ISSUE 11

DENKFABRIK

NEW IDEAS FOR TOMORROW'S TRANSPORT

FORWARD

What drives people and markets

Food for thought

LAWS VERSUS CONSCIENCE

DO YOU ACT ON CONVICTION?

When seatbelts became compulsory in Germany in 1976, many people found this a thorn in their side. Today, hardly anyone consciously fastens their seatbelt anymore, because it has become second nature. With a seatbelt usage rate of around 99 per cent, it is safe to assume that there is a high level of social acceptance.

The ban on smoking in restaurants and bars, which was introduced nationwide in 2007/2008, was also hotly contested at the time. Today, according to surveys by the German Cancer Research Centre (DKFZ), around three-quarters of the population say the ban is right. Even former opponents have long since got used to it – many even report that they now smoke less often or have given up altogether.

And what about the compulsory use of catalytic converters? When it was introduced in 1989, it was seen as a costly intervention in the automotive industry. Today, it is impossible to imagine life without it, and hardly anyone would think of questioning it. Air quality in German cities has improved measurably since then.

What these examples have in common is that the initial impetus came in the form of a law that was initially criticised. Yet, looking back, it is precisely these rules that have brought about change. Laws may sometimes be a nuisance, but they can also provide the impetus that we ourselves would not have mustered.

(Sources: BASt, DKFZ, Wikipedia)

Dear readers,

The topic of alternative propulsion systems has been a key focus for our industry for a good decade now. However, hauliers are no longer simply faced with the decision of whether to invest in new vehicles. The underlying infrastructure is also presenting an increasing number of challenges. For example, electric lorries require grid connections, charging points and affordable electricity at their own depots – and in no small quantities: if ten electric vehicles are charging simultaneously, they draw 3.75 megawatts from the grid, as much as an industrial plant.

We spoke to entrepreneurs, researchers and representatives from trade associations about how they are tackling these issues, what is already working well today, and what is needed to make electric transport even more cost-effective and practical. As the Krone Commercial Vehicle Group, we are providing support through technology: with the E-Cooler, a battery-powered refrigeration unit, we are also electrifying the refrigeration system in semi-trailers.

Through lightweight construction, we recoup the payload lost to a heavy battery. Furthermore, we make our contribution by offering reliable quality, fast service and stability – especially when operating conditions are uncertain.

For us, vehicles, service and digital solutions work together as a single integrated system. At IAA Transportation, we're highlighting this under the motto 'Built as One' and demonstrating how everything interlinks to provide you with the best possible support in your day-to-day transport operations. We look forward to welcoming you to our stand in Hanover and discussing with you what matters to you and what you need to succeed.

Wishing you an inspiring read,

Simon Richenhagen

Simon Richenhagen
Head of Marketing & Communications
Krone Commercial Vehicle Group and Schwarzmüller Group

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Contents

#11

Focus

Drive

COVER STORY

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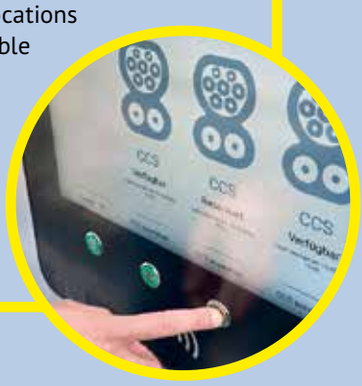
Blue Notes

News from the world of Krone

Charging points for electric lorries can now be reservedr

The Munich-based platform provider Fryte Mobility now enables the advance booking of charging points for electric lorries. Charging slots from various providers can be reserved via a single interface – regardless of who operates the facility. The first partners are Energie Südbayern and the charging park operator Dettendorfer Energy: seven truck-compatible charging points, each with a capacity of 400 kilowatts, at five Bavarian locations are already available for booking. The technical basis is the open OCPI standard, with a third provider set to follow shortly.



30 trailer manufacturers call for a review of CO_2 regulations

The CEOs of 30 leading European trailer manufacturers have come together in Koningshooikt, near Lier in Belgium, and, in the presence of MEPs Kris Van Dijck and Jens Gieseke, have signed a joint statement and petition. Although they are normally competitors, they are now speaking with one voice: they support the EU's climate targets, but warn that Regulation (EU) 2024/1610, in its current form, is more likely to increase than reduce CO_2 emissions. The crux of the problem is that trailers themselves do not emit any CO_2, yet they are held responsible for simulated emissions via the Vecto tool.

To meet the targets, manufacturers could be forced to adopt designs that reduce payload capacity – resulting in more journeys and more vehicles being needed to transport the same volume of goods. Around 70,000 jobs depend on the sector. "We are not calling for less climate protection. We are calling for rules that lead to reduced emissions, rather than penalising manufacturers for a flawed simulation," says Gero Schulze Isfort, spokesperson for the coalition of eight German trailer manufacturers. Their key demand is to bring forward the review, currently planned for 2027, to 2026.

Virtual freight forwarding: BSLV launches learning platform

The Education Academy for Freight Forwarding, Logistics and Transport (BSLV) has launched a digital learning programme called the "Virtual Freight Forwarding Company". Employees and career changers navigate their way through a medium-sized freight forwarding company and experience processes via avatar dialogues, explanatory videos and interactive exercises. The programme begins with groupage, general cargo, and part and full load transport; further areas such as warehouse logistics, air and sea freight are set to follow. The browser-based training is available free of charge until 30 September 2026.

Krone expands spare parts distribution with BPW

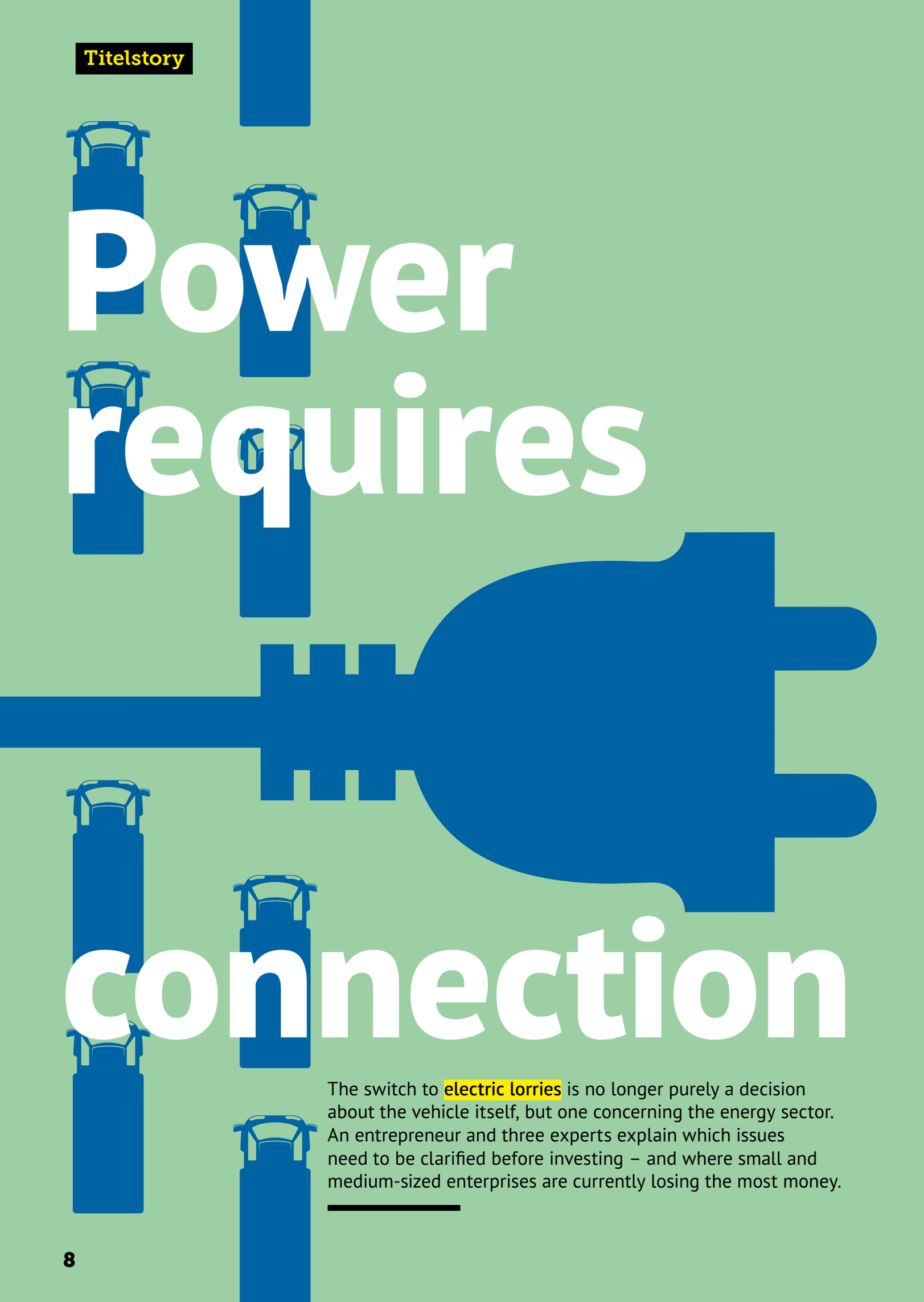
Krone Trailer is intensifying its collaboration with the BPW Aftermarket Group, thereby strengthening its spare parts business in the independent aftermarket. In future, Krone original parts will be offered via BPW's sales and logistics network, which comprises more than 150 locations in around 20 countries and supplies workshops, dealers and fleet operators. The aim is to achieve greater availability and shorter delivery times across Europe.

"With the BPW Aftermarket Group, we are gaining a strong partner with significant market penetration in the independent spare parts sector. Our customers will benefit in particular from improved parts availability and significantly shorter delivery times," explains Ralf Faust, Managing Director for Customer Service, Service and Telematics at Krone Trailer. With around 1,400 employees and an annual turnover of over 450 million euros, the BPW Aftermarket Group is one of the leading suppliers in the commercial vehicle aftermarket.

Less funding for depot charging

Under the Climate and Transformation Fund, funding for the development of refuelling and charging infrastructure will be lower in 2027, amounting to € 1.63 billion instead of € 1.7 billion. This also affects off-street charging: funding for charging points not accessible to the public is falling from € 151.1 to € 129.1 million, whilst the allocation for a fast-charging network with 1,000 locations is dropping from € 1 billion to € 653 million. Only the fast-charging network for lorries on motorways is growing – from around € 224 to € 690 million.

PHOTOS: KRONE, FRYTE, MAGNIFIC/LOOKSTUDIO, MILENCE



Power requires connection

The switch to **electric lorries** is no longer purely a decision about the vehicle itself, but one concerning the energy sector. An entrepreneur and three experts explain which issues need to be clarified before investing – and where small and medium-sized enterprises are currently losing the most money.

When ten electric lorries are charged simultaneously, they draw 3.75 megawatts of electricity – a scale of consumption usually associated with industrial plants. This figure highlights what the switch to electric mobility means for a haulage company. Whilst the focus used to be on the purchase price, range and cost-effectiveness of the vehicle, other issues are now crucial. Is the grid connection sufficient? What does a kilowatt-hour cost at the company's own premises? Are the company's own transport operations compatible with a vehicle that is regularly plugged into a charging point? Depots, transhipment centres and warehouses are becoming energy hubs. At the same time, fleet planning, energy management and IT must work in tandem. With grid operators, electricity suppliers and charging infrastructure providers, new partners are coming into play – partners with whom haulage companies have had little to do with until now.

Scaling up starts with ten lorries

A single test vehicle can still be operated with manageable effort; a charging point on the premises is sufficient for this. This is how many companies get started. However, as soon as several vehicles are involved, careful planning is required. "Scaling doesn't mean 100 lorries; scaling starts with as few as ten lorries," says Moritz Matthies, founder of the energy consultancy Electric Minds, which supports logistics companies with electricity procurement and charging infrastructure. Costly mistakes can be made in the process: oversized solar panels, energy contracts that do not match the new load profile, and charging stations built before anyone has worked through the business case. Misjudgements regarding connected load and system size are almost impossible to rectify later on.

BTK Befrachtungs- und Transportkontor GmbH, based in Raubling, Upper Bavaria, has had an electric tractor unit in its fleet of 160 vehicles for just over 14 months. "For us, this was a trial run to get to grips with the issue in the first place," says Managing Director Josef Heiß. Following the first six months, which presented many technical challenges, the lorry is now operating reliably on regional routes. Now the team is taking the next step. As part of a project, a member of the sustainability management team, representatives from the electricity supplier and a consultant are calculating how the site would need to be set up in future: what infrastructure, including storage systems and charging points, is required to cope with peak loads and enable continuous charging? What investment would be needed? What connected load capacity would be required – and is it even available?

The connection is the bottleneck

One assumption has already proved to be incorrect: "We assumed that we would need a very high grid connection capacity," says Heiß. →

JOSEF HEISS

Josef Heiß is the managing director of BTK Befrachtungs- und Transportkontor GmbH in Raubling, Upper Bavaria. The company has been focusing on alternative powertrains since 2018: its 25 bio-LNG lorries were followed, just over a year ago, by its first electric tractor unit.

ILLUSTRATION: MAGNIFIC, KSENIA96, ONYXPRJ

"Ultimately, electric lorries will play a major role, whether you like it or not."

JOSEF HEISS

In fact, the requirement can be significantly reduced if a charging management system controls the charging processes and a storage unit smooths out peak loads. In that case, the grid connection capacity needed would not be nearly as high as would theoretically be required to charge ten lorries simultaneously. However, how much grid connection capacity is required is only one question. Whether it is approved is another. "If the grid connection isn't provided, it's no use to me even if I already have the charging infrastructure and the vehicle on site," says Maximilian Hecker, Research Associate at the Research Centre for Energy Economics (FfE). This non-profit organisation conducts research into the grid integration of electric mobility. Hecker's advice to haulage companies is to initiate discussions with the local grid operator at an early stage, even if electrification is not yet on the agenda. After all, anyone operating in the megawatt range is immediately connected to the medium-voltage grid.

Dr Christoph Pellinger, a member of the FfE management board, particularly recommends a flexible grid connection agreement in this context. Those who do not require full power round the clock, but only draw power from the grid during specific time slots, often secure their connection at the desired capacity sooner. How quickly this happens, however, depends heavily on who you deal with: in Germany, there are over 800 grid operators with different points of contact, rules and processing speeds.

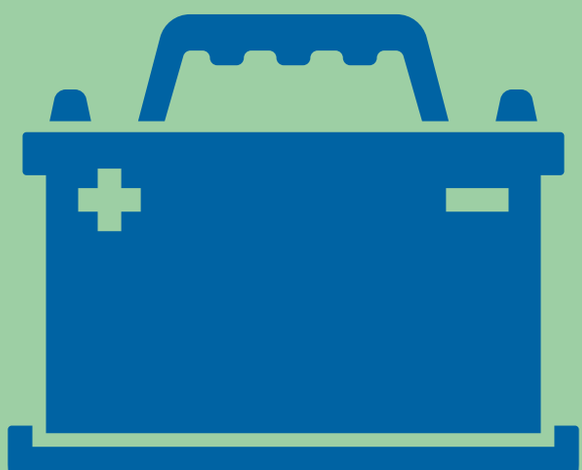
MAXIMILIAN HECKER

Maximilian Hecker is a Research Associate at the Research Centre for Energy Economics (FfE). His work focuses on the electrification of heavy goods transport – from grid connection and the cost-effectiveness of charging infrastructure to the space requirements for depots and rest areas.

PV electricity should be consumed on-site

The next major factor is the price of electricity: grid charges, taxes and levies now account for more than half the price of electricity in Germany. Anyone who generates electricity on-site and uses it themselves saves on these elements. "That's a significant competitive advantage, but one I can only capitalise on if I actually consume my own PV electricity," says Matthies. This is precisely where many people fall short: many systems were correctly planned based on the subsidy and pricing logic of the time. Under today's market conditions, the design would be different. The problem is that PV electricity is now barely worth anything in Germany. "There are now systems on the market where you actually have to pay extra for the electricity they generate during certain hours." His rule of thumb is therefore: ideally, a system should achieve a self-consumption rate of 70 to 80 per cent. Charging infrastructure helps considerably here, as nothing draws as much electricity as a truck being charged.

Nevertheless, anyone who has built too large a system will need a storage unit. Here too, Matthies warns against rushing into decisions: the key factors are correct sizing and, above all, the integrated control of the PV system, charging infrastructure and storage. "That is the point where things most often go wrong." Pellinger offers a strategic warning to all warehouse owners: "Under no circumstances should you lease your roof to just anyone on a blanket basis." Anyone who hands over their roof space to a PV investor will not benefit later from their own cheap electricity, even if the switch is not due for another two or three years. In extreme cases, this could even reduce the value of the property. An example from FfE's practical experience illustrates just how much a low electricity price matters: for anyone able to charge at a customer's premises for less than 15 cents per kilowatt-hour, the business case becomes "very attractive very quickly".



Different contracts required

Then there is the contract under which the electricity is purchased: in the past, haulage companies usually entered into full-supply contracts. “These were easy to manage as long as it was just a matter of depots. Now you need completely different contracts,” says Matthies. “Especially as fixed-price offers are becoming less common.” As a result, many are switching to spot contracts only. He warns against this: a spot contract must be managed very carefully, because major political events have a significant impact on the price.

His recommendation is a combination of approaches: flexible procurement that utilises not only the spot market but, above all, the intraday market. “Intraday trading allows you to trade right up until five minutes before the quarter-hour mark,” says Matthies. He considers this to be a completely underestimated area and the economic impact is significant. For medium-sized and larger logistics clients, this could mean savings in the six-figure range per year. However, at the outset, something else is more important than saving the last cent: “First and foremost, you gain control. Initially, it’s not about how to do it as cheaply as possible, but about ensuring you’re not at risk of doing it at the highest cost.”

It all depends on the transport routes

However, alongside the energy supply, it is the transport planning that is the key factor. BTK is therefore simultaneously assessing which of its own transport routes are actually suitable for electric vehicles. Around 75 per cent of the company’s transport operations are domestic, covering the whole of Germany: the major shippers are spread from the Rhine-Main corridor through central Germany to the Berlin area. “Either there are routes that are truly balanced in terms of load, or they can be organised as triangular routes,” says Heiß. “Otherwise, the vehicle’s utilisation is too low.” In retail deliveries, for example, a lot of goods go into a logistics centre, but rarely return to the supplier. Added to this is the availability of the company’s own depot. Because charging at the depot is significantly cheaper than public charging, BTK routes the vehicle so that it regularly calls at the depot. The company currently makes virtually no use of public charging. Looking ahead, Heiß expects a mix of three components: charging at the company’s own depot, within the emerging partner networks, and 10 to 20 per cent via the public grid.

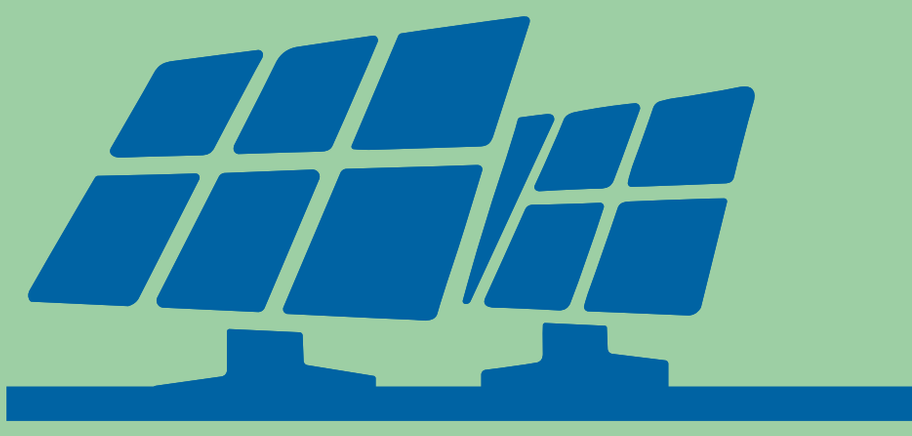
“Flexibility is currently the most important currency in Germany’s energy market.”

MORITZ MATTHIES

Matthies, too, sees the greatest untapped potential in the dispatching logic: “Flexibility is currently the most important currency in the German energy market. If I have the option to easily reschedule routes and better organise my charging processes, it has a very significant economic impact.” His advice goes even further: this flexibility should be incorporated into customer contracts in future. A simple electricity float, analogous to a diesel float, is hardly the answer, however.

Not enough space

Beyond the grid connection, the FfE experts highlight another bottleneck that is rarely discussed: space. For years, depots have been optimised for maximum storage and loading bay space, as this generates more revenue than a simple parking area. As a result, parking spaces are now almost entirely lacking, particularly at large freight forwarders and rental depots. Space is also tight at public service areas. If one in four parking spaces there were to be lost →



MORITZ MATTHIES

Moritz Matthies is the founder of the energy consultancy Electric Minds, which supports logistics companies with electricity procurement, charging infrastructure and risk management. He has a background in energy trading and, with a previous team, has already set up around 4,000 charging points.

PHOTOS: FFE, PRIVAT, ILLUSTRATIONS: SHUUTERSTOCK/THANYA, ISTOCK/ARC TINA, ADOBE STOCK/ТЕПАН ОЗАРЧУК

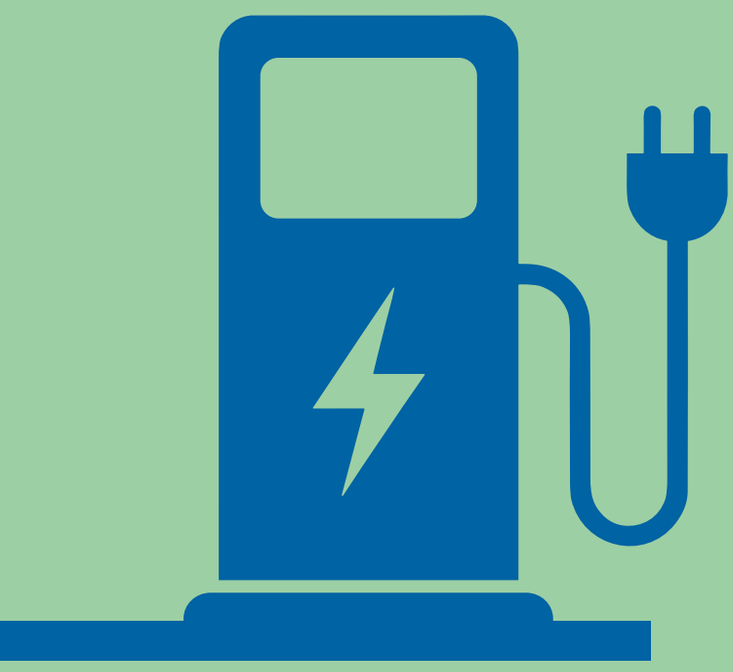
to charging infrastructure, the situation would become even more acute. New spaces are therefore needed in industrial estates and at service stations – and local authorities that are willing to cooperate. For such projects, Pellinger advises joint planning, ideally facilitated by a moderator: a shared charging park increases utilisation, and that is precisely what reduces costs.

Experts differ in their assessments of how quickly this can be implemented. Entrepreneur Josef Heiß says: “I believe that over the next three or four years, this will be limited to a maximum of 10 per cent of vehicles.” He argues that flexibility is still too low at present, the infrastructure is not yet comprehensive, and transport patterns often do not align. He cites his own experience with LNG as a reference: 25 bio-LNG vehicles have been in operation at BTK since 2018; at that time, there was effectively just one refuelling station at the manufacturer’s site in Ulm. “Today, you can refuel with LNG anywhere in Germany. That took between seven, and nine years, and we must expect a similar timeframe for electricity.” BTK has therefore ruled out making a major leap in the near future. “We won’t be converting 50 per cent of the fleet within five years. The concentration risk is far too great for that.” Matthies, on the other hand, has been pleasantly surprised: “We’re making faster progress with electrification than I had expected based on the experience with passenger car charging.”

Strategy first, then construction

Everyone agrees on one point: the order of things is crucial. “You really should start with the strategy: where do I want to go, and what will my future load profile look like?” says Matthies. Only then should the decision be made as to whether to build the charging infrastructure yourself and whether to grant access to third parties. “And then I can work out where to build what.” Every location needs a clear business case, and choosing the right partner is crucial. The deciding factor is whether they take a holistic approach to electricity procurement and charging infrastructure. Providers that focus on only one of the two leave an important gap – and can end up costing their customers a lot of money.

Hecker recommends an unspectacular first step: “Get to grips with the subject and start with the basics. The energy sector is a completely different matter from logistics.” Pellinger adds the most favourable real-world scenario: “The most appealing situation is when I have a customer who tackles the issue with me.” If you can charge at the customer’s premises, you’ve already solved a significant part of the problem. Heiß, however, warns against complacency. He estimates that around 80 per cent of the industry is currently still putting the issue to one side, adopting the attitude: Let the others get on with it first. “I think that’s short-sighted. Ultimately, electric lorries will play a major role, whether you like it or not.”



“If the grid connection doesn’t materialise, it’s no use to me even if I already have the charging infrastructure and the vehicle on site.”

MAXIMILIAN HECKER

DR.-ING. CHRISTOPH PELLINGER

Dr Pellinger is a member of the management board at the Research Centre for Energy Economics (FfE). A physicist by training, he has worked for the non-profit organisation since 2011, initially as a research assistant and later taking charge of strategy. His main area of expertise is energy system analysis.

ILLUSTRATIONS: ADOBE STOCK/NOOBCREATION

What still moves us

More inspiration, tips and thoughts

Maths time

Why just read the time when you can practise mental arithmetic at the same time? The Albert Clock Mini is a digital clock with an alarm function that turns hours and minutes into simple maths problems. Six difficulty levels featuring addition, subtraction, multiplication and division cover all the basic arithmetic operations. A quick tap on the top of the clock immediately displays the correct time. Alternatively, level 0 displays the time as normal. Powered by two AA batteries, the clock is versatile, and the alarm works even without solving the maths problems.

www.albertclock.com

Listen

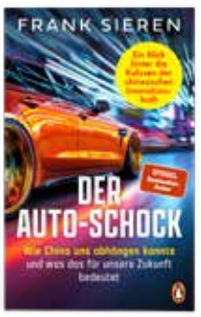
What if our everyday lives were to change fundamentally – for example, through the widespread use of fully autonomous cars or the legalisation of all drugs? Quarks' podcast "Mal angenommen" explores future scenarios of this kind – in a fact-based and well-founded manner, rather than purely speculatively. Drawing on scientific findings and expert opinions, the programme highlights the specific impacts such developments could have on our society.

Available on all major streaming platforms

"The Future with Hannah Fry"

In this series, British mathematician, science communicator and presenter Hannah Fry explores various scientific questions. She offers a glimpse into the world of tomorrow by presenting the latest developments in science and technology in an accessible and vivid way. Hannah Fry is known for explaining complex topics in an accessible and entertaining manner. The series illustrates the opportunities and challenges that new technologies bring to our everyday lives.

Available to watch in the Arte media library



The Race for the Future

Frank Sieren's "Der Auto-Schock" examines the profound transformation of the automotive industry in the wake of electrification and China's growing influence. The book explains why traditional car manufacturers are coming under pressure and how technological upheavals are reshaping global competition. It explores the consequences of these developments for the economy, politics and mobility in Germany and Europe, and considers how these challenges can be addressed.

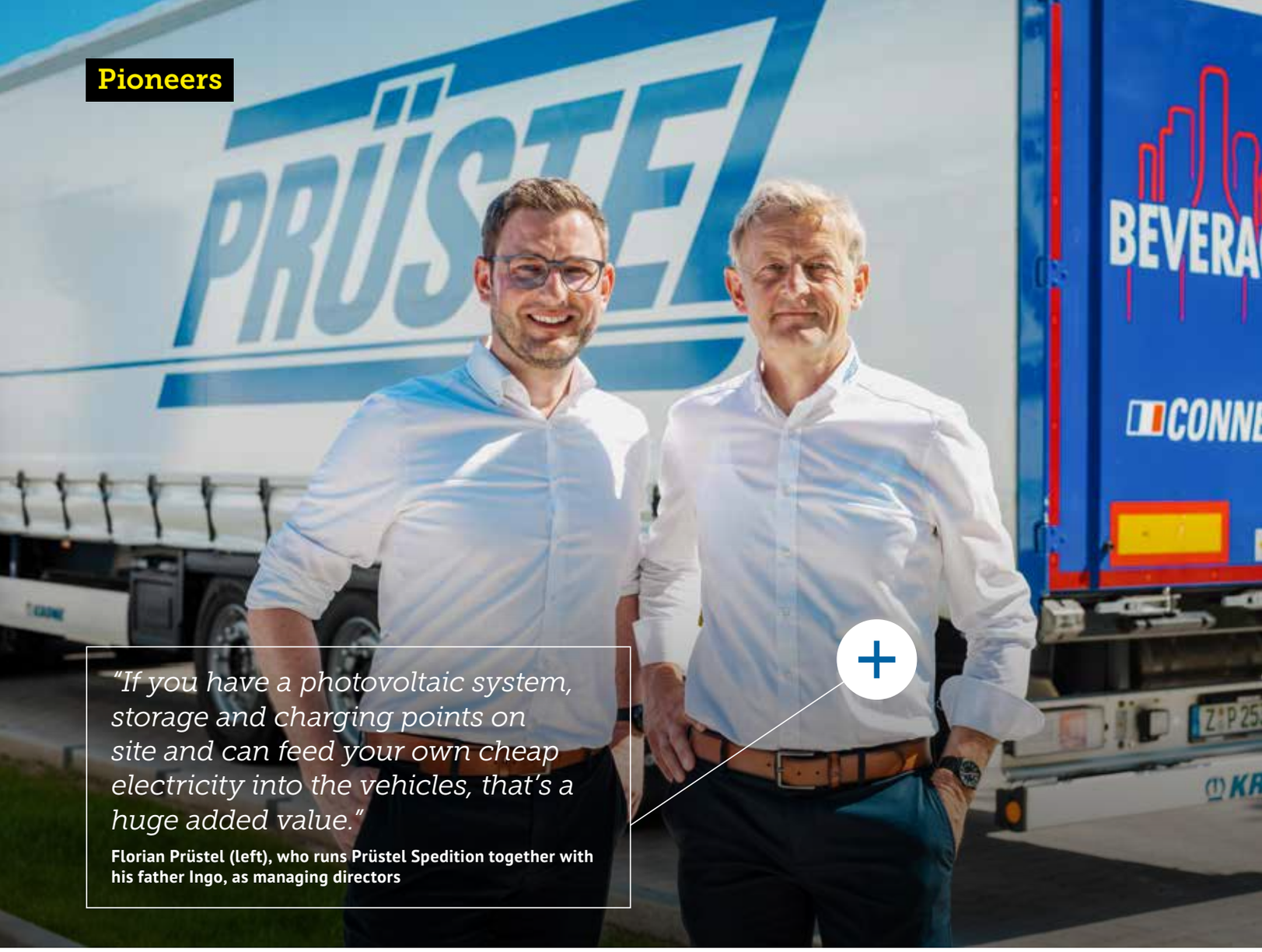
Published by Penguin

In the Tunnel

Since the beginning of July, the special exhibition 'Tunnel' at the DB Museum in Nuremberg has been shedding light on the fascinating world beneath the ground. It explains how tunnels are planned, built and used – from the technical challenges involved to their importance for transport. Visitors gain fascinating insights into engineering, history and modern infrastructure. Illustrative exhibits and interesting background information highlight the central role that tunnels play, both past and present, in mobility and connectivity.

www.dbmuseum.de

POTOS: MN TNT, ARTE, PENGUIN VERLAG, ARD, DB MUSEUM/UWE NIKLAS, ADOBE STOCK/MOLOTRAX



"If you have a photovoltaic system, storage and charging points on site and can feed your own cheap electricity into the vehicles, that's a huge added value."

Florian Prüstel (left), who runs Prüstel Spedition together with his father Ingo, as managing directors

"Have the courage!"

For two years, Prüstel Spedition has been steadily adding electric trucks to its fleet. The family firm from Callenberg now operates them in both regional and long-distance haulage and knows the technology's strengths and weaknesses.

With 25 purely electric trucks, acquired without a single cent of subsidy, plus its own charging infrastructure comprising three charging points, a photovoltaic system, a transformer station and storage, Prüstel Spedition has invested substantial funds in sustainable transport over the past two years – and has taken on real risk in doing so. By the end of 2026, the electric fleet is set to grow to around 45 vehicles. However, the investment will only pay off if the trucks cover enough kilometres and electricity prices remain favourable. The toll exemption for zero-emission trucks, extended until mid-2031, is an important factor.

Ingo Prüstel, the company's senior partner, encourages colleagues who are still hesitant about the switch: "Have the courage!" Preparation is what counts, he says. It's about bringing drivers on board and winning them over to the switch

from combustion engines, using a bonus if necessary. Vehicles should be trialled over two to three months; only then does it become clear how well the technology is accepted in operation and how reliable it is. It's also essential to examine closely what usage profile applies: full loads, part loads, heavy loads, auxiliary drives. For him, the fact that change is coming is certain. "Under the Fuel Emissions Trading Act, the price of CO_2 keeps rising year after year. Sooner or later, everyone will have to switch."

From sole trader to a fleet of 160 trucks

The company was founded on 1 September 1990 as a sole proprietorship, with its head office in Callenberg between Chemnitz and Zwickau. In 2013, the acquisition of the haulage firm Rolf Dischinger added a second major site in Hartheim am Rhein near Freiburg. Son Florian Prüstel built this site up and today co-runs the company as managing director. The focus is on beverage and paper logistics in full-load transport, alongside the automotive, recycling and construction sectors. Operations run nationally as well as into Switzerland and France. Of the roughly 160 trucks in the fleet, 25 are already purely electric.

Acquiring electric vehicles was also a very personal matter for Ingo Prüstel. "When I see my grandchildren, it makes me think. Then it's clear to me that I want to do this for this generation." It's far from a given that a mid-sized firm takes this step under its own steam. "Over the years we've always had to battle with liquidity, because margins in transport are what they are." Two customers backed the path from the start and paid a higher percentage.

When the electric truck pays off

Whether an electrically powered truck pays for itself or not depends above all on mileage. "The more kilometres per day, the more cost-effective it is," says Ingo Prüstel. Just how strongly external factors affect the sums is shown by the recent rise in crude oil prices amid the Iran conflict. Since then, running the electric truck has been cheaper for Prüstel than running the diesel – previously, the two were roughly on a par. But he's also clear about one thing: "In the long run, the technology has to stand on its own two feet, without subsidies or special rules."

A key lever is the company's own charging infrastructure. In Callenberg there are three truck charging bays with solar power, a transformer station and battery storage; charging also takes place at the Hartheim am Rhein site. "If you have a photovoltaic system, storage and charging points on site and can feed your own cheap electricity into the vehicles, that's a huge added value," says Florian Prüstel – especially for return-to-base traffic, where the trucks regularly come back to the depot. On the road, the public charging infrastructure is now well developed, for instance along the Rhine and on the corridor between Karlsruhe, the Ruhr region and Bremen. Dispatch works with a dynamic charging concept: Does the customer's time slot fit? Can the driver take a break while charging? And what are electricity prices doing at that time?

Limp mode on the motorway

As good as the overall experience has been, the switch hasn't been entirely without friction. "We have roughly one or two breakdowns →

PROFILE

Prüstel Spedition GmbH, headquartered in Callenberg in Saxony, operates three further sites and has a fleet of 160 trucks, 25 of which run purely on electricity. The family firm's focus is on **beverage and paper logistics in full-load transport**, complemented by the automotive, recycling and construction sectors.

Power from its own roof: at its Callenberg headquarters, Prüstel Spedition secures cheap charging power with a photovoltaic system, storage and charging points.

25 of around 160 vehicles at Prüstel already run purely on electricity.

a month," says Ingo Prüstel. If the high-voltage system develops a fault, an electric truck goes into limp mode for safety reasons and simply comes to a stop. "That can happen at a junction, or on the motorway." Prüstel's assessment is matter-of-fact: "The diesel truck took 100 to 130 years to develop. The electric truck needs its time too."

Prüstel Spedition relies on quick decision-making, flexibility and closeness to staff and customers – which, says Florian Prüstel, is ultimately what sets a mid-sized firm apart from a large group: "We're available even at weekends, and for example we're working with customers to introduce digital delivery notes." Through its own transport management system, the company has automated simple processes into workflows. "We live credibility,

The business's focus is on beverage and paper logistics in full-load transport.

appreciation and trust every day," sums up Ingo Prüstel. What he'd like to see again is German performance counting for more in European price comparisons.

"Krone delivers on what it promises"

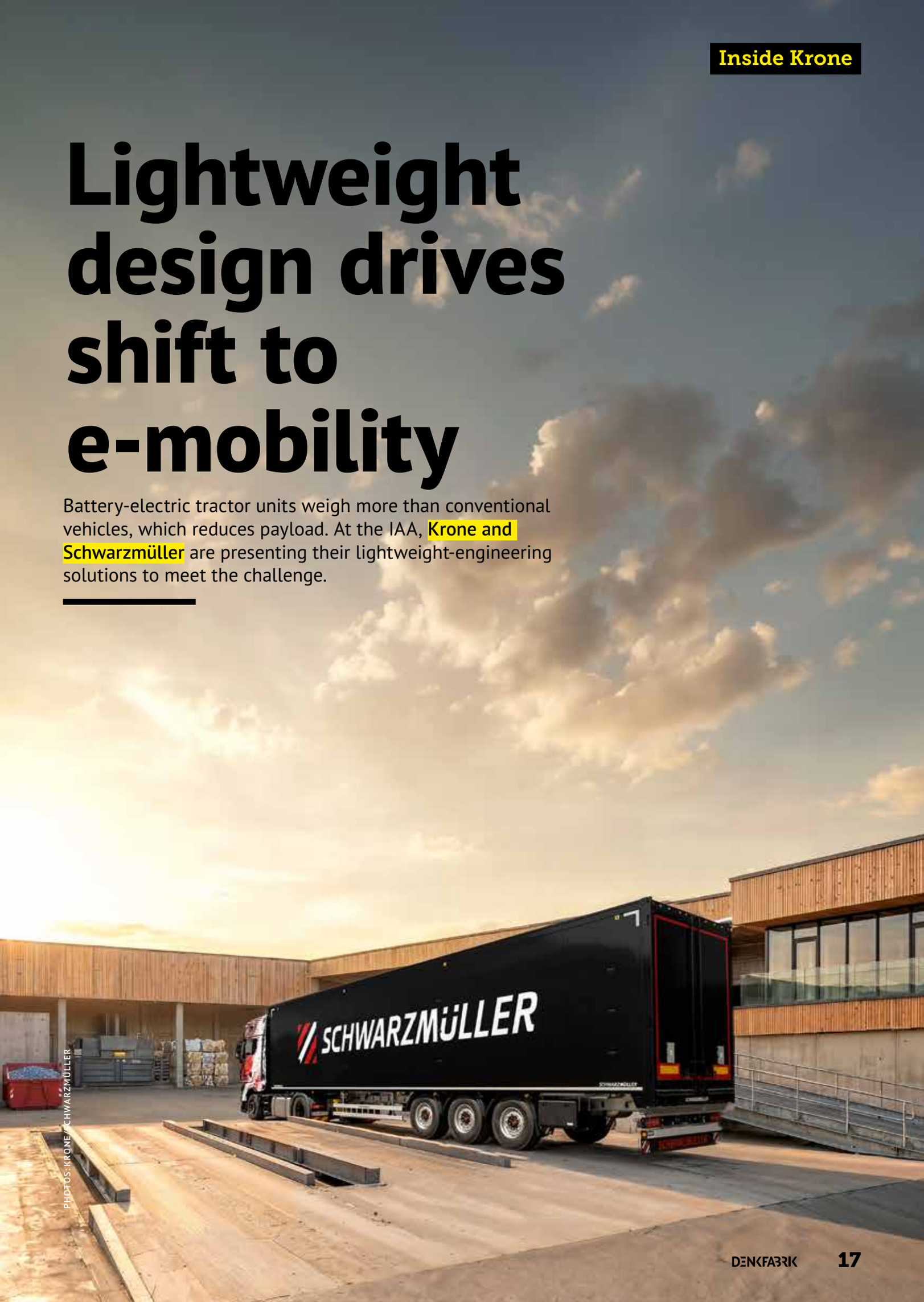
Krone is a long-standing partner of the haulage firm. It runs standard, paper, coil and mega trailers, as well as curtainsiders with quick-release systems. "Krone delivers on what it promises", says Ingo Prüstel. He particularly values the technical exchange with the team on equal terms. "We always have a point of contact, from warranty and guarantee right through to trade-ins on the used market." His workshop staff, who service and repair the trailers themselves, appreciate the consistency.

Like almost every entrepreneur, Ingo Prüstel also faces challenges such as driver shortages, bureaucracy and rising toll costs. "Finding and keeping staff is hard," he reports. "We opened up to applicants from Europe and third countries for driver roles a long time ago." But above all, what's missing is predictability. "What I sign today could be completely irrelevant in two or three years." Even so, the team keeps boldly moving forward: the next electric trucks have already been ordered.

PHOTOS: MINDWORK

Lightweight design drives shift to e-mobility

Battery-electric tractor units weigh more than conventional vehicles, which reduces payload. At the IAA, Krone and Schwarzmüller are presenting their lightweight-engineering solutions to meet the challenge.



PHOTOS: KRONE/SCHWARZMÜLLER

Michael Lehmann, Product Manager at Krone

Battery-electric tractor units (BEVs) eliminate tail-pipe emissions, but at the expense of payload. Depending on the configuration, the battery packs weigh up to three tonnes. And even though legislators allow combinations of e-tractor and semi-trailer two tonnes more permissible total weight, the sums simply don't add up.

"It's not just that a tonne is missing. The permitted load on the rear axle stays at 11.5 tonnes. And that's a huge issue," says Michael Lehmann, product manager at Krone. That's because this limit applies regardless of the higher total weight. Hauliers who regularly operate at the maximum permitted weight are particularly affected.

The real bottleneck sits at the back

The fact that it is precisely the tractor unit's rear axle that becomes the bottleneck is down to the fact that, by design, part of the battery weight sits exactly above it. Where a diesel tractor unit can take around ten tonnes of load on the rear axle without overloading it, a BEV has considerably less headroom. "A lightweight semi-trailer can soften the payload loss, but it's only one building block," says Lehmann. Just as decisive is how the weight is distributed across the axles within the tight legal limits.

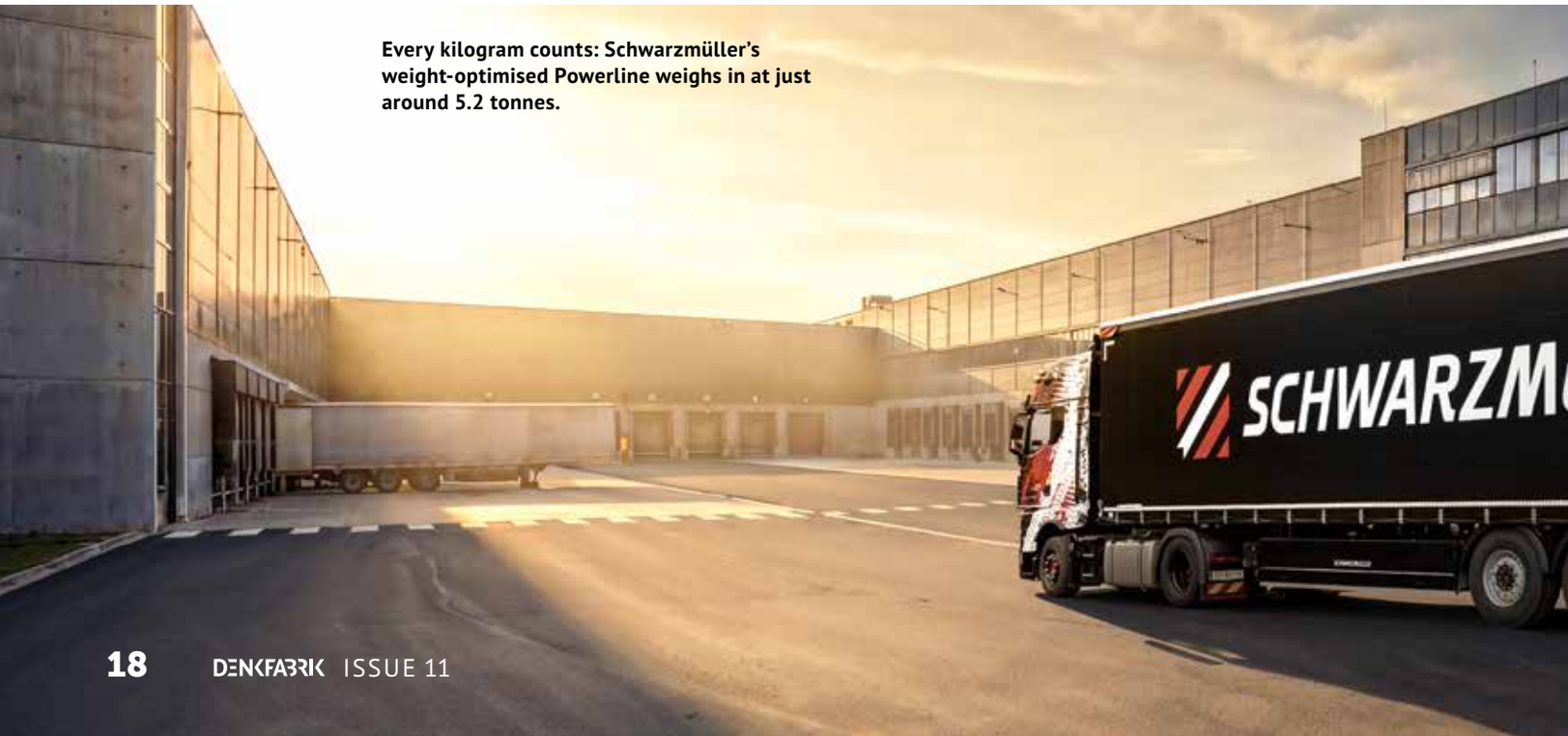
The maths sounds simple: if a standard trailer weighs around six tonnes and a lightweight trailer 700 kilograms less, that should mean 700 kilograms more payload. In practice, that only holds true as long as neither the kingpin nor the axles are overloaded. A lightweight semi-trailer only delivers a real benefit once weight is saved in the neck area. "If we manage to take 200 to 300 kilograms of pressure off the kingpin, that makes a real difference to the load distribution plan," explains Lehmann.

A lever you can pull straight away

The lighter the semi-trailer, the less pressure bears down on the tractor unit's rear axle, and the smaller the risk of exceeding the critical 11.5 tonnes. "That plays right into our hands," says Ferdinand Hamedinger, product manager at Schwarzmüller. For transport where weight is critical, this can be decisive: only the lightweight semi-trailer offsets the battery weight enough that the tractor unit, despite its electric drive, still offers sufficient payload.

In addition, while expanding grid connections and charging infrastructure can take years, lightweight design is a lever companies can use right away, without waiting for new technology or funding commitments. Anyone thinking today about electrifying heavy fleets thereby gains room to manoeuvre exactly where it's tightest: with every kilogram of payload.

A further challenge is that there is still no standard for e-tractor units that a trailer could be designed around. The vehicles are built very differently: Mercedes, for instance, offers variants from 200 to 800 kilowatt-hours, and the battery packs are fitted in different places, changing the axle loads. Long wheelbases shift the distribution further still. Some suppliers claim that a wheelbase shortened by just a few centimetres, or a single ready-configured e-optimised trailer,



Every kilogram counts: Schwarzmüller's weight-optimised Powerline weighs in at just around 5.2 tonnes.

is enough to make a vehicle suitable for a battery-electric tractor unit. But it isn't that simple. The right load distribution therefore can't be achieved with a one-size-fits-all solution, because it depends on battery placement, wheelbase and the body of the particular vehicle. That's why it's essential to view both as a complete package.

Individual advice

That's exactly what Krone and Schwarzmüller provide. They advise their customers individually, based on the tractor unit's exact data. "We put every vehicle through a payload and load-distribution calculation to get the best out of it," explains Ferdinand Hamedinger, product manager at Schwarzmüller. Alongside the kerb weight, this takes into account wheelbases, unit spacing and active axle-load distribution systems.

Krone relies on an optimally designed standard vehicle with numerous freely selectable lightweight components, such as aluminium rear portals, light-alloy wheels or aluminium landing legs. This brings the weight of a Profi Liner down from around six tonnes to about 5.6 tonnes. "And if it needs to be even lighter, we have Schwarzmüller within the group, who can shave off several hundred kilograms more," says Lehmann. With its "Powerline", Schwarzmüller offers a curtainsider in which the company has long been putting its lightweight-engineering expertise to use. "It's strong where it needs to be, and light wherever possible and practical," says Ferdinand Hamedinger.

Using high-strength fine-grain steels

Lightweight design pays off in particular in weight-sensitive operations with fixed delivery contracts and consistent routes, such as beverage or coil transport. There, every last kilogram can determine whether a run stays within the legal limits and whether the semi-trailer can be used at all. More payload also means more revenue, so the higher purchase price pays for itself quickly. At Schwarzmüller, low weight is achieved through a lightweight design refined over many years and validated using digital simulation (FEM calculations), durability simulations, demanding test-track trials and full-load and overload stress tests.

The use of high-strength fine-grain steels and a range of weight-optimised lightweight components, from the aluminium front wall and aluminium rear portal to light-alloy wheels and air tanks, complete the lightweight line-up. This brings the weight-optimised Powerline down to around 5.2 tonnes. Despite its low kerb weight, it still withstands 7.2 tonnes of forklift axle load and 20 tonnes of point load at the centre of gravity, with Code XL certification a given.

At the IAA, Krone is showing five curtainsiders: City Liner, Coil Liner and Mega Liner, plus two Profi Liners. One demonstrates the possibilities in aerodynamics and CO_2 – reduction while the other showcases the new Comfort quick-release system. Schwarzmüller is exhibiting its Powerline, together with a lightweight sliding floor.

Ferdinand Hamedinger, Product Manager at Schwarzmüller

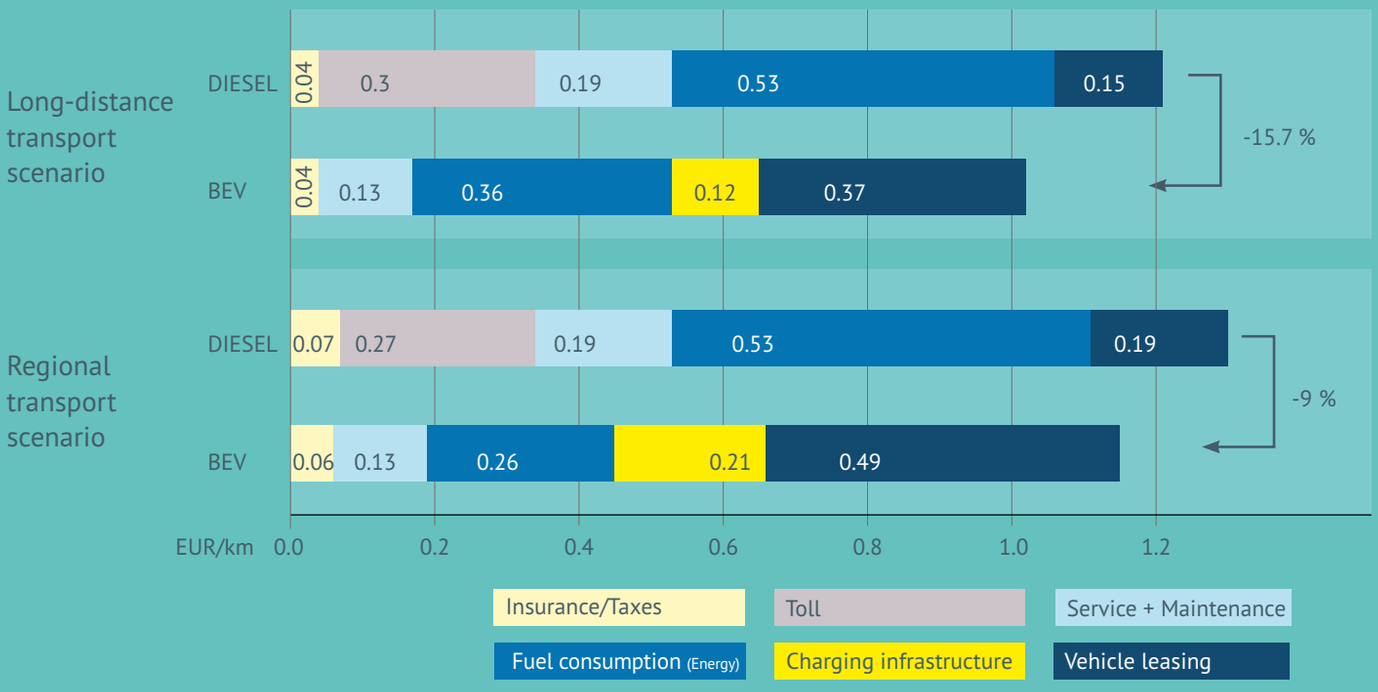
Reality check

The real cost of a lorry

Calculating the **Total Cost of Ownership (TCO)** for lorries is particularly challenging. The reason: many costs depend not only on the vehicle itself, but also on its operational profile and a wide variety of circumstances. A calculation is complex – but possible.

TCO-Szenarien

In logistics, cost-effectiveness is just as important as reliability. Total Cost of Ownership (TCO) includes purchase or leasing, energy or fuel costs, maintenance, insurance, tolls, taxes and residual values. Depending on the application, battery-electric lorries are already cheaper today: In a long-haul scenario for 2025–2030, with an annual mileage of 100,000 km and a 50–50 split between depot and motorway charging, the TCO advantage over diesel is just under 16 per cent. In regional transport, with 60,000 km and charging exclusively at depots, savings of 9 per cent are possible.



ILLUSTRATIONEN: KRONE / ADOBE STOCK, BARUDAK LIER, IWITO STUDIO, ABBASY KAUTSAR, DEWI SARI

Regulation as a driving force

Dec. 2023 – Diesel: **Increase in lorry tolls by approx. 83%** Primarily due to the newly introduced CO_2 surcharge of €200 per tonne.

Jan. 2024 – Diesel: **CO_2 levy rises to €45 per tonne** The CO_2 price rises from €30 to €45 per tonne – an increase of around 3 cents per litre for petrol and diesel.

July 2024 – All: **Threshold for lorry tolls drops from 7.5 to 3.5 tonnes** Toll increase for road haulage; journeys by tradespeople remain toll-free in certain cases.

2024 – Funding: **Federal KsNI funding comes to an end** There is no longer any federal subsidy for the purchase of electric lorries; some regional schemes are still in place.

Jan. 2025 – Diesel: **CO_2 tax rises from €45 to €55 per tonne** The ADAC calculates a CO_2 surcharge of just over 3 cents per litre of diesel.

Overview of cost factors

Acquisition costs:
Funding measures offset differences – electric lorries currently still cost significantly more than diesel.

The Mercedes-Benz eActros 600 costs 2.5 times as much as a comparable diesel Actros. Federal funding ceased in 2024; state programmes and toll exemptions partially offset the additional cost, as does leasing with energy and maintenance costs included.

Maintenance costs:
Structural advantage of the electric motor

Industry estimates suggest maintenance costs are 30–40 per cent lower – a guideline figure that depends heavily on vehicle type, usage and infrastructure.

Tolls:
Full toll exemption until 2031

The biggest single factor in the TCO comparison is the toll exemption for zero-emission lorries until 30 June 2031. According to BALM (Federal Logistics and Mobility Office), a Euro 6 diesel lorry will pay around 34.8 ct/km in 2026, including the CO_2 toll component – for 100,000 km per year, this translates to savings of around €34,800 for the electric lorry.

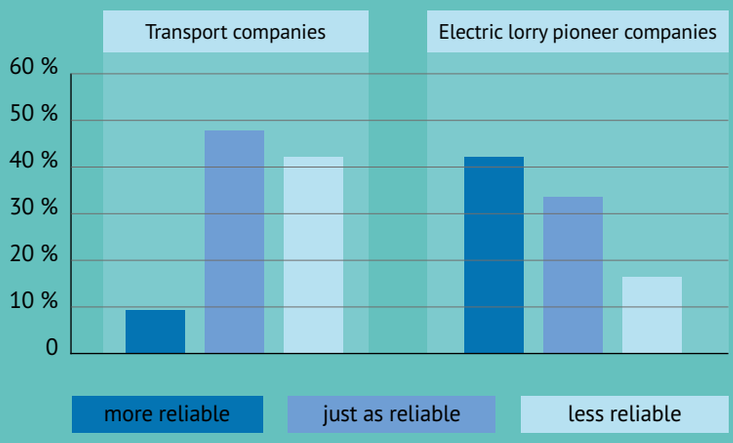
Further financial benefits:
GHG bonus: Avoided emissions generate bonuses.

EU ETS: From 2027, CO_2 costs for diesel operators in the EU Emissions Trading Scheme will rise; electric lorries are exempt.

‘Experience gap’

A study by the Freiburg-based Öko-Institut reveals that there are still significant gaps in knowledge within the transport sector regarding electric lorries. Inexperienced haulage companies are sceptical about range and cost-effectiveness, whilst pioneers are convinced – their satisfaction rises from 88% to 93% as they gain experience operating electric lorries.

Technical reliability of electric lorries compared with diesel lorries: expectations versus experience. Comparison of a representative survey of transport companies with a survey of pioneering electric lorry operators.



Cost comparison

Free cost comparison calculator from the Baden-Württemberg Climate Protection and Energy Agency:
kurzlinks.de/kea-rechner

Scan the QR code to find out more:

The potential of [R]eCool

A trailer fitted with a conventional TRU (Transport Refrigeration Unit) consumes an average of 2–2.5 litres of diesel per hour of operation. By using the [R]eCool, diesel consumption is reduced to 0 litres per hour.

Based on an average of 1,400 hours per year:

Diesel savings: 2,800–3,500 litres per trailer per year
CO_2 savings: 1 litre of diesel corresponds to approx. 2.64 kg of CO_2
2,800 l → 7.4 t CO_2 per year
3,500 l → 9.2 t CO_2 per year

Savings per trailer: 7–9 t CO_2 per year
In terms of ROI, this means: < 5 years; and potentially even shorter as fuel prices rise.

Oct. 2025 Infrastructure: **first public MCS charging station in Germany** New charging station on the A 2 motorway with up to 1.2 MW – three times the previous capacity.

Nov. 2025 Electric lorries: **toll exemption extended until 30 June 2031** Vehicles with a technically permissible gross vehicle weight of up to 4.25 t are exempt from tolls indefinitely.

May 2026 Funding: **€1 billion over four years for charging infrastructure** New funding guidelines apply to both depot charging infrastructure and publicly accessible charging points.

Closer together

Its own warehouse, a direct line, familiar faces: with the acquisition of Pozkrone, Krone moves closer to its Polish customers. DENKFABRIK looks at what´s changing and what's deliberately staying the same.

Two names, one team: Pozkrone and Krone have been travelling the same path since autumn 2025. The long-standing Polish partner has become a subsidiary of the Krone Group. “We’ve been working with Krone for more than 30 years, and now we’re part of the Krone family,” says managing director Maciej Michalski. “This gives us greater scope to grow in the Polish market and make better use of synergies. Most importantly, “Pozkrone” combines Poznań, the Polish city of Posen, and Krone. The company was founded there in 1994. Over the following three decades, Pozkrone delivered almost 75,000 semi-trailers to customers, establishing itself at the top of the Polish market in the process. Tomasz Kujawa, initially the company’s first salesman and today its managing director, still remembers the early days: „Back then I personally drove tyres and spare parts

"We hope there will be more movement in the market again in the coming months."

Tomasz Kujawa (right), alongside Maciej Michalski managing director of Pozkrone.

to the workshops in a small Fiat." The team currently comprises 17 staff at the Posen office and just as many sales staff across the regions. Most of them have been with the company for at least a decade.

2026 has got off to a strong start

In more than 30 years of company history there have been many opportunities and challenges. The EU accession in 2004, for example, brought strong growth, while the Lehman crisis of 2008 was the first real test. The company weathered it, partly thanks to the backing from Werlte. So where does the Polish transport market stand today? "2026 has got off to a strong start. We received a lot of orders in January and February," says Kujawa. However, the market slowed almost to a halt with the escalation in the Middle East. Fluctuating diesel costs became customers' biggest challenge, as they made planning harder and delayed investment.

„The Europe-wide driver shortage is also a major issue," stresses Michalski. "Many transport companies rely on drivers from abroad, which creates a significant administrative burden. Through industry associations, we are working to find new solutions that will make the process easier." Even so, optimism prevails: "We hope there will be more movement in the market again in the coming months," says Kujawa. And Michalski looks further ahead still: "If the war in Ukraine hopefully moves towards peace before long, the Polish transport market could benefit from reconstruction."

Pozkrone has delivered around 75,000 semi-trailers to Polish customers in just the last 30 years.

Acquisition long in the making

Both partners had been considering this step for some time. Ralf Faust, member of the Krone Management Board responsible for Commercial and Technical Services, had long seen the Polish market as strategically important and wanted to establish a major warehouse there.

That's now becoming reality: last summer, Pozkrone fitted out around 2,500 square metres of space in a new building at its existing site. The proximity pays off for customers: the company's own warehouse in Posen saves around two days of transport time from Herzlake, the online shop is available in Polish, →

and a QR code on the vehicle leads straight to the right spare part.

What matters most in the end, according to Michalski, is always that closeness to customers is preserved: “It remains hugely important to us that our customers always have direct points of contact. Anyone who wants to reach us speaks to people, not bots. At the same time, of course, we use new technology wherever it helps and makes our services even better.” With the integration of Pozkrone, the focus is also shifting away from pure vehicle sales towards services around the semi-trailer, for example in telematics. In addition, cooperation with the still-young rental business under Krone Fleet in Poland is being strengthened.

Award-winning: Pozkrone was also recognised by Forbes for its achievements.

Growth brings more room to manoeuvre

For the team, all this means exciting new tasks: “With growth, we’re building new structures, and that takes more processes and more planning,” says Michalski. “This gives us more room to manoeuvre. It’s perhaps like a large vehicle: at first it takes more energy to get moving. But once it’s rolling, it’s difficult to stop.” Throughout the transition, everyone involved was keen to retain what customers already valued. Krone

Interlinked services

Ralf Faust, member of the Krone Management Board responsible for Commercial and Technical Services, on faster delivery times, more service partners and his plans for the Polish market.

Mr Faust, what does the acquisition of Pozkrone mean for Krone’s spare-parts business?
A huge expansion of our availability structures. Until now, everything in Poland ran through an importer, with Pozkrone as our customer. Now we’re supplying the market directly, with our own warehouse and our own distribution, and we’ve switched on the entire functional process chain: from spare-parts availability through to warranty handling. Poland has more than 40 million inhabitants, we’ve been delivering 5,000 to 7,000 new vehicles there every year for years, and so we have a large fleet of Krone vehicles that needs supporting.

How quickly do parts reach the customer?
Much faster than before. We deliver fast-moving parts in Poland the same day or the next, while larger structural parts such as a door or a front wall come from Herzlake via Posen within three to five days. The new warehouse is connected to our ERP systems, so we have integrated access to stock and supply Posen on a weekly shuttle. At the same time, we track warehouse performance and consistently tailor the range to fast-moving items. For the customer, availability is often more important than price.

What role does the online shop play?
Across countries, we handle around 80 percent of our spare-parts business through the online shop, which is also available in Polish. Its main purpose is quickly identifying the right part. This is complemented by the QR code on each vehicle’s nameplate, which either leads straight to the shop or opens the vehicle-specific, accessible spare-parts catalogue. Almost 700,000 vehicles are registered with us in the shop, and we ship more than 9,000 spare-parts consignments a month – for the semi-trailer alone. Currently, no competitor can offer this combination.

Beyond parts sales, what’s changing in service?
We now handle warranty, customer service and, above all, full-service contracts directly in Poland. Via the importer, that was barely possible before, especially for customers running Europe-wide contracts with us. The goal is a network of around 50 service partners in

Closer to the customer: via the new warehouse in Posen, spare-parts supply will run directly in future.

made it clear from the outset that the experienced team in Poland would remain in place, that there would be no personnel changes, and that the Pozkrone name would continue.

"Customers should know that when they call, they will speak to the same reliable partner as before, now backed by the full strength of Krone," explains Michalski. The partners' goals are ambitious: in the spare-parts business they want to double or triple revenue within a few years, and in the sale of used and new vehicles they want to make use of the Krone Group's new opportunities. "We see very good progress at Krone, including with modern concepts such as the eTrailer or electric refrigeration units," says Michalski. "Those are the areas where we want to grow."

Poland, contractually and technically linked to the company via IT, with their processes managed centrally and digitally. A transit customer who breaks down in Poland gets back on the road faster in the event of a service case and can skip the detour via their home workshop. We also supply spare parts for the young Krone Fleet vehicles. In addition, we invoice in both euros and złoty, which is a particularly important aspect in Poland.

What role does Krone Trusted play?
Demand for Krone Trusted is particularly high in Poland. Because of comparatively lower labour costs, many companies have their vehicles repaired at Polish workshops, which further increases demand for spare parts. As a multi-brand-capable brand, we not only supply customers who use axle and running-gear components from different trailer manufacturers, but also workshops across Europe as part of refurbishment programmes. Although these aren't original parts, some come from the same European suppliers that also deliver components for our Reliable products and for the original equipment (OE) on our new vehicles.

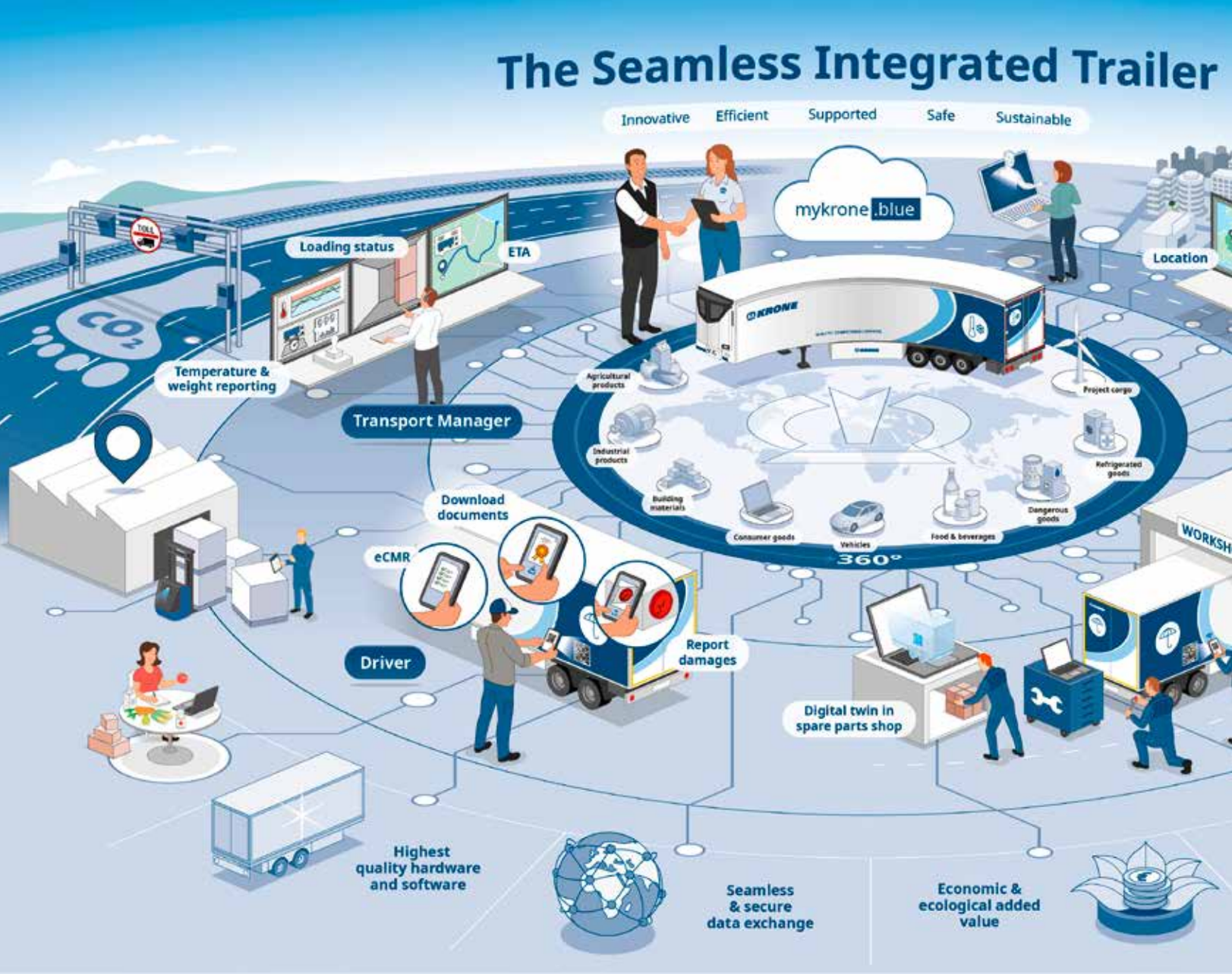
How does Poland fit into the European structure?
After entering the Italian market a year and a half ago, Poland is now the next of what will eventually be twelve digitally networked locations with their own spare-parts warehouse. Sweden is set to follow next. Through our multi-brand strategy, we're also bringing our sister companies from Austria and the Netherlands – Schwarzmüller and Knapen – into this structure. The goal is a central availability and control structure, so that in the end the customer gets everything from a single source.

Where do you see Krone in the spare-parts and service business compared with the competition?
Our great strength is consistency: we think of service as a complete value chain from the new vehicle through spare parts and warranty to the full-service contract – everything from a single source. This integration, combined with the QR code on the vehicle and the digital online shop, is unique in the market. In the end, what matters most to the customer is that their vehicle stands idle as little as possible. That's exactly what we align every decision to.

And how do you personally view the merger in Poland?
We've increased our spare-parts revenue tenfold over the past 15 years. That shows where things are heading. In Poland we're currently preparing the go-live for the new financial year, so that not just service but also sales are fully available. For me, Poland was for a long time a blank spot on the map that was close to my heart. It's especially pleasing for us as a team that we're now tapping into it.

Ralf Faust, Management Commercial &Technical Services at Krone

PHOTOS: PRZEMYSLAW BLECHMAN, POZKRONE, KRONE



From Trailer to Fleet Intelligence

At IAA Transportation, Krone is unveiling two major new developments. mykrone.blue brings together telematics, administration and damage management on a single digital platform.

At the show, Krone is presenting the latest developments in its digital ecosystem for trailers -all designed around the everyday working lives of fleet operators. Maximilian Birle, Head of Krone Telematics & Digital Services, explains: “At the heart of it are two standalone applications that can be combined on a modular basis: mykrone.blue and the Krone Smart Assistant with its management platform, mykrone.fleet.”

The entire process connected digitally

The most important update for IAA Transportation concerns the Krone Smart Assistant. What began as a digital communication tool is now a complete fleet management solution: working together with mykrone.fleet, it digitally connects the entire process, from the moment an incident is reported through to the completed workshop repair.

ILLUSTRATION: BIG PICTURY

The enhanced Smart Assistant also brings together all the vehicle-related functions of the Krone Smart Vehicle Check app – which was previously used separately – into a single central interface. At the same time, the Smart Assistant itself has been expanded. In addition to the established messenger service, it is now also available as a web application and a native smartphone app. Whether at the vehicle, in the office or on the road, drivers, workshop staff and dispatchers work on the same platform, in real time and without switching systems.

"We developed the solution together with customers, drawing on day-to-day operations," says Birle. "The result is an offering that, in this form and to this extent, has not previously existed on the market." With mykrone.blue and the Operation Center telematics application, Krone is going a step further by comprehensively redeigning the user interface. The application now allows for extensive, process-oriented customisation and presents information more quickly and in greater detail.

Reliable fleet availability

The benefits become clear in everyday operation: mykrone.blue continuously monitors the condition of every trailer, measures tyre pressure and temperature, and keeps an eye on wearing parts. Critical changes are detected early, before they can lead to breakdowns. This allows fleet operators to plan maintenance and servicing well in advance, resulting in less unplanned downtime, better utilisation and more reliable fleet operation.

"A strong telematics platform with open interfaces is the foundation for successful fleet management," explains Birle. "That is precisely the foundation we have built with the new generation." Krone is working on a further feature within mykrone.blue: a digital delivery platform. This will allow customers to book collection of their trailers directly. They select the vehicle and choose the day and time themselves. Birle describes it as a "complete digital collection system" and compares it to booking a table at a restaurant: customers choose a time that suits them and book online. At present, scheduling is handled manually and on a decentralised basis. In future, customers will be able to manage it themselves – around the clock and in line with the availability of their own drivers.

Modular and tailored to each customer

mykrone.blue covers the process from vehicle ordering through to telematics data management, while mykrone.fleet, together with the Smart Assistant, handles operational fleet management. The two can be combined as required: "Everyone talks about the one-size-fits-all solution. We deliver everything within the ecosystem, but on a modular basis, tailored to each customer." After all, every fleet operator has different requirements, such as different trailer types, service partners and processes. Customers choose the building blocks that suit their situation and actively help shape the applications in day-to-day operation. "Whether driver, workshop manager or dispatcher – at the end of the day, everyone should be able to do their job better with our solutions. That is exactly what we make possible."

The trailer reports tomorrow's breakdown

With 'TrAIler Health Monitoring', Krone turns tyre and brake data into genuine preventative maintenance: instead of raw data, the system provides a traffic light-style indicator and, if necessary, immediately routes the trailer into a workshop schedule.

Until now, telematics has primarily answered two questions: Where is my trailer? And what is its status? Krone is turning this perspective on its head. "We know where your vehicle is, and we also know how it's performing right now," says Maximilian Birle, Head of Krone Telematics & Digital Services. "But looking ahead is far more important."

Instead of replacing the brakes based on a fixed mileage, TrAIler Health Monitoring evaluates the condition of the components themselves. Two key components – tyres and brakes – are monitored. If the system detects high brake drag coupled with declining braking performance, it issues an early warning with a specific estimate of how much service life remains before a failure is likely to occur. The situation is similar with the tyres: if one of the six tyres is running noticeably hotter than the others, the system flags it for inspection before it bursts during transit.

From raw data to traffic lights

Since July 2024, all Krone trailers have been fitted with tyre pressure monitoring systems (TPMS) as standard. However, pressure warnings alone are often too late in everyday use. Specially developed analytics software therefore links the TPMS data with telematics, load information, driving profiles and historical damage patterns. This enables the detection of gradual pressure losses and atypical temperature trends.

The dispatcher sees only a traffic light status: green means ready for use, yellow means maintenance recommended, and red means critical. In addition, they receive a specific recommendation for action rather than just raw data. To prevent false alarms, Krone specialists check every anomaly before the customer is notified. During the pilot phase to date, every anomaly reported to the customer corresponded to a genuine fault and was made possible by a multi-stage check, carried out by Krone specialists before the dispatcher was informed.

Direct to the workshop plan

If the system reports an anomaly, a structured service notification is generated, complete with specific inspection instructions, which can be transferred directly into workshop planning. For fleet operators, this means fewer unplanned breakdowns and lower follow-up costs.

TrAIler Health Monitoring will be unveiled at IAA Transportation and will be available shortly afterwards. No new hardware is required: anyone using Krone telematics can book this additional service. "This is an important step away from reactive service towards proactive, data-driven fleet operations," says Birle. "Unplanned breakdowns are not only costly for fleet operators – but also, they jeopardise supply chains and timetables. TrAIler Health Monitoring provides the dispatcher with information before the problem arises on the road. This boosts both cost-effectiveness and safety at the same time."

Lighter cover for greater payload

Krone has made the coil cover lighter while also making it more robust. This benefits drivers, increases payload capacity and broadens its range of applications.

Anyone who transports steel knows the maths: every kilogramme of unladen weight reduces the potential payload. With the Coil Liner, Krone has focused on the coil cover, a component that is constantly in motion during day-to-day use. The new lightweight version consists of sandwich aluminium components that deliver significant weight savings. This simplifies handling and reduces the strain on drivers. At the same time, the lower vehicle weight reduces fuel consumption and improves the CO_2 footprint.

7 tonnes instead of 5.4 tonnes

There is another important benefit: because the cover is lighter, more payload is available. At the same time, the maximum floor load for forklift trucks increases from 5.4 to 7 tonnes. As the cover is forklift-accessible, the vehicle can be used more flexibly – even for transport and loading situations beyond the traditional coil business.

The Coil Liner is designed for applications where robustness, load securing and flexibility are key. A particularly sturdy chassis, the Multi-Lock side rave and strong lashing rings ensure multiple strapping options and secure load retention – whether for steel coils or other heavy goods.

The coil well accommodates coils with a diameter of up to 2,100 millimetres and is available in lengths of 7.23 and 8.59 metres. Those requiring even greater payload capacity will find the Coil Liner Ultra to be a lighter variant, without having to compromise on the vehicle's typical strengths.

PHHOTOS: KRONE

"Competition between technologies should decide the outcome, not a pre-selection made by the legislator."

Simon Brück, Head of Environment and Climate/ Energy Policy at the DSLV German Freight Forwarding and Logistics Association

On the Slip Road

New drivetrains are changing more than just the vehicle: they are shifting costs, processes and responsibilities across the entire industry. Dr Frank Albers, Managing Director, Sales and Marketing at Fahrzeugwerk Bernard Krone GmbH & Co. KG, spoke in Berlin with Simon Brück, Head of Environment and Climate/Energy Policy at the DSLV German Freight Forwarding and Logistics Association, about where the opportunities lie and where things are still proving difficult.

Dr. Frank Albers: ***The shift in drivetrain technologies for road freight transport is becoming increasingly apparent. How are you experiencing this moment? Is the transition already well underway, or are we still in a phase of uncertainty?***

Simon Brück: If I may put it in a picture: we've moved from the country road onto the motorway, we're noticeably picking up speed, but we're still on the slip road. Companies are increasingly and visibly leaving the pilot phase behind; the first battery-electric vehicles are commercially viable and are being rolled out widely. That is above all down to the companies that invested early, built up expertise and gathered valuable experience. When the scaling

effect kicks in that moves us into the overtaking lane depends less on political will than on robust business cases – and that will stay with us for the next 10 to 15 years.

Albers: ***Yes, I agree that we've reached the motorway. But in my view, the pace still isn't very fast. What I usually hear from our customers is: "We're trying it out." One customer is further along, already has several e-vehicles in its fleet and has invested in its own charging station. Others say they first need to gather experience and see how the administrative procedures and funding opportunities work out. The big question mark remains: who bears the costs? Is the shipper willing to pay more for the transport? There's a lot of resistance here. Only a few are willing to go down this road together with the forwarders. In your view, where is the biggest gap between what politicians promise and what actually happens in practice?***

Brück: Politicians often underestimate just how heterogeneous and complex our industry really is. People see a lorry moving goods from A to B, but they do not see the many individual players involved along the supply chain. That became clear with the funding programme for climate-friendly commercial vehicles, which was developed on the drawing board. Charging infrastructure and vehicles were funded together, but that does not reflect reality, as we often deal with highly layered and complex structures. On the one hand there's the asset-light forwarder who owns the property, and on the other the classic, medium-sized transport operator who runs the vehicle. The new funding programme for building depot charging infrastructure has at least resolved this more cleanly, although there have also been teething problems here, particularly for small companies in relation to the funding portal. But there's one aspect I'd also like to raise: ultimately, it's sustainable business cases that determine the success of the transformation. The biggest obstacle at present is infrastructure – once that's in place, competitive energy prices follow, and the model then becomes self-sustaining.

Albers: ***The business case also depends on access. I know of cases in Emsland and East Frisia where there are business owners who want to invest but can't, because they lack access to charging power. The grid operator charges high connection costs, and the cable from the depot to the transformer station has to be paid for by the operator itself. That doesn't add up. And costs need to be predictable: if I suddenly have to pay three times as much for charging while on the road, the business model falls apart.***

"Many customers would rather forgo funding altogether and would instead prefer a toll exemption or better categorisation."

FRANK ALBERS

Brück: Exactly. Reliability comes before the question of price. The first things to be electrified are plannable system and groupage traffic. The big advantage here, too, lies in the infrastructure: in the vast majority of cases, I find dedicated charging infrastructure at both the departure and receiving depots, and I know the costs. With public charging, on the other hand, we're still looking at around 40 cents per kilowatt-hour – for cars or spontaneous ad-hoc charging, often 60 or 70 cents per kilowatt-hour – and that's a price level that simply puts the brakes on many business models, despite the toll exemption. For a business owner, there's nothing worse than a vehicle with a flat battery, because then it's off the road. With diesel, I can currently always find a filling station – that's something electromobility still needs to develop.

Albers: ***I wonder how demand for electricity will develop in the future. Data centres are being built right across Europe, and artificial intelligence consumes enormous amounts of energy. That creates competition for electricity, and of course the question arises whether that electricity can be generated sustainably, or whether we'll have to fall back on conventional technology.*** →

The setting was fitting: Brück and Albers met for the conversation at the very place where the framework conditions for the drivetrain transition are decided.

Among other things, they discussed what kind of policy framework is needed for the transition to new propulsion systems – from subsidies and tolls to grid connections and reliable charging standards.

Brück: Our study with RWTH Aachen shows that by 2035, freight transport will consume twice as much electricity as the steel and chemical industries combined. By 2045, demand will increase eightfold – around 186 terawatt-hours in the so-called baseline scenario alone, meaning the current regulatory standard for CO_2-fleet limits and AFIR is maintained.

If you convert the entire diesel consumption of German road freight transport, we'd be looking at 580 terawatt-hours. So we do significantly reduce energy demand, but we remain a major driver of it. What matters is that politicians don't work with taboos: we need every available, competitive and resiliently generated kilowatt-hour, plus a European transmission grid, so that electricity from wind and sun-rich regions reaches where it's needed. That's first and foremost a market question for energy suppliers, and then a question of the regulatory framework.

Albers: ***A major issue in practice is the weight of the batteries. Our electric trailer weighs two to four tonnes more, depending on the battery, and that comes straight off the payload. For the forwarder, that's suboptimal. I'd appeal to policymakers to find a solution here. For example, similar to the positive network for long combination vehicles, allowing the full payload to be carried on certain routes with an e-tractor unit and e-trailer. The same applies to length. Since a BEV tractor unit is longer, the legislation would need to be adjusted for this too.***

Brück: That's the heart of it: we need a level playing field between conventional and alternative drivetrains, and that costs public budgets next to nothing. It's simply about removing the competitive disadvantages that the new technology itself creates. The directive on weights and dimensions is still being negotiated by the EU institutions. I firmly believe that a solution finally needs to be found during the Irish Council presidency, and that large nations such as France should drop their very restrictive rules in favour of harmonisation.

In addition, it would be advisable for all member states to introduce CO_2-differentiation in HGV tolls. To illustrate: Germany, the Netherlands, Denmark and Austria have implemented the Eurovignette Directive accordingly; in Italy, France and Spain, people are still waiting in vain for it.

Albers: ***In your view, what does funding need to achieve in future?***

Brück: The fact that the federal government is tackling the bottleneck of depot charging infrastructure leads me to assume around 80 per cent of future charging demand will be non-public – which is a sensible and correct approach. However, funding shouldn't be a permanent state of affairs; it should be understood as a transitional, pump-priming instrument. The vehicles are available and pay for themselves through toll savings and favourable electricity and energy cost economics. What

"The grid question should be resolved before ordering the vehicles."

SIMON BRÜCK

matters now – the federal cabinet has just presented the draft 2027 budget – is that the 1 billion euros announced by the Federal Ministry of Transport is now actually allocated in full. That's only logical – after all, road freight transport contributes around 13.5 billion euros a year to the federal budget. Some of that revenue needs to flow back into a green road financing cycle and support companies in the sector during the ramp-up phase, cushioning risk. Looking ahead though, the market needs to sustain itself without funding – whereby the funds for small and medium-sized enterprises are allocated within four hours in the first funding round. That shows just how immense the demand is.

Albers: ***With trailer funding, we've experienced two somewhat bumpy rounds, where, for example, the application portal crashed and the pot of money was far too small. That creates unease and distorts competition. One company gets funding, another doesn't. And larger firms with stronger back-office capacity tend to be quicker off the mark, while the small ones lose out. Many customers would rather forgo funding altogether and would instead prefer a toll exemption or better categorisation. That would benefit everyone.***

Brück: Tolls need to become much more technology-neutral. Anyone with a combustion engine pays the full CO_2-price component, regardless of the fuel used. With HVO 100, for example, I save 90 per cent CO_2 over the life cycle, and yet the same toll rate applies. Gas-powered vehicles have been fully liable for tolls since the start of 2024. That's a political narrowing of focus that effectively blocks the market from finding CO_2-reduction solutions.

Brück warns that the industry must not rely on funding and only what has its own viable business case will prove sustainable.

We need to focus much more strongly on the energy source, so that technology neutrality is put into practice and doesn't just stay on paper. Competition between technologies should decide the outcome, not a pre-selection made by the legislator.

Albers: ***There are many operators and prices when it comes to charging. How can this be standardised?***

Brück: The charging market will become large enough for a range of operator models – from fully in-house development, through leased sites, to networked depot charging networks. What we need from the legislator is workable energy law. A logistics facility should always be classed as an end consumer under energy law, which reduces complexity.

For public charging, the pass-through model helps, where – put simply – I bring my own electricity contract with me. That makes the price predictable. For depot charging, we'll achieve 23 to 25 cents per kilowatt-hour. I reach diesel price parity at 33 to 34 cents per kilowatt-hour, so I'm actually better off – and that's on market terms, without permanent subsidies. One further point, not to be forgotten, is today's common diesel floaters. We'll need an equally established and recognised pricing model for electricity in future. A transparency body publishing an average electricity price would be a lean, market-oriented solution. →

Albers: ***What concrete steps should a medium-sized freight forwarder take right now?***

Brück: Anyone wanting to use e-lorries shouldn't start with the vehicle, but with the grid connection, or rather the infrastructure. I need to sit down with my grid operator and work out what connection capacity I have and how I can increase it. In parallel, I need to talk to my clients about which routes can be electrified and how to approach investment, for example through longer contract terms. Realistic fleet planning follows from that. Don't procure 100 e-lorries at once; get two or three instead – together with gradually growing charging infrastructure. But once I do tackle the grid connection, I need to scale it big enough from the outset. In short, the grid question should be resolved before ordering the vehicles. Ultimately, the transformation is a business decision which also has to be communicated honestly. Companies will pass these costs on to their customers in the end. Reduced-emission or zero-emission logistics simply doesn't come free of charge.

Albers: ***True. What the forwarder pays is a surcharge that gets passed on to the shipper, who in turn passes it on to the end customer. That always raises the question of how expensive we want to become in Europe, and what competitiveness we want to preserve – not only compared with other European countries, but also with Asia and the US. We take climate change seriously; we have a responsibility. But Europe alone won't save the world. We need to prepare, for example, for Asian manufacturers entering the market and in this regard we don't shy away from competition. Bernard Krone firmly believes that competition drives us forward and makes us more innovative. It's just that we mustn't throw the barn doors wide open and let half-price products and indirect subsidies wreck the industry. That's where the legislator needs to step in, to ensure a level playing field. Furthermore, we mustn't lose the small businesses. The last mile is often handled by the many flexible small players, not the big ones. What's your view on this global challenge?***

Brück: Protectionism is absolutely not the answer – no trade barriers and no restrictive trade-policy instruments, such as the punitive US tariffs we're currently seeing. European technological leadership is preserved through competition, not trade barriers. As you say, we don't shy away from competition – on the contrary, it makes us more innovative and efficient. The mid-sized company is the agile speedboat, the large corporation the oil tanker that needs a lot of time to change direction. What matters is that this transformation happens, and that no one says any longer, "I don't want anything to do with it." We do however need to move away from the ideology that the e-vehicle alone is the solution. 50 to 60 per cent of HGV traffic can be electrified. We'll solve the rest through fuels and hydrogen – in a technology-open and pragmatic way. And the industry, particularly through energy supply, will grow even closer together as a result.

Albers and Brück call for fair competitive conditions in Europe – without protectionism, trade barriers or indirect subsidies.

PROFILE

Simon Brück heads the Environment and Climate/Energy Policy department at the **DSLV German Freight Forwarding and Logistics Association**. A qualified freight forwarding and logistics services practitioner, he represents the industry to politicians and legislators

"The legislator needs to step in to ensure a level playing field."

FRANK ALBERS

PHOTOS: JAN ZAPPNER

PHOTO: KRONE

SMARTER LOADING – FASTER WORK

The Mega Liner Comfort stands out for its exceptionally fast and user-friendly operation. Its quick-release tarpaulin with micro-rings enables rapid opening and closing, while the centrally operated hydraulic lifting roof ensures ergonomic, efficient handling. Designed to optimise loading and unloading operations, the Mega Liner Comfort is ideally suited to demanding applications in both the automotive and beverage transport sectors. The package is completed by comprehensive load securing certification, providing added confidence in compliance and safety.

"Sustainable business practices are becoming essential if we are to remain relevant to our customers."

Gert Naber, Manager of Fleet and Sustainable Innovation at Tielbeke

Quiet and clean

What does a sustainable transport fleet look like? At Tielbeke, the answer is: electric. The company is investing heavily in sustainability and looking beyond tractor units. As part of this, 27 new Krone Cool Liners were recently purchased.

Gert Naber works as Manager of Fleet and Sustainable Innovation at Tielbeke, a full-service logistics provider based in Lemelerveld in the Netherlands. His role is to ensure that at least half of the fleet is zero-emission by 2030.

"The transport sector is on the verge of taking a major step towards sustainability. All in all, this is coming relatively late. Public transport, for example, is already one step ahead," says Naber. And he should know, because before joining Tielbeke, he worked for years at the transport company Arriva Nederland. His explanation for this head start: "Public transport is closer to the government and is therefore easier to regulate."

At Arriva, Gert Naber was gripped by the electrification craze from an early stage. "As early as 2012, our first electric bus was operating on the Frisian Wadden Sea island of

PHOTOS: MARCEL BONTE FOTOGRAFIE

Schiermonnikoog. Three years later, we electrified our first public transport service in Den Bosch." Since then, the topic has never left him. "Electric motors are quiet and clean – not just in terms of emissions, but also under the bonnet. The technology is simple and low-maintenance." He is now set to drive this approach forward in logistics – a cause close to Naber's heart.

At Tielbeke, the company is open to electrification – not least because the market demands it. Above all, it is customers and regulatory requirements that are driving Tielbeke forward. With the radical shift from low-emission zones to 'zero-emission' zones, the transition to zero-emission transport is becoming ever more urgent in city logistics. Since July this year, the Dutch lorry toll has also come into effect, under which cleaner and lighter vehicles pay less per kilometre. "That's another reason why almost everything we're currently purchasing is electric," explains Naber.

On Tielbeke's premises in Lemelerveld, a small village in the east of the Netherlands, you can already spot electric tractor units here and there. "We already have eleven of them in operation, and another eleven will be delivered in August," enthuses Naber. "Things are moving quite quickly now."

The pressure is mounting

Tielbeke – 650 employees, 350 vehicles, 90 million euros turnover – is transforming from a medium-sized to a large transport company. "And for that, you need substance. If you don't invest, you have no future," says Naber. The transition to sustainability requires substantial investment. Naber sees the current period as a turning point. The only way is forward. "This applies not only to the sustainability of the fleet, but also, for example, to the areas of digitalisation, regulation and ISO standards. Also, our customers are consolidating, small businesses are becoming less common as clients and the big ones expect more and more from us."

Many of Tielbeke's customers are themselves deeply committed to sustainability and, as part of this, also consider emissions within their supply chain. "This means that we are increasingly having to demonstrate what we are doing in terms of sustainability." According to Naber, this means that sustainability is no longer simply an issue that is considered important or driven by political pressure. "Sustainable practices are becoming a prerequisite for remaining relevant to our customers."

Electrification is becoming a viable option

Tielbeke's work can be broadly divided into two areas. On the one hand, the company handles contract logistics, where everything in the lorry belongs to a single customer. On the other hand, Tielbeke operates in distribution, i.e. the finely meshed transport of general cargo. To this end, Tielbeke has joined forces with five other →

Gert Naber, Manager of Fleet and Sustainable Innovation at the Dutch full-service logistics provider Tielbeke, is responsible for the electrification of the vehicle fleet.

PROFILE

Tielbeke was founded in 1958 by Jo Tielbeke (1930–2021) as a provider of transport solutions for the regional construction industry. Over the years, the company has developed into a medium-sized transport firm with 650 employees, 350 vehicles and a turnover of 90 million euros. Today, Tielbeke is owned by Robert Tielbeke, the founder's son, and the investment company Wadinko. Day-to-day operations are managed by CEO Adwin Verhoeks.

transport companies to form the Distributie Holland België (DHB) network. Together, they are able to transport consignments through Belgium, the Netherlands and Luxembourg within 24 hours. "We operate round the clock, but the vehicles mostly remain within the Benelux region and always return to our depots after a day on the road. That makes electrification relatively straightforward." Naber is referring to the range and the charging infrastructure, which, alongside the availability of electric vehicles, are key prerequisites for emission-free operation. "We're not driving all the way to Morocco in one go, which makes the task easier."

Tielbeke began preparations for electrification around four years ago. "We notified the utility companies of our electricity requirements at an early stage, thereby actively taking on a pioneering role. We now have two charging stations that we installed ourselves and a third that we operate in collaboration with a partner." This means the infrastructure is in place to further expand the electrification of the fleet.

Data-driven investments

To determine which vehicles are needed in the fleet, Tielbeke relies on data and data models. This enables investment decisions to be made on the basis of facts. "Put simply: if we know which vehicles are being taken out of service and what capacity we will need in the future, we also know what we need to purchase." As a result, Tielbeke has recently purchased 27 Krone Cool Liners alongside electric tractor units. "The refrigerated trailers we'd been using were 15 years old. That was the turning point for us. Although the trailers themselves were still roadworthy, we could no longer renew the maintenance contracts for the refrigeration units. So we decided to continue using the best trailers without refrigeration units for ambient work and to order new trailers for refrigerated transport."

Tielbeke works with regular suppliers, including Krone. For the new refrigerated semi-trailers, the choice fell on the Cool Liner. "The decision wasn't just financially motivated; the product also had to suit our work. We prioritise quality. It's important to us that a trailer lasts at least 15 years and functions flawlessly throughout that time. In our view, Krone is one of the leading suppliers in this respect. German reliability, as we call it in the Netherlands."

The trailer must keep up too

The Cool Liner is a well-insulated, electrically refrigerated trailer. The power is currently still supplied by a diesel-powered generator. "This means we're set for the near future," says Naber, already looking ahead. "When coupled to an electric tractor unit, the diesel engine can be switched off and even removed. This saves weight, which in our industry translates directly into profit." After all, less weight means greater load capacity.

The zero-emission zones in the Netherlands focus on tractor units. With an electric tractor unit, Tielbeke is permitted to drive through the zone, even if the electric refrigeration system in the semi-trailer is still powered by a diesel generator. "However, that doesn't mean we don't also want to make the refrigerated semi-trailers more environmentally friendly." For Naber, the future lies in electric refrigeration. "We already had trailers with a generator in the axle, so that we could capture the trailer's braking energy and convert it into cooling. This technology also works with an articulated diesel lorry in front." But an electric articulated lorry with a comprehensive battery pack makes everything simpler and more logical. "The fewer additional systems, the better. That is our ideal, and we are working towards it step by step."

Cooling without diesel

An electric refrigeration unit operating for 2,000 hours a year can save between 4,000 and 4,800 litres of diesel, cutting CO_2 emissions by up to 14 tonnes. Carrier Transicold's [R]eCool is designed to deliver these benefits as a sustainable alternative to conventional diesel-powered refrigeration. Rodrigo Pires, Field Sales Director for Engineless Solutions at Carrier Transicold, explains what the unit can do.

Vector® eCool is regarded as the world's first fully autonomous and engine-less electric trailer refrigeration unit. What is the current status of the technology?
We launched the Vector® eCool in Europe in 2020. Today, more than 800 units are in operation across Europe, New Zealand and Australia, with around 80 per cent of them used in multi-temperature applications. Nearly 90 per cent of the units use a 19-kWh battery – proof of the system's efficiency. It combines low energy consumption with an energy-generating axle that charges whilst the vehicle is in motion. We have since expanded our portfolio to include a 27-kWh battery for lorries, as well as the 38-kWh [R]eCool battery system, which can be scaled up to 2 × 38 kWh.

Will eCool become the standard over the next ten years, or will conventional systems continue to be used?
Regulatory requirements such as Vecto and the EU Taxonomy are expected to further drive interest in electrified trailer refrigeration solutions. At the same time, fleet operations vary considerably, and no single approach will suit all fleets. We therefore anticipate a mix of different solutions: **Vector® eCool** with an energy axle on the trailer charges the battery whilst on the move. **[R]eCool** is a standalone battery that can be used on its own or in combination with Eco-Drive, eCool-Drive or an energy-recovery axle. **eCool-Drive** draws its power from the battery-electric tractor unit, which supplies 400 volts AC. **Eco-Drive** is powered by electricity from the diesel tractor unit.

How does [R]eCool help to reduce CO_2 emissions, and when does the investment pay for itself?
With around 2,000 operating hours in diesel mode, the potential savings amount to between 4,000 and 4,800 litres of diesel per year, depending on whether a single, or multi-temperature application is used. This equates to a saving of around 14 tonnes of carbon dioxide per year, based on application profile and operating conditions. To this end, we have developed a competitive [R]eCool offering.

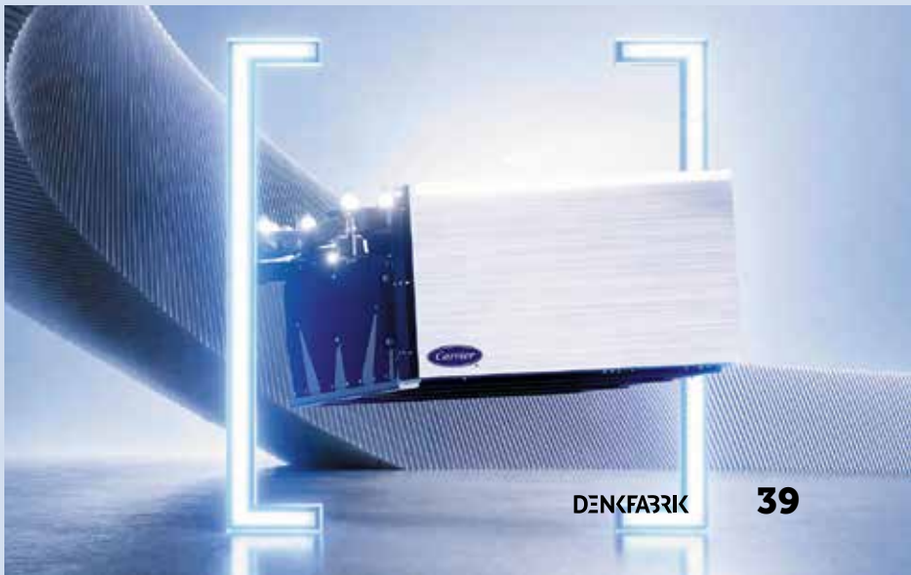
The TCO (Total cost of ownership) calculation is particularly compelling when the system is integrated into trailer financing and the diesel price, energy costs and utilisation rate are right. However, it is not possible to give a general answer as to when the investment will pay for itself. This depends on the fuel price, energy infrastructure, financing and operating hours.

In your view, what are the biggest hurdles to widespread market penetration?
Electrification is a gradual process. For most fleets, the challenge is not just choosing a technology but making the right long-term strategic decision. They must decide – not only from a technical but also from a strategic perspective – whether to opt for a fully electric, hybrid or diesel-based approach.

The price of diesel has the greatest impact, compounded by rising CO_2 taxation. Charging infrastructure remains a real constraint: stand-alone battery systems require a reliable grid connection.

Eco-Drive and eCool-Drive can further extend the system's operating time. In this way, we offer customers a gateway to electrification and support them every step of the way – from assessing their requirements and implementing the right solution to getting the best from the technology in operation.

Rodrigo Pires, Field Sales Director, Engineless Solutions, Carrier Transicold



PHOTOS: CARRIER TRANSICOLD

The e-truck pioneer

At TST Group, Katrin Herda transformed the idea of installing her own charging points into a comprehensive charging network for the industry. Her advice to anyone still hesitating is simple: just get started.

When the TST Group, a family-run contract logistics provider based in Worms, added its first electric lorry to its fleet in mid-2024, the company did not have its own charging station. "It wasn't ready yet, so we charged at public stations," recalls Katrin Herda. "In doing so, we realised just how difficult it is to find a suitable charging point at all – and how expensive the electricity can be in some cases." They were paying up to around 80 cents per kilowatt-hour. "You don't even need to do the maths – that's far too much." This experience gave rise to a business model: Herda is now managing director of PamSun GmbH, a separate entity within the TST Group, under whose umbrella the Dragonize charging network makes it easier for logistics companies to charge their lorries.

Actively shaping the future

A graduate in business administration, Katrin Herda began her career as a trainee at the American crane manufacturer Terex. Around two and a half years ago, she was offered a role at the TST Group to set up the charging infrastructure for the company's own lorries.

"This opportunity particularly appealed to me because it means I can play an active part in shaping the future," says Herda. "I find it exciting to be involved in a new technology, to act sustainably and still remain closely connected to the technology itself." In doing so, she has found that commercial success and sustainable action go hand in hand.

Once her own charging station was up and running, Herda spoke to other logistics operators – and, without further ado, opened up her charging points to them. Charging worked well, utilisation rates rose and the infrastructure became more profitable because more electricity flowed through it than was needed for her own vehicles. The charging point thus gave rise to the idea of a network for the entire industry. However, when she wanted to put the installation of charging stations out to tender, she received very different technical proposals from service providers at widely varying prices. "Many came from the passenger car sector, where the requirements are completely different to those for lorries. And how is a logistics operator supposed to decide what's right?" she asks. "That's not their core business, after all."

Tailored perfectly to logistics operators

Their solution was a network offering all the necessary components: qualified service providers with a binding catalogue of services, as well as comprehensive operations and support. "We need partners who understand how valuable time is to a logistics operator, and who can respond quickly and flexibly," says Herda. Last but not least, the network also includes a suitable billing system. "We were often told: 'Why not just use a credit card?' But no lorry driver has a company credit card." Those using the service can choose for themselves which components they need: just the operating system for billing, just the service, or even a new charging station, with the Dragonize truck charging network acting as a 'charging guide'. Small haulage firms are particularly close to her heart. "If an entrepreneur manages to buy that expensive vehicle, we want to open the door for them to operate an electric lorry profitably." →

The idea of installing charging points has given rise to three areas of responsibility. Herda's team is now developing energy systems at 80 to 85 sites across Germany. "In each case, I have to decide how large a system will be and what the set-up will involve – just photovoltaics, or a complete combination of PV, battery storage and charging infrastructure. Charging infrastructure makes the most sense when combined with storage," she explains. The second area is what she calls the energy ecosystem: "Logistics providers need to completely rethink their approach to energy procurement, with entirely different requirements and peak demands. Added to this are energy management and certification." Finally, the third area is the Dragonize charging network. It bears the dragon in its name and also in its logo. The symbol pays homage to the TST Group's headquarters in Worms, where the dragon is deeply rooted in the Nibelungen saga. 'Dragon' and 'Energize' were combined to form Dragonize. "This illustrates where we come from," says Herda, "and at the same time, it links the new and innovative with energy."

Independence becomes a competitive factor

It is precisely the interplay between site development, the energy ecosystem and the charging network that is the recipe for success: "Vehicles and charging infrastructure do work on their own," she says, "but when you set them up at your own site, you have to think about how renewable energies, photovoltaics, perhaps even your own wind farms and battery storage can be integrated." It is only this combination that creates the ecosystem which can ultimately be economically viable.

The TST Group, founded in 1990 by Frank Schmidt with a single lorry, is now a contract logistics provider with around 3,500 employees at over 85 sites. It specialises in warehousing, transport and value-added services, particularly for the chemical, pharmaceutical and retail sectors. For Katrin Herda, TST is one thing above all else: "the enabler". Without the warehouses, there would be no space for charging stations and no roofs for generating their own energy. The owner and the company's management are fully behind the initiative. They recognised early on that sustainable logistics and independence from large energy companies would become a competitive advantage. In this environment, Katrin Herda finds a combination of trust, a clear strategic direction and the courage to invest, as well as "a high degree of entrepreneurial freedom".

Gaining experience

What advice does she give to a medium-sized haulage company wishing to get involved? Herda is quite clear: "Just get started, take the plunge." She says the technology is already capable of much more than many people realise, particularly in terms of range. "You really shouldn't wait for the next grant or perfect market conditions, but should gain experience through a pilot project," she is convinced. This could provide the decisive edge. What the sector lacks, above all, is planning certainty: "Funding has only been available irregularly in recent years, whilst investments in charging infrastructure have to be made over a long timeframe. That was very challenging for those in the sector." The fixed toll demonstrates just how significant reliability is. "That was a catalyst that allowed us to say: now we can plan for the long term."

The fact that the field she works in is constantly evolving does not slow Katrin Herda down. On the contrary, it is her real motivation: "You don't just set up your charging network and then consider the job done. It's constantly evolving, for example, with a new vehicle that can store more energy meaning you may have to rethink things all over again." It's pioneering work, with everything that goes with it, including mistakes. And yet she is driven by a clear vision: "I think we'll have reached our goal when, at some point, electric mobility is no longer anything special, but simply part of everyday life and something people live with and perceive as economical."

ABOUT THE PERSON

Katrin Herda has been developing the e-mobility division at the TST Group in Worms since early 2024 and is now Managing Director of PamSun GmbH and the Dragonize truck charging network. The business graduate is responsible for establishing charging infrastructure and an entire energy ecosystem comprising photovoltaics, battery storage systems and charging points, as well as the industry-wide charging network for electric lorries.

PHOTOS: DRAGONIZE

A column by Bernard Krone

What drives us

In our industry, when we hear the word ‘propulsion’, we often think first of technology: diesel, batteries, hydrogen – the question of what will power the lorries of tomorrow. But ‘propulsion’ is also what keeps us moving as entrepreneurs. No matter how much technology advances, my driving force remains the same: in the end, it’s reliability that counts.

An entrepreneur must be able to rely on their business running smoothly, even when conditions are uncertain, costs fluctuate or investments are on the horizon. They need partners who speak their language and are there when the going gets tough. Reliability, trust, closeness – these are the values that drive us.

They become even more important in times of major upheaval. They provide stability when so much else is changing. As a family-run business we do not think in terms of quarters, but of partnerships that last for decades. And so it is our aim to carry on what we have built up.

What powers the vehicles may change. What drives us remains the same.

In doing so, we are always leading the way. We build electric trailers, develop digital platforms and connect entire fleets. But we do so driven by the same purpose that has always guided us: to help our customers move forward, not to pursue technology for its own sake.

What powers the vehicles may change. What drives us remains the same. You can count on that.

PHOTOS: KRONE, ISTOCK/PIRANKA


KRONE