

# trailer world

BPW's Customer Magazine

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The power of  
**cooperation**

Working together for greater success



# »The power of cooperation benefits everyone.«



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Meeting the complex challenges of the transport and logistics industry calls for maximum flexibility and competence from all actors involved. It is thus all the more important to pool resources and know-how, with the aim of identifying and exploiting any potential for optimisation.

This issue of trailer world looks into the power of cooperation and recounts success stories of effective cooperation. This includes the work of the cooperatively organised Edeka Group or the collaborative implementation of mammoth projects such as the upgrading of the A7 motorway carried out by project corporations, as well as diverse forms of joint action taken within the BPW Group.

As a strong partner, we offer a complete portfolio for vehicle manufacturers and vehicle operators, joining forces to deliver efficient and safe solutions that benefit everyone.

Throughout, we attach great importance to constructive dialogues. Our aim is not only to inform, but to get all parties involved to talk to each other. This is because innovations are always the result, amongst other things, of working with customers and suppliers. With this in mind, we send employees from Application Engineering to South Africa to explore the load-bearing capacity of our running gear systems, and in the field of composite applications, we benefit from an extensive network of experts that also includes our development specialists ADETE.

We will continue to make targeted use of the power of cooperation, so as to get many things going for you and with you, and to move forward together. Experience the very best of collaborative partnership – with BPW and in this issue of trailer world. Have a good read!

Carlo Lazzarini

## 04 THE PHOTO

## 06 PANORAMA

## 08 COVER STORY

### Working together for greater success

Edeka represents active partnership between wholesale and retail.

## 14 PARTNERSHIP

### Perfect teamwork

Three practical examples demonstrate the advantages of working with the BPW Group.

## 16 LOGISTICS

### Taking 1,000 tonnes over seven bridges

The Kahl Group relies on heavy goods vehicles equipped with axles from BPW.

## 20 INFRASTRUCTURE

### New paths with new concepts

The project corporation Via Solutions Nord is upgrading the A7 motorway – a mammoth project.

## 23 AFTERMARKET

### Spare parts for every need

The BPW Group provides customers with a reliable supply of wear and spare parts.

## 26 INNOVATION

### Scoring points with innovations

ADETE is among the development specialists of the BPW Group.

## 28 DIGITISATION

### The benefits of communication

TIP Trailer Services focuses on digitisation and communication.

## 30 INTERNATIONAL

### Pushing the limits every day

In South Africa, trailers are being put to work in extreme conditions.

## 34 AGRICULTURE

### Hand in Hand

BPW BENELUX provides support for the agricultural market in Belgium, Luxembourg and the Netherlands.

## 37 WE THINK TRANSPORT

### Solutions at a glance

The online BPW Solution Finder illustrates the BPW Group's extensive range of products and services.

## 38 FOCUS

### Full throttle into practical application

The students in the KA-Racing team are designing and competing with their own racing cars.

## 39 IMPRINT



Photos: Erzeugergenossenschaft Reichenau, Stefan Bungert, Bernd Rhein, KA-Racing  
Title: Fotolia – Production Perig



## Joining forces

Weighing 60 tonnes and a considerable 5.30 metres high and also wide, this dumper truck was transported to its new operating site in Rohrdorf in the Bavarian Pre-Alps. Moving construction machines of such dimensions is a matter of teamwork. In this case, BigMove, a pan-European network for special and heavy goods logistics, commissioned Scheuerle Fahrzeugfabrik with the construction of a special semi-trailer boasting seven BPW axles: the 7-axle EuroCompact low bed. The freight with a total height of six metres and a weight of 102.5 tonnes was transported by the Wallek haulage company.



## German Hidden Champions: BPW in the Top 30

› BPW Bergische Achsen KG has succeeded for the third time in earning a spot in the top 30 of German medium-sized businesses with the strongest brands. “We are pleased with the good ranking,” said Michael Pfeiffer, personally liable managing partner of BPW. “Medium-sized enterprises form the backbone of the German economy. This study demonstrates that BPW has a leading role in Germany’s commercial vehicle supplier industry.”

Since 2011, the ranking list has been compiled every two years exclusively for Wirtschaftswoche magazine by the Munich-based consulting agency Biesalski & Company. The ranking itself is based on every company’s brand performance and commercial success.

According to Biesalski & Company, reputation makes a significant contribution to the success of a company and accelerates



BPW reception area at the headquarter in Wiehl, Germany.

its growth. At the same time, the authors conclude that one of the reasons for the success of Germany’s Hidden Champions is that they have adapted early on to meet the requirements of the so-called industry 4.0 concept.

**3,507** million tonnes of goods were transported on Germany’s roads in 2015 – 1.9 percent more than 2014, and more than ever before.

Source: German Federal Statistics Office

## The next generation of trailer telematics

› With Cargofleet Trailer Gateway, idem telematics – a member of the BPW Group – is launching an inexpensive and flexible telematics solution for towed vehicles. The basis of this new trailer telematics is TC Trailer Gateway, an on-board computer that processes data from so-called hubs. Each hub has a specific function and can be flexibly connected to TC Trailer Gateway. In the basic package, functions include geolocation (track & trace), truck/trailer coupling status, and EBS data. Thanks to the additional hubs, which are being developed in close cooperation by the BPW Group companies, the functional scope can be adapted to the needs of vehicle operators as required and regardless of time. The modular design of the system provides hauliers with the greatest possible flexibility.



## Learn something new on the Practice Days

› See BPW professionals in action and try it out yourself: this opportunity will be given to workshop employees during the BPW Practice Days on 8 and 9 June 2016. For the first time, the format will be part of the comprehensive programme of training courses that BPW is once again offering in 2016 to meet the increasing need for information in the transport industry. Following the Practice Days, the participants will be able, amongst other things, to assess the condition of a running gear; they will be familiar with the structure of a steering axle and how it works, and will be in a position to completely overhaul a self-steering axle.

The training programme also includes seminars focused on the topics of special vehicles, tipper/tanks/silos, as well as vehicle construction and distribution. BPW is aiming to use the topic of special vehicles, for example, to support employees with priority areas in the fields of timber transport, low loader trailers, heavy goods, car transporters and swap bodies. In addition to these new courses, BPW continues to offer tried-and-tested seminars on the topics of telematics, fleet management, repair of ECO Disc brakes or the parts trade. Depending on the size of the team, trainers will also travel to the respective headquarters to give individual courses.

Registration can be completed online, and the entire package with dates and content can be found in the Support section at [www.bpw.de/en](http://www.bpw.de/en).



Workshop employees can receive further training in courses given by BPW professionals

### DATES

12 May  
**BPW Seminar: Fleet Management**  
Wiehl, Germany

8–9 June  
**BPW Practice Days**  
Wiehl, Germany

1–3 July  
**Truck Grand Prix**  
Nürburgring, Germany

6 September  
**BPW Technology Seminar for Workshops**  
Berlin, Germany

13–17 September  
**Automechanika**  
Frankfurt am Main, Germany

22–29 September  
**IAA Commercial Vehicles**  
Hanover, Germany

Visit the Support section at [www.bpw.de/en](http://www.bpw.de/en) for an overview of all BPW seminars and to register online.

## New member in the BPW management

› Since 1 February 2016, the management of BPW Bergische Achsen KG has been bolstered by Dr. Markus Kliffken,



an experienced specialist in technological developments. Occupying a newly created position, Kliffken heads the BPW Group’s technological innovation management with the areas of Mechatronics, KE Service and Testing. As a graduate engineer, he previously worked in a variety of management positions in the Bosch Group. There, the focal points of his work included the areas of drive technology, electronics and networking in cars, commercial vehicles and mobile machines.

## Mechanical suspension for 5.5 t axles

› In March, BPW expanded its ECO Cargo VB product programme with a new mechanical suspension for 5.5 t axles. The running gear, with top or bottom mounted suspension, can be flexibly deployed. Assembly costs are minimal thanks to pre-assembled parabolic springs and brake cylinder, while the steel rubber bushing ensures that the equalising bearing is low-maintenance. The suspension is also available with unpainted supports on request, as well as with drum or disc brakes. Along with this new product, BPW is making an attractive system offer: upon purchase of a tandem axle suspension, customers receive a promotional voucher for up to 100 euros for further components from the brands BPW, Ermax, HBN-Teknik, Hestal or idem telematics.



## Working together for greater success

Good and trusting working relationships with your partners enable you to deliver not only high quality but also to continually follow new avenues. As the largest alliance in the German retail sector, Edeka stands for an active partnership between retail and wholesale.

**W**here do the peppers that end up in our supermarket trolleys actually come from? Israel, the south of France, or perhaps Spain? Many are indeed grown in hot countries. But far from every plant of the Solanum genus sold in Germany will have travelled such a long distance: for some years, large quantities of peppers have been cultivated in the region of Lake Constance. To be precise, 3.1 million units per year. This is because the mild climate in the southernmost vegetable-growing region in Germany is enough for high-yield cultivation.

In 2009, when the Edeka Southwest regional company approached Reichenau-Gemüse eG with the idea of growing peppers on the island of Reichenau, five local horticultural businesses decided to join forces and constructed a large greenhouse in the Hegau area by Lake Constance. “Without this coalition, there would be no pepper cultivation here,” says Stefanie Glöckler, junior manager and specialist at the Glöckler horticultural company. “Previously, the vegetable growers on Reichenau were lone operators.”

Almost all of the peppers harvested from March to November in the Hegau growing region on Reichenau are sold to the Edeka Southwest regional company. Under the brand “Unsere Heimat – echt & gut” (Our home – authentic & good), these vegetables catch the customers’ eye as soon as they enter their local store. In woven baskets and with →



At the food markets, regional products are offered under the brand "Unsere Heimat – echt & gut" (Our home – authentic & good).

One of the five Edeka Southwest logistics centres is based in Ellhofen, a community near Heilbronn, Germany.



their own special stands, they are explicitly displayed as a regional product. Wholesalers assist individual stores by providing ideas and materials regarding product presentation. This cooperation is part of a larger whole: "We work very intensively with the merchants, in keeping with the cooperative principle that is behind the Edeka alliance," says Martin Lampe, operations manager at Edeka Southwest in Ellhofen. The merchants contribute their own equity and hold a stake in the cooperative.

### Volume bundling in purchasing

The purchasing alliance was founded as far back as 1888. But it was more than 20 years later, in 1911, that the merchants decided to operate their businesses under the shared Edeka brand. The close association was, first of all, based on financial considerations: the merchants hoped to get better

prices by combining their purchasing volumes. "Of course, volume bundling in purchasing is still one of the central functions of the wholesale business," says Lampe. Accordingly, a large part of the merchandise is ordered through centralised purchasing. The merchants are not obligated, however, to purchase at a specific scale from their regional company. "They are free to operate and organise their product portfolios independently," says Lampe.

The shelves of an average-sized supermarket hold between 20,000 and 25,000 products. Between 18,000 and 20,000 of them are handled for Edeka Southwest at the logistics centre in Ellhofen, while other products are sourced from third-party vendors or in-house. Because the regional merchants view their customers as partners, they also purchase goods from local agricultural enterprises. "Especially here in the Swabian-Franconian wine-growing region, many outlets order their wine from local wineries," says Lampe of the auton-

omy enjoyed by the tradesmen. "We have no intention of centrally controlling this deep-rooted regionalism."

### Producers encouraged to cooperate as well

A number of food producers are also sounding out the possibilities of cooperation, although still rather tentatively. Here, costs can be saved by combining shipments. But how are these savings handled? This question has been taken up by Prof. Dr. Franz Vallée of Münster University of Applied Sciences. "Current forms of cooperation are suffering from the fact that there is still no model for a fair distribution of both savings and the input from partners," says Vallée. At his university department, such a model is under development, covering several stages and combined with checklists. One producer sends only one pallet while another

delivers 30 – how can quantities, in their proportions, be meaningfully broken down for the partners involved? "A prerequisite for this is total transparency and the full confidence of all group members between themselves," says Vallée. Forming an alliance is worth the effort, explains the scientist: if food retailing bundles its shipments, costs are reduced because routes can be optimally planned. Some producers have already recognised this and have teamed up. For example, the three frozen food manufacturers Roncadin, Coppentrath & Wiese and Appetito have had a cooperation of this kind in place since 2004.

Today, the concepts of partnership and cooperation are hot topics in the working groups of the Edeka regional companies. There, merchants, wholesalers and producers are discussing, amongst other things, the items entering the product range, how to solve staff shortages, or how IT can best reflect the processes in wholesale and retail. "IT is always an issue," explains Lampe.

»We work very intensively with the merchants, in keeping with the cooperative principle that is behind the Edeka alliance.«

Martin Lampe, operations manager at Edeka Southwest



"It's often still the case that the electronic connection ends at the supermarket loading ramp. This is going to change in the future."

### Optimising processes

The Bundesverband Materialwirtschaft, Einkauf und Logistik e.V. association (national association for materials management, purchasing and logistics; BME) is also occupied with this topic. It has established a working group on the subject of collaboration between logistics service providers and customers. "To date, suppliers still have an inferior position at the loading ramp. If they are five minutes late, they have to join the end of the queue in incoming goods," criticises BME logistics manager Gunnar Gburek. The BME working group is looking for ways to more efficiently mesh processes in the transport chain so that both hauliers and customers can save costs. Here, →

Edeka Southwest has outfitted 50 of its 200-strong fleet of trucks with telematics from idem telematics.



Gburek views contract drafting as a key instrument: “It is possible to minimise waste through contracts if the logistics service provider sees itself as part of the chain, and if both supplier and customer communicate better with each other.”

Throughout, trust should be the foundation for any cooperation: “I also have to disclose certain data. This entails a basis on which everyone feels secure,” says Prof. Vallée. If producers team up, they can specify a shared dispatching service provided by a third party, for example. “Dispatching doesn’t necessarily have to be at the producer’s,” explains the logistics expert. This also safeguards the parties with regard to the sensitive issue of data protection. However, what may be difficult here is that many producers then no longer need their own dispatchers. Such aspects can only be clarified in the course of joint and open discussions.

### Openly addressing conflicting goals

The many working groups always include members from retail and wholesale, meaning that discussions can sometimes get a little contentious. Ultimately, everyone has their own view of the market, the region and its customers. Nevertheless, as Lampe points out: “Only a measure of friction can bring the right result.” Peppers from the Hegau growing region on Reichenau in Lake Constance are appealing for customers. But at what level should the price be set? What quantities can be sold? The wholesale trade is responsible for the economic performance of the group. “These conflicting goals are the subject of intensive discussions,” says the operations manager, describing how the parties deal with each other.

Alongside the product range and operational management, plans for the future are also being discussed. Here, both sides agree that

the current approach, with its focus on regionality and freshness, is the right one. Nevertheless, there are a number of challenges: “Regional, organic, vegan – we want to improve in these areas,” stresses Lampe. In addition, customers should receive more support during their daily shopping and with food-related issues. With this in mind, wholesalers are offering training for supermarket employees so that they can provide nutritional services as well. They can then assist customers in the store by providing them with information and advice about a balanced diet, exercise and relaxation. More than 1,000 employees have already seized this opportunity at Edeka Southwest.

### Ensuring a range of fresh products

Edeka Southwest has outfitted 50 of its 200-strong fleet of trucks with telematics from idem telematics. The system monitors the temperature in the trucks used for refrigerated transports. Martin Lampe and his colleagues can call up this data online. “Previously, we only had temperature sensors, so we didn’t have permanent access to the necessary information,” says the operations manager. This has changed with the new system: if the temperature in the truck drops to within the critical range, the fleet dispatcher receives an alert on their smartphone. In four years’ time, if all goes to plan, every Edeka Southwest vehicle will be equipped with this innovative technology.

Another telematics application helped to significantly reduce fuel consumption across the truck fleet. This solution assesses the driver’s driving style – how they accelerate, brake or change gears – and awards a score between 0 and 10. A 10 indicates optimal driving

behaviour. “We started four years ago with an average score of 6.5. We’re now at 9.3,” pronounces the operations manager proudly.

The next stage envisaged by Lampe is to link the two telematics systems with the aim of combining all the information in a single system. Here, an important aspect will be the connection of the telematics system to the loading ramp: “If the merchant has adjusted their own system accordingly, they can automatically transfer this data into their merchandise management system,” says Lampe of the planned IT network. Importantly, the data is scanned into the IT system even before shipment to the stores, thus getting directly into the database of the respective Edeka store. This means that both wholesale and the local Edeka outlets can immediately work with the same data pool. For the peppers from Reichenau, this means that in the near future, they can be accepted on the loading

ramp without the need for manual entries made by employees. Nevertheless, manual work is unlikely to disappear completely – at least on the island of Reichenau. There, the vegetable farmers turn their peppers by hand every 14 to 18 days, thus ensuring uniform ripening. After the harvest, each pepper is individually placed in shipping crates. Horticulture graduate Stefanie Glöckler, who is familiar with the modern IT methods in her sector, does not anticipate any fully automated cultivation of vegetables. Ultimately, one important factor is beyond technical control: the weather. “Despite all the technology, we horticulturists are extremely dependent on nature.” (dh)

You will find more information on:  
[www.edeka-suedwest.de](http://www.edeka-suedwest.de)

## Start-up capital from the Crowd

At Original Unpacked (OU) in Berlin, customers arriving at the store come armed with empty jars, bottles and plastic boxes. These containers are destined to be filled with all manner of products, because OU is the first supermarket concept to dispense entirely with disposable packaging.

Here, customers can choose from more than 530 loose products, ranging from flour to nuts and toothpaste in tablet form. This means less waste and lower production costs, but above all a big plus in terms of sustainability.

From the beginning, the project grew out of a community of like-minded people – from a lively exchange of ideas on Facebook all the way to a crowd-funding campaign on the Internet. OU founders Milena Glimbovski and Sara Wolf succeeded in raising more than 100,000 euros of start-up capital from the crowd, that is to say many people who were convinced by the idea and were willing to stump up the

cash to help it become reality. “We believe that the current model of shopping is not future-proof,” explains Glimbovski. In her experience, manufacturers are also beginning to think differently: “Our expectations have been exceeded: many manufacturers have met us halfway and helped us look for solutions how to avoid disposable packaging. Their support is helping us to offer a large selection of everyday necessities and more.”

Similar companies, for example OHNE in Munich, have also raised their start-up capital from project sponsors: if many people make a contribution, no matter how small, they can create great things together.



Photos: Reichenau-Gemüse – Rainer Maria Hohnhaus, Edeka Südwest, Jendrik Schröder

# Perfect teamwork

For companies in the transport and logistics industry, the BPW Group is a strong partner that takes account of their individual situation and uncompromisingly supports them in meeting their needs and addressing their challenges. As an experienced international mobility partner and system partner, the BPW Group follows new avenues with its customers and provides a comprehensive service package from a single source. Three practical examples demonstrate the benefits of such cooperation.



“Our objective is to always be at the cutting edge of technology, and BPW provides excellent support in this endeavour,” says Sergey Baklitskiy, Managing Director of **Sovtrastavto LLC**. The Moscow-based transport company has been active in the logistics sector for around 50 years and today provides transport, customs and warehousing solutions for customers in Europe, Southeast Asia, the Middle East and America. With a view to meeting the demands posed by international goods transport even more effectively, two of its Fliegl RoadRunners have been equipped with a comprehensive system solution from the BPW Group. Amongst other things, this involved equipping the Air-light II running gear with ECO Disc brakes, as well as fitting an axle lift to the first axle of the suspension unit. A further feature is the Ermax aluminium bumper, which is outfitted with LED lights and simultaneously fulfils the function of under-run bar. “When selecting our suppliers, we attach great importance to dependability and trust,” says Baklitskiy. “In BPW, we have found a reliable partner that can implement efficient solutions to satisfy our requirements.”



The truck rental firm **BFS – Business Fleet Services** has maintained a steadfast cooperation with BPW for around 30 years. BFS has customers in Germany, Switzerland and Croatia and, as part of its international mobility partnership with BPW, now also makes use of the new PSP – Partner Service Package maintenance contract: “The maintenance contracts enable us to better calculate the cost of the vehicles we rent out, and they give us the security of knowing that virtually nothing else will be added on top,” explains Managing Director Jan Plieninger. What to him is the most important feature of the Partner Service Package is that the maintenance covers the entire trailer, regardless of the manufacturer, from the axles and the electrical system to the body structure. The full service applies when the trailer includes a BPW running gear. “That’s why we’re going to conclude maintenance contracts, in stages, for all of our vehicles,” says Plieninger.



Thanks to support provided by BPW, Spanish vehicle manufacturer **Lucasfrio** has developed a new business area: “For around two years, the company pursued the idea of manufacturing refrigerated trailers all on its own,” says Susanna Esser, Managing Director of BPW’s Spanish subsidiary Trapaco S.L. “The system partnership with BPW has significantly facilitated the vehicle manufacturer’s move into self-production.” The family-run company has been on the market since 1890 and for a long time exclusively specialised in refrigerated boxes, as body structures, while purchasing compatible running gears from other Spanish manufacturers. Things are different today: the BPW Group enables Lucasfrio to procure components such as the ECO Disc brake, the ECO Air Compact air suspension, as well as supports, in the volumes required for production. Accordingly, Lucasfrio doesn’t have to operate its own warehouse – a significant financial saving. “Today, with the components from BPW, Lucasfrio can build 300 to 400 refrigerated trailers every year,” says Esser.

# Taking 1,000 tonnes over seven bridges

While industry is producing ever heavier engines, turbines and transformers, infrastructure is unable to keep pace. The transport of such goods calls for intelligent logistics solutions. The Kahl Group counts on heavy-duty modules that use axle suspension units from BPW.

Onlookers bustle at the roadside, photographers compete for the best places: there's always a great deal of interest when the Kahl Group sends a heavy goods transport on its way from their Moers site in North Rhine-Westphalia. Recently, the new G<sup>2</sup>/K600 side girder deck has been the subject of particular attention. This innovation makes it possible to cross bridges and overcome obstacles that are not at all designed for heavy loads, as for example in late November 2015 when two 475-tonne transformers successively set out to travel from Mönchengladbach to the Emsland region.

Soon after departing, on a ten-kilometre section between Korschbroich and Kaarst, the transport had – quite literally – to ‘bridge’ a total of seven bridges that are not designed for loads of this kind. This was done by deploying the new transport system: the running gears were connected in such a way that, due to hydraulic axle load compensation, the possible record-breaking gross weight of 909 tonnes was evenly distributed across all axles of the 110-metre-long trailer. The two running gears, which carried their loads on

side members, were each equipped with 22 Goldhofer centre lines. A total of 88 BPW axle suspension units ensured stability, while 352 wheels kept everything moving. “Due to the exceptionally favourable ratio of unladen weight and payload, we can reduce the axle load to twelve tonnes and even less for extremely heavy freight,” explains Group Managing Director Rainer Kahl.

## Six hours for just ten kilometres

Two four-axle tractor units, each with 650 hp, kept this remarkable heavy transport moving and helped guide the two running gears through numerous bottlenecks with millimetre precision. The procession took six hours to cover the ten kilometres. Beforehand, Kahl employees had accurately measured the section and computer-simulated the transport progress along the route. This showed, for instance, which traffic lights would require dismantling. Even

A possible record-breaking total weight of 909 tonnes was evenly distributed across all axles of the 110-metre-long trailer.

relatively small heavy transports with a weight of only 20 tonnes demand absolute precision work – on narrow roads, for example. “Either we dismantle the gate or we lift the load over,” says Marcus Pieper, Managing Director of Pieper Schwertransporte GmbH. Since 2009, the company has been a member of the Kahl Group, which currently has a workforce of around 150.

## Service before and after the transport

Today, the Moers-based Group includes four legally independent logistics companies; they specialise in various applications and handle demanding logistics and heavy cargo projects together. “Lone wolves,” says Rainer Kahl, who runs the Group with his brother Andreas Kahl and the other partners, “are not having an easy time of it today.”

One of the company's strengths is its focus on special assignments. Another is its ambition to increasingly provide customers with solutions and services that go beyond the actual transport of goods. If required, the specialists can move heavy cargo to the loading points in the factory, and place it on the foundations at the final destination. “As far as possible, we fulfil every wish for our customers. If necessary, we charter an Antonov, one of the largest cargo aircraft in the world,” says Marcus Pieper. Moreover, since 2010, the companies have jointly operated the Heavylift Terminal in the port of Duisburg, whose rail, road and water links allow various transport modes to be used.

## Heralding a new era

The Kahl transport system is setting new standards. The side girder deck, which can accommodate machines, transformers and generators, amongst others, is a unique feature – also internationally. Moving a total weight of 1,000 tonnes and more over roads and bridges is anything but commonplace, but in ever greater demand from customers. Due to high production depth and precision, manufacturers increasingly prefer to fully assemble their products in their own factory and only to install them at the customer's. For example gas turbines: during manufacturing, the blades can be precisely adjusted down to a thousandth of a millimetre, before the finished product is tested in live operation. “They cannot be disassembled and then reassembled at the →

customer's," says Rainer Kahl. The side girder deck is therefore in great demand. Immediately after its deployment in the Rhineland, the deck was off to the next assignment in Turkey, where it was again transporting gas turbines.

### At home on the road

The Kahl company is at home on the road. In 1953, at the age of 23 and 17, brothers Hans and Helmut Kahl set up a branch office of Konrad Kahl & Söhne in Duisburg. Their first vehicles were converted GMC trucks purchased from the US army. By the 1960s, they were already carrying out transports using low loader trailers. Just ten years later, their fleet included over 30 of their own self-propelled trailers for long objects. Today, the Group operates nearly 60 tractor units as well as some 200 trailers and semi-trailers. "That's equivalent to around 4,000 wheels moving for us," says Rainer Kahl. Because extreme conditions prevail in the field of transporting heavy goods, Kahl counts on quality – and thus on BPW. The strongest axles being put to work for the company can

take up to 45 tonnes of weight on the centre line. The decision as to which axle suspension units to use plays a major role in the development of the technical concept for a new vehicle. "It is important to us that we mainly incorporate BPW solutions. BPW stands for quality and reliability that we can depend on at all times," says Marcus Pieper.

Kahl frequently holds roundtable talks with vehicle manufacturers and experts from the BPW Group to find optimal solutions for specific requirements. Together, they plan the vehicle and match options and components. This close cooperation also extends to practical operations: BPW regularly equips Kahl vehicles with test axles. These field trials enable BPW to gain important insights into the behaviour of the axles. This is because deployment by the heavy goods experts is completely different from deployment by long-distance hauliers. "There's less mileage with us, but a greater weight load," says Kahl. As goods are getting increasingly heavier, nearly every transport now poses its own challenge – for people and technology alike. (pb)

 You will find more information on: [www.kahl-schwerlast.de/en](http://www.kahl-schwerlast.de/en)



88 BPW axle suspension units provided the necessary stability during the transport.

## A specialist in heavy tasks

When the going gets particularly tough, BPW gets transport moving: for heavy goods haulage, the company offers a comprehensive range of products and services for every application. Close cooperation with vehicle manufacturers and hauliers guarantees the highest quality.

"We have a very broad line-up, including swivel axles, single wheel suspensions, as well as positive steering and self-steering axles for low loader trailers and special vehicles. We can offer the right running gear for almost every application," says Hans Werner Kopplow, head of the Special Vehicle Systems business unit at BPW. The product range spans from the usual road applications, with typical axle loads between four and twelve tonnes, to extremely heavy-duty off-road and mining deployments which can involve axle loads of up to 60 tonnes.

For the engineers, the meticulous work invested in further optimising the running gears, axles and braking systems is never finished. The majority of swivel axles are currently undergoing further technical development. The focus is on achieving a significant weight reduction and making them more maintenance-friendly. The new generation of swivel axles will be on show for the first time at bauma 2016.



»The majority of swivel axles are currently undergoing further development.«

Hans Werner Kopplow, head of the Special Vehicle Systems business unit at BPW

### Optimally configured

Thanks to 3D CAD analyses, simulations and testing, the products are designed to be optimally attuned to the needs of everyday business. This enables the best possible use of space, which is extremely limited particularly in special vehicles. To be able to respond quickly and individually to all possible requirements, BPW has developed a modular system with brakes, wheel bear-

ings and attachment fittings that are also used in standard axles. This means that many components can be combined to make individual custom designs at relatively low cost.

For all innovations, high product quality is ensured by laboratory and practical testing, with BPW placing an emphasis on close cooperation with its customers. While characteristics such as strength and durability can be mapped out very well in the laboratory, field trials in the customers' en-

vironments provide, amongst other things, indications as to the effects of dirt, salt, water and other ambient conditions. Moreover, in practical deployment by the customers, data is gathered that provides information on the forces acting on axles and running gear. "These forces are then simulated on our test benches. Using hydropulse cylinders, in a few days or weeks we can apply the loads experienced in everyday operation over the entire life of the vehicle," says Hans Werner Kopplow.

Photos: Kahl Unternehmensgruppe, Joachim Stretz

# New paths with new concepts

As the main north-south connection in Germany, the A7 motorway in the greater Hamburg area is completely overloaded. In order to improve the tight situation, it is planned to add several lanes by 2018. In the course of the expansion, the project corporation Via Solutions Nord (VSN) will be working to keep traffic flows around the construction site as disturbance-free as possible.

**T**oday, the massive construction site on the A7 motorway in Hamburg and Schleswig-Holstein is a part of everyday life for road users. Many have come to terms with the undesired side effects of the upgrading, which include congestion and noise. In the meantime, the expansion to six or eight lanes in the greater Hamburg area is progressing without major difficulties. The project corporation Via Solutions Nord (VSN), composed of the company Hochtief PPP Solutions, the Dutch Infrastructure Fonds and Kemna, is in charge of implementation. This project corporation is not only responsible for the upgrading of the motorway, but also ensures that traffic continues to flow as smoothly as possible, despite constraints.

## More than 150,000 vehicles every day

Of course, there are frequent traffic jams on this busy stretch of motorway. However, the traffic problems are not exclusively due to the many construction sites along the route. Rather, the four-lane motorway in Schleswig-Holstein and the six-lane stretch in the Hamburg area have been, and continue to be, seriously overloaded. If, at peak times, more than 150,000 vehicles daily cause an overload of up to 60 percent, then compensation efforts during construction times have an even smaller chance of being effective, thinks Gerhard Fuchs, traffic coordinator for the A7 in the German federal states of Hamburg and Schleswig-Holstein. In Fuchs' opinion, the fact that traffic nevertheless keeps moving is due to the long-term traffic management and information concept developed at the office for transport, and to the "facilitators" at VSN. "Again and again, this team manages to identify and openly communicate problems in good time," says Fuchs. This is confirmed

by Christian Merl, head of communications at Via Solutions Nord: "Open dialogue between participating companies and stakeholders is essential. We address difficulties directly and work together to find efficient and beneficial solutions."

## Collaborative partnership

The construction consortium (Arge), which is responsible for the construction of the A7, has arisen as a highly capable group within the VSN. It comprises the companies Hochtief Infrastructure, Kemna Bau as well as the subsidiary Tesch Road. "Everyone is working together on a joint basis," says Merl. According to the participating companies, key positions in the Arge are not allotted proportionally to the number of partners, but according to professional criteria as well as management and project experience.

While one partner is occupied with the mounting of armatures in the noise protection tunnel known as the Schnelsen Deckel (Schnelsen tunnel cover), others are demolishing ailing bridges or removing old layers of concrete. Further on in another section, the new layer is already being paved. "A great deal of coordination is needed. Every

morning, there are workflows to align, materials and equipment to be shipped to the right places, companies to be briefed," says Merl. Experienced and reliable staff are vital if all these steps are to be carried out precisely.

All of the eight stages have their own construction managers that coordinate the work on site. They report to a number of senior site managers, who are respectively in charge of track construction, new structures, redevelopments of existing buildings, and the construction of the Schnelsen tunnel cover. In turn, these report to two key people, one of whom is responsible for track construction and the other for all civil engineering works. Both report directly to the technical and commercial project management of the Arge, which is in continuous communication with the official contractor VSN. After tendering, the project corporation received a contract as part of a public-private partnership (PPP). Alongside construction, the project corporation also secures interim financing. Furthermore, in this model, the VSN is responsible for the operation and maintenance of the A7 until 2044. The project corporation Via Solutions Nord Service was specifically founded to fulfil this function. The subsidiary operates the section of motorway with its own staff and fleet and is also in charge of tasks relating to traditional motorway maintenance.

## EXPANSION PROJECT – THE FIGURES

- 65 km total length
- 72 bridge structures
- 100,000 m<sup>2</sup> of noise barriers
- 70 traffic sign gantries and beams
- 10 service stations
- 1 motorway maintenance depot
- 30-year contract duration
- 1,800 project members

## Motorway must be available

The contracting entity in this PPP model is the project management company DEGES. The mammoth A7 project is being implemented on behalf of the German Federal Government and the states of Hamburg and Schleswig-Holstein, and tasks include contract awarding, inspection and approval of construction projects, availability checking and the safeguarding of accounting. →



In Schleswig-Holstein, the A7 will be upgraded from four to six lanes. VIA Solutions Nord began work on the first sections from north to south in 2014. These are set to be completed in late 2016.

“The partner consortium Via Solutions Nord was awarded the contract at the end of the roughly two-year award procedure. Alongside fundamental aspects such as performance and reliability, the central criteria were the price and the conceptual implementation of this complex construction project,” explains Bernd Rothe, Divisional Director of DEGES for Hamburg, Schleswig-Holstein and Bremen. The agreed availability model envisages a largely undisturbed movement of traffic. Any necessary restrictions and disruptions are defined by duration, number and length, with VSN receiving reduced compensation if the set limits are exceeded. “For this reason, it is in our own economic interest to ensure a maximum availability of the motorway. All project managers are working according to the highest construction standards so as not to compromise the economic efficiency of the project as a consequence of repairs,” emphasises Merl. Ultimately, this benefits all parties. (jh) ○

## Success through participation

The traffic coordinator for the A7 in the states of Hamburg and Schleswig-Holstein, Gerhard Fuchs, has accompanied the work on Germany's largest building site since the very beginning.

### What is unique about this construction site?

The A7 is the main traffic axis for the north of Germany. All long-distance freight transport to and from Scandinavia runs along this route, as well as the globally important port city of Hamburg and all related transport movements and city traffic, which makes the A7 take on the character of an urban motorway. The result is that, at peak times, the motorway has to cope with an excess load of nearly 60 percent, making the expansion an absolute necessity.



### Projects of this kind are often accompanied by protests, but in this case it has remained surprisingly calm. How did you manage to create a positive image?

From the outset, it was important for us to provide comprehensive information for the general public and all groups affected by the construction site, such as commuters, resident commercial enterprises and transport companies. To this end, we ran a series of information events even before the start of the works. Thanks to this active communication strategy, we were able to gain supporters, promote understanding, diminish reservations, and even pick up and implement a number of suggestions from road users and residents. A closely interlinked transport and communication concept was critical to this success. For example, we have built longer entrance and exit ramps than legally required. In addition, at a width of 3.25 metres, the right lane is wider than required, as is the centre lane around Hamburg. Even the left lane is 2.85 metres wide – more than required. This approach helps us to avoid numerous minor accidents. With our concept of multiple construction site sections and the so-called recovery phases in between, we have managed to limit the prolongation of total driving time to just ten minutes in low or medium heavy traffic.

### The 65 kilometre long building site is a public-private partnership project. Was that the right decision?

In this case, definitely. The project corporation Via Solutions Nord is not only the contractor for this 65-kilometre stretch of motorway, it is ultimately also responsible for its maintenance during the subsequent 26 years. The contract is based on a bonus-malus regulation. Via Solution Nord receives a bonus in case of early completion and full availability for users. However, deductions will be made from the regular payments should extensions to the construction period be necessary or defects occur. ○

Photos: VSN, BWVI

## Spare parts for every need



The BPW Group accompanies customers throughout the entire lifetime of a vehicle, covering every need as a service provider. This includes the reliable provision of wear and spare parts.

Saturday morning at a construction site in the Ruhr area. A tipper is hard at work on rough terrain. Suddenly, the brake cylinder on the disc brake breaks off – the compressed air line is disconnected and air streams out. The entire brake system is no longer functional, putting the entire vehicle out of operation. What is needed here is prompt assistance: the driver reaches for his smartphone, pulls up the BPW website and quickly finds a BPW service partner nearby, who has a new spring brake cylinder in

stock. Not long after, the workshop service team is on its way.

Cases such as this are part of everyday life in the transport business, and companies are strongly dependent on the immediate availability of spare parts when it matters. “We see ourselves as an international mobility partner that supports customers beyond the vehicle purchase,” says Dirk Hoffmeister, Head of Sales Aftermarket at BPW, from which spare parts distributors can procure original BPW parts. “This means that we not only support transport

companies with their loading and transport processes, but also accompany them in all their maintenance and repair work, regardless of the age of their vehicles.”

### Original and alternative parts

Dirk Hoffmeister's customers include distributors of spare parts for commercial vehicles, such as the Danish company Besko GmbH. As a spare parts trading company, the →



»We see ourselves as an international mobility partner that supports customers beyond the vehicle purchase.«

Dirk Hoffmeister, Head of Sales Aftermarket at BPW



»Our customers benefit from the fact that we can offer excellent alternatives within the Group.«

Thorsten Winterberg, CEO of Besko GmbH



BPW subsidiary has been active in the market for almost 30 years. Alongside original BPW parts, it also stocks products from other rele-

vant brands for trucks and trailers. “Our customers benefit from the fact that we can offer excellent alternatives within the Group,” says Thorsten Winterberg, CEO of Besko GmbH. Dirk Hoffmeister adds: “The BPW Group provides vehicle operators with appropriate solutions over the entire useful life of their vehicles – at any time, made to measure, and in line with the age of the fleet.”

The average age of commercial vehicles has been increasing for years, not least thanks to high-quality spare parts. Hoffmeister explains: “Our customers include companies with very different structures. At the same time, the spare parts market is extremely price-driven. In the case of a rather young fleet, hauliers will generally use original parts because that preserves the warranty, and the value of the individual vehicle remains stable.” Owners of older vehicles, on the other hand, tend to be more price-sensitive, according to Thorsten Winterberg: “They are more likely to

opt for the cheaper brand-neutral spare part components delivered by BPW and its subsidiary PE Automotive in high quality as well.”

### Building its own networks

With strong trading partners such as Besko, the BPW Group is positioning itself to cover all of Europe. As a service provider, it is already present in over 20 markets: the networks in Finland, Sweden, Denmark, Great Britain, Austria and the Baltic states, for example, are almost fully developed, with other markets to follow. “In some countries, we also work with external trading partners,” says Hoffmeister. “Customers have to be able to rely on us, no matter where they are. And they should know that they will always get more than just a spare part from BPW: “Product-related services are at least as important. As an after-

Photos: BPW

market service provider, we aim to be close to our customers. Apart from rapidly providing the required parts, we must be competent and provide technical advice. Because we know the products best, we can offer concrete assistance with repairs.” Thorsten Winterberg adds: “The best spare part is useless to me if it’s not there where I need it to be, and quickly, too. Thanks to our streamlined structure, we can ensure constant availability, and can deliver a number of products two, three or even four times a day.” This is primarily possible on account of the BPW Group’s close cooperation with the workshops.

As Thorsten Winterberg points out: “Customers are only satisfied when you offer the right service and the best quality.” Dirk Hoffmeister, too, sees the spare parts business as a ‘people business’: “It is a business between people – and I say this as an engineer,” he explains. “It’s a daily challenge. We have to demonstrate again and

again that we are aware of our customers’ requirements. This is what joint success hinges on, and it’s also precisely what keeps me excited about this industry.”

### Major changes underway

The aftermarket has changed significantly over the past decade. Before, the offer was rather small, and manufacturers often had difficulties delivering: it was quite common to wait a long time for a spare part. For transport companies, this could mean serious financial losses. The focus was clearly on the original equipment, and the aftermarket only slowly gained in importance. Moreover, little attention was paid to alternative brands for spare parts. Things are different today. BPW has recognised this development and come up with an impressive response, supported

by strong partners such as PE Automotive, a leading provider in the independent parts market. In the autumn of 2015, BPW acquired a majority stake in the company and is now looking to use its own manufacturer brand to expand the range for older vehicles, building on PE’s extensive range of spare and wear parts from all common truck, trailer and bus manufacturers. “We can achieve more together because we have combined our expertise in the commercial vehicle aftermarket and are realising our growth objectives more quickly,” says Dirk Hoffmeister.

Back in the Ruhr area, the workshop service team has arrived at the construction site. The replacement only takes about 45 minutes, including set-up time, after which the tipper is fighting fit once again, and work can continue. (jg)

You will find more information on: [www.bpw.de/en](http://www.bpw.de/en)



# Scoring points with innovations

If composites are to replace metal-based materials, either with or without fibre reinforcement, expert knowledge is called for. ADETE accompanies this process from the first idea all the way to implementation. Managing Director Dr. Markus Steffens lays out the advantages of this procedure.

## ADETE has been a member of the BPW Group since the beginning of 2015. What competences did the company bring along?

We belong to the development specialists in the Group. Our customers want to clarify whether it is possible and advantageous to replace components or entire assemblies made of metal with equivalents made of composites, or fibre-reinforced composites. To this end, we conduct feasibility studies, develop the new components on the computer, in virtual form, and then run simulations to test whether they are practicable. The major advantage of simulation is that, because you can examine variants and sensitivities before implementation, you are able to recognise the boundaries. We also weigh up which components are economically viable and which are not. This approach yielded, for example, the air-sprung ECO Vision running gear, which won the BPW Group the 2016 European Transport Prize for Sustainability.

## What's so special about ECO Vision?

With the ECO Vision air-sprung running gear, we have successfully manufactured an entire axle beam, including the swinging arms, out of glass fibre-reinforced composite, or FRC for short. This reduces the weight of the axle by up to 80 kilograms. Moreover, FRC is particularly resistant to corrosion and features high damping. This has a positive effect on lifespan during vehicle operation, as well as on road stress.

## So, it's not only the trailer manufacturer that benefits, but also the customer?

Exactly. ECO Vision is a good example of how the BPW Group, as an international mobility partner and system partner of the transport industry, works to support vehicle operators and manufacturers with dependable solutions for transport and loading processes. Above all, ECO Vision is lighter, and less weight means more payload. This will please both hauliers and forwarders.

## ADETE

The company was founded in 1999 as a university spin-off from the Institute for Composite Materials at the University of Kaiserslautern, a worldwide leading application-oriented research institute in the area of fibre-reinforced composites. The company founder is Dr. Markus Steffens, who is supported by ten engineers. ADETE – Advanced Engineering & Technologies GmbH has been part of the BPW Group since January 2015. The companies had a traditional business relationship since as far back as 2006. ADETE's specialist expertise is also sought after by companies operating in the aerospace sector, as well as in machine, plant and apparatus construction. The customer base further includes the areas of marine and ocean engineering, hydraulic engineering, renewable energies, and medical technology.

Photos: Thomas Hieronymi, ADETE

## So, there's no way around composites, either with or without fibre reinforcement, in trailer manufacturing?

No, it is foreseeable that composite products will play an increasingly important role. This development can't be stopped – something that BPW recognised a long time ago. We are currently analysing a range of components to see what can be improved through the use of composites. In addition to running gear components, we are currently looking into the design of doors and frame elements.

## It's not only BPW that benefits from your know-how, is it?

That's right, because we also have customers from other sectors than the commercial vehicle industry. For example, we develop innovative composite solutions for objects ranging from an implant used in brain surgery to a protective cover for a submarine antenna. Traditionally, however, our customers come from the fields of mechanical engineering and vehicle construction.

## Does ADETE also produce its own parts?

No, and quite purposely so. We focus exclusively on engineering. In contrast to material producers and component manufacturers, for example, who are often active in consulting as well, we have no machinery that we should use to capacity and are not partial to any special manufacturing technology. If required, we can also act as a general contractor, providing production partners and controlling the entire process – from the first idea to series production.



## And who are your partners?

We have a broad skills network and thus a wide range of different partners. For example, ADETE is a member of the Rheinland-Pfalz Composites Network. In this network, each discipline is represented only once; for instance, there is one injection moulder, not two. Besides, we are a member of Carbon Composites e.V., a network that covers the entire value chain for high-performance composites. And with the aim of remaining at the very front in the commercial vehicle sector, ADETE is also a partner of the Commercial Vehicle Cluster Southwest.

## What does the future hold?

Together with the BPW Group, we want to push the use of lightweight plastics in commercial vehicles. After all, we can contribute ideas from projects undertaken with customers from very different sectors. One example: we first encountered the type of plastic that is set to find use in future generations of disc brakes in entirely unrelated applications. Conversely, we can also take along experience gained in BPW projects and put it to use in other industrial areas. Our submarine customer, for example, benefits from a manufacturing process that is basically similar to the one used for ECO Vision. The great thing about our membership in the BPW Group is that we're not in anybody's way, and all sides can benefit. (abob)

 You will find more information on: [www.adete.com](http://www.adete.com)

# The benefits of communication

From traditional hauliers to globally active logistics companies – the customers of TIP Trailer Services all come with a wide variety of requirements. To help them master their specific challenges, TIP counts on digitisation and communication.



Oliver Dietrich spoke at the Wiehl Forum 2015, a BPW customer event, on how digitisation can help fulfil customer requirements.

As a specialist in renting out semi-trailers, tankers and other commercial vehicles, TIP Trailer Services offers its customers a broad portfolio, ranging from fleet management to maintenance and repair services. “The more digital that our business becomes, the more manual it gets at the same time,” says Oliver Dietrich, Commercial Leader for Germany and Austria. “We must always try to understand our customers and find out, in a direct dialogue, what they really need. This is because requirements are extremely diverse.” TIP sees itself as a partner for its customers: “Today, to be able to sell a product or service, we have to possess detailed knowledge, and so when we go to customers, we often

take a technician and an IT specialist along. That’s how you get into project management in no time.”

## Individually tailored technology

The TIP fleet in Germany comprises around 12,500 vehicles, more than 3,000 of which are outfitted with telematics. The company also provides support in managing its customers’ own telematics systems. TIP is currently working on a platform that will be able to handle this variance even better. “The issue of ongoing development affects us every day,” explains Oliver Dietrich. “We notice in discussions with our customers

that there’s a tremendous amount of uncertainty: ‘Where should I be next year, and the year after that?’ For us as a company in the services sector, this means that the value added has to come from the system – from our knowledge and our processes.”

Digitisation and telematics come with numerous benefits in invoice process automation, for example, as well as simpler documentation. At the same time, the technology should always be individually tailored, because not every customer has a need for everything, and also in view of costs, you should define exactly what is actually needed, says the sales manager: “I think this is going to be the major challenge in the next few years for all of the companies on the market. It’s not just about producing big data, but also about finding out what you can really accomplish with big data.” From the parcel sector, for example, customers are familiar with the complete documentation of transports all the way to the precise time of delivery. “Soon, customers in the commercial vehicle sector will no doubt expect such transparency as well, but if a company operates a fleet of several thousand vehicles, it also means that you have to coordinate, prioritise and properly integrate all of the resulting information in the operational procedures.”

## A better understanding of the fleet

Another important issue for TIP is preventive maintenance: “We work very hard to gain an ever better understanding of the



## TIP TRAILER SERVICES

The company, which has its German headquarters in Hamburg, is active throughout Europe and provides customers with services covering every aspect of vehicle fleet management. Independent of manufacturers or banks, the rental and leasing offers span 16 European countries and can be complemented by maintenance and repair services, damage repair, fleet management or telematics solutions.

Photos: BPW, TIP Trailer Services

fleet, so as to meet unplanned downtimes as effectively as possible,” says Dietrich. “This presents huge challenges, amongst others with respect to interfaces and the management of goods.” To guarantee this service, the employees at TIP are in some cases involved in the customers’ own scheduling. This particularly applies to time-sensitive planning: “In the case of documents for dangerous goods, for example, we don’t talk about a time frame of a month or a week, but about a very specific date by which it has to be done. Everyday business, however, continues in parallel.”

The so-called Customer Service Delivery team at TIP offers particularly comprehensive support for customers. “One of our clients is in the business of transporting natural gas, and we have three employees handling everything on this client’s behalf. After all, these transports have to be completely reliable, because among the end customers are hospitals where you simply can’t say, ‘Sorry, no delivery today.’” Accordingly, the employees at TIP bear a high responsibility.

Because the company knows its customers so well, it can also provide support in ongoing efforts to boost efficiency. “For example, when we look at data from the electronic braking system and notice that from 100 units, only a certain number are regularly on the road, then we can advise the customer accordingly and put together a tailor-made flexible offer that combines long and short-term rental agreements,” explains Oliver Dietrich. “Ultimately, we want to build up a lasting relationship with our customers, and preferably grow with them, too.” (jg)

# Pushing the limits every day

In South Africa, trailers are being put to work in the toughest conditions. Bernd Rhein, who is responsible for Application Engineering at the Vehicle Systems Business Unit at BPW, was on site to find out how well the materials can withstand the strain.

A mine in Loeriesfontein in the Northern Cape Province in South Africa: on a gravel road, a traction unit from Unitrans, one of the most important vehicle operators in South Africa, is working its way out of the terrain. Coupled one after the other behind the truck are four trailers loaded with more than 100 tonnes of gypsum raw materials from the mine. Amidst rising clouds of dust, the tyres fight stubbornly through earth and scree, sending stones and rocks flying. The behemoth has another 40 kilometres to go – through a semi-arid area marked by the same challenging road conditions – before it will finally reach a railway station where the gypsum material is loaded onto trains for onward transport.

“The vehicles are pushed to their limits every day here,” says Bernd Rhein. How do the axles, suspension elements, brakes, bearings and wheels withstand these high loads in off-road use? To get a picture of how things are on site, and to learn from the experiences of businesses in South Africa, Rhein visited a number of customers of BPW subsidiary BPW Axles.

## Extreme conditions

BPW Axles is headquartered in Johannesburg. There, Bernd Rhein met with Technical Sales Manager Günther Heyman before they set off on a cross-country journey together. On the way, they spoke with vehicle manufacturers and end customers, with hauliers and logistics service providers. “It was very instructive to see how our solutions are being applied there in practice and how they prove themselves even in extreme conditions,” says Rhein. “This is because the loads experienced by the vehicles in off-road use are higher in South Africa than was originally foreseen. The vehicles must therefore undergo regular examination for wear and possible damage.” It is precisely this aspect that fascinates Rhein and that has brought him on this journey: “When we look at such cases, we can deduce the stresses experienced by the vehicles in similar deployments, and then incorporate this to an even greater extent in the ongoing product development.” →



Axles from BPW have to withstand particularly heavy loads on the roads of South Africa.

The vehicles in Loeriesfontein perform truly exceptional feats: the unconventional four-trailer configuration alone places huge forces on the materials. The vehicles are loaded with many tonnes of gypsum and at the same time have to cope with uneven terrain. “They drive almost exclusively on dirt roads,” says Rhein. “The weather conditions are likewise tough: it’s hot, and it rains very rarely. But when it rains, it simply pours and pours. From dry gravel to slippery mud, it is up to the vehicle operators themselves to ensure that routes remain passable, for which they use their own on-site construction machines.

Unitrans has its own workshop at the mine. “Also because they know that repairs can be carried out quickly by their own company, the employees really put the vehicles to the test,” says Bernd Rhein. “At the same time, they know their trucks inside out, and we can benefit from this knowledge.”

### Technology as the key to success

On his journey through South Africa, Bernd Rhein learned a great deal about how the BPW Group’s vehicle systems behave in such extreme conditions: “The customers are very open and told me many important details. Moreover, the fleet operators that I met are extremely pragmatic, thorough and solution-oriented. And they have a sure grasp of vehicle technology.”

Technology is generally viewed by the companies as the key to success and as a means of differentiating themselves from competitors. “That’s why they’re always interested in ongoing developments,



of course,” says Rhein. He experienced South Africa as a highly developed country where transport operators attach great importance to cost-effectiveness and sustainability.

As a general rule, companies work with more robust vehicle models – not only because of the climatic conditions and the frequently poor roads, but also because these vehicles have a higher centre of gravity. And because it is common to hitch up several semi-trailers one after the other, the use of side tipper trucks is also typical. The so-called interlink vehicle combination usually consists of a three-axle truck, a ‘leader’ semi-trailer with two axles and a ‘follower’ semi-trailer, also with two axles. “For the vehicles, however, this means a greater strain because there are additional lateral forces acting on the running gears. We don’t encounter this in Europe,” says Rhein.

These kinds of challenges develop from a country’s specific industry. “The side tipper trucks are no fad of the vehicle manufacturer but a market peculiarity,” says Rhein. “I knew before my visit to South Africa that side tipper trucks are popular over there, but when you see for yourself that at least half of all commercial vehicles in that country are of this type, it appears in an entirely new light.” From the perspective of BPW in Germany, these vehicles are special designs, but the fact that they are the standard in a local market will be incorporated into ongoing product development. Bernd Rhein guarantees: “In the context of our modular system, we can specifically provide the appropriate components for every requirement.” (jg)



You will find more information on:  
[www.bpw.de/en](http://www.bpw.de/en)

## Application Engineering

If customers require special technical assistance, they can turn to Bernd Rhein, Karl-Rainer Lang and Roland Berghaus. Together, these three staff members in the Design & Development department form BPW’s Application Engineering team.

### As a team, what do you offer your customers?

**Karl-Rainer Lang:** Together with our sales colleagues, we advise vehicle manufacturers in all technical matters relating to our products – with regard to both end application and special solutions in terms of vehicle technology. There are colleagues with similar tasks in the BPW Group subsidiaries: we are networked and engaged in an ongoing exchange.

**Bernd Rhein:** The BPW Group offers a wide range of products, including numerous standardised designs as well as highly specialised designs for unconventional requirements. We can propose the optimal version of a product from our overall range to a customer, or we can work together to develop an individual solution. We also pick up a great deal of input for product de-

velopment through our discussions with vehicle manufacturers and vehicle operators.

### What personal background do you bring to your work?

**Roland Berghaus:** As graduate engineers, we are qualified in vehicle technology and mechanical engineering, and all three of us come from the fields of design, development and testing. We’re also known to get to work on vehicles ourselves during customer visits. Moreover, each of us has more than 20 years of experience in the trailer sector, which always comes in handy when we advise customers.

**Rhein:** Application Engineering is a complex undertaking. We have to have a very good knowledge not only of our products, but also of international contexts. Because we

are active worldwide – in Europe, of course, as well as in Africa, Japan, India and China, for example – there’s always the challenge of cultural particularities. Throughout, the diversity of our customers is as fascinating as their various requirements.

**Lang:** This also applies to the different sizes of our customer companies. There is, for example, the manufacturer that builds 30 vehicles a year with ten employees that sometimes requires highly specific solutions. And then there’s the mass production plant that manufactures 100 vehicles every day, where production-ready assembly is usually more important.

### Don’t customers already have a good grasp of BPW Group products?

**Rhein:** Our customers are highly professional and know exactly how to deploy our products. But there are limits, above all with new developments or modifications. In addition, the BPW product range, which includes telematics, body structure and lighting systems, composite solutions as well as services, extends far beyond running gears, meaning there’s a greater need for advice.

**Berghaus:** Yes, the customers usually come with strong expertise. Nevertheless, the running gear in particular is an advice-intensive product. The range is so extensive that not all of the versions are featured in the catalogue.

**Lang:** When our customers order a particular version, we can maybe see that there’s an alternative with less variance. If we intervene in this way, it’s also a welcome contribution towards standardisation for the customers.



The Application Engineering team is made up of Bernd Rhein, Roland Berghaus and Karl-Rainer Lang (from left to right).

# Hand in Hand



The BPW Group can provide particularly strong support for the agricultural market in Belgium, Luxembourg and the Netherlands thanks to a local sales subsidiary. During a meeting in the Belgian town of Herstal, Guido Nussbaum, Managing Director of BPW BENELUX, and Peter Lindner, Head of Sales Agriculture at BPW in Germany, spoke about the successful cooperation.

Photos: Sabine Schmidt

**Guido Nussbaum:** Peter, good to see you!  
**Peter Lindner:** Good morning, Guido! Our departments have been working together for almost ten years now – and very successfully, too. Together, we have achieved a great deal that we in no way could have managed alone. Also personally, I always look forward to our meetings. Much has been happening on the market in that time, and we have mastered a number of challenges.

**Nussbaum:** Yes, I totally agree. About a decade ago, manufacturers of agricultural vehicles recognised that they can only achieve sustained success in Europe by concentrating on niche products. Today, too, the market is steadily developing, and so it is important for all of us that we provide consistent support for this specialisation. In the Benelux markets, we see our task as recognising and acting on this demand, discussing it with vehicle manufacturers and passing it on to our development department. This much we have in common.

**Lindner:** And that's precisely what our customers appreciate. As a BPW sales subsidiary, you can provide a valuable service that, alongside development projects, also includes collaboration with application engineering. In particular in the Benelux countries, you have the relevant experience as you've known the market for many years.

**Nussbaum:** The set-ups of our customers vary a great deal. There are large companies with distinctive structures that we visit every two months, as well as smaller and very simply structured manufacturers where the managing director also serves as purchaser and sales manager, taking most of the decisions himself. That's why it's essential to have regional sales staff who know their customers and their needs very well. They have to go to the customers and engage in a personal dialogue.

**Lindner:** We wouldn't be able to manage this from Germany for cultural reasons alone. To do this, you have to talk to the company representatives at eye level but



Peter Lindner (left) and Guido Nussbaum agree: it is only possible to sell agricultural technology if you have a feel for it.

also to 'speak their language' in the figurative sense, meaning you have to understand the mentality of a region. This customer proximity is also a solid basis for developing products together with manufacturers – products that meet the genuine needs of the farmers and that provide them with solutions.

**Nussbaum:** That's right. In our business, it's particularly important to have a good instinct for people.

**Lindner:** You're doing much more than simply selling products: you get the stock in place and know the product variants that your customers need, as well as when and where. And you know their individual needs and requirements. Ultimately, your customers – the manufacturers of agricultural machines – have also changed: from manufacturers of agricultural machines to industrial companies that have a far broader set-up and offer a large number of additional solutions.

**Nussbaum:** Yes, exactly – and that's why we think hard about the new challenges faced by our customers and how we can offer ap-

propriate solutions. In many cases we even develop the solutions in collaboration with the customers.

**Lindner:** As, for example, with the manufacturer who came to us with a unique design for a new field sprayer. They wanted to develop the product together with us, and were counting on our experience and know-how. We sat down with our colleagues from application engineering, design and sales, and we jointly worked out some improvement proposals. In the process, we not only developed the product, but are now trying it out at our testing station in Hungary. It is even being fine-tuned for serial production, and is now in frequent use in Belgium, for example.

**Nussbaum:** For us, the guiding principle is to always keep an eye on the feasibility of new products and on customer benefits, above all with a view to having products and services that are in line with market requirements. Ultimately, we have to succeed against strong competition, and that is only made possible by economic efficiency, reliability, availability and service. →



### BPW BENELUX

BPW BENELUX was founded as a subsidiary in late 2007 and is headquartered in the Belgian town of Herstal near Liege. A sales office was opened at the same time in Eindhoven (Netherlands). Today, BPW BENELUX markets axles and running gear systems in the area of agricultural and commercial vehicles, as well as all other products and services from the entire BPW Group.

Always in search of the best solution: Guido Nussbaum and his team from BPW BENELUX.

**Lindner:** And by customer proximity and the trust that we have built over the years. It's only possible to sell agricultural technology if you have a feel for it.

**Nussbaum:** Absolutely! It's not just about running gears, axles and the corresponding supports, but an all-round package with other components such as steering systems, mudwings, lights, braking systems, landing legs, coupling systems, and so on – including maintenance services.

**Lindner:** And this includes our broad package of services for vehicle manufacturers, from braking and FEM calculations to measurements and road tests with test vehicles. And the local availability of our products: just-in-time deliveries are part of everyday business.

**Nussbaum:** For us, having our own professionally managed warehouse is always a major plus point. It is tailored to local demand, enabling us to provide optimal support for customers in keeping their own inventories as low as possible. Indeed, despite the large number of models and versions in the agricultural sector, we are generally able to deliver required parts from our stock.

**Lindner:** In my opinion, this is one of the great strengths of BPW and BPW BENELUX in this area: we know our customers extremely well and can thus have precisely those items that they actually need at the ready.

**Nussbaum:** As well as stocking running gears and components for the manufacture of agricultural vehicles, however, we can also deliver all spare parts for repair and maintenance at short notice. Moreover, thanks to our own customer service, we can provide a local guarantee that machines equipped with our running gears will, in case of a defect, be returned to working order as soon as possible. This applies both to locally manufactured machines and to imported products. For our customers, that is the vehicle manufacturers, and for the end customers, that is the vehicle operators; this means maximum mobility and thus optimal economic efficiency.

**Lindner:** What further distinguishes us from the other market players is that we conduct product training. Alongside application consulting, we make recommendations on the deployment of products, and

can provide instructions for maintenance and repair.

**Nussbaum:** Yes, our team is happy to assist if customers want training for our products – this applies to installation and use, as well as maintenance. Furthermore, we keep our customers systematically up to date on our development activities and product innovations. All this is undertaken in cooperation and after consultation, and we're grateful for the support that you give us from Wiehl!

**Lindner:** We're only too glad. Speaking of innovations, what are your plans for the future?

**Nussbaum:** Of course, we hope to maintain and expand our good market share, and we're also going to direct our attention to axles with a low axle load. With the support provided by the sales management and the agricultural department in Wiehl, we are very well positioned to deal with future challenges.

**Lindner:** You can be sure of that – guaranteed!

 You will find more information on: [www.bpw.de/en](http://www.bpw.de/en)

# Solutions at a glance

With just a few clicks, the new online BPW Solution Finder illustrates the extensive range of products and services offered by the BPW Group.

The BPW Group portfolio covers numerous products and services. A new online tool called Solution Finder, or SoFi for short, presents this large range at a glance to everyone, at [www.wethinktransport.com](http://www.wethinktransport.com). Customers and interested parties can quickly and easily find information about the BPW Group as an international mobility partner and system partner.

### Comprehensive information

Using SoFi is straightforward and makes it great fun to experiment and combine. First, select one of four classic vehicle types – curtainsider, box, tipper or tank. Then continue with the corresponding products and services. For the semi-trailer tractor with tank trailer, the BPW Group offers running gears, support systems, truck and trailer telematics, cable and lighting systems, but also maintenance contracts and financing and leasing deals, among other items. The solutions are displayed in a 3D view at up to five levels, and users can choose from three perspectives to see details from the front, rear or top. The online tool is

rounded off by comprehensive background information, including details on how the running gear systems were developed, or on financing and leasing. With a single click, the application will forward users directly



from the products to the websites of the respective brands, such as Hestel, Ermax and idem telematics.

### Discover solutions

Whether on a PC or tablet, the BPW Solution Finder makes it easy to start right away

and find all the information. Those who already have something specific in mind, can search directly for products and services. The comprehensive overview provided by SoFi is unrivalled: the tool skilfully exploits the benefits of a digital platform and uses examples to present the BPW Group's solutions in an innovative and illustrative manner. This way, it demonstrates how the company assists its customers in their everyday transport business with a perfectly coordinated product and service package.

### Much more than just the running gear

“The BPW Solution Finder proves once again that the companies in the BPW Group are working hand in hand for the benefit of their customers, delivering so much more than just the running gear,” says Daniela Kämper from BPW's Corporate Communications. “With SoFi, you can gain a quick overview and discover new solutions.” (jg)

 You will find more information on: [www.wethinktransport.com](http://www.wethinktransport.com)

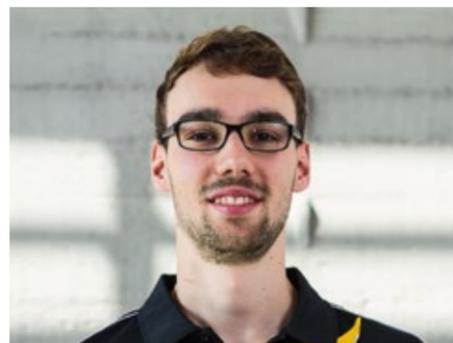


# Full throttle into practical application

In Karlsruhe, students can join the KA-RaceIng association and construct their own racing cars, even competing internationally: in the Formula Student.

Constructing your own racing car and putting it to the test in an international competition? Now that's exciting stuff. In Karlsruhe, this dream is being lived by students who have joined KA-RaceIng, an association affiliated with the Karlsruhe Institute of Technology (KIT). "We construct two vehicles every year – one with a combustion engine and another with an electric drive. We then take part in the Formula Student, an international construction competition for students," explains Paul Leo Lochner. As a former team member, Lochner now accompanies new members as they learn the ropes.

sibling, the KIT15e, powered by four electric motors, manages the same in just 2.5 seconds. As well as proving that their creations are fast, safe and manoeuvrable on the track, the students must submit the cars for critical examination by experts. The competition consists of two disciplines: the dynamic part of driving and the static part. The jury, for instance, also assesses the extent to which teams keep an eye on costs, as well as the viability of their business plans for mass production.



Alumna Paul Leo Lochner looks after new team members.

## Jury also examining profitability

The vehicles themselves pack a real punch: The turbocharged combustion engine of the KIT15c takes it from 0 to 100 kilometres per hour in a mere 2.99 seconds, while its

The Formula Student originated in the US where it was held for the first time in 1981. The event came to Germany in 2006 under the name Formula Student Germany, and the Karlsruhe team has been participating since 2007. KA-RaceIng's biggest success was recorded in Hungary in 2015 when their electric vehicle achieved overall victory. Their construction was judged to be the best vehicle in terms of acceleration, endurance and design.

The KA-RaceIng team has around 80 members, mainly mechanical engineering students but also undergraduates from other disciplines such as electrical engineering, computer science, industrial engineering, business management, and physics. The team comprises a number of sub-teams, each focusing on a specific area, for example the running gear or the engine. "The vehicles are technologically highly complex, and we construct all parts ourselves," says Paul Leo Lochner. "We developed the entire running gear ourselves, and also the engines." Thanks

to many supporters, the students can make use of a fully equipped workshop and top-quality materials. With partners such as BPW, there is technological cooperation as well. "We meet regularly with representatives from the company, exchange knowledge, and can ask all our questions," says Lochner. "It's extremely valuable and inspiring." BPW also benefits from the cooperation, especially with regard to know-how in the field of e-mobility – an important topic in the commercial vehicle sector which BPW investigates in a number of projects.

Each team member is responsible for a specific task or component. Over the past year, Joseph Suppanz, a 24-year-old mechanical engineering student in his seventh semester, focused on the battery of the electric vehicle: "My primary task was to package the elements and fit them in



Mechanical engineering student Joseph Suppanz takes care of coordination in the team.

the vehicle so that they are safely stowed away, whilst also keeping to the strict competition rules." This season, Suppanz is in charge of organisational management, coordinating the team, amongst other things, and representing it to the outside world.

## A CV highlight

KIT is a joint venture of the Karlsruhe Research Centre and the University of Karlsruhe. The project work performed by participants, however, does not count towards their studies. "It's a hobby for us that we pursue alongside our studies. Nevertheless, the association has strong support from the university, the competition is well known in industry, and participation is no doubt a minor CV highlight," says Joseph Suppanz. For him, it's all about the practical experience that he can gain here: "At university, there's often a lack of practical relevance. The KA-RaceIng project not only boosts my practical skills but also increases my options as a mechanical engineer. It shows me the wide variety of engineering work and also draws my attention to job profiles at companies that could be quite exciting for me." (jg)



You will find more information on:  
[www.ka-raceing.de/en](http://www.ka-raceing.de/en)

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