

DENKFABRIK

NEW IDEAS FOR TOMORROW'S TRANSPORT



RE-START

New value creation –
despite the crisis and especially now!

+ SUPPLY CHAINS UNDER THE STRESS TEST

How the Pandemic and other factors impact material supplies.

Page 08

+ FORGING A DETERMINED PATH INTO THE FUTURE

Bernard Krone in conversation with Hildegard Müller

Page 26

+ 25 YEARS: KRONE COOL LINER JUBILEE

The anniversary of a successful trailer

Page 35

IF ONLY YOU COULD START OVER...



Many people have certainly experienced the situation of wanting to do something differently in retrospect or regretting a decision. The American professor of sociology and gerontology at Cornell University, Dr Karl Pillemer, asked hundreds of older people as part of a study what they regret when they look back on their lives. In the process, he got to hear one answer in

particular over and over again that he had not expected: "I wish I hadn't spent so much of my life worrying." Many had dealt too often with problems that turned out to be only half as bad or did not arise at all in the end. Their simple advice: Waste less time worrying – just do it!

Source: legacyproject.human.cornell.edu/

Dear readers,

You are now in possession of a magazine with a new look, fresh ideas and a new title: "trailerforum" has evolved into "DENKFABRIK" – The Ideas Factory. This term has had an important meaning for us in the Krone Commercial Vehicle Group for quite some time. Two years ago, we presented the Krone 'Denkfabrik' to you at the transport logistic trade fair in Munich. Since then, we have been using this platform for a dialogue process between industry, experts and users. A new podcast of the same name was launched in September 2021. Given that we want to stay in touch with the people who keep the industry alive, use new technologies and tackle future issues – in order to always have our finger on the pulse of the times and to initiate developments or help shape them at an early stage. The "factory" points to our base – this is our origin, here are our roots. And, of course, we will continue to manufacture our products in a factory, even if this becomes ever more modern and intelligent as we head into the future. At the same time, nothing comes into being without "thinking" – without the wealth of ideas and creativity of the people in our company.

With this magazine, we want to once again strengthen the exchange between you as our customers and us as manufacturers. I look forward to many great examples of 'food for thought' and conversations, and wish you plenty of inspiration while reading!

Yours, Dr Frank Albers



Dr Frank Albers, Managing Director Sales and Marketing

+ FOLLOW US ALSO ON

- facebook.com/kronetrailer
- instagram.com/kronetrailer
- twitter.com/kronetrailer
- youtube.com/user/KroneTrailer
- tiktok.com/@kronetrailer
- all known podcast portals

TITLE: VDA PHOTOS: ISTOCK/RICHVINTAGE, KRONE

#01

Focus

Re-Start

02 Food for thought

03 Editorial

06 Blue Notes



26 Heart of the Matter

Bernard Krone meets Hildegard Müller for a walk in the woods – they talk about the **climate-neutral mobility** of the future.

31 The Big Picture

Highest welding precision at the Herzlake site.

32 Cold Passion

Vaccines and rapid tests are highly valuable cargo – especially during the Coronavirus pandemic. Trans-o-flex knows how to get them safely to their destination.

35 Stage

The Cool Liner celebrates its 25th anniversary.

36 The restless expert

With her start-up Parcel Perform, Dana von der Heide makes tracking transparent.



+ COVER STORY

08 Attention, hold-ups ahead!

How the pandemic is affecting the availability of raw materials and supply chains – and what the outlook is for the months and years to come.

13 Record prices

Many raw materials have become scarce – and much more expensive! Dr Heinz-Jürgen Büchner, Head of Industrials & Automotive at IKB Deutsche Industriebank AG, understands the background.

20 Reality check

Selected raw materials in detail

19 Innovation

Support for Elon Musk: A hyperpod is being built in Emden.

22 Switch faster

Spedition Hütter relies on modern technology for fresh food logistics.

25 Stage

Maximilian Birle, new Head of Sales & Service Telematics and Digital Services, on the potential of telematics solutions.

14 Backstage

Marco Henn, IT Service Manager at Boll, facilitates communication between shipper and forwarder using a customer-facing portal.

15 Impulses

From exhibitions to podcasts – inspiration for everyday life.

16 Always open to new ideas

Walter Schmitt GmbH is not afraid of change.



LEGAL NOTICE

Publisher:
Fahrzeugwerk Bernard Krone GmbH & Co. KG
Bernard-Krone-Straße 1
49757 Werlte
www.krone-trailer.com

Responsible for the publisher:
Dr Frank Albers,
Managing Director Sales and Marketing
Tel. +49 5951 209-200

Publishing house:
DVV Media Group GmbH
Julia Schwericke (Project Management)
Heidenkampsweg 73 - 79
20097 Hamburg

Editorial contributions to this edition:
Harald Czycholl-Hoch, Juliane Gringer,
Reinhard Huschke, Sven Mentel, Katharina
Pleus, Julia Schwericke

Layout:
Benjamin Tafel, www.byben.de

Print:
www.muellerditzten.de, Bremerhaven

Rights:
The publication, its articles and its illustrations are protected by copyright. Any reproduction or distribution must be authorised by the publishing house or publisher. This also applies to electronic

use or transfer to databases, online media (Internet), intranets or other electronic storage media. The publisher and publishing house cannot accept any liability for photos, manuscripts and other data carriers submitted without solicitation.

Fahrzeugwerk Bernard KRONE GmbH & Co. KG will use your address to provide you with information about similar products and services pursuant to Section 7 (3) of the German Act against Unfair Competition (UWG). You may object to such use at any time, for example by sending an email to info.nfz@krone.de. The privacy policy pursuant to Section 13 GDPR can be accessed at <https://www.krone-trailer.com/datenschutz>

Blue Notes

News from the world of Krone

Proven quality at a favourable price

The new Krone Trusted spare parts brand enables timely repairs at a favourable price with the best quality – this has been well received in the market. “Both nationally and internationally, we are experiencing a very positive and great response,” says Ralf Faust, Managing Director Service of the Krone Commercial Vehicle Group. The Krone Trusted brand was launched in early 2021 and has so far exceeded all expectations: It has been very well received by workshops and transport companies, and many Krone customers are already ordering regularly from the Krone Spare Parts online shop, which can be reached at www.krone-trailerparts.com. According to Ewald Gronewald, Sales Manager DACH Spare Parts / Krone Trusted, customers particularly appreciate the proven quality they have come to expect from Krone: “We purchase spare parts directly from various well-known manufacturers such as BPW, SAF or Jost, who also deliver to our assembly line as original equipment. In addition, we provide a twelve-month warranty on all parts.”

Ewald Gronewald and his team visit customers and interested parties personally on site. The market particularly appreciates this individual advice. More than 300 different Krone Trusted spare parts are already available in the online shop and cover more than 80 per cent of common wear parts. The range extends from axle parts and ABS sensors to brake drums, air suspension bellows and disc brake pads. The tested brand-name spare parts are up to 50 per cent cheaper than original spare parts and can be ordered throughout Europe. They are not only suitable for Krone vehicles, but also for most trailers from other manufacturers.

Ralf Faust plans to expand the brand significantly: “Spare parts of the usual Krone quality are an important component of the Krone 360° Trailer Service.

They support us in achieving our goal of further optimising the life cycle costs in our customers' fleets. Especially when it comes to cost-intensive axles, the costs for wear and maintenance can be significantly reduced in large fleets with mixed vehicle fleets thanks to Krone Trusted.”



Hygiene stop on the A1 motorway

Especially during the Coronavirus pandemic, truck drivers on the road depend on uninterrupted access to sanitary facilities. Krone, therefore, is supporting the “DocStop” initiative once again. Together with Paul Schockemöhle Logistics, the company is assuming the rental costs of a sanitary container complete with toilet and shower on the premises of the forwarding company – directly on the motorway A1, motorway exit Holdorf, as part of the [#Logisticshelp](https://www.instagram.com/logisticshelp) campaign.

50 years Commercial vehicle production in Werlte

50 years ago, the company Krone started producing commercial vehicles in Werlte. The site was built up from 1964 as an extension of the Spell agricultural machinery production. Since 1971, only commercial vehicles have been produced at the Werlte site. Today, the plant in Emsland is the largest production facility for trailers in Europe: About **1,200 employees** produce around 30,000 units of per year on 87 hectares of land.

Environmental label for the Cool Liner with recuperation axle

The Cool Liner THT New Cool from Krone and its Dutch partner THT have been awarded the “**Green Truck Innovation 2021**” award. The prize is awarded by the trade magazines Verkehrs-Rundschau and Trucker. The THT New Cool is an electrically powered refrigerated semi-trailer that is ideal for food transport in inner cities and conurbations: The second trailer axle is converted to a recuperation axle, which feeds electrical energy to a battery pack mounted longitudinally under the floor. This storage unit, which weighs only 320 kilograms, supplies the all-electric cooling unit with electricity through intelligent control electronics – so the trailer manages completely without a diesel unit. Fuel consumption (and thus also CO₂ and particulate emissions) are significantly reduced, and the cooling unit is also much quieter.



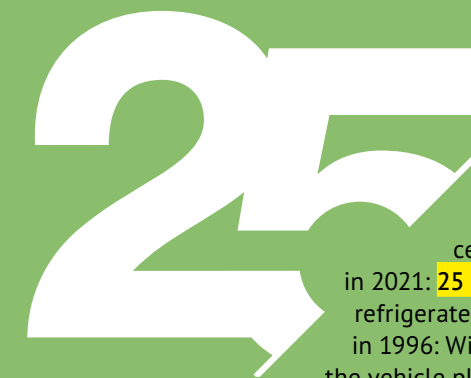
CREDIT: KRONE, FREEPIK/RIKODIGITALCREATOR, SHUTTERSTOCK/CREAPICTURES



Find free parking spaces for trucks

With “Kravag Truck Parking”, the insurance company wants to alleviate the parking shortage for truck drivers. Freight forwarders and companies offer free parking spaces on their premises via the app of the same name, which can then be booked directly by drivers and dispatchers. Krone is providing four places to support the programme: two at the new vehicle delivery site at the Werlte trailer plant and two at the Krone site in Spelle. Truck drivers whose haulage companies belong to the Kravag Truck Parking network can reserve a space with just a few clicks and gain access to secure areas with toilets and showers. Erich Kraft, Head of Delivery in Werlte, explains: “We are pleased to be able to support this valuable campaign and want to underline our appreciation for the drivers. That is why Krone is offering these four places free of charge.”

More info at: www.ruv.de/presse/kravag-truck-parking.



Happy Birthday, Cool Liner!

The Krone Cool Liner celebrates its anniversary in 2021: **25 years** young – that’s our refrigerated semi-trailer! It all started in 1996: With the Krone Wabash, the vehicle plant expanded its product range at that time – in cooperation with the world’s largest trailer manufacturer from the USA. When an increasingly strong dollar drove up import costs, Krone took over the Scandinavian manufacturer Norfrig A/S in 2000 and then set up its own factory in Lübtheen, Mecklenburg in 2007.

Attention, hold-ups ahead!

The Coronavirus pandemic is causing massive disruptions in global **supply chains**. The shortage of raw materials is driving up prices. If you can order something, you have to expect it to take longer. How do you still keep production going under such conditions?



“**T**he pandemic is unique, no one could have foreseen an event of such magnitude,” says Dr Steffen Wagner, Head of Transport & Leisure at KPMG AG. Even if you had tried to prepare for it: Since all sectors were really affected, there would have been no easy solution. Shortages of raw materials, limited supply capacities, an intensified shortage of skilled workers, increased effort due to hygiene requirements and comprehensive border controls – entrepreneurs have had to overcome all kinds of challenges since the beginning of 2020. According to Steffen Wagner, Covid-19 has increased the already high dependence of supply chains on factors such as raw material shortages: “We have seen how even small changes in the transport chain can lead to its collapse – especially in the automotive industry, where a tightly synchronised supply chain with just-in-time delivery to the assembly line is common today.” The term “whip effect” applies here, which describes a scenario where even small fluctuations in demand can lead to significantly larger movements even far down the supply chain, i.e. like the small movement of

a hand that can make a whip crack: “When there was suddenly so much demand for toilet paper in the first lockdown, it caused big problems elsewhere in the supply chain.”

Automobile manufacturers were left high and dry

There was always enough toilet paper – it just had to be brought to the shops faster in the required quantity. Raw materials such as wood or steel, on the other hand, became seriously scarce because they were in greater demand: In the case of wood, for example, the private construction boom in the USA fuelled sales, while North America – the traditional source of wood there – was no longer able to deliver because many forest fires had severely reduced the stock. Rising demand from China also drove up timber prices. Wood was increasingly bought from Europe, which was also felt by every private house builder in this country. This is because prices in the domestic market followed higher export prices and a sell-out of the European domestic market took place. →

ILLUSTRATIONS: ISTOCK/VICTOR_85, ISTOCK/IULIA KANIVETS

+ DR STEFFEN WAGNER

Head of Transport and Logistics, KPMG

Dr Steffen Wagner has been an analyst at KPMG since 1997 and became a partner in the Corporate Finance/M&A division in 2004. He holds a lectureship at the Chair of Accounting & Capital Markets at the University of Mannheim.



Furthermore, raw materials become scarce when they suddenly “migrate” heavily to other industries: “When semiconductor chips, which are mainly produced in Asia, were much less in demand by the automotive industry in the mid-2020s, they flowed instead into consumer electronics, which boomed during the pandemic,” says Steffen Wagner. “Car production ramped up again in the second half of the year – but remains stranded for the time being in terms of chips because now there was a shortage of supply for them.” So there can be changes on the supply side as well as the demand side – and the effects can be significant.

As Purchasing Manager of Krone Holding, Georg Sasse and his team are continuously faced with the challenge of ordering at competitive prices and getting the material to the right place at the right time in the necessary quality. In the Coronavirus pandemic, this is anything but easy. “Currently, there is no commodity group in the materials we process where the supply is relaxed,” he explains. In his 20 years as Head of Purchasing in the company, he has never experienced a situation like the current one: “But I still see it positively and remain optimistic. Krone has a strong foundation and long-standing supplier relationships that we can build on. Any entrepreneur will only stay in the market if he or she offers competitive prices. As a trailer manufacturer, we have proven over the past year that we can rise to this challenge together with our suppliers.”

Relationships with suppliers rooted in trust

Ensuring competitiveness – This is the task facing all players in the transport industry. “Our most important task is to secure this for the future.” In order to be able to react flexibly and quickly to different market situations with the supplier structure, continuous and

transparent cooperation is required. Krone always stays in touch with its partners and maintains open communication.

During the pandemic, in addition to the shifts between supply and demand, there were also instances of collapse in transport capacities – again, for very different reasons: In air cargo, passenger aircraft – which previously accounted for about 50 per cent of international capacity – went missing. The transporters could hardly counter this rapid, substantial and so sudden shortage. Volumes shifted from air freight to sea freight – but trans-shipment soon stopped working in the ports due to hygiene regulations, a lack of containers and a shortage of staff. “The ships were anchored in the harbours, the crews were stuck there,” as Steffen Wagner explains. The traffic jam in the Suez Canal in March 2021 was another influencing factor; and international land transport was slowed down by entry stops, among other things.

Two effects at the same time

“The fact that supply chains are massively disrupted has happened more often in the past, for example, during the oil crisis in the 1970s or the eruption of the Icelandic volcano Eyjafjallajökull in 2010. In the Covid-19 pandemic, however, the situation was not localised but affected the entire world. It occurred in a very condensed way and everything happened in a short space of time.” The interconnectedness and fragility of the supply chains already existed before, due to the international dependencies in the global economy, says Mr Wagner, himself a logistics expert: “For example, the EU imports almost all the rare earths it needs in production from China. But the Coronavirus had now triggered two parallel effects: on the one hand, shifts in demand structures and, on the other, the loss of transport capacities.” →

+ GEORG SASSE

Head of Strategic Purchasing Krone Holding

Georg Sasse completed his apprenticeship at Krone back in 1984. After his further training as a technical business economist, he went into purchasing – first in Werlte, then in Spelle and since 2020 in the holding company.



PHOTOS: KPMG, KRONE

**The perfect cycle
Change of perspective**

The notion that raw materials cannot become scarce at all because they are continuously recycled in a perfect cycle – this is what “Cradle to Cradle” is based on. The concept was developed in 2002 by the chemist Michael Brannan and the architect William McDonough – both had the vision of a world without waste. The model is nature: With biological cycles, no waste is produced – even on dung, new plants grow again. Until now, however, the economy has largely lived according to the “cradle to grave” principle, in which products are made from incessantly new raw materials and thrown into the rubbish after they have been used. This destroys resources and damages the environment.

According to “Cradle to Cradle”, there should only be closed cycles, both in production and recycling: Organic components become breeding grounds for new life on the compost; manufacturers take back their goods and recycle them with the help of chemical or mechanical processes; renewable energies are used in production. A radical idea – which critics accuse, among other things, of being too expensive and not feasible for all products. But there are already many companies that are successfully implementing a closed economic cycle. Clothing, tiles, carpets, household cleaners and cosmetic products, among other things, can already be produced in this environmentally friendly way and without creating waste. You are writing a story that hopes for endless continuation.

Facts & Figures

76 %

of the disruptions in the supply chains are due to a lack of containers. (DIHK)

**AROUND
5 MILLION
VEHICLES**

Production in 2021 will be lower due to the shortage of semiconductors in the automotive industry. (Automotive Research)

25 billion euros

is the amount that bottlenecks and delays in global supply chains cost the German economy. (estimate by the Kiel Institute for the World economy 2021)

Only 50 %

of container ships were on time in November 2020. On average, ships arrived 5.1 days late. (Sea Intelligence)

64 %

of companies are looking for new or additional suppliers due to raw material shortages and supply bottlenecks. (DIHK)

Of course, such a huge crisis on this scale could not have been foreseen. But what can be learned from it? Steffen Wagner expects companies to spend a lot of time and energy on organising their supply chains to be even more transparent and thus more predictable: "The aspect of transparency in the supply chain will become much more important." This is accompanied by a new risk management approach for calculating costs, which also has an impact on the area of transport and supply chain costs: "In the pandemic, we saw that when in doubt, it can be cheaper to keep larger stocks on hand."

Relevant data is again needed for planning such precautionary measures. "The importance of interlinking supply chains, data exchange and platform economy will thus continue to grow," says Wagner.

Focus on risk management and flexibility

Once a year, the consulting firm KPMG asks managers in German companies across all sectors which topics they are prioritising for the coming twelve months: "The transport industry had, for a long while, put its main focus on digitisation and the shortage of skilled workers until suddenly, in 2020, the factors of risk management and flexibility were mentioned most often." Nevertheless, according to Steffen Wagner, digitisation remains a very important keyword: "Companies today are driven by data analytics. But many companies do not yet have the necessary technical basis for this. For them, digitisation, therefore, means above all modernising, i.e. adapting their systems to the latest technological standards. Provisions are already being made: New production facilities for chips have been established in Germany. Such measures to safeguard production will increasingly exist in this country. But global dependencies will continue. Companies have to reckon with this risk – and live with it." ↩



BERNHARD BRÜGGGEN, CEO

"The current price developments and material availability in the market are very challenging. However, Krone continues to be a reliable partner for all customers. We are working flat out every day to keep our promises. So far, we have achieved this; also, when compared to the competition, we have been very successful."

Interview

Steel is scarce – and twice as expensive

Dr Heinz-Jürgen Büchner, Managing Director of IKB Deutsche Industriebank KG, explains how top prices for the material came about and what developments can still be expected.

+ DR HEINZ-JÜRGEN BÜCHNER

He holds a doctorate in economics and is Managing Director and Head of Industrials & Automotive at IKB. In this function, he is in charge of the metals sector and responsible for the Bank's commodity analyses.



At the beginning of 2021, steel prices rose sharply: Why exactly did this happen?

Prices almost doubled in a short time: This was actually one of the most substantial climbs I have ever personally experienced. It is mainly due to the massive slump in automobile production as a result of the pandemic: The steel industry scaled back its production capacities after demand collapsed and only slightly increased again from the fourth quarter of 2020. Steel prices were still low then. Then, at the beginning of the year, orders started coming in again from automotive suppliers, just like in mechanical engineering. And everyone was trying to get steel, but production was not prepared for these quantities. In addition, caution was exercised to see whether the

increase might not just be a flash in the pan, and capacities were correspondingly ramped up with a degree of hesitancy.

If you want to produce steel, you need iron. How did it look here on the commodity side?

Iron ore production was slowed down, especially in Brazil: There, safety measures had yet to be implemented after disasters such as the 2019 dam burst in the north of the country; moreover, Brazil was among the hardest hit by Covid-19. Australia maintained production to some extent, but all in all, strong demand caused iron ore prices to explode, so that we saw peaks of over 230 US dollars per metric tonne. By mid-2020, the price was still at 75 to 80 dollars.

What developments do you see for the near future?

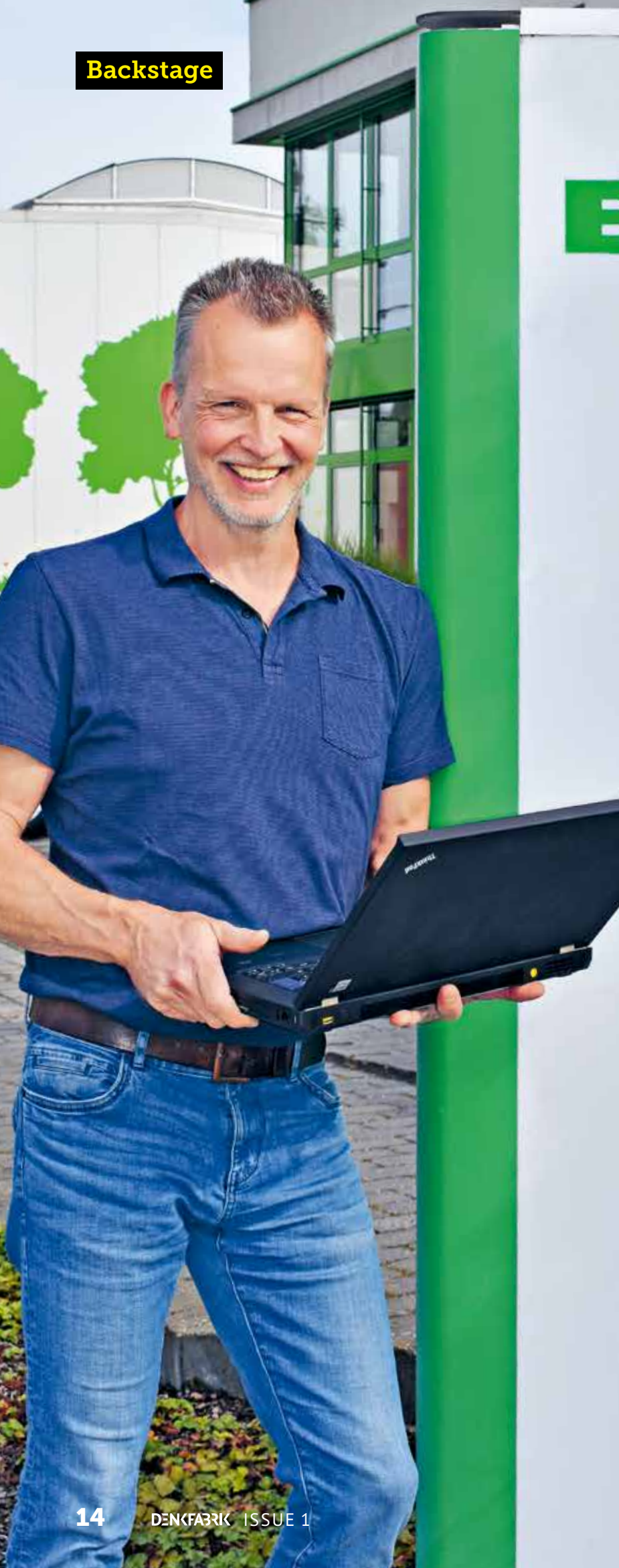
We expect iron ore production in Brazil to normalise, provided there is not another big Coronavirus wave there. Steel production capacities should also rise again to normal levels or slightly above: That will take the pressure off.

What can we learn from this crisis?

An event like this pandemic with its effects had probably not been taken into account by any company in its risk calculations. I observe that this is changing and people want to learn their lessons. With the traffic jam in the Suez Canal, we have also seen how vulnerable export routes can be. ↩

PHOTO: KRONE

PHOTO: IKB



BOLL | Logistik

The creative talent

"We want our customers to be able to find out about the status of their consignment even more quickly and comprehensively.

We have developed the Boll portal on the customer side to fulfil precisely this claim: A ticket system for complaints, a ramp tool for time slot booking for the logistics warehouses, container tracing with documentation of the condition of goods on unloading and consignment recording with a tracking history for any period in Excel format – these individually designed information carriers optimise the communication flow between shipper and forwarder."

**MARCO HENN,
HEAD OF IT SERVICE AT BOLL**

PHOTO: BOLL LOGISTICS

What still moves us forward

More inspiration, tips and thoughts



Science is beautiful!

The makers of the YouTube channel "Kurzgesagt - In a Nutshell" from Munich are convinced of this and want to create awareness. Their clips on topics from science, space travel, technology, biology, history and philosophy are intended to inspire people to learn – quickly, vividly and colourfully.

www.youtube.com/c/KurzgesagtDE

Check your App

The info portal for safe mobile phone use is a platform for consumers and provides information specifically on the topics of security and data protection for smartphones. The editorial team explains settings, gives app tips and researches background information to help users keep an eye on privacy and security on mobile devices.

www.mobilsicher.de

Well, listen to that!

DENKFABRIK – The Ideas Factory: Krone's specialist podcast will from now on discuss the most important topics in the logistics industry with leading experts every Thursday as well as exciting perspectives and ways of thinking.



Rated "worth reading"

In her book "Unsere Welt neu denken. Eine Einladung", Political economist Maja Göpel provides an apt and evocative analysis of our growth-oriented economy. It focuses on our form of economic activity and the resulting consequences for human coexistence. Maja Göpel's invitation is to look at the future in a new and completely different way.

"Unsere Welt neu denken. Eine Einladung" (Rethinking our World. An Invitation) Maja Göpel, Ullstein-Verlag

Well entertained

The film "Wer wir waren" (Who we were), based on the book by Roger Willemsen, is an intensive meeting with six important thinkers and scientists of our time. They look at the current state of the world and deal with the question of how future generations will think about us.

www.werwirwaren.de



Tomorrow's World

What can artificial intelligence do? How does global warming work? The Futurium, which opened in Berlin in 2019, is a house of futures that looks at how we want to live in the future. The exhibition is divided into three large sections: Nature, man and technology. One key topic is the "Future of Mobility".

www.futurium.de



PHOTO: X VERLEIH, ULLSTEIN VERLAG, DAVID VON BECKER



"The future is electric. That's for sure."

Rainer Schmitt

Always open to new ideas

The logistics company Walter Schmitt GmbH, based in Bietigheim near Karlsruhe, has always been open to new developments. In this way, its early entry into **Contract Logistics** was the basis for the company's current success. Schmitt is also a pioneer in the field of electromobility.

A Mercedes-Benz E-Actros has been part of the fleet for almost two years. Rainer Schmitt, Managing Director since 2012 of the company founded by his grandfather Walter Schmitt in 1948, is very satisfied with the electric 25-tonne truck: "Super in terms of pure driving experience, smooth acceleration and above all: no more noise!" The loudest thing about the E-Actros is the indicator, one of its drivers put it succinctly. In the meantime, the battery truck has already covered 60,000 kilometres without any notable complaints and is driving along as normal in the diesel fleet.

Schmitt primarily operates regional shuttle services for contract customers from the automotive industry – first and foremost Daimler and Porsche, but also for various suppliers. Sophisticated storage and transport logistics with large storage capacities for automotive parts were set up for them. The daily workload of the E-Actros is 250 to 300 kilometres, divided into twelve tours from the Schmitt warehouse in Ötigheim to the automotive plants in Rastatt and Gaggenau, to which transmission and axle components are delivered just in time to the production lines. For this workload, 30 to 40 minutes of intermediate charging three times a day at the company's

own 80-kilowatt charging station is sufficient, while the goods are being loaded.

Success model contract logistics

Logistics orders for the automotive sector today account for around 80 per cent of Schmitt's business, and more than 50 of the 80 trucks are used for this purpose. In the days of his grandfather and, to some extent, his father, Schmitt was still a classic transport company which drove, among other things, for the paper industry based in the nearby Murg valley and the Rhine plain. With the shrinking paper industry, there is now less going on than before – in retrospect, the entry into warehouse logistics has proved to be all the more fortunate. When a warehouse operator in the neighbourhood went bankrupt in 2003 and production at Daimler threatened to come to a standstill, Schmitt took on the job in short order. This was the beginning of the business relationship that still exists today.

Since then, further warehouse locations have been added successively, some rented and some newly built. Today, the company manages 77,000 square metres of hall space at six locations. Schmitt offers its contract customers a complete service – from storage to picking →

+ PROFILE

About Walter Schmitt GmbH

Founded in 1948 by Walter Schmitt, the freight forwarder is today a **Full Service Logistics Provider** with around 300 employees and six branches along the Rhine from Mannheim via Karlsruhe to Rastatt. The company is headquartered in Bietigheim, Germany. The family business, now run by the third generation of Rainer Schmitt, specialises in contract logistics in the automotive sector.

Looking ahead: The brothers Christian and Rainer Schmitt are confident about the future.



and packing to transport on demand. This also includes the concept of product-specific transport solutions:

For Porsche, they developed a fastening system for the more secure transport of traction batteries for the e-model Taycan. "Actually, it's not a big order, but it has made us a household name in the industry," laughs Rainer Schmitt. Creativity was also in demand for another order, including for Porsche. This time, voluminous interior panelling had to be transported. Schmitt purchased six extra-long Krone Euro-trailers especially for this job. "With this, we only have to drive six times a day instead of seven and save ten per cent CO₂ - that won over the customer." This is because customers are increasingly attaching importance to sustainability in the supply chain.

IT competence is crucial

However, contract logistics is not just about sophisticated route planning and smart storage and transport solutions. Rather, the backbone of this business model is an efficient, smooth data exchange with customers. "We now invest more in hardware and software than in new trucks and trailers," explains Rainer Schmitt. It is, therefore, a good thing that the second – non-family – managing director, Volker Klemm, has a background in business informatics. Of the family, brother Christian is also an authorised signatory in the company. He mainly takes care of the technology – from the trucks to the warehouses. The now 73-year-old father Max also drops by from time to time, but his role is "more advisory than that of a hindrance", Rainer Schmitt notes with a wink. "My father is not a patriarch, he let me get to grips with it my own way early on – I am very grateful to him for that."

He is also grateful to him for setting the right course almost two decades ago: "Contract logistics saved us," Rainer Schmitt is certain.

This is because a pure haulage operation with a few trucks would hardly be worthwhile for a medium-sized company today because of the tough competition. "Only the really big players can do that, the others have to specialise," is his credo. "Our core competence today is the last mile – within three hours we deliver directly to the assembly line." Schmitt is proud of its loyal customers from the automotive sector; however, the Coronavirus crisis also revealed the problems in this regard. In March 2020, the assembly lines suddenly came to a standstill and Schmitt also had to close the factory – for the first time since the company was founded – for three weeks. It was not until the last quarter of 2020 that business returned to some degree of normality. Unfortunately, only until this spring, because suddenly semiconductors became scarce worldwide and car production stalled again.

A broad line-up creates security

The fragility of global supply chains thus remains a challenge, quite aside from the Coronavirus. In addition, the automotive industry is on the verge of perhaps the biggest change of era in 100 years. "The engines and transmissions that make up a significant part of our loads today may soon no longer exist," Rainer Schmitt foresees. Of course, components for electric vehicles could then be transported, but he wants to play it safe and win over more industries in the contract logistics sector in the next two years. "Our focus is and will remain the automotive industry, but we want to give more weight to other industries again."

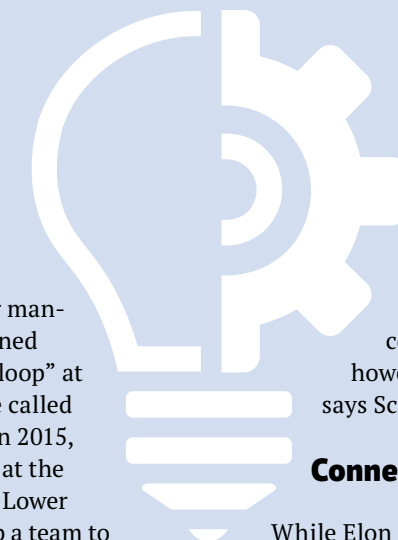
The Bietigheim-based logistics company also wants to remain at the forefront of electromobility. This includes participation in a pilot deployment of electric trucks in the neighbouring Murgtal, where trolley trucks are tested and compared with battery and fuel cell models. Rainer Schmitt is rather sceptical about the overhead line concept and will represent the battery faction with the E-Actros: "Our shuttles have to be flexible and, if necessary, also run detours – you can't do that with a fixed infrastructure." He can imagine converting half of his fleet to battery vehicles in the medium term. "There is hardly any workshop time and brake wear is reduced by 70 per cent because of recuperation." He is just waiting for the right time: The technology is developing rapidly; the series version of the E-Actros, which will be produced in the Autumn, already has twice the range of its current test vehicle. The e-trucks are also expensive. Nevertheless, there is no going back to diesel for Rainer Schmitt: "The future is electric. That's for sure." ↩

PHOTOS: PAUL GÄRTNER

"Hyperloop is the Transrapid 2.0"

The Hyperloop from Emden

A team at Emden/Leer University of Applied Sciences is developing a capsule that can travel in Elon Musk's high-speed "Hyperloop" tube. The system could become an important component of the **Traffic concept of the future**.



Elon Musk, founder of the electric car manufacturer Tesla, wants to move manned capsules in a tube called the "Hyperloop" at almost the speed of sound. When he called on students worldwide to support his vision in 2015, Walter Neu and Thomas Schüning, professors at the University of Applied Sciences Emden/Leer in Lower Saxony, also took notice. Together, they set up a team to develop their own vehicle based on the Hyperloop principle: The "Hyperpod X" capsule is supposed to float in Musk's tube, glide along at lightning speed and consume very little energy. Air resistance normally accounts for around 80 per cent of a vehicle's energy consumption – Hyperloop is an almost airless space. The concept is not a science fiction scenario, says Schüning, but "a technology that we have mastered from a technical perspective".

System components are being worked on worldwide

The air pressure in the tube is comparable to that of a flight at an altitude of 20 to 30 kilometres. "So you could say that the Hyperloop will be grounding planes going forward," explains the mechanical engineer. A worldwide community of companies and universities is now working on suitable system components. "The capsules have to be stable and safe to withstand the high speeds, and at the same time they should be able to float," explains Schüning. "In doing so, we have to submit to certain restrictions of the tube, including that no heat dissipation is possible within the system." He sees the Emden location as a player in an international Hyperloop network: "We have already initiated some EU research projects and are trying to bring all the players together to make the Hyperloop a reality." A test circuit is needed for this. In Groningen, the Netherlands, for example, a model is being built. The former test circuit of the Transrapid in Emsland is also partly suitable –

technologically speaking, the Hyperloop could be called Transrapid 2.0. "Ultimately, however, we need a common route for Europe," says Schüning.

Connections with logistics hubs

While Elon Musk is primarily focusing on the high speed of the system to enable people to travel, the community, according to Schüning, initially wants to look more at freight transport.

"The tube can certainly not completely replace other modes of transport. But there is also great potential in combining it with other alternative delivery concepts such as the Cargobike from Krone subsidiary Rytle. We are in contact with the Krone vehicle factory to exchange knowledge and experience." The expert considers it conceivable that in at least ten years, the first routes will emerge that connect industrial areas with logistics hubs. "That way, you could get more delivery traffic out of the cities," he explains. The expansion of a hyperloop infrastructure is certainly one of the biggest challenges: "But if you want to achieve the climate goals, you have to face such challenges." ↩



PHOTO: TEAM HYPERPOD

The finite nature of our raw materials

WHAT ABOUT THE AVAILABILITY OF OUR RESOURCES?

This question is more complex than it seems at first glance. Many factors such as recycling possibilities, substitutability or the recycling rate have an influence on availability. But supply risks due to trade restrictions or regional concentration of raw materials must also be taken into account. An overview.

RESIDUAL AVAILABILITY



Due to the high concentration of the largest producing countries, the **chrome** supply is classified as critical.



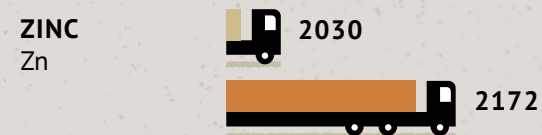
Copper is easy to recycle. However, its unique electrical conductivity makes substitution difficult.



Phosphorus recycling is possible in principle, but cannot be substituted in the main area of agricultural use.



Due to new applications in high-tech products, an increasing demand for **titanium** is predicted.



Recycling is a growing complement to **zinc** production, but cannot replace it in the foreseeable future.



RESERVES
Deposits that can be mined economically using current state of the art technology.

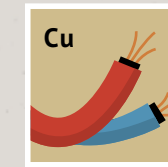
RESOURCES
Deposits that are available but cannot yet be mined economically.

RESIDUAL AVAILABILITY
Indicates how long the reserve or resource would last at the current annual production rate.

EXAMPLES OF USE



CHROME
Alloys for corrosion and heat protection



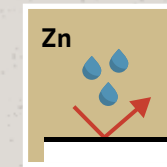
COPPER
Wires, cables and conductors



PHOSPHORUS
Fertilisers and animal feed, Corrosion protection



TITANIUM
Paints and lacquers, plastics



ZINC
corrosion protection, in cosmetics and pharmaceuticals

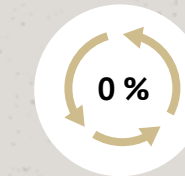
RECYCLABILITY



Cr



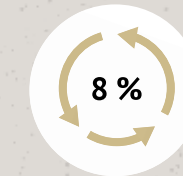
Cu



P



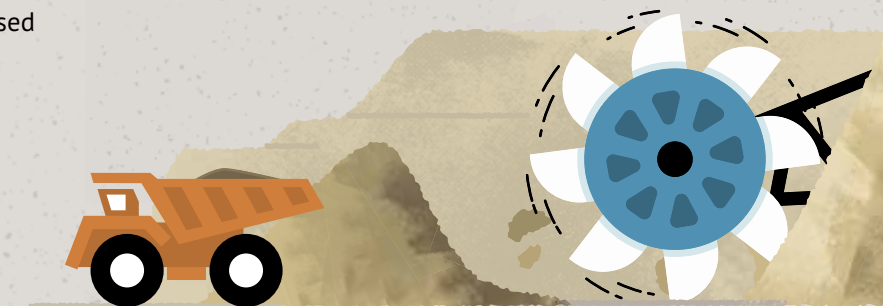
Ti



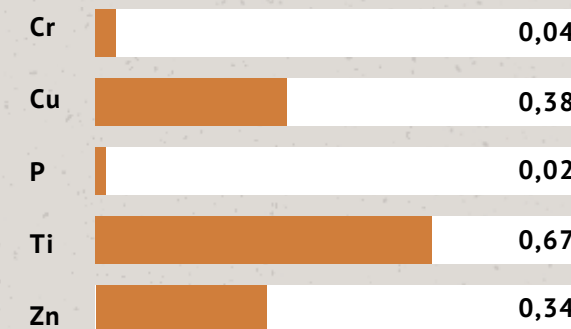
Zn



Describes how much of the processed raw material can be recovered and recycled.



SUBSTITUTABILITY



0 = bad, 1 = good

Provides information on how well a raw material can be substituted without a loss in quality and satisfaction of needs.

TOP 3 OF THE PRODUCING COUNTRIES

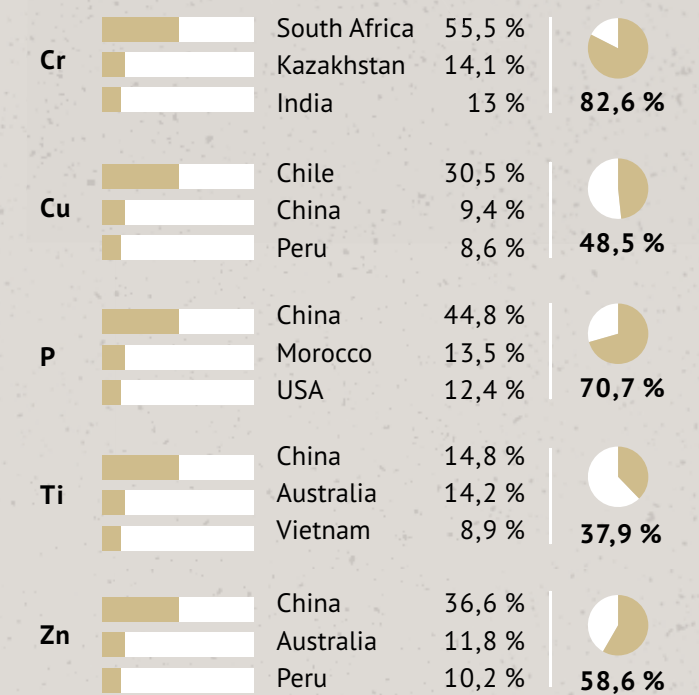


ILLUSTRATION: ELISABETH DEIM SOURCES: REMONDIS, 2015; GERMAN RAW MATERIALS AGENCY

Switch faster

Spedition Hütter from Öhringen in Baden-Württemberg specialises in the transport of sensitive goods such as pharmaceutical products and foodstuffs, as well as safe air freight. The precise documentation of many parameters is necessary. This is ensured by Krone's **Telematics system**.

Four monitors at each operational workstation – and the phones ring every minute: “Are you driving to Stuttgart via the country road?”, an employee asks a driver on the phone. The heart of Spedition Hütter beats in the internal control tower. All roads lead back to here – the scheduling department is responsible for coordination throughout Europe, and if a problem should arise, it can be reacted to immediately.

Transporting goods these days means more than loading them onto a truck at the point of origin and unloading them again at the destination – especially when food, medicines or high-value goods are being transported. “We specialise in these product groups,” says Dirk Hütter, who is responsible for project management and business development in the family business. And goods from these sectors also require permanent monitoring during transport: “We have to be able to provide our customers, especially those in the pharmaceutical and food industries, with complete proof that the required temperatures have been maintained throughout the entire transport process.”

To document this, Hütter relies on Krone's telematics box, which is installed in all of the haulage company's trailers. Up to twelve temperature sensors measure the temperature of the trailers in six zones. If deviations occur, they are reported directly to Hütter's scheduling department. If necessary, the driver can be notified directly by the dispatch staff or intervene himself via telematics. But the telematics system measures even more parameters: “The monitoring centre is also used to check whether the GPS coordinates match the route, whether the security system is activated or whether the

doors are still secured. If something is wrong, an alarm message appears immediately,” Hütter reports. In total, more than a dozen parameters are recorded. “We would not have this scope for action with other telematics providers.”

In addition, the Krone Telematics Portal is also very user-friendly. “Even new colleagues can settle in very well there. With two to three clicks you get everything you need,” says project manager Hütter. On the one hand, this simplicity facilitates and shortens the training of new employees. On the other hand, the required data could always be retrieved. “This permanent data supply is particularly relevant for us, as is data security,” says Hütter. “This corresponds to the optimum of the customer requirements for us.” At the same time, thanks to the data provided, a delimitation of liability vis-à-vis the shipper can be proven, as this is documented to the second via the door status sensor.

The human component is also important to Hütter when working with the commercial →



Satisfied:
Dirk and Bernd Hütter (picture right)

Checked:
The telematics box provides relevant data.



“Permanent data supply is particularly relevant, as is data security.”
Dirk Hütter



Project Manager Dirk Hütter (left) and Managing Director Bernd Hütter are enthusiastic about the benefits that the telematics system brings to their haulage company. Business decisions can be derived from the data and problems can be identified at an early stage.

vehicle specialist: "At Krone, a contact person is always available and we get the best possible advice." When problems arise, technical solutions are sought together. Maximilian Birle, Head of Sales, Service Telematics and Digital Services at Krone, gives an example: "The last issue was the power supply for an external telematics box that had been installed at Hütter for some special cases. It turned out that the battery was not sufficient to run the already installed telematics systems autonomously every five minutes for 24 hours." The Krone telematics box with its powerful back-up battery has met this requirement ever since. "You just have to get the right people for 20 minutes to solve a problem together," Birle sums it up.

A special feature at Spedition Hütter is the company's own workshop, where not only necessary maintenance work is carried out on the tractor units and trailers, but also conversions and extensions. "In a way, the workshop is also part of our core competence," Dirk Hütter proudly reports. "We have a 100 per cent owned fleet, 100 per cent employed drivers and our own in-house workshop." Above all, this gives the company flexibility: "We can control this internally very well; unlike external workshops, this also makes appointments at the weekend easier," says the project manager.

The freight forwarding company's workshop also benefits from the data provided on the Krone portal, for example, when it comes

to maintenance intervals, low battery voltage or mileage. "A lot of things can already be read out of the data in the workshop and thus problems can be detected at an early stage," says Managing Director Bernd Hütter happily. "This way, we can react at short notice and in a targeted manner." At the beginning of telematics, it was rather "driven by the customers", says the entrepreneur. But Hütter created a virtue out of necessity and switched to state-of-the-art digital technology and working methods at an early stage. "Now, we are actively using telematics, because the world is changing rapidly and we are going with it," says Bernd Hütter.

Since placing its trust in digitisation and relying on telematics, a lot has changed in the company. "We first had to integrate the data-driven work into the old structures," reports Dirk Hütter. "In the past, scheduling was manual, but today we are much more systematic. Our deviations are documented digitally, I can react to alerts around the clock and find all the data I need in my app." Telematics provides a clearer information structure and ensures automated monitoring of the vehicles. "Admittedly, we had a greater upstream effort at the beginning, but this results in higher process reliability, simpler documentation and faster data availability." All of this offers the freight forwarder's customers many advantages that they no longer want to do without. ↩

+ PROFILE

About Hütter Spedition + Logistik GmbH

Spedition Hütter from Öhringen in Baden-Württemberg specialises in temperature-controlled transport. Trailer digitisation by means of telematics is helping the medium-sized family-owned company to provide a high quality, reliable service.

PHOTOS: MATT STARK PHOTOGRAPHY, KRONE



MAXIMILIAN BIRLE

Maximilian Birle (36) is Head of Sales & Service Telematics and Digital Services at Fahrzeugwerk Krone. He is convinced of the digitalisation potential for the transport industry.

Interview

"Data competence is becoming increasingly important"

Maximilian Birle, Head of Sales & Service Telematics and Digital Services at Krone, on the increasing importance of telematics applications for commercial vehicles and the challenges this poses for manufacturers and customers.

What is the significance of telematics in the commercial vehicle segment?

The commercial vehicle industry was one of the first business sectors to be introduced to telematics and has had a major impact ever since. In the beginning, it was more about purely technical monitoring, but in the meantime, it has also become a matter of net-working logistics chains. A commercial vehicle that is not connected to telematics cannot participate in a digital logistics chain today. Telematics also plays a significant role in efficient fleet management.

Which topic is currently most important to your customers – the transport companies?

Traditionally, our customers are haulage companies. Until now, they have mainly transported goods, but now they are suddenly becoming data transporters and producers. This is a transformation that raises many questions – from data protection to the question of who can (and may) access which data, when, where and for what purpose. Many medium-sized haulage

companies have recognised that data competence is becoming increasingly essential for them – and this naturally also applies to Krone. We invest a lot of money and time to further expand our expertise in this regard.

What is the main focus of telematics use today?

The main functions are to record the position of a trailer and its course. In the case of coolers, the precise documentation of the cooling transport chains is added as an indispensable function. Then there is the issue of safety, especially for the pharmaceutical industry and for high-value goods, where a special level of safety must be maintained during transport. For example, there is a special safety system that ensures that the driver can no longer open the trailer on his own, but needs a remote-controlled release from his dispatcher in accordance with the principle of dual control.

Where is the trend heading?

Above all, it is about achieving the best possible level of data utilisation.

Telematics has now transformed from a monitoring system to a support system that, for example, documents tyre pressure and wear, thus enabling damage to be repaired before it even becomes visible.

Who is the driving force behind these new developments: the manufacturer, or the customers?

I think one can really speak of a symbiosis here. Of course, customers are a strong driving force in this transformation. And, by the way, this exchange works very much in the spirit of partnership, whereby large customers also have excellent IT departments of their own and, in individual cases, even advance to independent IT system houses in order to be able to distinguish themselves from the competition. On the other hand, of course, it is as Henry Ford said: "If I had asked the cowboys what they wanted, they would have said a faster horse." For us as a manufacturer, the challenge is always to think and develop in very complex dimensions so that we can reach the next level of innovation. ↩

"We can build on our innovative strength"

Climate neutrality by 2050 – what can the automotive and commercial vehicle industries contribute? Bernard Krone met Hildegard Müller, President of the German Association of the Automotive Industry, on a walk in Emsland to discuss this topic.



Bernard Krone: *Dear Ms Müller, thank you for taking the time to talk to us – in your old home country! You were born about 70 kilometres away from our location, in Rheine. We are here in the midst of nature, in a very beautiful forest. The summer of 2021, with its extreme weather events and a flood disaster in Germany, showed us quite clearly how vulnerable the environment is. Against this background, too, the demands on mobility are growing ever stronger: It should be clean, quiet, efficient and climate-neutral. Ms Müller, how do you think the automotive industry can help to achieve this?*

Hildegard Müller: I, too, would like to thank you for inviting me to this meeting and I am glad that we are walking this beautiful path together. These are indeed big tasks we are facing as an industry. Above all, the goal of climate neutrality demands a lot from the automotive industry. But we can build on one great strength: our innovative power. We have always proven that we put new ideas into motion, and we will continue to do so in the future. In doing so, we think beyond the car and look at how we can better interconnect the individual modes of transport and thus achieve more efficient transport. However, individual mobility will remain important in the future. As an automotive industry, we are convinced that it is necessary to take into account what mobility needs people actually have. Being close to people and their needs – whether they live in cities or in rural areas – that will be crucial. Incidentally, this applies just as much to road freight transport. I am certain that we can also become climate-neutral with individual mobility and with the car. Commercial vehicles, trailers and bodies will make their contribution. Medium-sized companies like Krone are very committed to this. →

B.K.: *Indeed. On the one hand, we are continuously optimising our environmental management approach. This includes, among other things, the consumption of materials and resources and the topic of recycling. For us, climate neutrality also means reducing energy consumption in our production. For example, our paint shop has been operated for many years with a combined heat and power plant that reduces CO₂ production. The cathodic dip painting plant installed in our modern surface centre in Werlte is also state-of-the-art in terms of energy efficiency. The German Energy Agency has named it a lighthouse project for the reduction of waste heat. Another example of our contribution to climate neutrality is that we use renewable energies: Large photovoltaic systems have been installed on the roofs at our sites in Lübtheen and Herzlake. They also have a positive influence on our energy balance. In addition, we are increasingly relying on digital solutions in our products and services to enable our customers to be more efficient and cost-effective. I am a firm believer that digitisation will also further strengthen climate protection and the innovative power of the German economy.*

H.M.: I see it the same way as you. Digitisation is and will remain a very big driver of the future, bringing us not only more growth, more freedom and more security, but also more climate protection. However, we as an association see a great need for political action so that innovative solutions can also be implemented. For example, we would like to see digitally optimised traffic management in cities that can reduce congestion and speed up routes. We are also aiming for autonomously driving shuttles in the city and in the countryside, as well as new assistance systems. If we intelligently link the individual modes of transport, this can make everyday life much easier for users. However, all of this requires a faster expansion of the digital infrastructure, especially for 5G, and a faster implementation of the framework conditions for autonomous driving. Where do you stand with your company in terms of digitisation, and how much potential does it still have for you?

B.K.: *When I look back on the previous year, the focus for us was, of course, on internal digitisation on the one hand – both in terms of business processes and supporting the people*

"Climate protection is a task that we as the human race must shoulder together, and to which we must all contribute."

**HILDEGARD
MÜLLER**

who work for us. We were able to implement "working from home" solutions and the establishment of flexible working hours well; we have invested a lot in IT here in order to meet the security requirements offered. On the other hand, when I look at our products, digitisation plays an important role both in the agricultural machinery we manufacture and in our commercial vehicles. The vehicles themselves are digitally monitored to ensure their permanent, fault-free function. In addition, the data enables so-called Predictive Maintenance. And, of course, you can see what happens to the goods during transport on board, for example, whether the necessary temperatures are maintained. Thirdly, we can optimise the utilisation of vehicles with our digital solutions. This, too, pays dividends in our pursuit of climate neutrality. After all, the automotive industry supports the EU Commission's goal of making Europe the first climate-neutral continent by 2050.

H.M.: Absolutely! Climate protection is a task that we as humanity must face up to and to which we must all contribute. Our member companies are investing over 150 billion euros in climate-neutral drives, electromobility and the digitalisation of transport by 2025. German manufacturers already have more than 50 per cent of the European market for electric cars. This makes them European champions in electromobility! And there are also fixed targets for commercial vehicles. We remain convinced that, in the long term, we need a technology mix of electric drive, hydrogen and e-fuels to achieve climate neutrality in transport.



This applies to passenger cars, as well as commercial vehicles. The modern and clean combustion engine also makes its contribution. Even before the Commission's proposals, however, it was clear to us: Especially in the passenger car sector, the rapid ramp-up of electromobility is a priority. This is also where we – as the automotive industry – have delivered in recent years: Customers can already choose from more than 70 e-models from German manufacturers – by the end of 2023, there will be almost 150. But the lack of charging infrastructure in Europe is a real burden on success. 69 per cent of the charging points are located in just three countries: Germany, France and the Netherlands. And a corresponding infrastructure for commercial vehicles hardly exists yet. The VDA is very committed to ensuring that this issue is finally dealt with in a committed manner in politics. The Commission is now proposing a set of binding regulations for an expansion – we see this as a positive sign. Nevertheless, the targets still fall well short of what would be required for nationwide coverage. And for electromobility to develop its full potential, we need 100 per cent green electricity. I see that you offer an electric refrigerated semi-trailer – that's very exciting. How do you implement this from a technical standpoint?

B.K.: *With our Krone Cool Liner THT, the cooling unit is operated purely electrically: A battery pack is installed in the vehicle that is charged via recuperation – an axle generator charges the battery with the energy from braking. This saves a lot of diesel fuel, which is still used as standard for transport refrigeration units. →*





H.M.: Impressive! I think that soon the CO₂ certification of superstructures will become mandatory. Accordingly, new innovative ideas for optimising trailers must be quickly enabled and also promoted. Are there other projects under your roof that are moving in this direction?

B.K.: *In addition to the use of recuperation, fuel consumption can be reduced, for example, through aerodynamically-designed parts on the trailer: Here we offer packages with side trim or rear diffuser that measurably reduce drag.*

H.M.: In future, support programmes for commercial vehicles should take all vehicles and components into account. This also means that longer-term funding programmes for trailer technologies or the electrical auxiliary units on superstructures they mention must be realised. The restrictions in Europe that apply to commercial vehicles in terms of mass and dimension should be revised. They must be aligned with the potential they have for CO₂ reduction. And if it is politically desirable to shift more goods to rail, the processes and prices in combined transport must also be adjusted accordingly.

B.K.: *Allow me to make the following comment: Since it is not at entirely possible to transfer all goods from road to rail, we must continue to optimise road transport, and there should be an open-system discussion about which routes*

are the right ones here. Of course, we would like to see this not only discussed, but also implemented – especially in the short term, so that we as an industry can muster even more courage to test innovative solutions.

H.M.: I agree with you completely. Are there other points in which politics should support you as an SME? What do you want from the decision-makers?

B.K.: *Above all, reliability. And that entrepreneurship is not punished but promoted because it secures jobs, and helps to maintain Germany as a business location. With regard to our products, it would be desirable that concepts such as the long vehicle combination or weight and length measurements in general are openly discussed and not prevented by political restrictions. Ms Müller, what do you have on your agenda – what do you think it will take in the coming years to achieve the goals you have mentioned?*

H.M.: The climate-neutral mobility of the future is an ambitious project that industry, politics and society can only implement together. When it comes to climate protection, the clock is ticking and we have to act – we know that and that is what we are going to do. But whoever has the most committed climate goals worldwide also needs the best location conditions. Unfortunately, we are becoming increasingly removed from this, and this is a great burden on those small and medium-sized businesses that are so committed, in particular. We also need a policy that is focused on the needs of consumers – whether in cities or rural areas. What we don't need are specifications regarding technologies. Rather, innovations should be promoted. They are the most efficient way to achieve climate neutrality by 2050 and to master the balancing act between climate protection, economy and social compatibility. [↪](#)

+ HILDEGARD MÜLLER

President of the German Association of the Automotive Industry

Before Hildegard Müller became President of the VDA in 2020, she was responsible for the Grid, Infrastructure and Digitisation division on the board of the energy supplier Innogy SE.



PHOTOS: SCHÖNING PHOTO DESIGN

SPARKLING PRECISION

Accurate, fast and precise, these industrial robots weld the batten pockets of a corner stanchion that is installed in the end wall of the Profi Liner 5: Within a few seconds, the materials are inseparably joined together. When the robots work here, it is evidence of automated precision – and sustainable quality.





"We cover the entire logistics chain from procurement to fulfilment."

Wolfgang P. Albeck

We help save lives

As an expert in temperature-controlled transport, Trans-o-flex is an optimal partner for pandemic supplies. More than **200 million Corona quick tests** have already been delivered on time by the express service.

When it was decided in the spring that Coronavirus tests would become compulsory in schools, it was clear: plenty of test kits would be needed! They had to be delivered on time, safely and at the right temperature – and also flexibly: “In North Rhine-Westphalia, for example, we sometimes delivered appointment letters to schools during the holidays when secretarial offices were not staffed,” Wolfgang P. Albeck, CEO of Trans-o-flex Express GmbH reports. “We are living through an intense time, but with detailed planning, we are managing it all very well.” Over 200 million Corona quick tests have been delivered by specialist express transport alone. “These high volumes are still the lesser challenge, rather, it is the framework conditions under which we transport them – and the pressure of expectation from the public if something were to go wrong.”

Vaccines against Corona and rapid tests for the virus: In the pandemic, hardly anything had to be delivered more reliably and quickly than these two products. And all this under high time pressure and, in part, extreme conditions: The mRNA vaccine “Comirnaty” from Biontech/Pfizer was initially only allowed to be delivered and stored at around minus 70 degrees. The rapid tests are also temperature-sensitive, requiring a range between 2 and 30 degrees Celsius.

Delivering parcels and pallets together

Trans-o-flex's core competence is express transport and logistics solutions for manufacturers

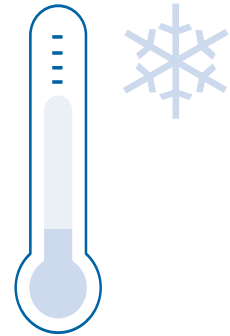
in the pharmaceutical, cosmetics and consumer electronics industries, as well as for other high-value and sensitive goods. The company can transport goods both untempered and actively tempered at 15 to 25 degrees or at 2 to 8 degrees Celsius and documented in accordance with the EU regulations for the pharmaceutical industry throughout Germany and Austria. Unlike parcel service providers and groupage freight forwarders, Trans-o-flex delivers parcels and pallets together. “This enables us to achieve a high level of consignment consolidation, especially in our core industries, which has ecological as well as economic advantages. For our customers, this means a high degree of flexibility and lower costs,” reports Wolfgang P. Albeck. Its teams also offer warehousing and order picking, as well as individual additional services such as the serialisation and de-serialisation of medicines. “Thus, we cover the entire logistics chain from procurement to fulfilment.” →



WOLFGANG P. ALBECK

has been Chief Executive Officer (CEO) of Trans-o-flex since April 2017. As a seasoned industry expert he looks back on over 50 professional years.





Measurements show that there is no outside temperature at which medicines can safely maintain the room temperature range of **15 to 25 degrees** without risk. At **16 degrees** outside temperature, the risk is lowest. (Source: Trans-o-flex)

Trans-o-flex's fleet currently includes 286 Cool Liners from Krone, which are used for pharmaceutical transport. "They are an essential part of the infrastructure of our ambient network for the range of 15 to 25 degrees Celsius," explains Albeck. "In addition, we still have almost 250 Krone Dry Liners available for our customers from other industries. The robust technology is also suitable for intensive use with high mileage." High reliability of the vehicles is a priority for the logistics service provider, as is a quick supply of spare parts in case of damage and wear. "In addition, transport units with a type-qualified pharmaceutical certification are necessary for the EU-GDP-compliant shipment of medicinal products. As a company that aims to be CO₂-neutral by 2045 at the latest, we therefore expect further innovations from our suppliers in the vehicle industry to reduce the fuel consumption of our fleet even more." Krone is meeting this challenge with lighter materials, new design advantages and aerodynamics, among other things.

Managing complexity

According to Albeck, one of the biggest challenges in pharmaceutical logistics is to master its complexity: "Because in the pharmaceutical sector, there are hardly any standard deliveries." The temperature windows must be controlled, measured and documented. In addition, there are special requirements when it comes to the transport of dangerous goods: "We need to meet appointment-based deliveries that are guaranteed to be delivered by 8 am, 9 am, 10 am or 12 pm on the next day or on a very specific day. These shipments often go to a specific person or directly to the workplace – in a hospital, for example, this may concern a specific ward. And then there's the possibility of combining all these services with each other."

Compliance with GDP standards is a basic requirement here. "We simply can't do without them. And that is not money-grubbing," Wolfgang P. explains. Albeck. "Rather, this secure supply chain serves to ensure the

efficacy of medicines. We help to save lives and alleviate illnesses.

This is also enormously important for our motivation and often helps us to find a way even for seemingly unsolvable tasks." As a logistics specialist for the healthcare sector, the company keeps a very close eye on how this industry is developing, so that it can identify changing customer needs in good time. Wolfgang P. Albeck foresees, for example, an increased demand for actively temperature-controlled distribution: "Here, Germany lags behind other countries such as Austria, Italy or even Spain. Above all, we expect an increase in the temperature range of 15 to 25 degrees Celsius. That is why we have made targeted investments in the expansion and performance enhancement of our networks in recent years. We are ready and able to absorb greater volumes."

In-house manager for artificial intelligence

In order to maintain or improve the quality of services even with such growth, the company has also been investing in modern hardware and software for years, as well as in the development of new, IT-driven processes that also use artificial intelligence (AI). As one of the first logistics service providers, Trans-o-flex has therefore hired a manager for AI. "Through all these measures, we will be able to increase transparency for our clients and also for our controlling," says Albeck. "This will enable us to identify and eliminate deviations from standards even faster, and we will once again significantly increase efficiency, especially in the last mile." The topic of sustainability also gets a lot of attention: "Only with clean, quiet and economical vehicles will we be able to curb the impending cost explosion in the transport sector. At the same time, we are investing heavily in the training and development of our employees and in a lively feedback culture in order to develop together and to continue to be an attractive employer in the future." ↵

PHOTOS: GETTY IMAGES/ANDRIY ONUFRIYENKO, TRANS-O-FLEX

+ PROFILE

About Trans-o-flex

Founded in 1971, the company has its origins in pharmaceutical wholesale. In order to enable manufacturers of medicines to supply pharmacies directly, five companies joined forces at the time to form a transport organisation of particular flexibility. Today, the group employs almost 2,000 people in Germany and Austria.

KRONE TV SPECIAL

Dr Bernard Krone looks back on the history of the Cool Liner's development, reports on experiences from the past 25 years and shares memories of very special moments.



Updates for the anniversary

25 years of Cool Liner! The refrigerated trailer from Krone celebrates its birthday in 2021. In a quarter of a century it has steadily evolved from the riveted aluminium box to the current premium refrigerated semi-trailer. In this, its anniversary year, the product has been enhanced still further with numerous new features.

1

The newly designed **evaporator guard** of the Krone Cool Liner has been significantly improved in terms of stability and is designed to swivel, which optimises the protection of the bulkhead and cooling unit and noticeably simplifies cleaning and servicing. The plastic plate used instead of hollow aluminium profiles results in a weight saving of 25 per cent and prevents contamination of the load.

2

The **multi-temp equipment** of the Cool Liner enables the simultaneous transport of goods at different temperatures. Thanks to a new mounting technique, additional evaporators can be flexibly positioned in the vehicle. Thanks to the innovative balancing technology, the Krone Isowall transverse partition, which can be moved longitudinally, can be opened and closed effortlessly and positioned along the entire length of the interior.

3

The new **crash protection concept** at the rear offers a high degree of flexibility in terms of equipment variants. Different impact protection systems can be configured from a modular system and even modified in the field if required.

4

For low-noise delivery – especially at night – the Krone Cool Liner can be

ordered in a particularly low-noise version. The **PIEK equipment** ensures that 60 decibels are not exceeded during loading and unloading. This is achieved, among other things, thanks to a special floor in the vehicle and a noise-absorbing coating at the bottom of the side panels.

5

The new, optimised **door seal** of the Krone Cool Liner improves the rigidity of the refrigerated body and, in combination with a low door handle position, ensures easier door handling. The Krone Door Protect door locking system combined with Krone Telematics secures the rear doors against unauthorised access and, if desired, also monitors the outer skin of the refrigerated body.

6

The **innovative lighting concept** with high-intensity LED interior lights enables optimum illumination of the interior, provides significantly better visibility and thus increases occupational safety during loading and unloading. Optional ambient lighting at the top of the rear provides the best conditions for tail

lift operation. Standard brake lights, mounted at the top of the rear and a completely revised wiring system round off the overall concept.

7

By networking the trailer via the standard **Krone telematics**, the Cool Liner becomes visible, both in terms of location and operational performance. Not only can the driver modify the settings of the refrigeration unit, but the dispatcher can also access them from his desk via two-way communication if necessary. The optional Smart Capacity Management also recognises free loading capacities – in conjunction with freight exchanges, this can reduce partially loaded journeys and significantly increase the efficiency of transport operations.

In the anniversary year 2021 Krone celebrates its Cool Liner together with its customers, with an exclusively liveried, "25 Years-Edition".





The restless expert

As CCO of the start-up Parcel Perform, **Dana von der Heide** and her co-founder Dr Arne Jeroschewski, enable online retailers to track parcel shipments correctly and in a customer-friendly manner.

She finds logistics “incredibly exciting”, says Dana von der Heide. And the 32-year-old from Berlin, together with Dr. Arne Jeroschewski, wants to make the industry a great deal more customer-friendly, digital and faster: The two have founded Parcel Perform, a company that has developed a cloud-based delivery platform for e-commerce companies. This offers transparent tracking data in real time: E-commerce retailers such as Nespresso can use Parcel Perform to show their customers exactly where their shipment is and, more importantly, when it will arrive on the company’s own interface. Financially strong investors also believe in this business model: Cambridge Capital and SoftBank Ventures invested a whopping 20 million US dollars in the company in the summer of 2021.

First off: get to know the Group from the inside

Previously, von der Heide and Jeroschewski had built up the company very solidly over a five year period in Singapore. This is where Dana von der Heide ended up after her studies. She had studied journalism, communication studies, political science and psychology in Berlin and had taken several bachelor’s degrees “purely out of interest”. At the time, she was heading for a job at a PR agency. But one of her professors, a communications manager at DHL, recommended that

she first get to know a large company from the inside. An international trainee programme at DHL brought her to Singapore. She then worked in the corporate strategy department of the company. “At that time, we initiated a change process in the direction of e-commerce. For this process, I gathered a lot of customer feedback and saw how much online retail success depends on orders actually arriving on time.”

Traders usually work with several carriers – and they all have their own tracking sites. “Large online companies put a lot of emphasis on optimising their pages – but then they have to send their customers to the parcel and express service providers’ websites for tracking, which are often confusing and don’t always provide the right answers. This disrupts the shopping experience and is, therefore, a real problem from a marketing point of view.” At the same time, she became aware of how long change can take in a corporation: “There are so many good ideas. But change, I guess, usually has to come from outsiders.”

Expansion into the USA

She spoke with Arne Jeroschewski about the potential of tracking. Together they founded Parcel Perform in Singapore in 2015, invested all their time and savings in the company – and it paid off: Today, the company operates profitably. Jeroschewski acts as CEO, →

+ PROFILE

Dana von der Heide

Dana von der Heide graduated from the FU Berlin with a combined Bachelor of Arts in Psychology, Communication and International Politics. After an International Management Trainee Programme at DHL, she spent three years as Senior Business Development Manager for DHL eCommerce Asia. She was also an eFounder fellow at Alibaba since 2018. In 2016, she founded Parcel Perform with Dr Arne Jeroschewski.



von der Heide as CCO (Chief Customer Officer) and is thus primarily responsible for customer contact. Khang Nguyen, a CTO from Vietnam, joined the team early on; Parcel Perform now has one of three branches in the country. After establishing itself in Asia, the start-up looked to the European market, they set up an office in Berlin and are now expanding into the US. "This latest move is just technically straight-forward for us, as Southeast Asia was the much more difficult market," says Dana von der Heide. Different languages and time zones are a major challenge for business operating in the USA – and that there are around 300 parcel service providers there instead of half a dozen.

Dana von der Heide explains that she is "very much practice-driven". I am not a theorist, I just like to do things. I like to develop solutions and build teams. It's incredibly good fun and also gives me a lot of energy." When her family reminds her once again that she shouldn't work too much, she thinks: "I think there is a big difference between: 'I'm working' and 'I'm really into this'." She does not feel that her job, which of course can only be done with many hours per week and full commitment, is a burden. "But I am also someone who can never sit still. I could hardly stand two weeks' holiday on the beach. I always want to do something with my head, I'm just very busy."

It's all about transport from A to B

She sees the transport and logistics sector as a "hidden champion" and says: "In the end, the world depends on goods being transported from A to B – in the B2B sector just as much as in B2C and C2C. And that from-A-to-B is a very manual, labour-intensive process that I have the utmost respect for." Parcel Perform wants to support it with digital intelligence. "I increasingly feel that our impact grows the more successful the company is," she explains. "What really motivates me is that you can actually drive change in this industry."

This builds on a secure foundation: In the first 18 months or so after its founding, the team virtually hunkered down to first build a stable, reliable product. Only then did they go out into the big, wide world with it. The founders attach great importance to developing the software in such a way that it meets the needs of their customers. And that work is done quickly: Both new customers and new logistics service providers are connected to the cloud within two weeks. "We are scaling strongly, in the Coronavirus pandemic we grew fivefold," says Dana von der Heide. "But we always make sure that growth is stable, that our team is comfortable with it and that we grow in a healthy and sustainable way."

Various teams

It is also important to her and her co-founder that the teams are diverse: The staff members come from 17 different nations and speak around 20 languages; they have the most diverse backgrounds. "The best members of the sales team have never had anything to do with sales before," says von der Heide. Women make up about half of the team: "We take our time to select suitable candidates. And where women are also in positions of responsibility, they attract more female employees as if by magic – they are role models."

The USD 20 million funding is a big milestone for Parcel Perform, says Dana von der Heide. "And at the same time, I feel like it's just getting started," she explains. In the first few years, a start-up is usually always on the brink of failure. "But we are now established and profitable. After all, this shows that we can make money with what we offer." She wants to remain loyal to the company and believes that Parcel Perform will accompany her personally for a long time – simply because there are still many exciting things to discover: "The company has an incredible amount of potential and we can still make a huge difference in the market. ↴"

PHOTOS: PARCEL PERFORM

Innovation Age



A column by Bernard Krone

Our tradition of transformation



Talking about tradition has become unfashionable. Anyone who starts with that immediately sounds backward-looking, saying something that has long been overstated. After all, we live in the age of innovation! Nothing inspires more than technological development, which is causing ever stronger waves of change to sweep over all sectors. The whole world is talking about digital transformation, and those who do not face up to it are threatened with disruption – they will be swept out of the market.

This sometimes seems quite threatening, and as an entrepreneur, you ask yourself: Can I keep up? How secure is my company when soon the carpet will be swept out from under my feet, and there will be nothing there? What if all it takes is one start-up to take on my industry and change it with a clever idea, a new digital business model and with a real bang? ↴

"Have the idea yourself, develop the business model and beat the drum yourself."

The answer is simple: Having the idea yourself, developing the business model yourself, beating the drum yourself. Okay, that only sounds simple, but it's not that easy. It requires knowing your market intimately. Listening to your customers. To focus one hundred per cent on them to make their own business easier. But also to keep adapting to the circumstances and to take advantage of opportunities that arise. At Krone, we've been doing it that way for over 110 years. It's a tradition here. But we are not talking about that now. That would be unfashionable. ↴

PHOTOS: ISTOCK/JOLYGN, KRONE

KRONE
We Deliver the Future

COMPETENCE / SERVICE

KRONE
We Deliver the Future