of turning into steppe because the herds of goats are getting bigger and bigger. But the Aid by Trade Foundation established by Prof Dr Michael Otto is convinced that the wool can be produced sustainably too – and has therefore developed a label for cashmere from sustainable production. The Good Cashmere Standard® monitors farmers in Inner Mongolia in northern China based on criteria covering animal welfare, environmental protection and good working conditions. The new label has been on the market since 2020 and is meanwhile supported by textile companies and fashion brands like Peter Hahn, H&M, Tchibo and J.Crew.

Photo: Erdos Cashmere Group

PUBLISHING DETAILS

NOW
Hamburg, May 2021
Editorial deadline: 1st April, 2021
Many of the photographs in this magazine were taken before the coronavirus pandemic started.

Publisher
Otto Group
Werner-Otto-Straße 1-7
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Verification: Quality Board

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All the facts have been checked by the independent experts on GEO's Quality Board,
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authors with precise, relevant reports based on data from primary sources,
such as scientific studies, professional journals or statistics.

Prepress: 4mat Media, Hamburg/Gütersloh, Germany
Printing: Langebartels & Jürgens GmbH, Hamburg, Germany

HV8
www.blauer-engel.de/uz195

RECYCLED
Papier aus Recyclingmaterial
FSC® C005266

Klimaneutral
Druckprodukt
ClimatePartner.com/53249-2103-1001

NOW was made using a climate-neutral printing process and is certified according to guidelines
established by the Blue Angel – the German federal government's eco-label for protecting people and the
environment. Unlike conventional printed matter on the market, print media bearing the Blue Angel label are
produced in an environmentally friendly and resource-efficient way and are
printed in a low-emission process on predominantly recycled paper.

Photos
Cover: Justin Kauffman/Unsplash.com; pp. 2/3 Axel Martens; pp. 4/5 GMB Akash, Claudia Meitert, Axel Martens, David Maupilé, Peter Rigaud, Romina Rosa, Maria Schiffer, Jonathan Torgovnik, Jonas Wresch; pp. 6-9 Dörpsmobil Schwedeneck e. V., atmosfair, Bergwaldprojekt e. V, Wege aus der Einsamkeit e. V., Finlit Foundation, Elias Bohun, Aqua-Agents office, Azuri Technologies, Vic Hinterlang/Soil, Ipso; pp. 10/11 Brooke-Lark/Unsplash.com; pp. 12-21 David Maupilé; pp. 22-33 Peter Rigaud; pp. 34-41 Jonathan Torgovnik; pp. 44-49 Maria Schiffer; pp. 50-59 Romina Rosa; pp. 60-65 Axel Martens; pp. 66-75 GMB Akash; pp. 76-81 Axel Martens; pp. 82-85 Claudia Meitert; pp. 86/87 Andrew Timmins; pp. 90-99 Jonas Wresch, OTTO; pp. 98-103 Axel Martens, Volodymyr Hryshchenko/Unsplash.com, Wherda Arsianto/Unsplash.com; pp. 104-106 Tomas Engel/Unown, People Tree, Nudies, Giant Kelp/AlgiKnit, Erdos Cashmere Group, Presize, About You

“It’s up to us to take a stand now on behalf of our planet and the whole of humanity. Time’s running out. We have to act now – it’s crucial that we act now.”

Prof Dr Michael Otto

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