

DENKFABRIK

NEW IDEAS FOR TOMORROW'S TRANSPORT



REGENERATION FOR A BETTER WORLD

Approaches and ideas for a greener economy

NEW AGAIN AND AGAIN

How can the circular economy become reality?

Page 08

MAKING THE MOST OF LOADING SPACE

Intime freight forwarder drives with Krone Smart Capacity

Page 16

FAIR WINDS FOR GREEN ENERGY

Dr David Frink visits offshore world market leader Ørsted

Page 26

WHAT TO DO WITH YOUR OLD SMARTPHONE?

Germans are big collectors: according to a calculation by the digital association Bitkom, there are currently some 210 million mobile phones or smartphones, 40 million laptops and 26 million tablets lying unused in German households. That adds up to a total weight of about 135,000 tonnes and, put end to end, a distance of about 55,000 kilometres, which is longer than the circumference of the planet.

This means that not only large quantities of plastic and glass are in the drawers, but also numerous valuable and rare raw materials: about 6,600 tonnes of aluminium, 1,400 tonnes of cobalt, 180 tonnes of lithium, 140 tonnes of magnesium, 60 tonnes of titanium as well as phosphorus, tantalum, platinum metals or

rare earths. And also around 3 tonnes of gold are “stored” in the phones. “The production of a smartphone requires many raw materials, energy and resources. If they are used for longer, this has a positive effect on their **ecological footprint**,” says Bitkom Chief Executive Dr Bernhard Rohleder. “Germans are hoarding a huge treasure trove of raw materials. Also, against the backdrop of ever more interrupted supply chains, it is important that we do not let the raw materials already available in households lie fallow.”



Source: Bitkom e. V.

Dear readers,

We all have the chance to help shape the future – as great as the challenges in transport and logistics are at present, as they are in the economy as a whole. This is exactly what drives us at Krone: We never stand still, but are always pursuing new ideas to be able to offer real solutions for you to shape your daily transport routine. To do this, we complement optimum hardware with sophisticated technologies and the best service – and we are continuously developing all these areas.

In this issue of DENKFABRIK magazine, we look at the circular economy: the aim is to waste few resources and instead create a closed system in which as much as possible can be recycled. This is just as conceivable for a single screw as for an entire trailer, a house or a wind turbine. On the following pages you will find out where this circular economy is being considered or is already being implemented. We show what is feasible when good ideas are systematically generated and realised. And how product design, recycling, optimisation of the value chain, technologies and above all quality form perfect synergies. This is precisely our claim at Krone: everyone in our team works together with you to ensure that transport and logistics remain powerful, innovative and capable of action all around – today, tomorrow and the day after tomorrow.

Yours, Simon Richenhagen



Simon Richenhagen,
Head of Marketing
of Krone Commercial
Vehicle SE

TITLE: ADOBE STOCK/ATCHARIYA PHOTOS: ADOBE STOCK/7707601, KRONE

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#04

Focus

Circular Economy

02 Food for thought

03 Editorial

06 Blue Notes

+ TITELTHEMA

08 Closing the circle again and again

Use products and raw materials for as long as possible: This is what the principle of the circular economy aims to achieve. It still has a lot of potential to save costs and CO₂.

13 Long life for materials

A long service life is the silver bullet when it comes to sustainability. How old was your last smartphone when you bought a new one?

20 Realitycheck

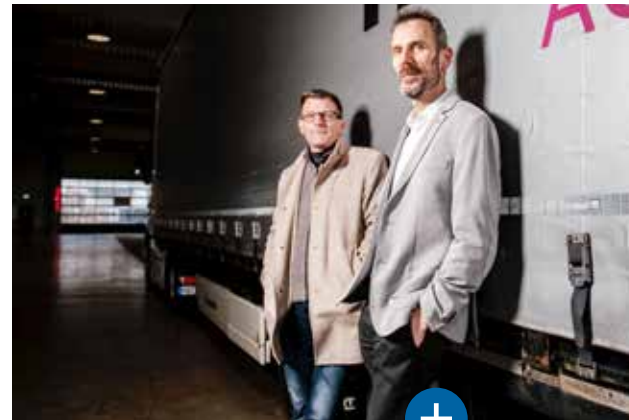
Potentials and limits of the circular economy

14 Backstage

Fernride wants to complete autonomous driving with autonomous loading and unloading. In cooperation with Krone, it is developing concrete solutions for everyday transport.

15 Impulses

From exhibitions to podcasts – inspiration for everyday life



16 In-house expertise

Express logistics provider Intime has long relied on its own digital solutions for agile transport. Now it is testing **Smart Capacity** from Krone, which can identify unused capacity through real-time analysis.

19 Onstage

With Smart Capacity, Krone has launched an intelligent load space detection system that can identify unused capacity via real-time analysis.

22 Built on paper

The **freight forwarder Albers** has grown up with paper recycling.



26 Heart of the matter

Ørsted, world market leader in offshore wind farms, is considered the most sustainable European energy company 2023. Dr David Frink, CEO of the Krone Group, met Ørsted Managing Director Jörg Kubitz in Hamburg.



31 The Big Picture

Deppe Rohstoffrecycling in Lingen presses interchangeable cases into the ideal shape for melting in the steelworks.

32 Cold Passion

The Spanish refrigerated logistics company Armesa Logística has been transporting fruit and vegetables from Spain to Germany for many years.

35 Innovations

The Swiss label Freitag produces bags from truck tarpaulins. Now it wants to develop a material that can still be recycled after its life as a bag.

36 Connected to nature

Thanks to CEO Antje von Dewitz, the outdoor brand Vaude is **consistently sustainable**: all products – from hiking jackets to bike bags – are produced climate neutrally.



39 Column

LEGAL NOTICE

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Blue Notes

News from the world of Krone



How can the commercial vehicle industry become CO₂-free?

The members of the Krone think tank meet regularly to discuss perspectives and impulses for transport and logistics. The think tank of the Krone Commercial Vehicle Group met at the end of 2022 at Daimler Truck AG in Wörth and dealt with the question of how the CO₂-free commercial vehicle industry can become a reality under the heading "Think tank meets future mobility". The experts from business and research worked together on the opportunities and challenges of the topic and formulated demands for politicians, which they discussed with Jens Gieseke, Member of the European Parliament. Daimler and Trailer Dynamics provided impulses on alternative drives from an entrepreneurial perspective and the think tank members were able to test drive the eTrailer from Trailer Dynamics and Krone as well as the eActros. An evening event at the Matthias Anton winery rounded off the day. [↪](#)

Full transparency with Krone Smart Assistant [top secret]

In everyday haulage operations, many companies rely on messenger services to control operational processes – as these are usually available and there is often not enough time to familiarise themselves with special apps. With Smart Assistant, Krone has established a tool that enables simple and data-protection-compliant vehicle monitoring via messenger: a QR code is attached to the vehicle, which can be scanned with a smartphone. A browser window then appears in which you are asked to select a tried and tested service such as WhatsApp or Telegram. There, questions about the condition of the respective trailer are posed in the chat, which can be answered at the touch of a finger or by taking a photo. The result is transferred to the [Krone Smart Assistant customer portal](#) and compared with the previous checks. Changes or damage to the trailer as well as missing cargo can be documented in this way. If there is a problem, a warning is automatically sent to the driver and office staff. Fleet managers are thus informed about the condition of their vehicles at all times and can track and allocate costs incurred. [↪](#)



25 YEARS

Profi Liner convinces for 25 years

25 years of Profi Liner: In 2023, Krone celebrates the anniversary of its bestseller, which was publicly presented at the IAA Commercial Vehicles in 1998 and is now on the road as a technology carrier in its fifth generation. Its career began as a benchmark for the solid semi-trailers with dropsides of the 1990s. It always kept up with the times and, among other things, impressed as a curtainsider with innovative elements such as steel bulkhead, steel rear door with single-hinge, well thought-out basic chassis construction and cable routing. As early as 1997, Krone was also the first manufacturer worldwide to introduce another quality feature with the KTL-plus powder process for long-term protection against rust. The current version of the Profi Liner has [robot-manufactured steel container doors](#), new details in the body, zinc-phosphated KTL with powder coating and numerous telematics functions. [↪](#)

Krone becomes partner of the Goodyear FIA European Truck Racing Championship (ETRC)

The European Truck Racing Association (ETRA) has entered into a partnership with Krone. Having already been a valued partner of the championship in 2017, Krone will revitalise the collaboration for the 2023 truck racing season. Among other things, Krone and ETRA want to promote [sustainable solutions](#) in the transport industry and in motorsport and honour the important role of the truck driver. The events of the ETRC racing series are considered the "family reunion of the industry". [↪](#)



Donations to 15 initiatives

250,000 euros in donations from all over the world were collected in a major [appeal by the Dr. Bernard Krone Foundation](#) on the occasion of the commemoration of family entrepreneur Dr.-Ing. E. h. Bernard Krone. At the request of the deceased, they were distributed to social projects that were particularly close to his heart. On behalf of the entire family, Dorothee Renzelmann, Maria Krone and Bernard Krone presented the cheques at the end of 2022 at the headquarters in Spelle. In addition to regional associations and organisations such as the St.-Johannes-Stift nursing home or the food banks in Haselünne, Spelle and Werlte, the donations went to Acker e. V. with the project "GemüseAckerdemie", Aktion Kinder-Unfallhilfe e. V., DocStop für Europäer e. V. and PROFI – Pro Fahrer-Image e. V. In addition, departments at universities and colleges of engineering will be supported with another almost 100,000 euros. [↪](#)

250.000 Euros



PHOTOS: KRONE

Using resources again and again

The **circular economy** principle aims to ensure that products and raw materials can be used for as long as possible. Much is already being implemented – but there is still plenty of exciting potential to be discovered.



ILLUSTRATION: ADOBE STOCK/RAX QIU

From the chassis to the tarpaulin to the floor panel: a Krone trailer consists of hundreds of components. Could they be completely recycled at the end of a long trailer life? Can a new trailer be made from them – or can the raw materials be put to new uses? The concept of the circular economy envisages precisely this recycling. Under the guiding principle of “cradle to cradle”, precious resources are to be used again and again so that they are neither lost nor wasted. In addition, the principle of the circular economy strives to reproduce in an environmentally friendly way and to use renewable energies – in other words, a complete package for climate protection.

“The topic of climate change is becoming more and more pressing and those responsible in logistics are realising this,” says Dr. Christoph Küffner from the Chair of Supply Chain Management at the Friedrich-Alexander University Erlangen-Nuremberg. “The fact that awareness of this has increased so massively in recent times is also due to the fact that the topic is becoming more relevant to competition. Those who don’t deal with environmental protection have to reckon with disadvantages in a timely manner.” This means, for example, that capacities for vehicles with alternative drives could become limited because many fleets are being converted at the same time during the transition phase. For the circular economy to succeed, it must be considered from the very beginning: “The industry must try to use materials that are easy to recycle. And it should avoid anything that makes recycling more difficult, such as when individual components can no longer be separated. The more raw the recovered material, the more flexibly it can be reused.

Entering into dialogue with partners

Krone wants to make exactly that possible and is intensively addressing the subject of circular economy: “As a trailer manufacturer, we buy numerous components from different manufacturers. If all parties involved create more transparency and use their resources sparingly, →



Since 2018, chassis have been powder-coated to the latest standards in Krone's state-of-the-art surface centre: The process ensures the highest quality and durability.

+ PHILIPP SANDER

Philipp Sander has been Sustainability Manager at the Krone Group since August 2022. After completing his Bachelor of Engineering with a focus on energy technology and his Master's degree with a focus on energy management, the industrial engineer worked previously for a consulting company in the energy sector for several years.



it has enormous potential," explains Philipp Sander, Sustainability Manager of the Krone Group. He is responsible for the sustainability report that Krone will publish in the future, is helping to develop a climate strategy for the company and is in charge of the exchange with stakeholders. The latter are essential for this topic: "Circular economy is a challenge that cannot be solved alone, but only in conversation with each other," Sander is convinced. "We enter into dialogue with our partners and try to define common requirements as well as collect ideas that can and must already be taken into account in product development, in order to save resources and energy."

Krone is involved in the Circular Economy working group of the German Association of the Automotive Industry (VDA). In the future, Sander and his team also want to set up a stakeholder dialogue, which – with the character of a "think tank" – would bring all stakeholders together at one table and within the framework of which, new approaches would be developed and implemented. The guest list would extend to steel producers, who are involved in the overall process as major energy consumers and

disposers. Sander sees the greatest leverage for Krone in this networking of stakeholders: "We can identify the relevant topics, stimulate joint exchange along the value chain and carry them into decisive bodies."

Using resources efficiently

Of course, the company is also looking internally at how it can continuously enable more sustainability. "We are setting many things in motion within the group to ensure that resources are used efficiently in our own production and as CO₂-reduced as possible," says Sander. In their own processes, they are checking where even more regenerative sources can be used. Krone is also participating in the EDNA research project, abbreviation for: Edge Data Economy in Sustainable Automated Manufacturing. "We want to use this to determine the consumption of energy and resources within our own trailer production as automatically as possible and use this database to identify optimisation potential."

According to Christoph Küffner, circular economy also means a big change in the way supply has been thought about so far. "The classic supply chain has a linear structure: Resources go from the supplier to the manufacturer, who brings them to the warehouse and from the warehouse they go to the



In a circularity assessment, reusable materials are recorded and registered by Concular, as here in the VfB stadium in Stuttgart. In the following mediation phase, a large part of these materials was sold externally.

customer. Circular economy breaks up this linearity by incorporating return processes. Logistics must play a greater role in shaping these processes in the future." And change internally, because, "Logistics has long been the big cost-saving lever in the industry, which shapes the current conditions in the sector, such as low wages for drivers." That is now changing, he says, along with the corresponding social pressure behind it. For Küffner, this is precisely why it is "an incredibly exciting field where many changes have to take place. Everyone who is involved in it with their hands or head is in a very dynamic field."

Sustainable supply chain management

As a scientist himself, he tries to "set positive impulses": In his research, Küffner deals intensively with topics of sustainable supply chain management. "Companies in logistics currently have to prioritise trying to improve their own CO₂ footprint and decarbonise transport in particular. There are more and more support options for this." Apart from vehicles with alternative drives, he sees great potential in questioning logistics concepts: "For example, one should examine whether long-distance supply via warehousing models still makes as much sense today as it did ten years ago. Bringing supply closer to direct demand can be an increasingly sensible alternative."

Logistics contributes its share to CO₂ emissions, but another industry has a particularly high impact – and could be a pioneer in recycling at the same time: the real estate

Facts & Figures

60%

of the total waste generated accounts for the construction industry.

40%

of CO₂ emissions can be allocated to the construction industry.

+ DR. CHRISTOPH KÜFFNER

Dr. Christoph Küffner studied business administration and, after holding various supply chain functions, completed his doctorate in January 2023 at the Chair of Supply Chain Management at Friedrich-Alexander University Erlangen-Nuremberg. His research focuses on the SCM areas of sustainability, resilience and human capital.



industry. The construction of new buildings and the demolition of old ones account for a full 40 per cent of annual carbon dioxide emissions worldwide. In addition, 80 percent of all raw materials are consumed in the process and 60 percent of global waste also comes from construction sites. Many concrete parts, steel girders or windows do not have to "go to waste", but could be reused. The start-up Concular is building a business model from precisely these findings: it reuses building materials.

Legal framework conditions are needed

For Concular CEO Dominik Campanella, the circular economy is the only way to reduce CO₂. After all, it has the greatest influence: "It is assumed that it can prevent half the CO₂ →

HALF OF

the emissions are accounted for by the so-called GREY ENERGY, which is generated during the production and transport of building materials and components as well as during the construction and demolition of buildings.

25.000

buildings are approximately demolished in Germany every year, which corresponds to almost 70 buildings every day.

Quelle: Concular

emissions. In short, if we can get the construction industry CO₂-neutral, the rest is settled. But the big challenge is to move the whole economy towards a circular economy – and for that we need the right legal framework.” So far, the use of petroleum-based insulation materials has been promoted and DIN standards make it difficult to reuse used materials, he said. “Legislators must actively promote the circular economy through practical regulations.”

In the three years since it was founded, Concular has assisted with around 250 projects, ranging from logistics properties to office buildings and shopping centres to football stadiums and railway stations. “These pilots show that it works, but in 2022 alone, 20,000 buildings were demolished and 300,000 were newly built – there is so much more potential,” says Campanella. “That’s why we now urgently need policy decisions that make the circular economy in construction possible.” The origin of his company is a marketplace for building materials: “With that we still offer the possibility to buy or sell deconstructed materials.” However, large construction projects cannot manage with the relatively small quantities that such a marketplace can provide. That’s why Concular was created as a consortium to offer a practical solution: “We digitise the materials in buildings with the help of special software,” explains Campanella.

What was installed exactly?

When recording, everything that is important for reuse is registered, i.e. in addition to information on the composition, for example, also whether a door is a fire protection door or where the handle is attached to the window. “The biggest problem is that it is usually not clear what exactly was installed. And if you don’t see what all comes to light until the deconstruction, it’s usually too late for efficient recycling.” With Concular, transparency is created much earlier. “This gives us the time we need to build the necessary value chains and network with recyclers, manufacturers and processing companies.” The materials that Concular “scans” it links directly to the demand for them – and balances how many resources have been saved and how many CO₂ emissions have been avoided.

Philipp Sander would also like to see much more transparency for the components of a trailer. “A digital product passport that makes it very easy to track the parts used would be a great milestone,” he says. “It could also be used, for example, to enforce the use of recycled steel or environmentally friendly

+ DOMINIK CAMPANELLA

Dominik Campanella is co-founder and CEO of Concular and Restado. He studied in Mannheim and Paris and holds a Bachelor’s degree in Business Informatics and two Master’s degrees in Business Informatics and Management. As an entrepreneur, he aims to promote circular construction and support the construction industry in becoming resource-efficient and CO₂-neutral.



materials.” The passport just has to be implemented as unbureaucratically as possible: “Extensive documentation along the entire value chain should not be the goal.”

Optimal product design

It is not only the materials that play a major role when it comes to building a circular economy. Another approach to making products recyclable is optimal product design. “For example, it is important that repairs can be carried out as easily and quickly as possible, especially for high-maintenance components and wear parts,” says Sander. “This is where the efficient provision of high-quality spare parts, such as through our Krone service network, can support very well.” Ultimately, he sees the most significant starting point for more sustainability in the quality of products: “If we produce high-quality vehicles that can be used for as long as possible, we make the most important contribution.” And when it comes to recycling individual parts, cooperation is again required with our suppliers, who should think from the outset when developing their products about how they could be reused one day. But longevity can also be supported by extending the useful life: After the “first life” of a trailer, for example, it can be refurbished via Krone Used and then used for many more years.

He also sees the limits of the circular economy in quality: “This must not suffer under any circumstances. Also, because this could affect other sustainability goals: Krone has responsibility for 5,500 employees.” And the rebound effect should not be underestimated: “If you make a television much more efficient in terms of the square centimetre of screen surface, but then the devices become much larger, the sustainability effect evaporates. You really have to approach the issue holistically and consistently.”

PHOTOS: KRONE, CONCULAR, BLENDE 11 FOTOGRAFEN

Change of perspective the materials! Long live

Circular economy is good when it is slow – because it saves significantly more resources and energy in the long run.

According to a study by the Öko-Institut commissioned by the Federation of German Consumer Organisations (Verbraucherzentrale Bundesverband e. V.), the four product groups of televisions, smartphones, washing machines and really need a new mobile phone after two years, even though the “old” one is still fully functional!

and careful use contribute to this longevity. Do we economy. Well thought-out technologies, reparability significantly increases the efficiency of the circular can be used for a correspondingly long time, this longevity! If materials are of high quality and Unfortunately not. Meaningful recycling requires into new shapes. Perfect circular economy, then? sorted, crushed, cleaned, melted and poured. A plastic lemonade bottle can be easily and quickly

notebooks alone have the potential to release 3.93 million tonnes less CO₂ each year if the appliances were used for longer than is currently the case. In the case of a smartphone, for example, one assumes seven years! Thus, its owner would save 242 euros – costs for energy consumption and possible repairs already included – and extrapolated to all smartphone owners it would be 15.668 billion euros. The basis for this is durable products, in whose manufacture, quality is prioritised and which can be repaired or are still usable after many years through long-term software updates. In regulatory terms, minimum criteria for durability could be introduced and information for consumers could be improved, for example through a repair index and mandatory information on service life. The dishwasher lasts at least ten years? I'll buy it!

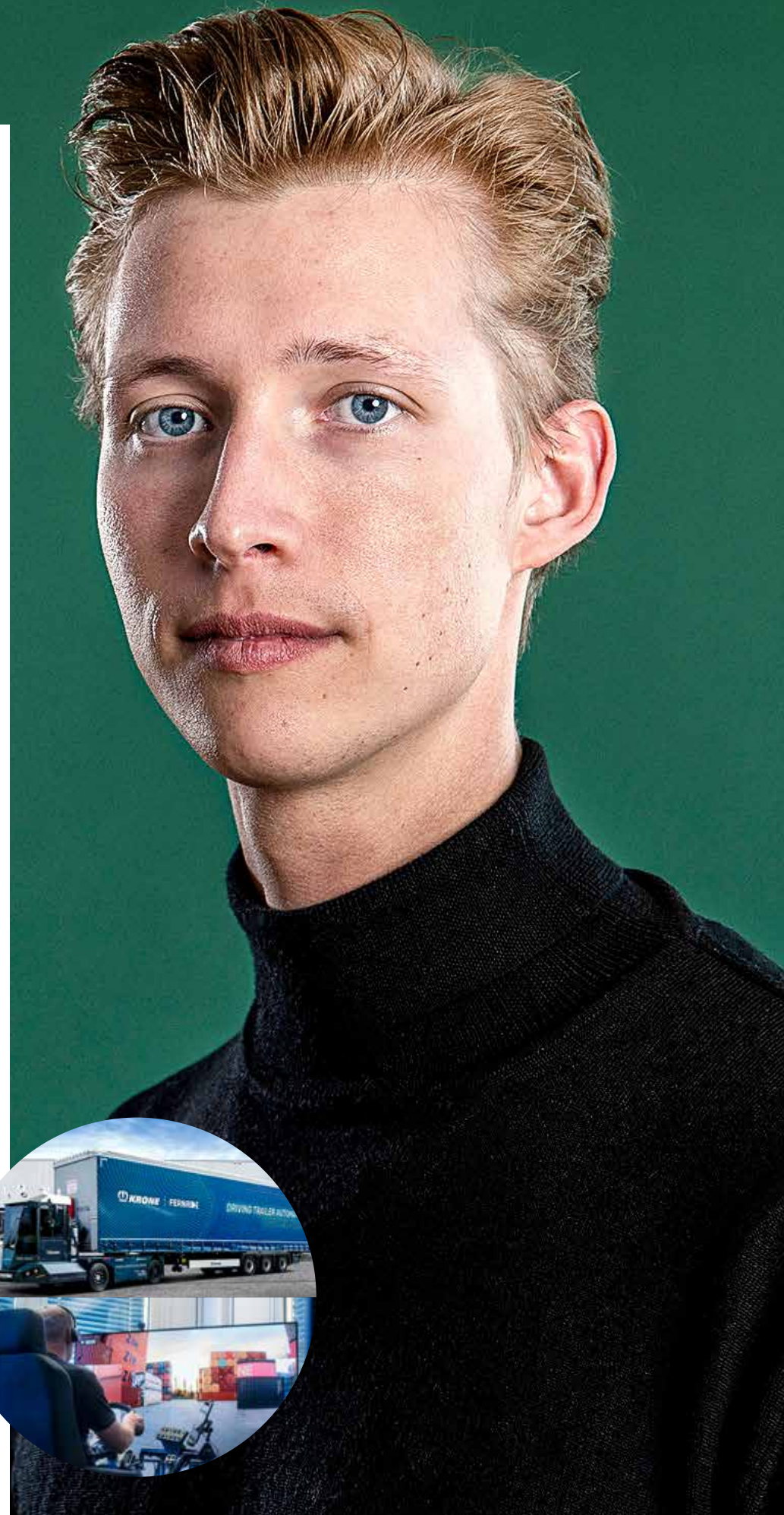
ILLUSTRATION: ADOBE STOCK/SYLVERARTS

Partner at eye level

“In the autonomous truck, the human moves out of the driver’s cab – but who will then uncouple the vehicle, open tarpaulins or unlock doors? We are automating these secondary activities together with Krone. We are currently building prototypes and will test the first functions with customers this year. When we made the decision to enter into a partnership with a trailer manufacturer, it was clear to us that we would have to choose one very selectively. I myself come from the Emsland region, so there was a certain cultural closeness right from the start. And the first impression was confirmed: There are simply really good people working at Krone, and it’s a pleasure to work with them on a variety of issues. We are on the same wave length and are getting closer to our common vision every day, step by step. What I particularly like is that the Krone team sees us as partners at eye level – which is a matter of course.”

HENDRIK KRAMER

Hendrik Kramer founded Fernride in 2019 together with Jean-Michael Georg and Dr Maximilian Fisser: The start-up is a spin-off from the world’s leading research laboratory for teleoperation at the Department of Automotive Engineering at the Technical University of Munich (TUM). By combining the skills of long-distance drivers with autonomous technologies, it aims to enable automated, sustainable logistics. The team was able to secure venture capital of more than ten million euros as early as 2021.



What continues to move us

More inspiration, tips and thoughts



Even more answers

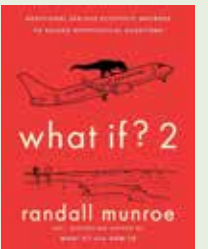
In the knowledge series “42 – The Answer to Almost Everything”, Nora Tschirner, like Douglas Adams in his novel, provides answers to life’s big and small questions. And she does so in an original way: Cleverly inspired and thinking outside the box, the topics are presented.

www.arte.tv

What if?

In the sequel to his international bestseller “What if?”, xkcd.com creator Randall Munroe finds truly scientific answers to absurd hypothetical questions. For example, this one: What would happen if the solar system were filled with soup all the way to Jupiter? The answers are charmingly illustrated with the author’s line drawings.

Published by Penguin



Listen



In the podcast “Geladen – der Batteriepodcast” (Charged – the Battery Podcast), Patrick Rosen and Daniel Messling discuss battery topics, electromobility and the energy transition with guests from science and industry. The aim is to explain complex relationships from research in a generally understandable way and to factually dispel numerous myths that circulate around batteries and electric cars.

www.geladen-podcast.de

App Check

The Forest app is designed to help you focus on your work and not be constantly distracted by your smartphone. It relies on digital forestry work. The phone is left alone for a predefined period of time – during which time a tree grows. If one does not adhere to the cell phone break, the tree dies. The app can even be used to plant real trees.



www.forestapp.cc

More than just flowers

BUGA 23 will be held in Mannheim from April 14 to October 8. It aims to be the most sustainable Federal Horticultural Show of all time. In addition to attractive flower shows and garden landscapes, it offers a field of experimentation that presents innovative ideas on the guiding themes of climate, environment, energy and food security.

www.buga23.de



PHOTOS: ARTE, PENGUIN-VERLAG, KARLSRUHER INSTITUT FÜR TECHNOLOGIE, FORESTAPP, BUGA 2023

In-house expertise

With its own software, the **express logistics company Intime** from Isernhagen has taken the digital path to agile transport at an early stage. With a test in the Profi Liner provided by Krone for this purpose, it is supporting the further development of the Smart Capacity load space detection system.



"We were one of the first logistics companies to make an extensive network of vehicles transparent across Europe."

Gerd Röttger, Managing Director, Intime



Agile Logistics" is written on the Krone Profi Liner. The trailer is getting ready for its next assignment in the warehouse of Intime in Isernhagen near Hanover. As an express logistics provider for the automotive industry, the company brings parts for vehicle production quickly and accurately to just-in-time production. Agility is part of everyday life here. The company has been working digitally for a long time and is continuously optimising the software it developed three decades ago. Early on, it was able to map the order and the vehicle at the same time and "marry" the two in scheduling. At a time when such transport management systems (TMS) did not yet exist. "This put us in a position very early on to plan with the computer instead of pen and paper," explains Intime Managing Director Gerd Röttger. "We were one of the first logistics companies to make an extensive network of vehicles transparent across Europe." What is standard today, Intime implemented long before and incorporated the data gained into intelligent dispatching and planning. "Our founder showed great foresight with this and made the growth of the company possible in the first place."

Systems for transparency and high speed

The main driving force behind the development of our own software was the high speed that the automotive industry demands from its service providers. "We are always under time pressure with this transport, someone is urgently waiting for the goods," says Röttger. "That's why we had to use systems that allow transparency and high speed right from the start." The software has remained an in-house solution to this day and is constantly being developed. Now the next step is to reprogram it to contemporary standards and create a new image from the in-house software landscape. "In addition, we network with customers," says Röttger. "Today, orders have to be taken over automatically, for example via interfaces – and no longer by e-mail or telephone."

Vehicle technology also plays a decisive role in this; for example, sensors on the trailer can support the dispatching process. As with Krone Smart Capacity Management: Intime has been using intelligent load space detection in a Profi Liner for a few months now. Intime is contributing its experience to the further development

of the technology, including for the Mega Liner. The team provides continuous feedback to Krone. "Daily use reveals new challenges that can be incorporated into further development," says Röttger.

Krone shows pioneering spirit

It is exciting for the transport service provider to be involved in the test because it can then plan the integration into its TMS at an early stage: "In the end, any information about transport and cargo is only useful if it is available to the scheduling team. Then really good things can come out of it." The initial spark for the cooperation came from a contact at the IAA 2022: "We got into conversation with Krone there and were really fascinated by the pioneering spirit and also the force with which the topic is being pushed forward in the company," recalls Holger Siegmann, Head of Project Management Digitalisation at Intime. Digitally mapping the cargo area in this way is the first initiative of this kind by a trailer manufacturer. In logistics, the tractor unit and the driver have been seen as the main infor-

Intime has 600 vehicles in continuous operation, 120 of which are its own.



mation carriers, and too little importance has been attached to the actual cargo area. Yet there is enormous potential here for more utilisation of existing capacities and thus for more environmental protection and efficiency at lower cost.

Connecting despite independence

Own IT solutions, as realised by Intime, make you independent. At the same time, it is important to always keep in touch with the market →



+ PROFILE

Founded in 1987 as a direct courier service, **Intime** today operates **7 locations in Germany and 14 locations** and further partner networks in Europe with around 400 employees. 600 vehicles are in continuous use, 120 of which are the company's own. In 2015, the African Super Group Limited took over the majority shares in the Intime Group. The company has continued to grow since then, including the acquisition of Trans-Logo-Tech (TLT) GmbH in 2019.

and to enable compatibility and interfaces. The logistics company therefore enters into cooperations and maintains strategic partnerships, not only with Krone but also with the MAN subsidiary Rio. "We also no longer want to do everything ourselves, but rather make targeted use of good technologies that we can dock onto our software from outside," Siegmann explains. For him, the recipe lies in the clever selection of the really relevant approaches: "There are so many possibilities on the market today that you have to choose the right solutions from among them and decide: What is technically and strategically suitable, what information can we integrate into our processes?" So, as much as Intime continues to maintain the competence of its own IT, it is also true that: "Today, nobody can do everything themselves. And you don't have to. We focus on our own core processes and build partner systems around them."

For Intime, it is therefore important to bring good professionals into the company and keep them. Especially as specification is becoming more and more prevalent: Particularly in IT, special fields increasingly have to be mapped, such as web design or the programming of apps. Intime currently has 15 of its own programmers on board, as well as just as many employees who purely take care of the infrastructure. "As a transport company, we have to make ourselves particularly attractive in order to attract experienced professionals," explains Gerd Röttger. Apart from the possibility of working in a home office and using flexible working time models, the team is also thinking about how to make the offices more attractive again, because personal contact is important from time to time, especially for project work. For example, plans are currently being drawn up for creative spaces.

Most important, however, is the binding corporate culture that is cultivated here, says Holger Siegmann: "We see our team as a family in which everyone can contribute with their ideas and strengths, feel comfortable and enjoy working." He himself has been part of the company for 20 years.

Broad commitment to sustainability

Last but not least, the company's commitment to sustainability is of interest to many who want to apply. In addition to its focus on more efficiency in transport, Intime supports, among other things, the "Justdiggit" initiative, which aims to re-green Africa under the slogan "Cooling Down the Planet". Farms on site are empowered to enable vegetation to grow again on fallow land. The logistics company donates to a specific plot of land, the progress of which it can continuously monitor. "We want to use it to compensate for the emissions of our own vehicle fleet," explains Röttger. "But we don't leave it at that; we have also set up our own sustainability strategy with further long-term goals."

How Intime continues to develop will also be determined by the current changes in the automotive industry, especially the strong focus on alternative drives. In Isernhagen, the company is focusing on new areas where express and ad-hoc logistics are still in demand. For example, the company has taken a stake in a start-up that organises the transport of defective car batteries and is looking at new requirements for their storage. "Furthermore, we are preparing to be able to react even more flexibly to the market, also with our own vehicle structures," says Röttger. In the course of the shortage of transport capacities on the market, he also sees plenty of potential for forwarding companies in the future – if they manage to remain agile and find their own answers to the demands of the market. [↩](#)

Managing Director Gerd Röttger and Holger Siegmann, Head of Project Management Digitalisation (from left).



PHOTOS: MICHAEL LÖWA

Making payloads pay

With **Smart Capacity**, Krone has launched an intelligent load space detection system that uses real-time analysis to optimally utilise trailer capacities.

Maximum utilisation of the vehicle and automated comparison with freight exchanges: Krone's Smart Capacity Management brings significantly more efficiency to transport. With the help of artificial intelligence, it uses camera images and sensor data to determine how much loading space is still available in the trailer and passes this information on to the scheduling department in real time. The system is available immediately: "Anyone who buys a new Profi Liner from us can already order it as a module," says Maximilian Birle, Head of Sales & Service Telematics and Digital Services at Krone. "It will also be available for our other trailer models."

Utilizing cargo space quickly and efficiently

Birle describes Smart Capacity as something "completely new": "The fact that we can look into the trailer and record, calculate and monitor the loading space in this way simply didn't exist before." The system makes work easier for the dispatchers in particular: they no longer have to ask the drivers how much space is still available in the trailer – communication that is usually handled in a time-consuming manner by phone or messenger on the smartphone. "Dispatchers often don't know the drivers or there are language barriers," says Birle. "With Smart Capacity, they can simply see on their screen at any time how much space is left in the trailer and can utilize it quickly and efficiently, independent of the driver."

Both the photos of the loading space and the data that the system evaluates are sent to the dispatcher: Thanks to sensors on the trailer, it can not only calculate the free space, but also indicate the weight of the goods on board and how much payload is still available. Smart Capacity is an important milestone on the way to a transparent trailer. "Telematics shows us where the vehicle is at any given moment. Sensors can monitor its condition and check the tyre pressure, for example. But the money in transport is earned with the goods on board," says Birle. "And that's why every square centimetre of free loading space counts." In addition, the system offers more safety and automatic documentation of the cargo: "If you suspect that cargo was damaged during the journey, you can use the camera images as proof."



Reliable in heat and cold

The development of Smart Capacity demanded a lot of patience from the Krone team, the project was complex. "It depends on many variables, both on the hardware and software side, and also on external influences: For example, the technology must deliver data just as reliably in heat as in cold or rain. The challenges lie not in the individual components of camera, telematics and AI, but in the combination of these – and in the end the solution should also be economical. We have succeeded in combining all of this." According to Birle, the innovation is a testament to Krone's foresight and proximity to the customer: "We always stay in touch with our customers and listen to what they need to succeed in their day-to-day transport operations," he explains. "We build the solutions that the industry really needs." For the future, he sees plenty of potential with regard to Smart Capacity: "There are certainly still very many possible applications, in other sectors as well." [↩](#)

The perfect circle

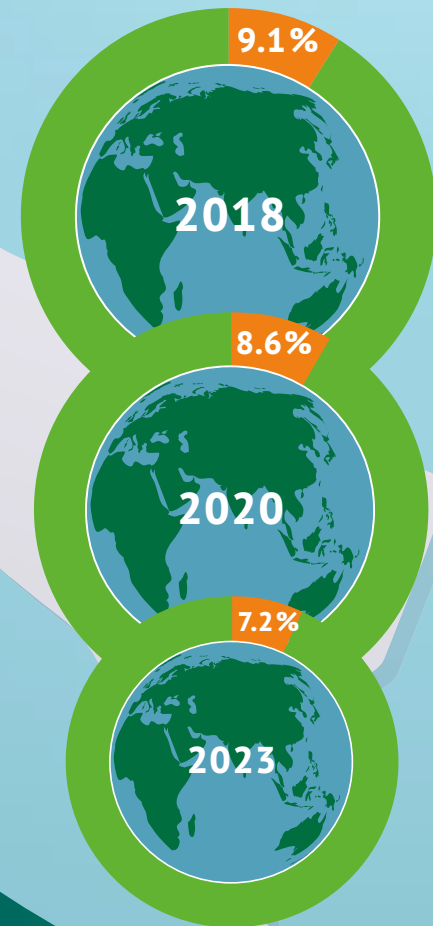
The use of natural resources has serious consequences for the environment, the economy and society. The need to use resources as sparingly as possible has long been recognised, and the consistent adoption of measures has significant effects.

„A circular economy is a regenerative system in which resource use and waste production, emissions and energy waste are minimised by slowing down, reducing and closing energy and material cycles; this can be achieved through durable construction, maintenance, repair, reuse, remanufacturing, refurbishing and recycling. Recycling is mostly the means of last resort.“
(Source: Wikipedia)

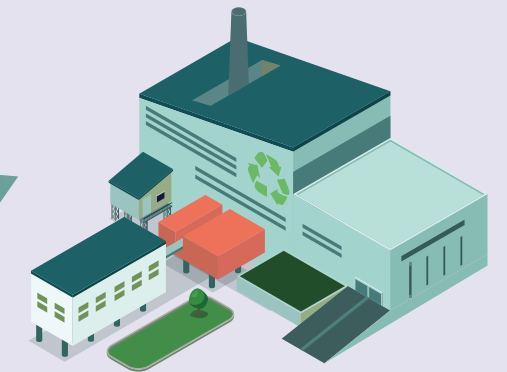
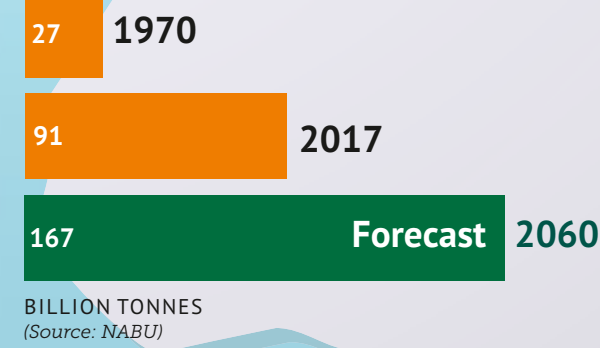
Use of secondary materials

Currently, the global circular economy is only 7.2 percent. This means that so-called secondary materials, i.e. materials that are returned to the global economy at the end of their useful life, account for 7.2 percent of total material input. In 2018, the global circular economy was still 9.1 per cent, and in 2020 it was 8.6 per cent. This leaves a huge circular economy gap: The globe relies almost exclusively on new (unused) materials.

(Source: Circularity Gap Report 2023)



Global demand for raw materials



Across Germany, more than **310,000 employees** work in around **11,000 municipal and private companies** in the circular economy. They generate a turnover of **85 billion euros** and a gross value added of around **28 billion euros**.

(Source: Statusbericht der deutschen Kreislaufwirtschaft 2020)

The future of the circular economy lies in its integration into a much broader vision of resource conservation, closing product loops and sustainable consumer behaviour. For the overall system to be optimised, the focus must be on product cycles.

Design for recycling, reparability, reuse, leasing and sharing economy also require a change in social values, as they are also reflected in the objectives of the Circular Economy.

Macroeconomic effects

The macroeconomic effects of a circular economy for Germany are enormous. A distinction must be made between direct and indirect effects. The former includes the increased value added in the recycling industries, while the latter refer to upstream and downstream industries, such as the increased demand for transport services.



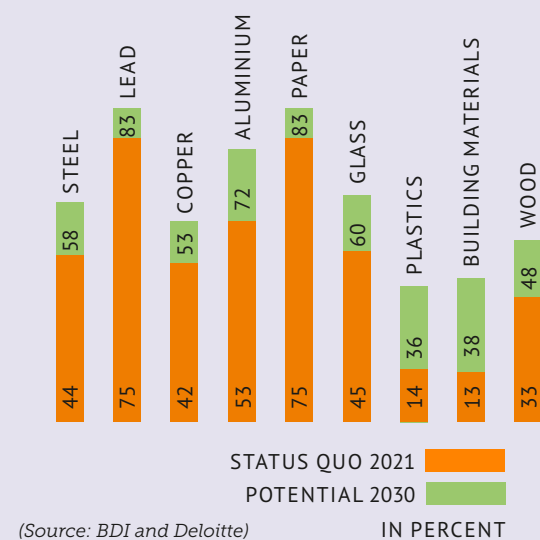
(Source: Statusbericht der deutschen Kreislaufwirtschaft 2020)



(Source: BDI and Deloitte)

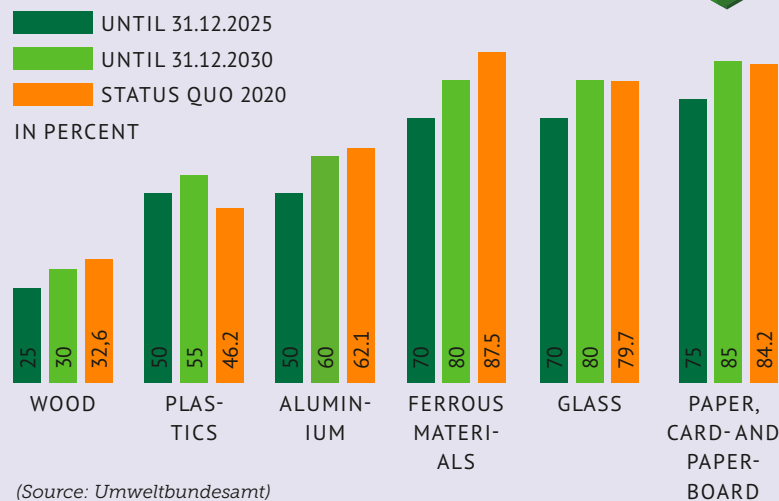
Application rates of secondary raw materials in Germany

As part of a study, selected experts from associations and companies were asked how high they estimate the substitution potential of the most important primary raw materials with recycled secondary raw materials to be by 2030.



Recycling rates Germany

Germany is one of the pioneers in the recycling of packaging, and the requirements of the Packaging Directive have always been easily met. However, thanks to technical development and progressive waste management, the possibilities are still not exhausted.



ILLUSTRATIONEN: FREEPIK, MACROVECTOR/FREEPIK.COM, CHEKMAN/FREEPIK.COM, ALANO_DESIGN/FREEPIK.COM

"After the Wall came down, we drove cables east – and came back with waste paper."

Jörg Albers, Managing Director,
Albers Logistik GmbH



Built on paper

Albers Logistik GmbH is closely associated with the Varel paper and cardboard mill. But over the years, the business has grown quite a bit.

It is often a few moments that turn paper into waste paper. Letters, cardboard boxes, brochures – in the end they all end up in the blue garbage can. And sometimes they end up in Varel. "This is really good stuff," says Jörg Albers, pulling a white shred from a cuboid of the pressed material. "Really expensive waste paper." Albers, 56, gray jacket, white sneakers, stands in an old hall. Colorful paper scraps stick to the floor like confetti after a humid night out.

Since 2012, the old brickyard with the hall in Varel-Borgstede has belonged to Albers Logistik GmbH; before that, Frisian bricks were fired here for more than 150 years. The company of Managing Director Jörg Albers had urgently needed storage space, and they found what they were looking for here. "We took the old clay out of the hall by the ton before we could use it," Albers recalls.

Today, this is exactly where the waste paper is stored. Letters, cardboard boxes, brochures – shredded and pressed into cubes. Albers' drivers picked them up from dealers, and later they take the waste paper to the Varel paper and board mill, where it is turned back into cardboard and cartons. And if you want to produce high-quality cardboard, you need high-quality waste paper, says Albers, looking at the white shred in his hand.

In Varel, 930,000 tons of paper and cardboard are produced annually

According to the Federal Environment Agency, a good 23 million tons of paper were produced in Germany in 2021. Waste paper accounted for more than 18 million tons, or just under 78 percent. For other types of paper, the share is over 100 percent, as sorting residues and all impurities have to be deducted. In Varel, 930,000 tons of paper and board can be produced annually. "This requires 1.1 million tons of waste paper," says forwarder Albers. "And all of that is transported by truck." That means several hundred truck movements a day, he says.

In the past, that was handled exclusively by Albers' drivers. "We practically drove in circles," says Jörg Albers. Waste paper to the mill, new paper out. "We had our site right across the street, after all," he recounts. "We always needed more trailers than we had trucks. It was quick and easy for the drivers." Albers' employees just swapped trailers. "There are a lot more trucks there today," Albers says. Each job is assigned individually, he adds. It's not sustainable, he says, but it's cheaper.

The waste paper is purchased throughout Germany, but most of it comes from the region. "After the reunification, we got the paper from the new federal states – that was →

+ PROFILE

Albers Logistik GmbH, based in Varel (Friesland district), was founded in 1937 as a haulage company in Seefeld (Wesermarsch district). The company has locations in Nordenham, Varel and Brake. In 1984, the group of companies in Varel took over Spedition Kruse. The managing director of Albers Logistik GmbH is Jörg Albers, and the Nordenham location is run by his brothers Claus and Thomas Albers. The entire group employs around **220 people**.

The halls at the headquarters of Albers Logistik GmbH have long since ceased to hold waste paper. The storage area is now used by a steel trader.



incredibly cheap,” Albers recalls. Actually, he says, he always made sure to bring waste paper when one of his trucks delivered a load somewhere. “No empty runs,” he says. These are currently around 10 percent, he adds.

The town of Varel is built on red bricks, Albers’ company on paper

Albers’ grandfather was already a forwarder in the Wesermarsch region. “My great-grandfather had a mill in Seefeld, and then my grandfather drove the flour to Bremen with his wood carburetor from 1937.” Later, Albers’ father ran the company from Nordenham, and in the early 1980s the move to Varel came with the takeover of the Walter Kruse freight forwarding company – and its biggest customer. Today, Albers calls it an “intentional marriage” that was formed between the forwarders and the paper mill in 1984. “We grew up with the paper and board mill,” he says. It wasn’t long ago that the paper and board mill accounted for three-quarters of annual sales. The town of Varel is built on red bricks, Albers’ company on paper. “We are still closely connected,” says Albers. Even if the marriage has cooled somewhat, at least as far as the bare figures are concerned – and the new location.

Six years ago, Albers moved, directly to the A 29 highway, which takes trucks either straight to Oldenburg or to Wilhelmshaven. And thus also to the Jade-Weser Port. Jörg Albers expects good business from it in the future. “As soon as Hapag-Lloyd starts operating there, there will be a lot more for the smaller forwarders,” he is convinced. As a precaution, a model of the “Colombo Express” – a container giant of the Hamburg shipping line – is already standing in his office. Next to it are trucks in miniature format.

The company headquarters is a modern functional building: offices, meeting rooms, an area for the drivers with beds, a fitness room and

a kitchen. Albers looks out of his office onto a warehouse, trucks, sea containers – and palm trees. “I have those in my backyard, too,” he says. Root heating helps the plants survive the northern German winter. Fittingly, the Managing Director has had a beach volleyball court built for his drivers. “We want the drivers to do well,” he explains. Word gets around, he adds.

Steel instead of cardboard – Albers is in a state of upheaval

When Jörg Albers leaves his office, a piece of family history always accompanies him. “That one belonged to my father,” he says, pointing to the photo of a blue MAN truck from the 1960s hanging on the wall in the hallway. Next to it is his grandfather’s wood carburetor, the beige models of the 1980s, and the bright red ones with the silver trailers that still stand in the yard of Albers Logistik GmbH in Varel. 100 of them are in use, 70 in Varel, the rest at the Nordenham site. There are also branches in Brake and Wilhelmshaven. A total of 220 people work for Albers. And the company is set to grow further – especially in terms of warehouse space. According to Albers, around 100,000 square meters are not enough.

Today, the halls at the headquarters no longer store waste paper, but steel. “We now have two major steel customers,” says the forwarder. The 10,000-square-meter hall is full of round and square pipes, and a truck is just bringing in another load of them. “We handle everything from logistics to warehousing to IT,” Albers reports. He adds that the steel distributor only buys and sells from the office. “They always just ask how much space we have left for them.” More steel is stored behind the hall, and in another hall as well. An open area is to be specially roofed. “We’re in a state of upheaval right now,” says Albers

Albers has long been more than just a logistics company

This is not only visible in the goods transported. Albers has long since ceased to be a pure logistics company. Among other things, the group of companies includes a recruitment agency – originally founded to find drivers for its own trucks in Lithuania, Latvia or Bulgaria. When elsewhere the trucks remained in the yard due to the shortage of drivers despite full order books, there was not a single truck in Varel. Other companies in the region would also benefit in the meantime. “We like to share – even personnel,” emphasizes Albers, who also acts as an intermediary for other industries, such as nursing.

PHOTOS: TRISTAN VANKANN

A service center has also been created in recent years – also out of necessity. When workshops became scarce, Albers unceremoniously built one himself so that his own vehicles could be serviced and repaired. “We didn’t really want to do that, because it’s very cost-intensive,” he says. “In the meantime, however, it’s going really well.” More and more customers are coming from outside, he says.

Another source of income is on the hall roofs. In Borgstede, he had the new halls built extra asymmetrically, Albers says. “So that the roofs would get enough sun.” Photovoltaic systems were then installed on them. They not only bring in money, but also save some. “We converted everything to electric,” the managing director reports. Cranes and forklifts run on their own solar power. “Something just always adds to it for us.”

The old hall in Borgstede is also to be modernized. In any case, far less waste paper is stored here than a few years ago, Albers notes, looking at the red brick walls. “It used to be all full.” But the waste paper won’t disappear completely, he’s sure. “If we have a tour somewhere, we still see if we can take back waste paper with us,” he says, adding, “No empty runs.”



What others throw away is used in Varel: tons of waste paper are stored in a hall where bricks used to be fired.





“As a pioneer, we also want to encourage other companies to consistently follow the path towards climate neutrality.”

Jörg Kubitza, Managing Director Ørsted



“Our customer is the society”

Ørsted wants to drive the energy transition with offshore wind farms in the North Sea. Dr David Frink, CEO of the Krone Group, met Managing Director Jörg Kubitza on a stormy day at the headquarters in Hamburg.

Up to wind force 8 is reported by the weather forecast for Hamburg on this Monday afternoon, when Dr David Frink, CEO of the Krone Group, meets Jörg Kubitza – the Managing Director of Ørsted in Germany – in the Hanseatic city. The company is the world market leader in offshore wind energy and is considered the most sustainable European energy company 2023. Ørsted has its headquarters in a “ship of glass and steel” – in the “Dockland” at Hamburg harbour, a six-storey office building with unusual architecture. From the public viewing platform on the roof, you can see the Elbe and the Elbphilharmonie – and in the distance you can glimpse the wind farms in the North Sea off Borkum that Ørsted is building there.

Dr. David Frink: *Is this weather situation optimal for your business today, or is it already too windy?*

Jörg Kubitza: Yes, that’s right, there can also be too Fair winds. When it is strong like today, our teams all go into the harbour. Safety always comes first.

Frink: *What sizes do your wind turbines reach on the open sea?*

Kubitza: We currently have 1.3 gigawatts of offshore wind power installed – that is equivalent to the capacity of two and a half medium-sized coal-fired power plants. And we are now adding almost the same capacity in →



the “Gode Wind 3” and “Borkum Riffgrund 3” projects, which are scheduled to go into operation in 2025. The rotor blades of the wind turbines are each 97 metres long, longer than an Airbus. The nacelle and nacelle house, to which the rotor blades are attached, are as tall as a three-storey house.

Frink: *Is it true that the bigger the wind turbine, the more efficient it is?*

Kubitzka: Yes, that is definitely true for offshore. This is mainly because the foundation is quite expensive: In the North Sea, with a water depth of around 40 metres, it means a high investment. And the more you can put on a foundation, the more electricity you can generate from it. We are currently at an output of the latest turbine generation of 15 megawatts. The development is gigantic: when I started working in this field about 20 years ago, it was 500 kilowatts. Our parks off Borkum can



currently supply more than one million households with electricity – not individuals, but entire households.

Frink: *What I find very exciting is that you not only ensure that renewable energy can be generated and used with wind power, but you also have very high standards for your own environmental friendliness as a company. This is evidenced by the fact that you were named the world’s most sustainable energy company for four years in a row from 2019 to 2022, and that you will again take the top spot in Europe in 2023. In 2020, you also won the German Sustainability Award. At the same time, Ørsted itself has also undergone a transformation as a company – wind power was not on your agenda from the beginning, right?*

Kubitzka: Yes, there was even the idea in the beginning that we would build coal-fired power plants. But everyone involved was aware that they were not a good business in the long term: so you were faced with the choice of going down this long road and becoming extinct as a Danish energy supplier or making a courageous U-turn. This was at a time when offshore wind was getting more attention, so we opted for the complete transformation and sold all assets that were not “green”. The fact that we are now the offshore world market leader is of course also important for our investors: they see that we are acting authentically. And they should know that we live the topic of climate protection as part of our corporate culture. For example, our employees use alternative drives – for our company cars we only use electric vehicles and I come to the office every day by public transport. Everyone makes a contribution.

Frink: *So the central keyword is “consistency”?*

Kubitzka: Consistency and honesty. Our

customer is the society. That may sound glib, but it is meant seriously. Politics allows us to build wind farms on lake beds. We are aware of the responsibility this entails, and we want to remain credible. We are the first to build an offshore wind farm without subsidies. We have built up a very good reputation in terms of occupational safety and working conditions. Building such a reputation takes time and it has to be proven again and again. That is why we are very consistent. As a family business, you know this too, don’t you?

Frink: *Yes, there are of course very clear parallels. As a family business, we can fully concentrate on our long-term planning, as we are not bound by quarterly decisions as is the case with listed companies. “Greenwashing”, which is popular in the business world, is also not an option for us: to be honest, we simply do not need it, but do what we are convinced of at the core. We are trying to make our production plants self-sufficient in terms of energy in the medium term and are thus aiming for a positive energy balance for our company in the next 10 to 15 years. For example, we decided years ago to invest in our own photovoltaic systems. In the agricultural machinery sector, we are building a new, state-of-the-art production facility and have decided on a heating concept that can be flexibly operated with hydrogen, wind or photovoltaics. We are planning to install our own wind turbines in three other plants; our site in Werlte, for example, borders directly on a wind farm. However, the approval situation is very complex and not very pragmatic.*

Kubitzka: Energy is always political. Planning and building a wind farm takes seven years, maybe half a year less, but it never goes much faster. It takes 10,000 tonnes of steel, it takes engineering and people to construct it and so on – it just takes time. Politicians don’t always have this kind of foresight, which presents us with massive challenges. However, we as an industry also have to deliver when we have demanded something for a long time. I’ve been in the wind power industry for 24 years and since then there

“The fact that we are now the offshore world market leader is of course also important for our investors: they see that we are authentic.”

JÖRG KUBITZKA



have been expansion scenarios for offshore wind. Then Robert Habeck comes along, gives the go-ahead for 30 gigawatts by 2030 and everyone freezes. But we mustn’t whine now, otherwise we will have lost as an industry and transformation movement, because then no one will believe us in the future.

Frink: *I wish that politics would not slow down the dynamics of SMEs, but rather support us as drivers of the economy. We as the Krone Group want to concentrate on our core business, and at the same time we are of course investing in renewable energies and putting solutions for CO₂ reduction on the road. When it comes to the CO₂ emissions of a fleet, the towed unit is increasingly coming into focus. As a trailer manufacturer, we are looking for a wide variety of approaches to what can make it more efficient. Aerodynamics is one lever, as is optimal utilisation of the cargo space on the road and optimum route planning. But so are technical solutions, for example to constantly monitor tyre pressure, because if it is too low, fuel is wasted. We can also offer tractor manufacturers indirect installation space for their batteries for the electrified trucks. And we recently presented an e-trailer ourselves with an electric drive axle that uses a sensor system on the kingpin to decide when to engage. That can save around 20 percent CO₂. Here, however, politics is again called upon: unbureaucratic approvals should always be possible for such innovations so that they can get on the road quickly.*

Kubitzka: That sounds very exciting! And it shows that the best place to start with change is with yourself. I wonder to what extent your staff is also interested in the topic of climate protection. At Ørsted, the employees are passionate about the topic and work with complete conviction. Do your teams also ask about it?

Frink: *Climate protection is definitely also a big issue for all employees, but especially for young →*

Some of the wind turbines are higher than Cologne Cathedral.

people. We are seeing that the generation that is now entering professional life has very clear values with regard to their working environment: For them, making money is not necessarily in the foreground, but they want to see a deeper meaning to the job in the company. And sustainable environmental protection is certainly a big part of that. What do you think: Can energy really be generated completely "green" in the future, despite all the challenges?

Kubitza: Definitely. It is possible, but it is not easy. And it takes time. The calculation is really simple: climate change is happening; we have to reach the 1.5 degree target. That only works by replacing fossil fuels, which account for 70 percent of global CO2 emissions. You have to replace that if you want to maintain prosperity at the same time. It is possible through offshore wind and if you don't just think nationally. You need storage facilities and financially sound regulations for grid fees. You also need people out in East Frisia who really go out to the construction sites and take care of service and maintenance on a daily basis. That's a really tough job and we're also looking for skilled workers.

Frink: One goal you have set for the future is to be able to offer wind turbines from Ørsted that are completely recyclable. How long does such a turbine currently stand in the sea?



+ ØRSTED

the company was named after the Dane Hans Christian Ørsted, who discovered electromagnetism in 1820 and thus laid the foundation for how energy is produced today. The company was founded in 2005 as DONG Energy (Danish Oil and Natural Gas) and initially supplied municipal utilities, primarily with gas. Then followed the consistent switch to wind power: from 2013, it built its first offshore park in Germany, "Borkum Riffgrund 1", which has been able to supply the equivalent of 320,000 German households with green electricity since 2015. Since 2017, the company has been called Ørsted. In Norden-Norddeich, it maintains an operations management centre with around 130 employees who are responsible for the operation and maintenance of the facilities.



Kubitza: We assume that an offshore wind turbine has a service life of around 35 years – and then it has to be completely dismantled, including the foundation. In recycling, the rotor blades are a challenge because they are made of a composite material that includes carbon and resins. We are working on solutions, but it is difficult to find something similarly durable. Other parts of the turbines can be recycled and made available as green steel. There is hardly any of that on the market today.

Frink: What other goals have you set for yourself that will be useful to your customers and society?

Kubitza: We want to participate in the energy transformation – and if possible in a way that is good for society. Furthermore, as a pioneer we want to encourage other companies to consistently follow the path towards climate neutrality. And we are taking on further challenges ourselves, such as diversity and social sustainability. In addition, we not only want to protect the environment, but also plan and implement projects in such a way that we create biodiversity. Already now, many fish are settling around our facilities because no fishermen are allowed to go there and the animals find more food there. We will demand such developments with additional investments. We maintain around 18 sustainability programmes, from IT security to water consumption. What drives us: We want to make the world a little bit greener every day. And we have a lot of optimism – we can't do without it. ↵

PHOTOS: MARCO GRUNDT, ØRSTED



+ FEED FOR THE MELT

FEED FOR THE MELT

After years of use on the road, these swap bodies from Krone are prepared for melting in the steel mill at Deppe Rohstoffrecycling GmbH in Lingen. The team separates the materials such as wood and the reinforced floor. Walls and ceilings are pressed into this cube shape by a hydraulic shear with 170 bar pressure. Such a block weighs around 750 kilograms and has the ideal dimensions to be efficiently melted in the steel mill and thus prepared for a second life.

PHOTO: KEVIN ERNST



“Germany is our most important market”



“Spain and Germany can undoubtedly learn from each other.”

José María Arnedo, Managing Director of Armesa Logística

Armesa Logística is synonymous in Spain with international logistics, especially for the transport of agricultural and pharmaceutical products to Northern Europe.

José María Arnedo, Managing Director of Armesa Logística in Valencia and President of the Spanish Association of Refrigerated Logistics Operators ATFRIE (Asociación Española de Empresarios de Transporte Bajo Temperatura Dirigida), loves his country. However, that does not blind him to the problems that exist there. For decades, the Spanish entrepreneur and Krone customer has experienced first-hand the weaknesses and strengths of political decisions in the transport sector in Spain and Germany, Armesa Logística’s most important foreign market. The problem at present, he says, is persistently high inflation with no foreseeable end. The chaos that has already occurred in fuel prices in 2021, the causes of which he says no one has accurately explained, “has led to such a distortion of the market that it was important to obtain from

the Spanish government a subsidy of 20 cents per liter of fuel to partially offset the large operating losses,” Arnedo says.

That government support, guaranteed by the Spanish government, is still going on, he says, and he appreciates that. Meanwhile, there is also good communication with the Spanish Ministry of Transport, Arnedo confirms, which has so far prevented massive strikes on Spain’s roads. “They listen to us there.” The family businessman is also satisfied with the ban achieved on the loading and unloading of goods by domestic and foreign drivers throughout the national territory. “It is a pity that this does not apply in other EU countries, such as Germany, where a driver is forced to load and unload the truck. But he is not a forklift driver or a warehouse keeper,” says Arnedo, referring to the occupational accidents and additional costs for the industry that

result. He is glad that the problem of non-payment and mass bankruptcies has been solved in Spain: “Under the new legislation, we are no longer allowed to offer dumping prices, and our customers can be penalized with significant fines if they don’t meet the payment deadline of 30 to 60 days.” For him, however, it’s also clear that money circulates much faster in Germany than in Spain, which helps the economy there overall: “Both countries can undoubtedly learn from each other.”

Germany has been Armesa’s most important market for years

Armesa’s ties with its customers in Germany go back decades, as Spain has been one of the main producers of fresh food for Europe for many years. The company has benefited from this →





Armesa Logística uses state-of-the-art refrigeration technology to transport fresh fruit and vegetables from Spain to Germany. In the meantime, the next generation is moving up into the company management (picture below).

+ PROFILE

Armesa Logística
The family-owned company, which has been in business since 1965 and is headquartered in Valencia, is considered the market leader for temperature-controlled transport from Spain to Germany and the United States. The fleet comprises around 190 vehicles.

for more than half a century. The refrigeration technology has been developed over time and today consists mainly of Krone products. Recently, 20 Cool Liners from the Emsland-based company have also been in operation, and the vehicles are equipped with the latest fleet tracking technology. “This allows us to cover all our customers’ needs on a daily basis,” says Arnedo. Armesa Logística not only transports agricultural products to Germany or other EU countries, but also pharmaceuticals. For both goods, the utmost care is required during transport, which is why trust and safety are among the most important factors for the customer relationship. When Armesa trucks return from Germany to Spain, they in turn transport imported products from the Spanish food industry, not only for the German discounters in the country, but also for other retail chains.

In doing so, Arnedo not only has its customers’ satisfaction in mind, but also that of its drivers: “The customer-supplier cooperation of Armesa and Krone, as well as the use of the latest and most advanced technologies in route determination to shorten distances, are very important in this context. We are committed to providing the best possible quality of life for our drivers.” As a family-owned company, Armesa Logística does not have a major shortage of skilled workers thanks to its long-standing employees. In addition, the company’s driving staff includes many couples, both Spanish and citizens of other EU countries, which contributes to the work-life balance and thus employee satisfaction, he said. The company’s own offspring are also now pushing their way into management, and Arnedo says this will secure Armesa Logística’s long-term future.

Armesa relies on duotrailers and does not consider megatrucks

In the debate over the best trailers and vehicles for refrigerated transport, Arnedo is neither a proponent of the 44-ton truck nor an advocate of larger trailers that may not be able to pass through certain tunnels or bridges when transporting goods internationally. Should the so-called megatrucks become popular, Armesa will opt for them as well, Arnedo believes, “but for now we prefer the duotrailers because they are more versatile.” More urgent at the moment, he says, is thinking about better infrastructure for drivers. The few guarded and safe rest areas in Spain are already a problem: “How will that work with even larger vehicles?” ponders Arnedo, who also doubts that a truck that is literally twice as long really saves fuel: “It’s logical that traction with more horsepower is needed because the trains have to pull twice as many tons. What’s more, it’s not clear which drive system will be used: combustion engines, hydrogen or electric drive. And who can or will then bear the additional costs?” asks the entrepreneur.

Although Armesa Logística has always had environmental protection in mind, its fleet of 190 vehicles still consists exclusively of internal combustion engines, “but with the most advanced Euro VI EE technology,” Arnedo argues of this policy. Referring to the heated debates about the refrigerated transport of vegetables and fruit from the hot and dry south of Spain to cooler northern Europe, Arnedo stresses that Spain has organized its agriculture well so that cultivation and transport are sustainable and environmentally friendly. For Armesa, it is important that Spain continues to be the fruit and vegetable chamber of Europe, because this is a large part of the logistics company’s business. “When we talk about change, maybe we should think about importing less from South America or North Africa, where cultivation takes place in much worse conditions than in Spain,” Arnedo said. ↩



PHOTOS: SANTIAGO VIDAL

The everlasting tarp

The Swiss **Label Freitag**, together with industry partners, develops a material that can still be used after two lives – as a truck tarpaulin and as a robust bag.

For 30 years now, the Swiss label Freitag has been giving truck tarpaulins, car belts and bicycle inner tubes a new life: as particularly as robust bags, in a variety of designs. It is not uncommon to still recognise the lettering of well-known haulage companies on them. Now the company is taking the next step: with “Circular Truck Tarp” it wants to develop a tarpaulin together with industry partners that can be reprocessed after use as a bag – i.e. is recyclable.

Sub-projects on test drive

Freitag has been working for over two years with partners from industry and “Circular Economy” experts to develop a suitable material. The requirements are high: it must be resistant enough for use on the road – coated to be both water and dirt repellent. Last but not least, the lettering must adhere well. And at the same time, the tarpaulin should be able to be broken down into its basic components so that it can be reused.

Four sub-projects have been developed: A prototype went on the test track in summer 2022, where it is permanently exposed to sun, wind and acid rain. The fabric and coating are made of polypropylene (PP), a material developed by the Dutch company Rivertex. PP is considered one of the most sustainable of the petroleum-based plastics.

Another prototype is made of thermoplastic polyurethane (TPU) and a polyester fabric (PES). It was put on a truck in



December 2022 to be tested on the road. However, this combination of materials is not expected to be recyclable at a high level for several years. Therefore, the project team is working in parallel with Covestro and Heytex on a new type of tarpaulin structure that could easily bypass this hurdle.

Which material will prevail?

A model made of polyethylene (PET) is also being worked on – together with a partner from Freitag’s accessories and materials development department. And even bio-based models are a possibility: Here Freitag has cooperated with the German Fraunhofer Society, the company Linotech and the tarpaulin producer Heytex. However, the result is not yet suitable for use on the road. No one can say today which material will ultimately prevail. And then it will take at least another five years before bags are actually made from it: Because that is how long a tarpaulin is on the road with a truck on average before it is recycled by Freitag. For the company, thinking in cycles was the basis of the business idea. Now Freitag is taking the next step and wants to close these cycles as much as possible. ↩



PHOTOS: FREITAG/YURI SCHMID, FREITAG/ELIAS BOETTICHER

The power source of nature

As CEO, **Antje von Dewitz** has transformed the outdoor brand into a sustainable company that manufactures all of its products worldwide in a climate-neutral manner. Operations at the company's headquarters in Tettang, southern Germany, are also climate neutral. She recently took three months off to hike across the Alps.

Flexible working hours and home offices were known at outdoor equipment supplier Vaude long before the pandemic: The company, which manufactures innovative and sustainable products for biking and mountain sports as well as all other outdoor activities, is known for its holistic corporate culture. This includes consistently environmentally friendly products, extensive certification of suppliers worldwide, and fair working conditions and wages in the global supply chain. The 13 percent increase in sales to around 149 million euros in 2022 shows that profitability and climate protection are not mutually exclusive. When Antje von Dewitz took over the company from her father in 2009, the roots were already there: values such as trust and simple common sense had long been established at Vaude. Von Dewitz transformed Vaude into a holistically sustainable company and ensured that these values were lived throughout and were tangible for all employees.

High proportion of women among managers

It is also the small details that tell of what makes up the "Vaude culture": In the organic canteen at the headquarters in Tettang, Baden-Württemberg, employees enter what food they have taken themselves at the checkout. Trust-based working hours apply. The proportion of women among managers is around 44 percent. The workplaces are ergonomically designed, further training is intensively promoted, and the company's own climbing wall is an inviting place

for sporting breaks. And importance is attached to ensuring that employees do not work too long hours. She sees managers in the company as important key players who do not exercise power, but provide a framework in which everyone can work well, good solutions can be found and employees communicate with each other at eye level. Managers should be able to respond to the strengths and weaknesses that each person brings to the table, she explains. Because: "That creates a better work environment."

Vaude comes from "VD" – the initials of the last name "von Dewitz" and the nickname of Albrecht von Dewitz. In 1974, he founded the company: He is convinced that more and more people want to be active in the mountains and in nature – a far-sighted assessment. Since hardly any genuine mountain sports equipment is available in stores, he wants to manufacture and sell it himself. The one-man business becomes one of Europe's leading outdoor brands, which today has 650 employees. His daughter Antje von Dewitz, born in 1972, studies economics and cultural area studies at the University of Passau before joining Vaude as a product manager and later assuming responsibility for communications. From 2002 to 2005, she completed her doctorate and worked at the Entrepreneurship Endowed Chair at the University of Hohenheim before taking over as managing director in 2009.

Own standard for sustainable outdoor products

In the conviction that clothing made for use in nature should conserve resources as much as



+ ANTJE VON DEWITZ

After completing her studies and doctorate, **Antje von Dewitz** worked in various positions at **Vaude** before finally joining the family business in 2005 and taking over as CEO in 2009. Under her leadership, Vaude has developed into a leading company for environmentally friendly and socially responsible outdoor equipment.

possible, Vaude is introducing its own standard for sustainable outdoor products within the company in 2010, among other things: “Green Shape” takes into account the entire life cycle – from design to the manufacture of materials, production, use, care and repair, and recycling. The aim is to produce the most environmentally friendly products possible from sustainable materials under fair conditions. For example, every product awarded the label must be made of at least 50 percent recycled or bio-based materials and tested for reparability. The strict criteria are continuously being refined, and recently an external advisory board of renowned experts has also been involved.

Other milestones also testify to their goal of transforming the company in the direction of “green”: 2015 will see the inauguration of the ecologically converted company building. By signing the Greenpeace Detox Commitment in 2016, Vaude pledged to eliminate all harmful substances from its entire supply chain by 2020 at the latest and to manufacture its collection completely PFC-free. Sustainability and integration are combined in the upcycling workshop founded in 2018, in which new products are made from leftover materials from the Vaude factory - by refugees who are permanently employed for this purpose. In 2020, the Vaude Academy for Sustainable Business will be founded: It is intended to support other companies with sound expertise in making their organization environmentally friendly



and sustainable. The company headquarters has been climate-neutral since 2012. In 2019, the company is setting itself further ambitious and science-based climate targets in the global supply chain. Since 2022, all products produced worldwide, from hiking jackets to bike panniers, have been manufactured in a climate-neutral way. The further reduction of emissions is a

clear priority – and the share of offsetting is to be reduced further in the process.

Award for responsible corporate governance

Antje von Dewitz’s extraordinary commitment is also demonstrated by numerous honors such as the Austrian Triglos Honorary Award for Sustainable Business in 2019 or the Vanity Fair Changing Your Mind Award in 2020. The latter is awarded annually to five personalities from around the world who have the courage to break new ground and thus bring about positive change. In 2021, it will be named “EY Entrepreneur of the Year” in the “Sustainability” category for its responsible and successful corporate management, and will receive Germany’s highest marketing award with the title of “CMO of the Year” (Chief Marketing Officer).

From the company’s headquarters, you look out over pure idyll: cows, meadows, hop fields and the Alps in the distance. Lake Constance is only 15 kilometers away. Antje von Dewitz grew up here and knows the value of nature. That is precisely why she wants to combine sustainability with profitability. The entrepreneur realized a personal dream in the summer of 2022 on her 50th birthday: She hiked across the Alps on the GTA long-distance hiking trail – from Valais in Switzerland through Piedmont, across the Maritime Alps to the Ligurian Sea.

Three months off as CEO

For this tour, she took three months off from her job. This worked out wonderfully thanks to a “strong culture of trust, shared responsibility and great representation” by her team, says the Vaude CEO. And the project was also not a “last measure against burnout,” but she has always paid attention to a good balance between work and free time. Because Vaude as an employer attaches great importance to this, the company offers its employees, among other things, flexible trust-based working hours, childcare, a sports program or individual time off in coordination with the team.

In two and a half months, she covered around 1,100 kilometers and at least 1,000 meters in altitude every day through often lonely and challenging terrain. On individual stages, family and friends accompanied the mother of four, but she also deliberately ran long distances alone. “Most of the stages are steep and long. It’s really exhausting, you reach your limits, but then when you’re at the top, you’re filled with this insane feeling of happiness,” says von Dewitz. “I fell in love with the mountains all over again. Nature is my source of strength.”

PHOTOS: VAUDE



A column by Bernard Krone

The cyclical principle



The cyclical principle is a fundamental concept that helps us understand the world around us. Whether in nature or in the economy, many processes follow recurring patterns.

In nature, this principle is particularly evident. The change of seasons, the day-night rhythm, the ebb and flow of the tides – these are all examples of natural phenomena that repeat themselves in cyclical patterns. Agriculture benefits from this principle by using the natural cycle of the seasons to grow and harvest crops. Cyclical patterns can also be observed in our economic world. In logistics, for example, it is important to optimise the flow of materials within a company. This involves repeatedly providing the raw materials needed to manufacture products at the right time and in the right quantity.

But the cycles sometimes require our support. Technology can make a huge contribution here. As a commercial vehicle manufacturer, we see

it as our responsibility to help shape the efficiency of transport, and we are addressing this in many ways: We optimise the utilisation of the cargo space, ensure lower fuel consumption by monitoring tyre pressure and, together with the start-up Trailer Dynamics, have developed the eTrailer, which moves together with the tractor unit by means of its own electric drive.

In nature, this principle is particularly evident.

So the cyclical principle is an important aspect of our lives and our economy. By adapting and preparing for these patterns, we can act more successfully and sustainably and equip ourselves for the future.

PHOTOS: ISTOCK / GEORGE PETERS, KRONE

