

K»MOBIL

THE KIRCHHOFF GROUP MAGAZINE



Vehicle safety, lightweight construction and e-mobility: German Chancellor Angela Merkel was impressed by the innovations presented at the IAA Mobility. [Read more about this from page 016](#) ▶

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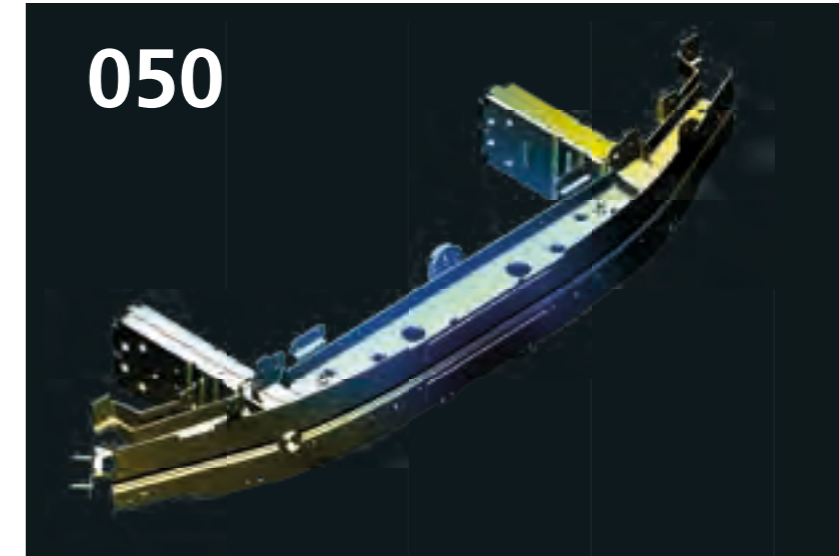
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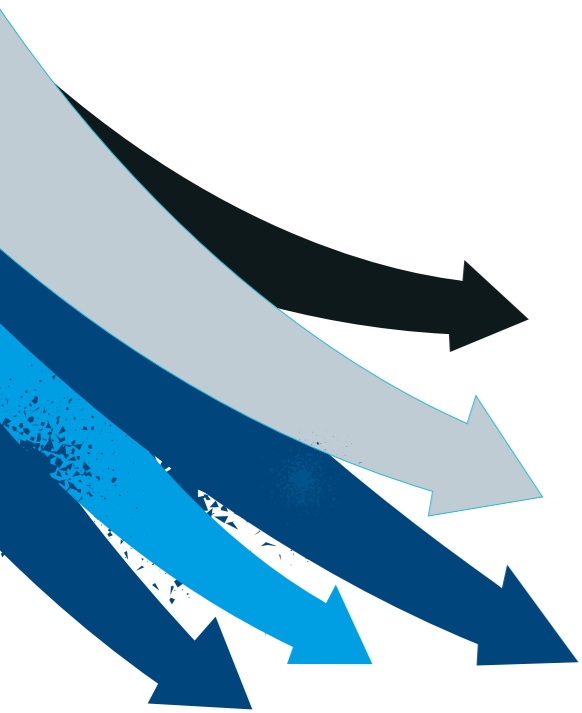
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Challenge(s) accepted!



**Dear customers and friends of our group of companies,
Dear employees,**

Who would have thought it! Looking back on the past, many of us could not have imagined that there would be a global pandemic the effects and consequences of which would still have us firmly in its grip two years later.

The pandemic has not only exposed many vulnerabilities, but also reinforced them. A large bundle of challenges is the legacy.

Catching up in the digital transformation

Germany's gaps in the area of digitalisation are still immense. Studies have shown that Germany is far behind in terms of digital competitiveness. The reasons cited are a lack of courage and will to implement. Too much talk, little action.

Yet digitalisation offers enormous opportunities. For example, artificial intelligence (AI) and data can be used to support medical care—be it in diagnostics, in finding therapies, in preventive care or in operations. An improved digital infrastructure is also important for energy production and supply. More and more devices and vehicles are becoming smarter. The path to green electricity requires a decentralised power supply that must be coordinated because it is not only energy suppliers that produce electricity. Many companies and households are planning to generate their own electricity and thus supply themselves self-sufficiently. ►



Dr. Johannes F. Kirchhoff
Managing Partner of the KIRCHHOFF Group

However, in addition to the many advantages of digitalisation, the risks must not be ignored. IT security is a particular focus here. Digital transformation makes companies, hospitals, states and many more vulnerable to blackmail.

Mobility turnaround at high speed

Germany wants to become climate-neutral in 2045. One area that contributes significantly to this is transport. The mobility turnaround must finally gain momentum and requires many measures: a uniform CO₂ price, socially acceptable implementation, incentives for reducing emissions, support measures for new technologies and much more.

In the future, there will no longer be just one solution that will dominate the picture for decades. Depending on the application and requirements, different types of drive, such as battery-powered electromobility, hydrogen fuel cells and/or fossil-free fuels (e-fuels) will prevail. Technology openness must be guaranteed so that the best future drive and energy supply concepts can develop in competition. In addition, there are infrastructure requirements that must be met quickly.

Rethinking raw materials

We see the closing of raw material cycles as a key to sustainable business and a contribution to meeting climate targets. Against the background of finite raw material resources and the increasing supply chain problems, holistic solutions are needed for the economically sensible recycling of raw materials. Framework conditions must be created for this, products must be developed differently ("Design for Circular Economy"). The potential and the technological competence are available in Germany; and the will to change.

Battle for the best brains

Another major challenge that has steadily increased in 2021 is the shortage of skilled labour and the shrinking share of the working population. The ageing population leaves large gaps in many sectors. The struggle for the few good skilled workers is increasing. Employers need to hone their attractiveness. The issues of diversity and equality play a major role in this. The continuous qualification of the workforce is also unavoidable. Working environments are changing rapidly. For example, production processes are changing due to increasing automation. Experts are needed, other jobs are eliminated or transformed.

These are just a few of the challenges we face. The list is long. What is crucial here? We must finally pick up the pace. Moreover, these examples show how complex our world has become and that many things are interrelated. In particular, climate change, energy and the competition for resources are strongly interconnected. This calls for a high degree of creativity, courage and flexibility.

What we have also learned: Nothing is certain any more. The framework conditions and structures can change quickly. Political uncertainties are increasing. Today's technology may already be obsolete tomorrow.

We have accepted the challenges. There was no standstill within the **KIRCHHOFF Group**, even if we were forced to do so in places due to the pandemic and supply chain problems. The KIRCHHOFF Group was able to expand its activities at many locations, make forward-looking investments, continue to

drive forward technological innovations and finally present them again at trade fairs and exhibitions. With the four business divisions Automotive, Ecotec, Mobility and WITTE Tools, the group will generate 2,175 million euros this year with 12,200 employees.

Rising steel prices at the beginning of the year, raw material shortages and temporary production stops by our customers due to the shortage of semiconductors presented **KIRCHHOFF Automotive** with additional challenges in the supply chains. However, the fact that e-mobility is becoming more and more established in the market is positive. In 2020 alone, KIRCHHOFF Automotive was able to win almost 50 percent of the orders in Europe and Asia for products that will later be installed in battery-electric or hybrid vehicles. This is because the issue of safety plays the same important role in electric vehicles as it does in "combustion vehicles". Due to the different vehicle structure, crash components developed by KIRCHHOFF Automotive, such as bumpers or front-end modules, have a different design but are also used in electric vehicles. German Chancellor Angela Merkel was impressed during her visit to the KIRCHHOFF Automotive stand at the IAA Mobility in Munich: "That is very interesting, I was not aware of that at all. The entire safety architecture has to be completely rethought." With a new concept, the IAA brought mobility to the people. In addition to suppliers and OEMs exhibiting side by side in the exhibition halls, the mobility of the future was made freely accessible in the city centre in the most beautiful places in Munich and presented for people to experience for themselves.

In 2021, KIRCHHOFF Automotive has continued to grow: New technologies and facilities are expanding capacities and increasing the competitiveness of our locations worldwide. In the south of the USA, a new plant has been built in Atlanta. There, the production of body parts for the new, battery-powered generation of the Mercedes-Benz SUV is now being set up in two steps. At our North American locations, further extensive investments in new presses are planned for 2022. In Shenyang, China, we implemented a comprehensive plant expansion with the installation of a large press and welding line for a new project with our customer BMW. In order to realise current and future order volumes for structural parts for e-vehicles of our customers, several millions were invested this year in fully automated welding and laser welding systems at our German sites in Attendorn and Iserlohn. ▶



In addition, the digital transformation towards the SMART Factory in production is progressing. Software that is used worldwide provides various key production figures. These are automatically processed and analysed for daily (digital) production planning meetings. With different driverless transport systems, we implement demand-driven, pull-controlled container movements and drive standardisation and optimisation in the production environment.

KIRCHHOFF Ecotec has been actively shaping climate-neutral mobility for years. The BLUEPOWER hydrogen fuel cell drive for our municipal vehicles and distribution transport is constantly being further developed and adapted to the requirements of our customers. The production of our hydrogen trucks has been expanded. For this commitment, we were awarded the "f-cell Award" in the category "Products & Markets" this year. More and more municipalities and cities are using our emission-free waste collection vehicles. Since the drive solution alone is not enough, we are also committed to expanding the hydrogen supply infrastructure.

Digitalisation has become an indispensable part of the waste management sector. The companies of **KIRCHHOFF Ecotec** continue to develop and optimise solutions, such as telematics systems or scanners to identify misdirected waste. At the same time, customer service is constantly being expanded by means of e-learning tools, data glasses and web offerings.

KIRCHHOFF Ecotec was also affected by delivery bottlenecks at its suppliers. Nevertheless, in 2021, substantial investments were made in plant expansions and in improving productivity at the locations in Poland, the Czech Republic, Germany, Austria and France. Ecological measures also play a role: a large number of trees were planted as a reforestation measure; the company's own photovoltaic systems will be used to generate green electricity for its own needs in the future.

Despite uncertain times, our plant in the UK also invested in the renovation of its headquarters and built a Customer Experience Centre. The latter made it possible to keep in touch with customers online and to present products. This was especially important during the uncertain BREXIT negotiations to maintain and build trust in FAUN ZOELLER UK. And it succeeded.

The current major difficulties in the automotive industry have not left **KIRCHHOFF Mobility** unscathed. The structural change in the automotive industry and the significant shortage of semiconductors are having a huge impact on the supply chain. New vehicles for conversion are very difficult for KIRCHHOFF Mobility to obtain and this has a negative impact on the current order situation. However, thanks to the further expansion of its market position in previous years, KIRCHHOFF Mobility is in a good position to further develop its product range. This year, for example, the vehicle retrofitter began offering a modular system developed in-house, which covers the majority of current passenger car volume models. In close cooperation with the OEM, a conversion kit for the new Caddy 5 was also developed, which is based on the design of the Nivo rear cut-out kit.

At the same time, KIRCHHOFF Mobility invested in its service offering. Since 2021, rental vehicles for people with limited mobility have been offered. In Austria, a new location was built together with KIRCHHOFF Ecotec. The digital presence was completely revised and optimally aligned to the needs of end customers. Since this year, virtual consultation rounds off the service package. In addition, there is an online vehicle market with a large selection of new and used cars converted for the disabled.

While some of our companies suffered from the supply chain issue, **WITTE Tools** was able to benefit from it. Thanks to manufacturing in Germany, WITTE Tools was able to meet the supply bottlenecks from Asia with tools from the domestic market. However, the prices for material have risen massively. The price of plastics has doubled in the last 12 months. Steel prices and energy costs have risen to the same extent as in the automotive sector. Nevertheless, WITTE Tools was able to record a small increase in turnover in 2021 and invested in a new automatic blade straightening machine, for example.

One event that touched us very much was the devastating flood in Germany, which unfortunately also affected some employees of KIRCHHOFF Automotive. We were very pleased to see the great solidarity within the workforce. Many from the KIRCHHOFF Group donated a share of their salary, and our waste collection vehicles and sweepers were used in the clean-up work. Some spontaneously lent a hand. This cohesion is moving and makes us proud of our team.

Dear customers and friends of our company, dear employees, the management of our group of companies would like to thank you for your loyalty, your great commitment and your active cooperation. Thank you for your perseverance and flexibility, which are in demand in these times. We look forward to a continued good and successful cooperation.

My sister, my brothers, our families and I wish you and your families a Merry Christmas, all the best and health in the New Year. ■

With best regards

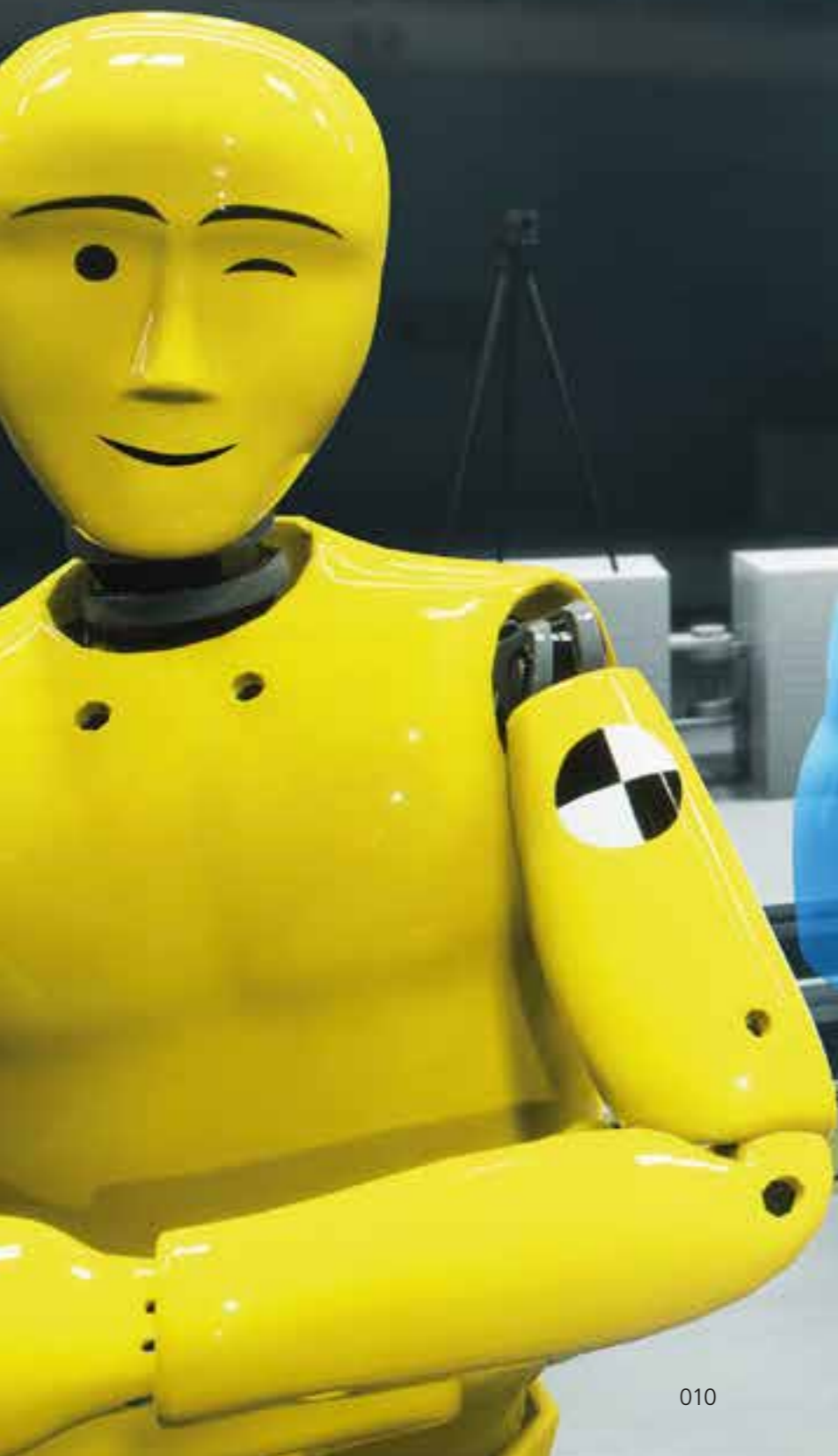
Yours

Dr Johannes F. Kirchhoff



MAKING. MOBILITY. SAFE.

Body Solutions for Safe Mobility ›

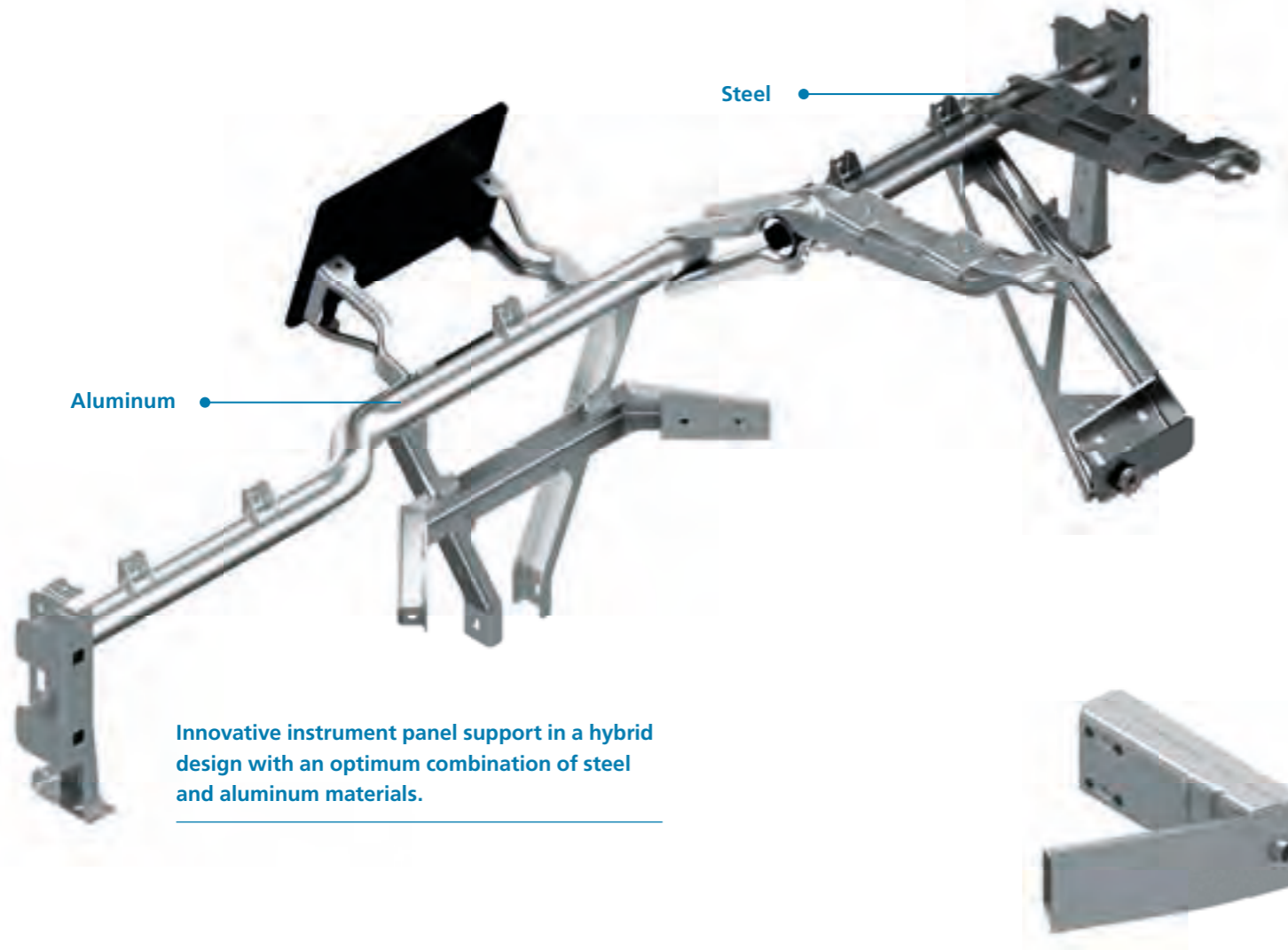


AUTHOR: PROF. CHRISTOPH WAGENER
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KIRCHHOFF AUTOMOTIVE



New electromobility is not only changing the powertrain and electronics of modern cars; car bodies also need redeveloping to ensure that they continue to be safe even without an internal combustion engine.

Individual mobility and the use of passenger cars will also be a building block of future mobility concepts. However, the appearance/design of the vehicles and the package will change significantly. These changes imply new challenges, such as creating a design for the front end structure that is acceptable from a passive safety viewpoint. For example, the front end of a battery electric vehicle (BEV) without the combustion engine must not become unstable in the event of an accident. The occupants and other potential accident victims must be equally well protected even without the large engine block, which absorbs energy during impact. Furthermore, in the case of BEVs for example, the structure of the vehicle must ensure that the battery is not damaged in order to prevent a fire in extreme cases. Even though the vehicle weight has a significantly lower influence on energy consumption in electrically powered vehicles than in combustion vehicles, lightweight construction still plays an important role in these vehicles; the lighter a vehicle is, the less energy has to be dissipated in the event of a crash. ►



Innovative instrument panel support in a hybrid design with an optimum combination of steel and aluminum materials.

stiffness requirements meet tight installation space conditions so that the material properties of steel (high modulus of elasticity) are optimally utilized.

In contrast, the center and passenger-side areas are made of aluminum. The lower stiffness requirements and more favorable installation space conditions in this area mean that aluminum offers enormous lightweight design potential. One focus of the development work was the connection between the aluminum and steel components without additional mechanical joining elements. Additionally, the instrument panel support is capable of meeting future infotainment requirements by enabling the integration of a large-area central display and a head-up display. The corresponding mounts allow vibration-free

The pile test shows: CMS allows continuous energy absorption over long intrusion paths without complete failure.

Advanced Crash Management System: As a MAG-welded and fully laser-welded variant.



Advanced crash management system with high deformation capacity.

attachment and guarantee a high level of safety.

Safety in the e-vehicle: a pre-galvanized crash management system with high deformation capacity

The consequences of a collision with a tree are often dramatic. The central load application leads to strong intrusions and poses an extreme risk to the vehicle's occupants. These scenarios are protected by a newly developed crash management system (CMS) in which the load paths and components have been adapted to this load case.

The CMS enables continuous energy absorption over long intrusion paths without complete failure, thus protecting the

occupants and the battery. The reliable processing of pre-galvanized steels is a challenge for the joining technology. As such, as MAG welding process was optimized for galvanized materials used in process-reliable and low-porosity welding, while ensuring sufficient paint adhesion, particularly in the joining zones. Furthermore, a fully laser-welded concept has been realized for the first time.

A laser-welded, bending-resistant CMS for the BMW iX, made from particularly thick-walled steel sheets that are specially developed for electric vehicles, has already been implemented in series production. Read more about this on page 50. ■

AUTHOR: SABINE BOEHLE
COMMUNICATON AND MARKETING MANAGER KIRCHHOFF AUTOMOTIVE

New Location, New Concept— The Reinvented IAA

This year, a lot of things were different for the IAA. Rather than being hosted as usual in Frankfurt, it took place in Munich with a new name and concept. The new IAA Mobility stands for new mobility, encompassing everything that people move with, as well as what moves people. The displays at the world's largest mobility exhibition were not only focused on e-cars, but also bicycles, e-scooters, and e-minibuses.



The Chancellor was impressed: "That's very interesting, I hadn't thought that through at all. The entire security architecture has to be completely rethought. And these are the strengths of the German automotive supplier industry—that you are thinking all this through," she said. In picture from left to right: J. Wolfgang Kirchhoff (CEO of KIRCHHOFF Automotive), Arndt G. Kirchhoff (Chairman of the Advisory Board of the KIRCHHOFF Group), Federal Chancellor Angela Merkel, VDA President Hildegard Müller and Markus Söder (Prime Minister of Bavaria).

Bringing mobility to the people—that was also the focus of the IAA Mobility in Munich. In addition to hosting a trade show with manufacturers and suppliers on the exhibition grounds outside the city, the new concept also included an "open space" in the city center. The mobility of the future was presented at the most beautiful places in Munich, which were freely accessible for visitors to experience. The open space in the city center and the exhibition halls were connected by a "Blue Lane". This offered visitors an IAA they could touch: electric cars, bicycles, and e-scooters were available for testing on the test track. Another new feature was that suppliers and manufacturers exhibited side-by-side in the halls. "By mixing suppliers and OEMs, we can better present our company here," said CEO J. Wolfgang Kirchhoff. For him, the new concept, which KIRCHHOFF Automotive was also involved in developing, has been a success. Representatives of the German automotive manufacturers as well as the suppliers had developed it together over the past two years. ▶



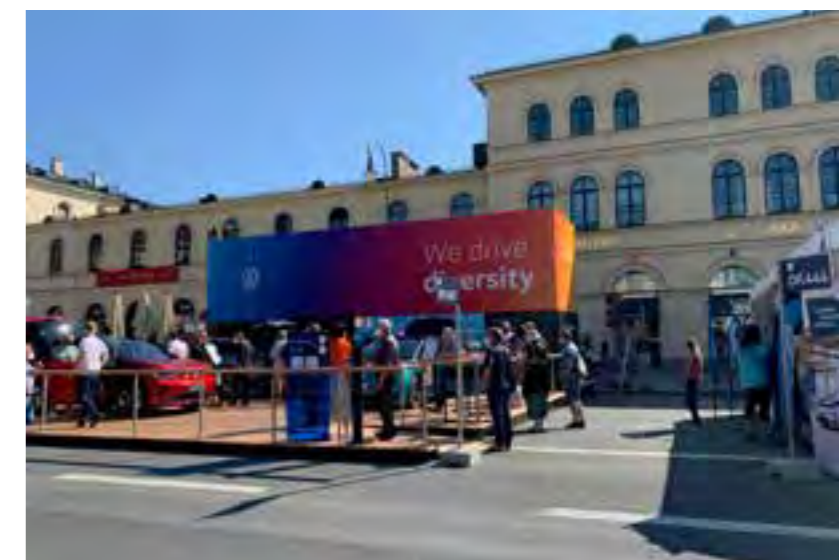
Conversations in a pleasant atmosphere are facilitated by an open and inviting catering area.

"Mobility is changing completely. I think the German automotive industry is changing the fastest of all. This change should be reflected in the concept for the new IAA," says Andreas Heine, Global EVP Communication & Marketing, who was involved in the concept's development. Leading up to the show, there was some uncertainty: "We didn't know whether the new concept would really work, and whether or not the presentations in the city center would also be well-received. Initially, pandemic restrictions also lead to concerns about how "open" our KIRCHHOFF Automotive booth could be, especially with our catering area for our customers. Now we can say the concept has worked for manufacturers and suppliers—the IAA Mobility has arrived in Munich!"



In addition to predominantly e-cars, the latest bicycle concepts, e-scooters and e-minibuses were also presented in the exhibition halls.

At first, it seemed like it always does at a car show; many visitors were excited to see the latest models. Yet this year, it's also different; the shift away from combustion engines to alternative drive systems can be felt and experienced throughout the IAA. For example, not only were electric vehicles widely visible throughout the numerous events and booths at the high-profile congress on the Munich exhibition grounds, but were also seen in downtown Munich, where brands like Mercedes-Benz were exhibiting only fully electric vehicles and presenting their new "electric only" strategy. Out of the 13 vehicles on display, six models are already available for purchase. All other major automakers are also fully committed to electric or hybrid drive.



KIRCHHOFF Automotive is presenting its contribution in this new mobility, since the company is already supplying many structural parts for electric vehicles. These include aluminum protection for the batteries of the Volkswagen Group's current e-models, and a crash management system for the BMW i20 electric SUV. Vehicle safety is "the most important thing," according to Dr. Thorsten Gaitzsch, Global CTO Sales & Technical Development. "With the changes in the automotive industry turning towards electric drive, the requirements for crash management systems are also different" (read more about this in the article "Making.Mobility.Safe." on page 10). Occupant safety and lightweight construction play a role in all the innovations presented by KIRCHHOFF Automotive at the IAA. For example, a newly developed fully laser-welded bumper made of galvanized steel has a high deformation capacity, ensuring maximum passive safety.



The conclusion of Dr. Thorsten Gaitzsch is positive: **"Everyone who visited our booth was enthusiastic. The sales teams and executives also agree—it was worth it and we are looking forward to the next IAA Mobility in two years' time."** ■

Very own paths

AUTHOR: JULIAN HOFFMANN

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FAUN—specialist for refuse collection vehicles and sweepers - challenges the climate change. The company's own fuel cell truck is intended not only municipalities and private waste management companies, but the entire transport industry. ▶



01

Then, in 2015/2016, FAUN had worked through Contena-Ochsner for the first time with Designwerk. The Swiss company behind the Futuricum electric truck brand. In the first completely battery-electric refuse collection truck; today there are already 25 such vehicles on the road in Switzerland. And it is also due to this cooperation FAUN has been the exclusive distributor of Futuricum trucks throughout Europe, which are produced in Winterthur on the basis of the Mercedes-Benz Econic and Volvo FM/FH. But FAUN is not satisfied with these battery-electric vehicles alone. The company continues to believe in the fuel cell and has even developed its own creation in the programme for Econic chassis, which the Daimler Group delivers without the engine-transmission unit to FAUN.



02

A typical waste collection truck stops up to 1,000 times a day. Again and again it starts up and accelerates, only to slow down and stop again a few metres later. For Patrick Hermanspann, CEO of the FAUN Group, this is basically an unacceptable for the internal combustion engine. "The diesel was never been designed for such a use, never been built for it," he says. On the contrary, it is only particularly efficient at a constant speed. A refuse collection truck is therefore only run on diesel out of necessity —simply because there was no alternative. The goal of FAUN is now contribute to making truck traffic climate-neutral in the future. "We come from the waste management sector, but we see potential to extend our concept to other transport and logistics sectors," explains Hermanspann.

He has been the head of FAUN Group company for eight years and has worked for FAUN for a total of 20 years. Fifteen years ago—in 2006—the company set up the first partially electric waste collection truck prototype because the customers were also innovative and the idea of braking electrically in order to recover the energy that would otherwise be wasted came up early on. At the beginning, FAUN had developed a diesel hybrid for this purpose, which only stores

the braking energy in supercaps for a short time in order to use it again in the next acceleration process. According to Hermanspann, up to 40 per cent of the energy can be saved in this way, because the smaller diesel engine simply runs much more efficiently and the braking energy is largely recuperated. 20 vehicles with this technology have been built in Osterholz-Scharmbeck, one of which is still in use today. "This project was realised without lavish subsidies and without social pressure from movements such as Fridays for Future", Hermanspann explains.

However, FAUN had already developed the concept further in the later noughties and thought in the direction of fuel cells. This is how the first waste collection body powered by this technology on a waste collection body on a conventional diesel chassis. The project, which the company had undertaken together with Heliocentris and the Berlin's city cleaning service, was a complete success, according to Hermanspann. The prototype was in use for two years without any problems.

01 The BLUEPOWER is based on an Econic chassis, but the drive unit comes entirely from FAUN. 02 The fuel cells are located on the right-hand side of the frame, while the hydrogen tanks are on the left-hand side. 03 The power electronics and, above all, the cooling units take up space behind the drivers cab.

The BLUEPOWER is equipped with a modular fuel cell system—depending on the requirements, one to three 30 kW units are installed on the passenger side of the frame. In addition, there is always a 85 kWh energy content battery under the driver's cab. It is also perfectly positioned there because the collected waste would otherwise put a lot of strain on the rear axle. Power electronics and cooling units are mounted behind the cab. The hydrogen fuelling unit, which is mounted on the frame on the driver's side, is again modular in design. Here, up to four pressurised cylinders can be installed at the customer's request, so the BLUEPOWER carries between 4 and 16 kilograms of hydrogen. Unlike Hyundai for example with the Xcient Fuel Cell in Switzerland, FAUN does not use a pressure of 350, but 700 bar. The manufacturer specifies a refuelling time of five to ten minutes and a range of up to 400 kilometres.

The search for the right configuration for the FAUN, in turn, works together with the customer. In this way vehicles with measurement technology are used in real operation to collect data and draw up clear specifications. On this basis the customer then receives his offer. And later, when the application scenario changes, FAUN remains flexible. The chassis can then be upgraded or downgraded as required. ▶



03



NON-SMOKERS! BSR is taking a big step in the direction of climate protection. Hydrogen fuel cell vehicles at the Brandenburg Gate, Federal Minister of Transport Andreas Scheuer (3rd from right), BSR fleet manager Wolfgang Wüllhorst (3rd from left), FAUN CEO Patrick Hermanspann (left), Julian Neuhaus, FAUN Sales Manager (4.f.l.), FAUN Managing Director Burkard Oppmann (4.f.r.), Kurt-Christoph von Knobelsdorff, Managing Director NOW (2nd from right), Dr. Klaus Bonhoff, BMVI Policy Affairs (right) and Erich Kielhorn (2nd from left) from Project Management Jülich.

But why exactly is FAUN backing the fuel cell in the first place, which many say is prone to failure and complex in design? "Take a look at a modern diesel engine with its exhaust gas aftertreatment—compared to that, a hydrogen fuel cell is a very simple construct. We at FAUN are convinced that in the future the fuel cell will be as cheap to produce as a modern diesel engine," explains Hermanspann. An important point is also that the BLUEPOWER concept is always equipped with a buffer battery. It provides load balancing, which is important for the service life of the fuel cell. "A fuel cell can also be operated more efficiently than a hydrogen burner—just to point right away," says the FAUN CEO.

And how does production start now? Where does FAUN want to go? Quite clearly in the width. On the BLUEPOWER chassis, other bodies such as refrigerated boxes or boxes with a tail lift are therefore also conceivable. FAUN offers the vehicle as a two-axle and three-axle vehicle with 6x2 drive. Currently, discussions are being held with body manufacturers

and transport companies to find out for which scenarios the BLUEPOWER might be suitable. 50 employees have already been assigned to the project, and the delivery of the first 20 customer vehicles is in full swing. At the end of the year, the real series production should start. In five years' time, Hermanspann wants every second vehicle destined for Germany to be on the road with a fuel cell.

The FAUN CEO sees a variety of solutions for the petrol station issue. "Our customers in the waste collection business have a lot of experience in the installation of systems. They also operate, for example, large incineration plants. And that's where they produce the basis for their own fuel, because they can use the electricity to produce hydrogen at virtually zero cost. So that's not going to be a problem.

Together with industry partners, FAUN has launched the Clean-Hydrogen-Coastline project, which aims market-relevant integration and scaling



"Look at a modern diesel engine with its exhaust aftertreatment - compared to that, a hydrogen fuel cell is a very simple construct."

PATRICK HERMANSPANN, CEO OF THE FAUN GROUP

of the H2 technology into the German and European energy system. According to the partners, the investment can amount to up to 1.3 billion euros under the right political and funding conditions. Up to 400 megawatts of electrolysis capacity by 2026 is possible. "The combination of vehicles and decentralised H2 supply offers customers an all-round carefree package, and that must be the goal," says Hermanspann. The government's hydrogen promotion projects and the National Hydrogen Strategy are the basis for the availability of large quantities of the energy carrier in the future. And thus the drive is also an alternative for classic transporters. "The interest is huge. The hydrogen truck with fuel cell is just as flexible as a diesel truck today. Losing so much space and payload with large batteries and then having to travel the same load with more trucks cannot be the solution."

Need to ramp up the hydrogen economy

IPCEI (Important Project of Common European Interest) is a European funding framework for the the ramp-up of the hydrogen economy. Within this framework, FAUN plans, together with partners, to build a sustainable and resilient hydrogen value chain. Through the expansion of production capacities to up to up to 5,000 units annually, FAUN will make a major contribution with more than 12,000 vehicles by 2027 to climate-neutral heavy goods traffic. ■



"Tour de Hydrogen"

On SEMAT site in La Rochelle between May and July, we had almost 700 visitors as part of the Clean Solution days.

The KIRCHHOFF Group is a pioneer in the field of hydrogen vehicles and the first hydrogen-powered BLUEPOWER refuse collection vehicle in France will be delivered via SEMAT delivered.

The environmental stakes are major: they involve sustainably entering the ecological transition with a range of equipment and services adapted to tomorrow's challenges, reaching carbon neutrality by 2050.

This vehicle has been touring France since the beginning of September as part of the "H2 TOUR": symposiums, conferences, hydrogen days, refuse collection tests, not to mention the POLLUTEC and HYVOLUTION trade shows. It's scheduled to start service in the Tours region at the end of the year.

"This vehicle is the first hydrogen-powered refuse collection truck in France and we are especially delighted with this first success".

Christophe Birge, Head of Strategic Products at SEMAT

AUTHOR: CLAUDIA SCHAUE
MARKETING & COMMUNICATION MANAGER FAUN GROUP

BLUEPOWER chassis now coming from Bremen



Relocation of the hydrogen fuel cell vehicle production BLUEPOWER to its own plant on the Weser.

These first BLUEPOWER refuse collection vehicles and their operators are truly pioneers of a functioning hydrogen circular economy. Already in 2022, the production of 100 more chassis with hydrogen fuel cell drive is planned. Due to this strong demand, the BLUEPOWER team has moved from the FAUN plant in Osterholz-Scharmbeck to its own production hall in Bremen in November 2021 and is currently settling in. The first gliders (chassis without drive train) are in the yard and in the shopfloor. The warehouse and component production are being set up and development and programming is already underway in the office. Production is scheduled to start on 1 January 2022.

The new production complex extends over:

- » Site area: 10,000 m²
- » Production and storage area: 3,200 m²
- » Office and social space: 1,700 m²

A very good infrastructure and a hydrogen filling station around the corner round off the profile. The goals are ambitious and idealistic: by 2030, no more conventional chassis are to be delivered. After completion, the low-emission chassis will be transported to the superstructure factories of FAUN and ZOELLER, where they will be given the appropriate bodywork. Whether refuse collection vehicle, sweeper or for inner-city distribution transport. ■

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GLOBAL DIRECTOR MATERIAL PLANNING & LOGISTICS KIRCHHOFF AUTOMOTIVE

Self-Driving Vehicles—Another Step Towards a SMART Factory

Cucujães in Portugal was the first KIRCHHOFF Automotive site worldwide with full AGV integration. Since 2020, ten driverless transport vehicles (AGVs) have been supporting internal material transports at this plant. With SLAM (Simultaneous Localization and Mapping), another type of navigation technology is now being used for automated material transport at the German plant in Attendorn.



Scan this QR Code and watch a video of the driverless transport system.



Above: Attendorn, Germany: An AGV transports finished parts from the production to the dispatch area. **Left:** Driverless transport systems at the Cucujães plant, Portugal, transport components from the central supermarket to production and finished parts from production to surface coating.

A magnetic tape is glued to the floor of the **Portuguese plant**. A sensor of two to three magnetic field sensors underneath the vehicle detects the magnetic tape and uses it to control the steering motor. This drives and steers the vehicle in conjunction with embedded RFID transponders and a real-time WLAN positioning system along the specified paths to the relevant areas. Contacts embedded in the floor control automatic battery charging as soon as a vehicle is not in constant use.

By means of rollable platforms, the containers and racks to be transported are moved from A to B via a "piggyback". The required components move from the central supermarket to the transfer areas in production, or to the finished components from production to the transfer area for surface coating. "Our goal was to eliminate the risk of accidents in the narrow and sometimes confusing driveways and production areas. The use of vehicles equipped with highly sensitive safety devices in combination with following pre-programmed routes significantly increases the safety of our employees. Other major benefits are the increased standardization of processes, equipment, layouts, and the visible improvement of our 5S* efforts," explains Gonçalo Rios, Logistics Engineering Internal Flow Analyst from Portugal.

In **Attendorn/Germany**, SLAM will be used for automated material transport in the future. Here, a laser scanner integrated in the vehicle continuously determines its position by recording its surroundings in three dimensions. By matching it with the virtually stored plant layout, the shuttle steers along its predefined route. Depending on the identified position, activities such as lifting, lowering, accelerating, or braking are triggered. In this way, containers with finished material and empties are transported from or to specified transfer areas in production and shipping.

"With the introduction of AGVs, we are now implementing pull-controlled container movements according to demand, and visibly driving standardization and 5S optimizations in the production environment," says Jens Schöttler, responsible logistics manager at the site. The automation of repetitive goods flow processes also leads to a reduction in product contact and damage.

Further projects to increase the efficiency of the internal material flow have already been nominated for implementation. In the future, KIRCHHOFF Automotive will also deploy, among other things, swarm intelligence-controlled and automated low-lift trucks with the integration of production systems at further locations.

In order to further advance digital networking towards a "SMART Factory", local and international KIRCHHOFF Automotive teams are working intensively together on integration, and linking into the transport order and transport management of our global SAP Warehouse Management. As such, we find the motto, "The right part, at the right time, (automated) at the right place," fitting. ■

AUTHOR: HUGO FERREIRA
GLOBAL VICE PRESIDENT PRODUCTION SYSTEMS KIRCHHOFF AUTOMOTIVE

Shop floor management meetings are held every morning in all KIRCHHOFF Automotive plants, where the most important production figures are automatically displayed on large monitors and analysed together.



Digital Shop Floor Management in Use Worldwide

Since summer 2021, our plants in North America are also "Qlik "ing each other through digital shop floor management (SFM) meetings at plant manager level. "Qlik "Sense is thus available company-wide. This so-called self-service business intelligence tool provides various production key figures for the specific user requests and is thus an essential module of the digital transformation in production.

In a specific use case, the most important production key figures are automatically prepared for the daily shop-floor management meetings. QlikSense retrieves data from all our standardised reporting systems (ERP, MES, SAP, etc.) and determines correlations between the data points. All project managers at different hierarchical levels can access these key figures and thus make decisions more easily. "Evaluations that previously had to be carried out in a time-consuming manner via SAP are now literally available with just one 'Qlik'. Thanks to its ease of use, Qlik Sense is also quick to learn for any user," says Deepak Prasher, plant manager in Aurora/Canada.

The meeting areas for our SFM meetings are very similar in all plants: They are comprised of a standardized set of boards that team members so far had to fill out manually prior to the start of the meeting. Since the beginning of the year we have been rolling out a new digital format for the SFM meetings, and as of June, there are more and more KANA plants benefitting from this solution. All of the information that needs to be presented during the meeting is digitized and automatically available and clearly formatted on screens.

The corporate departmental owners have collaborated with our business intelligence team to create standardized reports within the system which will quickly allow plant team members to see their top ten issues and the impact the issues may have caused. For example by pulling data from our MES system the report lays out the top ten problematic machines by breakdown cause. As the team goes through the machines one by one we can see the time trends which will show us any correlation between the downtime causes and visualize any negative trends that need to be addressed.

The initiative to digitize our Shop Floor Management was first triggered by the COVID-19 pandemic and accompanying constraints of personal meetings. It has now become the standard way also for physical meetings. The teams are able to collaborate more closely again while adhering to social distancing. ■



What means QlikSense?

QlikSense is a so-called self-service business intelligence tool and an essential building block of the digital transformation. It allows data from different sources (such as SAP, HYDRA, etc.) to be merged and analysed. Self-service means that with QlikSense, the business department can independently create logics and diagrams. Our IT team can thus concentrate on the efficient and uniform provision of the data and supports the department in the creation.

AUTHORS:
 STEFAN SENFTLEBEN – MANAGER SERVICE ADVICE & SPARE PARTS
 LOTHAR GIESE – HEAD OF IT APPLICATIONS
 PATRICK LEBRECHT – IT INFRASTRUCTURE MANAGER ZÖLLER-KIPPER

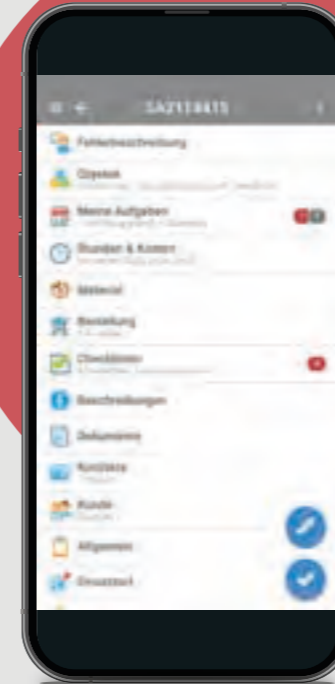
"Handyman": all service orders at a glance with one click

Until now, there was no uniform ordermanagement at the individual ZÖLLER-KIPPER locations which is why a more efficient process management needed to be realised. With the new "Handyman" software and its applications "Handyman Office" and "Handyman Mobile", the order overview and processing is easier and more transparent. An integrated app for the service technician guarantees a continuous service management process.

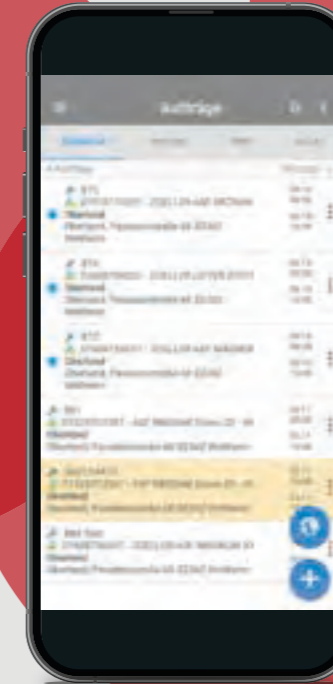


Service technician Laurin Weber controlling the checklist displayed by "Handyman Mobile" at ZÖLLER-KIPPER's main plant in Mainz.

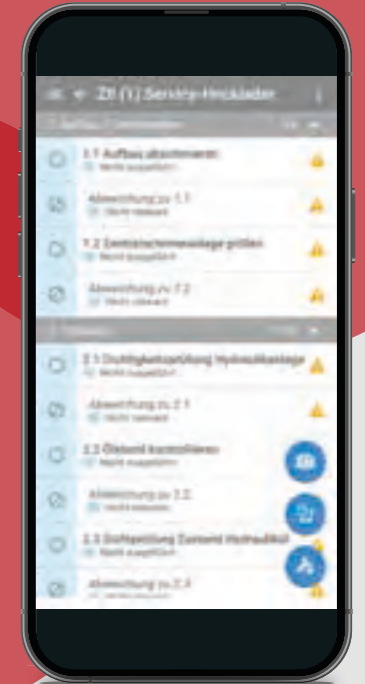
When it came to selecting a suitable provider, ZÖLLER-KIPPER opted for the GS Group, an international provider of service order management software. This is because the digital solutions offered for service management are characterised by direct integration into ZÖLLER-KIPPER's existing ERP system.



Main menu of "Handyman Mobile"



Order overview in the "Handyman Mobile" app



Checklist in the "Handyman Mobile" app

The goal was to find software support that would allow smooth interaction with the existing ERP system and, in times of increasing networking, illustrate the growing complexity of the IT infrastructure in a way that everyone could understand. The challenges were to standardise, automate and control the processes and to increase the quality of service and documentation. One of the most important criteria in the selection of the software was that integration into existing and future IT systems of KIRCHHOFF Ecotec is guaranteed and can be implemented in other companies.

The result is a comprehensive tool whose "Handyman Office" application offers a variety of functions for the office staff and order processing. For example, at the touch of a button, they can get an overview of all current orders according to different priorities or access evaluations in the form of visually appealing reports. In addition, "Handyman" clearly displays extensive details of all orders. All information

from the responsible salesperson to the service item and its ordertype to the delivery and billing address is bundled in one central location.

The heart of the new system, however, is the smartphone app "Handyman Mobile", which can also be used offline. The service technician has access to all the necessary information required for standardisation in service and quality assurance. The checklist function and material recording are particularly useful.

The optimisation of the previous service landscape and the harmonisation of structures brings many advantages. For example, the administrative effort in order processing and paper consumption are minimised. Order data is automatically updated and, for instance, supplemented with images of UVV (accident prevention regulations) inspections. This increases efficiency and productivity and enables complete and uniform documentation as well as fast and correct invoicing. ■

INTERVIEW: NICOLE KREBS
MARKETING ASSISTANT OF MANAGEMENT
KIRCHHOFF ECOTEC

Equality Means Togetherness

Stereotypes—they are everywhere. However, they should have no relevance because they hinder us when it comes to equality. What opportunities can equality offer? What makes it more difficult? We talked about this with Matilda Heidorn, Project Manager Hydrogen & Infrastructure at FAUN Umwelttechnik GmbH & Co. KG, in Osterholz-Scharmbeck.

Nicole Krebs: Matilda, after your business administration studies, you focused on various areas in your jobs: brand support, process management, sales training, and strategic purchasing. Then, in July 2019, you started at FAUN as assistant to the CEO, Patrick Hermanspann. Since July 2021, you are now project manager for the "Hydrogen & Infrastructure" division. What are your tasks and are there any new challenges for you?

Matilda Heidorn: As assistant to the CEO, I was also responsible for coordinating internal projects in addition to administrative tasks. The first challenge for me was entering the "hydrogen world" just under a year ago. In my new role, I was responsible for initiating projects such as IPCEI, a major European funding project, and for business development, especially

concerning the question of how to increase our truck production in synchronization with the expansion of the refueling infrastructure. As such, I am in contact with many partners and contribute constant efforts at FAUN.

Nicole Krebs: Did you know what to expect at FAUN?

Matilda Heidorn: Actually, I knew from my previous job that as an assistant you get an all-round view of many areas. In the interview with Patrick Hermanspann, it was already clear to me that FAUN is an innovative company that wants to make a lasting difference and stays up-to-date in its industry. Additionally, there are flat hierarchies and short decision-making paths. I knew then that I would enjoy helping shape things here.



Matilda Heidorn

Nicole Krebs: Equality, in terms of gender, age, nationality, sexuality, social background, etc., is becoming increasingly important. In this country, the focus is shifting to women. Have you had any experiences with stereotypes or discrimination in the professional world?

Matilda Heidorn: Yes, I have, much like almost every woman. Here is the most defining example for me: I was in a group call, where one participant doubted the role of female project participants. In his opinion, we were rather born for general housework. I was stunned. I was even more shocked when the participant's supervisor commented that she had to listen to much worse things during her studies in mechanical engineering, and not to make such a fuss. I found that very frustrating. I didn't have any experiences like that at FAUN. Actually, and this should

always be a given, but at FAUN I always felt that the professional competence I had developed was taken seriously. However, it is also a fact that the teams at FAUN and in the hydrogen industry are predominantly male.

Nicole Krebs: In your opinion, how should you deal with situations like the one you described?

Matilda Heidorn: Address them openly and don't be afraid to create awareness.

Nicole Krebs: Is creating awareness the first step to change for you? »



Matilda Heidorn at the ITS World Congress 2021

Matilda Heidorn: Yes, I think an open approach is important to positively changing a company's culture, especially in terms of gender equality. The mindset still has to change, and this applies to all genders. For me, in terms of equality, it should never be a case of working against each other, but always with each other.

Nicole Krebs: In Germany, who or what do you think could use an improvement in gender equality to make a difference: companies, the state, or society?

Matilda Heidorn: I think it's a mutual effort of all of them. First of all, you should look at what you can change in your own sphere of influence. Don't wait until something is regulated by laws, for example. Companies can act as role models: create equal basic conditions within their capabilities. The increased number of women in management positions represents this movement's growing potential. We can act as role models for the next generations. When I read business magazines, I find it inspiring when I discover female role models there. In this way, companies can successively shape the path to equality within the organization, and deal openly with the issue of family planning.

Nicole Krebs: It's a difficult topic because employers aren't allowed to ask about it openly.

Matilda Heidorn: That's correct. In my opinion, it's not necessary as a preventive measure (like when hiring, for instance). There is one fundamental physiological difference between the sexes: only women can bear children. However, the parents can take on the subsequent care and upbringing equally. Parental leave, especially for fathers, should be valued

in companies as something positive that contributes to advancing equality. It needs to become more than a phenomenon, and evolve into an active and normal practice.

Nicole Krebs: Do you know a positive example of how a company has dealt with this sensitive issue?

Matilda Heidorn: Yes, from my circle of acquaintances. An employer, together with a friend, worked out a 30-month roadmap for her transition to and from parental leave. That gave both parties security and shows appreciation. I think this openness and talking to each other is important.

Nicole Krebs: What other suggestions do you have with regard to employee equality?

Matilda Heidorn: Value the work of all employees equally and be mindful of stereotypes. Women should be able to pursue technical professions, and conversely, men should be able to pursue what are typically considered "female" professions. I think companies should encourage women, and women deserve to have conviction and courage to apply for their dream job, even if the challenge feels daunting at times. For example, a company can make job postings gender inclusive, in terms of content and design.

Nicole Krebs: What would you wish for?

Matilda Heidorn: I wish that women didn't have to "be man enough" to be successful at their jobs. I would like to openly make my contribution to equality and create awareness that diversity is something positive. I hope that it becomes a norm to always talk openly with each other and recognize the potentials of equality.

Nicole Krebs: Matilda, thank you for the interview. ■

ONE OF US



” MUCH MORE THAN JUST MUSCLE POWER

"This is not a profession for a woman," and "You are too small for this job." Statements like this at the beginning of Zarah Camin's training as an industrial mechanic caused some initial doubt her career choice. Nevertheless, she did not let herself be dissuaded from taking this path. Now, she has been employed as a mechatronics technician at FAUN in Osterholz-Scharmbeck for over three years. The open and collegial working atmosphere there is good for her, and she shared some advice for other women: **"Don't be discouraged to realise your dreams in your professional life!"**

Diverse Teams for Better Outcomes

Miriam Mertens, CEO and founder of DeepSkill, is a consultant for human-centric leadership and highlights that diversity is a great driver for performance in organizations. Studies have shown, that diverse teams generate up to 19% more revenues compared to homogenous teams (BCG study, 2019) and 15% more profit compared to their industry average (McKinsey study, 2015). Diversity has many forms; such as gender, age or different social or ethnic backgrounds.

AUTHOR: LISA KITTERER
GLOBAL EMPLOYEE DEVELOPMENT MANAGER KIRCHHOFF AUTOMOTIVE

There is no doubt that the automotive industry is a male-dominated environment. In a study by Deloitte in 2020, conducted across the globe, it was confirmed that although women make up half of the workforce overall, they only make up 24% of the workforce in automotive. This significantly decreases the pool of women for leadership or expert positions, and leads to an uneven gender distribution across teams in general.

To get deeper insights into this topic from a gender perspective, Lisa Kitterer, Global Employee Development Manager, spoke with Miriam Mertens CEO of DeepSkill as well as three leaders within our organization: Wen Leyendecker (Managing Director in China), Erika Montiel (Plant Manager Atlanta/USA) as well as Armin Berthold (Executive Vice President Manufacturing Engineering) who is the responsible for a predominantly technical department of our company and recruited one of our first female foremen in Germany. ▶



"We need to be both inclusive and competitive in some situations. It's the mix and the ability to adapt your behaviour to the target group and the situation—that's what makes excellent leadership, not whether you're male or female."

Miriam Mertens
Founder of DeepSkill, a consultancy for human-centric leadership

Lisa: Wen, you have been leading our organization in China for many years now. What is your experience as a woman within the automotive industry?

Wen: You know the way you ask that question is interesting. To me it is not about me being a woman. For me what really matters is that you do a great job as a person and that you are passionate about what you do—independent of being a man or woman. Many companies in our area here [China] have women in leadership positions.

Lisa: So is it fair to say that the discussion on women in leadership positions is not as current in China as it is for us in Germany—where we have also a lot of discussions on gender roles and e.g. the difficulty of balancing a family and a career?

Wen: Absolutely. I think that the emancipation is probably further ahead here in China. There are obviously many cultural influences and this has changed within the last decades. To give just one example: even what might be perceived as a struggle in terms of work-life-balance in your case in Germany, here in China we often live together with several generations. This has the benefit for women being able to focus on their jobs while grandparents support with childcare. But again that is just one example.

Overall I personally never felt not accepted in my career just because I am a woman.

Lisa: Erika, you have been in different leadership positions in both Mexico and the US. What are your experiences?

Erika: Let me first of all support Wen's comment on being yourself. As long as you are confident and passionate about what you do, you can be successful. From my studies until today, I have always been the minority as a woman. But we should not be intimidated by that fact. I also have a technical background and feel comfortable making decisions in the same way my male colleagues would.

However, coming to your question, I do see differences here in the United States and also in Mexico compared to what Wen experiences. Especially in the automotive industry, it is not common to have women in leadership positions. I guess the industry is perceived as male-dominated for the obvious reasons of the sheer % of males within the workforce. It is for sure a very competitive environment. But again, I



"For me, it's important that you do a good job as a person and that you are passionate about what you do—regardless of whether you are a man or a woman."

Wen Leyendecker
Managing Director at KIRCHHOFF Automotive in China



feel women do not need to shy away from a career in automotive—maybe we need to work on promoting our industry a little bit better again.

Lisa: Miriam, you are an expert in the field of diversity and consult companies from different industries. Research suggests that diverse teams lead to better outcomes. What is your experience with that?

Miriam: The biggest challenge is in my point of view, that too many people in power still have not yet realized how critical it is for their organizations to change from being homogenous to diverse teams. Therefore, they are not putting emphasis to give away power and "tradition" in order to become more diverse. To become more diverse is often uncomfortable in the beginning, but it pays off in the long run.

Why is diversity so important for businesses? In our extremely complex, fast changing business world, there are almost no more "standard solutions", just because there are no "standard problems" anymore. Therefore, we need very different, heterogeneous ways of approaching problems to find the best solutions—and therefore we need people of different background, different gender, different race, age etc.

Above all these measurable reasons: It is much more fun to work in diverse teams—and it is in my opinion our responsibility as a society to include everybody in value creation!

Wen: It is not just about the percentage of women and men—diversity has many forms. In the end what matters is that you combine different perspectives and strengths within a team. I believe diverse teams have a positive impact on problem-solving.

Erika: You might have more discussions because of different perspectives; it is healthy to not jump to a conclusion too quickly and see what others have to say.

Lisa: Armin, you are responsible for a very technical area—Manufacturing Engineering. What are your experiences with diverse teams and gender distribution amongst them?

Armin: When you have the chance to include different perspectives, the solution in the end you are offering to the organization, gains more acceptance—because you ultimately make sure that more interests are met. I feel we are responsible in our leadership positions to create exactly that kind of culture where everyone has a voice and feels appreciated.

If I personally see for example that I have very capable women on my team, who might shy away from giving their opinion because men dominate the discussion, then I would try to coach them to become more confident. I let them know how much I value their opinion and that it is important for us as a team, and our results, for them to have just as much of a say as their male counterparts. ▶

"It's about valuing the individual. If you try too hard to fit in, you lose your authenticity and end up neither happy nor successful."

Erika Montiel
Plant Manager Atlanta (USA)





“It has always been important to me to create an environment where girls also get the chance to try craft activities and spark their interest in technology. Breaking these patterns in society is the first step, which then influences our corporate culture.”

Armin Berthold
Executive Vice President Manufacturing Engineering

Lisa: ... and what do you feel is necessary to support and get more Women in technical careers?

Armin: You know for me it really starts by the perspective we have as a society on gender specific stereotypes. As a dad of two daughters I have always made sure to expose them to activities that are—at least according to what most people think—not necessarily “girl-like”. Creating an environment where also girls get the chance to try handicraft activities and to spark their interest in technology was always important to me. To break those patterns in society is the first step which then influences our company culture as well.

This only works however, if my personal believe in a gender-neutral culture is genuine. If I see potential in a women for a leadership or expert position, I make sure to support her along the way and in the end, hopefully those positive examples will motivate more women to strive for a career in technical areas as well.

Lisa: I would like to come back to everyone’s comments on being authentic. Is that maybe one key aspect women in male dominated industries should focus on? Do we try to adapt too much to the male-way of doing things?

Wen: I would always argue that you should try to stay as you are. When you are committed to your job, work hard and show that people can trust you and also your business outcome, then it should not matter whether you are male or female and in which industry you work. In China we have a saying that would translate to something like “Gold shines—sooner or later”—meaning in that context: People will see when you work hard eventually and respect you for that.

Erika: It is about appreciating the individual. If you try too hard to fit in, you lose your authenticity and will not be happy nor successful in the end.

Miriam: Women in general—this is very stereotypical to say—have on average a different leadership style than men. On average they tend to be more inclusive and less competitive. But as I said, these are tendencies on average, and that doesn’t help at all in judging an individual male or female leader. Women might tend to be more empathic leaders and have stronger emotional skills than men—but again this is very much dependent on their background, experiences, cultural context.

What is much more important: For excellent leadership we need analytical, more left brain part competencies, as well as emotional, creative, more right brain part competencies. We need to be inclusive as well as competitive in some situations. It’s the mix and the ability to adapt your own behavior towards your target group and situation—that’s what makes excellent leadership, not the question, if you are male or female.

Lisa: Thanks everyone for your time and sharing your perspectives with us. I truly appreciate your input on that topic. ■



There is a disconnect between women and men when it comes to factors that most contribute to a lack of diversity in leadership positions, particularly the perception of Industry bias toward men.

Factors that generally contribute most to a lack of diversity in leadership positions.



Note: Data reflects survey respondents who feel that minorities are underrepresented within their company’s leadership team (Q32). Q31. In your opinion, what factors generally contribute most to a lack of diversity in leadership positions? (Please select all that apply) Sample size: n=Men (203), Women (109). Source: Deloitte Study 2020

New products on the road

AUTHORS: SABINE BOEHLE
COMMUNICATION & MARKETING MANAGER,
VANESSA WILKNIB
MANAGER INSIDE SALES / ASSISTANT TO VP SALES

KIRCHHOFF Automotive offers body solutions that make tomorrow's mobility safe. Innovative and economical lightweight products ensure that people are optimally protected in the event of an accident. Our focus is on the further development and continuous optimisation of crash-relevant lightweight assemblies for combustion and electric vehicles. ▶



BMW i20 Front end & front crash management system

Technologies Frontend

forming of aluminum sheet and aluminum profiles, milling and heat treatment of aluminum profiles, assembly of fasteners.

Technologies CMS front

forming of high-strength steel, laser cutting, laser & MAG welding, pickling, automated assembly of adjusting elements and protective caps, e-coating

Production plants

Front end: Gliwice / Poland
CMS front end: Iserlohn / Germany

Capacity/year

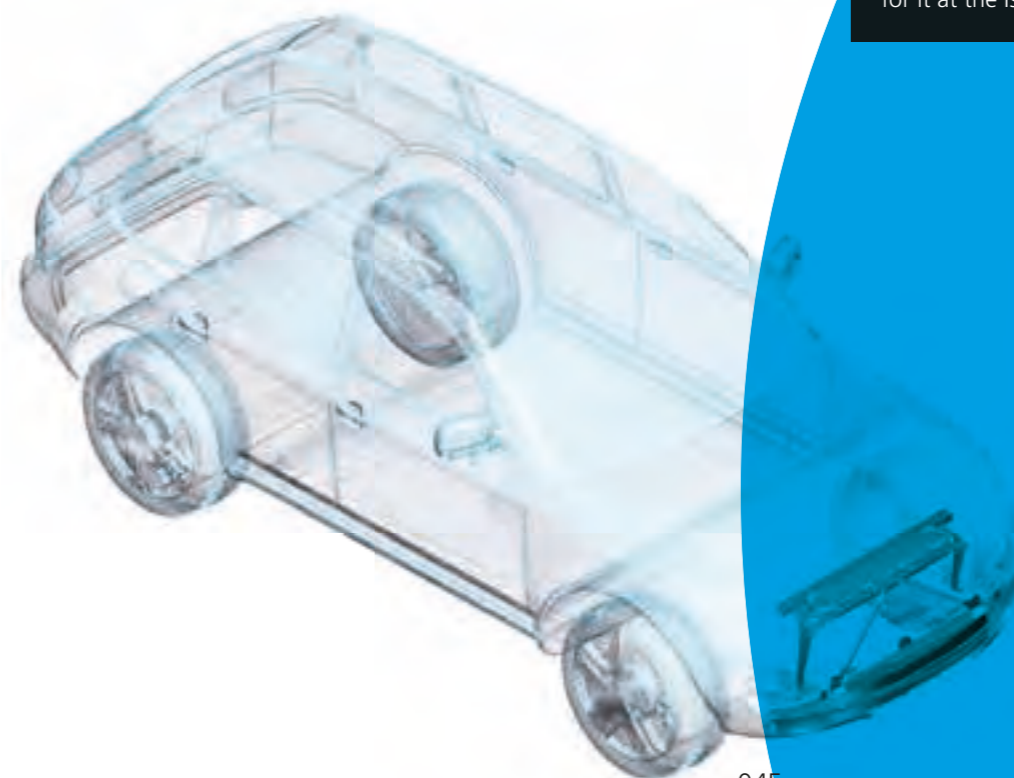
62,796

Customer/model

BMW i20

Hybrid Joining Concept Ensures Passenger Protection

The **BMW SUV iX** stands on its own platform and is designed for pure BEVs (Battery Electric Vehicles). E-vehicles lack the large engine block of a combustion engine and the front is often shortened. The absence of the internal combustion engine, which takes up a large portion of the engine compartment and weighs significantly more than an electric motor, has changed the force inputs and distributions in a crash. Without body modifications, the consequences of a collision can be dramatic. For the BMW iX (i20) electric SUV, we have developed a crash management system (CMS) that compensates for these changed tree space conditions as much as possible, therefore ensuring optimal passenger protection. Read more about this new development and the equipment installed for it at the Iserlohn plant on pages 50-52.





VW MEB platform underrun protection

Technologies

Forming, washing, laser welding

Production plants

Iserlohn / Germany

Capacity/year

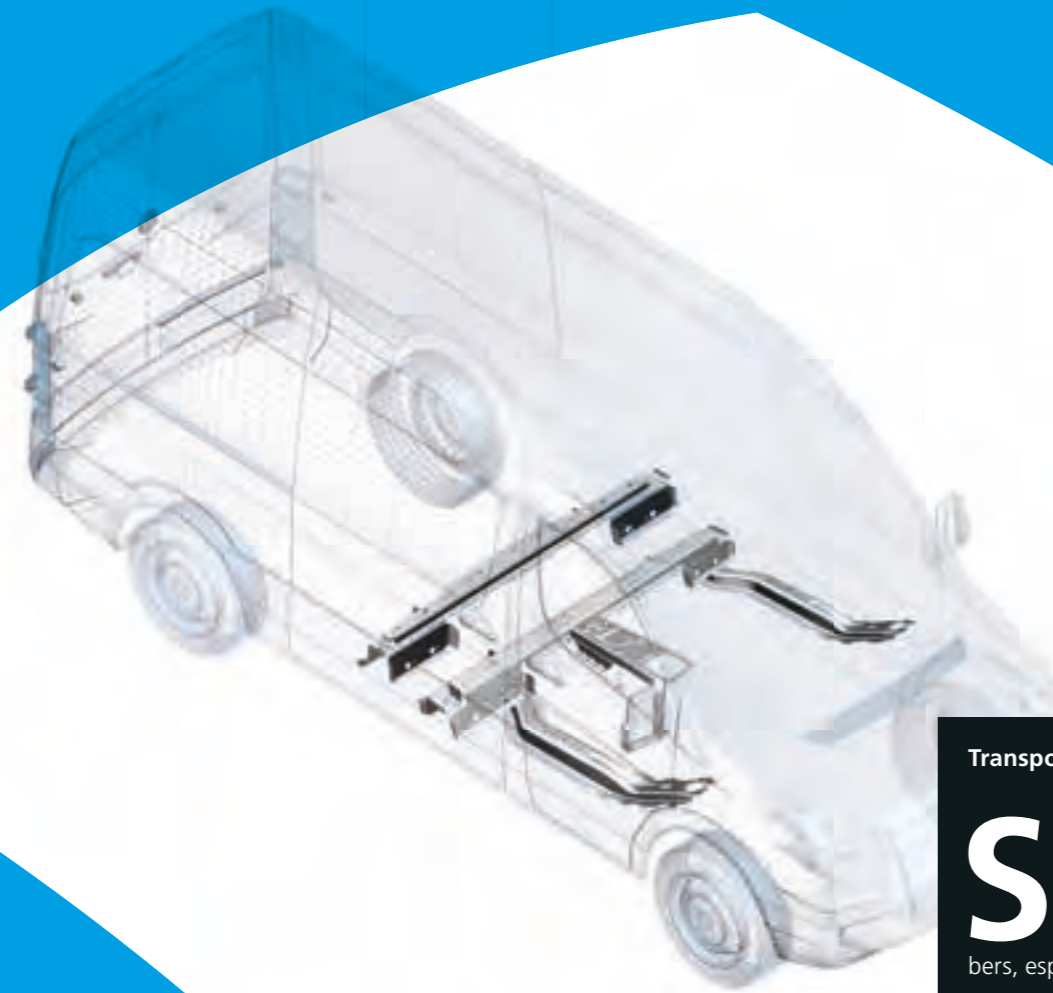
450,000

Customer/model

Škoda Enyaq / VW MEB platform

Development Activities Intensified

Alongside our customers, we continue to move in the direction of e-mobility. For several years now, we have intensified our development activities in regards to the special requirements of e-vehicles, and in particular, battery housings. Now, with the underrun protection, we will deliver the first component of this product range in series production. The laser-welded assembly is manufactured in three sizes from five or seven individual aluminum components. At our Iserlohn, Germany site we have invested in an automated blank unloading system, a washing system to prepare the aluminum for the further welding process, and a highly automated laser welding and container loading line. The finished underrun protection, together with the other parts assembled in the component plants of Volkswagen and Škoda's in-house production in Braunschweig, Germany and Mladá Boleslav, Czech Republic, ultimately forms the entire battery module. This is then installed in the vehicle range of the MEB platform across all brands throughout the group. Currently, these are the **VW ID.3** and **ID.4** vehicles, soon the **ID.5**, the **Škoda Enyaq** and **Enyaq Coupé**, the **Audi Q4 e-tron** and **Q4 Sportback**, and the **Born** from the Seat offshoot Cupra. Read more about the new automated one-piece-flow production concept for the underrun protection, at the Iserlohn site in Germany, on pages 54-55.



Transporter Models with Electric Drive

Stellantis is now launching an electric version of its very successful van models. We supply the tunnel as well as the longitudinal and cross members, especially for the electric variant.

Since June 2021, customers have also been able to choose an electric variant for the van segment, in addition to the traditional powertrains; the **Citroën Berlingo**, **Peugeot Partner**, and **Opel Combo** models are now also available with battery drive. For component production we use Tailored Welded Blanks, which we form on the hot forming line at our plant in Ovar, Portugal. Tailored welded blanks are tailored blanks typically welded together from different material grades and sheet thicknesses. This is advantageous because they achieve a particularly high degree of material utilization which optimizes component weight. Finally, the components are assembled on a spot-welding robot cell.



Citroën eBerlingo, eCombo, ePartner— side member, cross member, tunnel

Technologies

Hot forming of TWB blanks, lasers, spot welding

Production plants

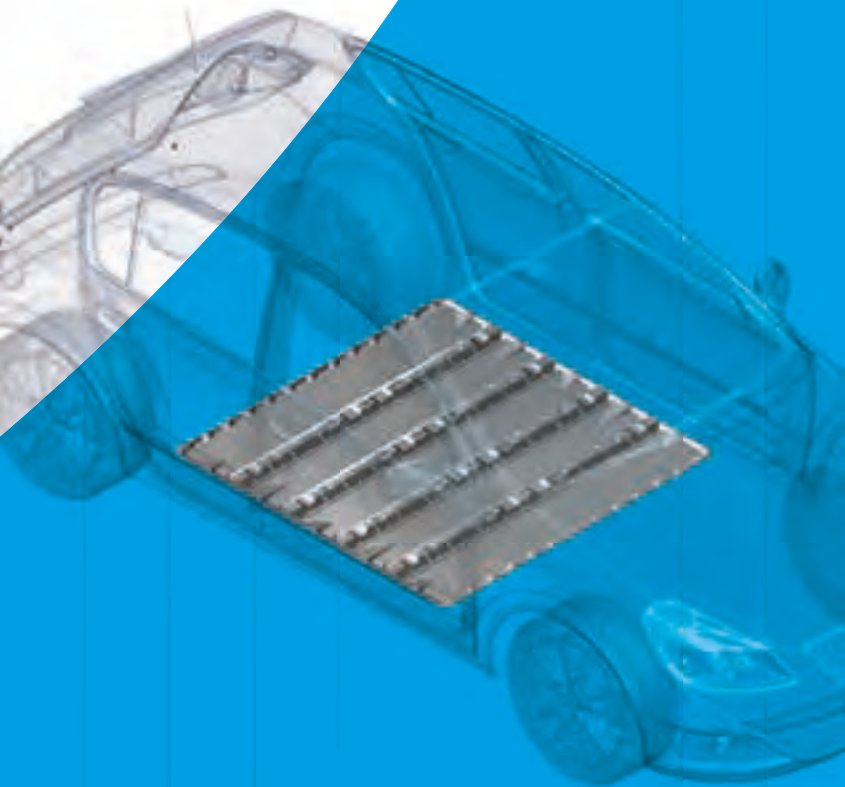
Ovar / Portugal

Capacity/year

13,455

Customer/model

Citroën eBerlingo, eCombo, ePartner (eK9)





VW T7 Multivan—Side members, seat cross members, roof frame and door pillar structures, impact beams, hinge reinforcements

Technologies

(hot) forming, welding

Production plants

Mielec, Gliwice / Poland; Attendorn / Germany

Capacity/year

77,000

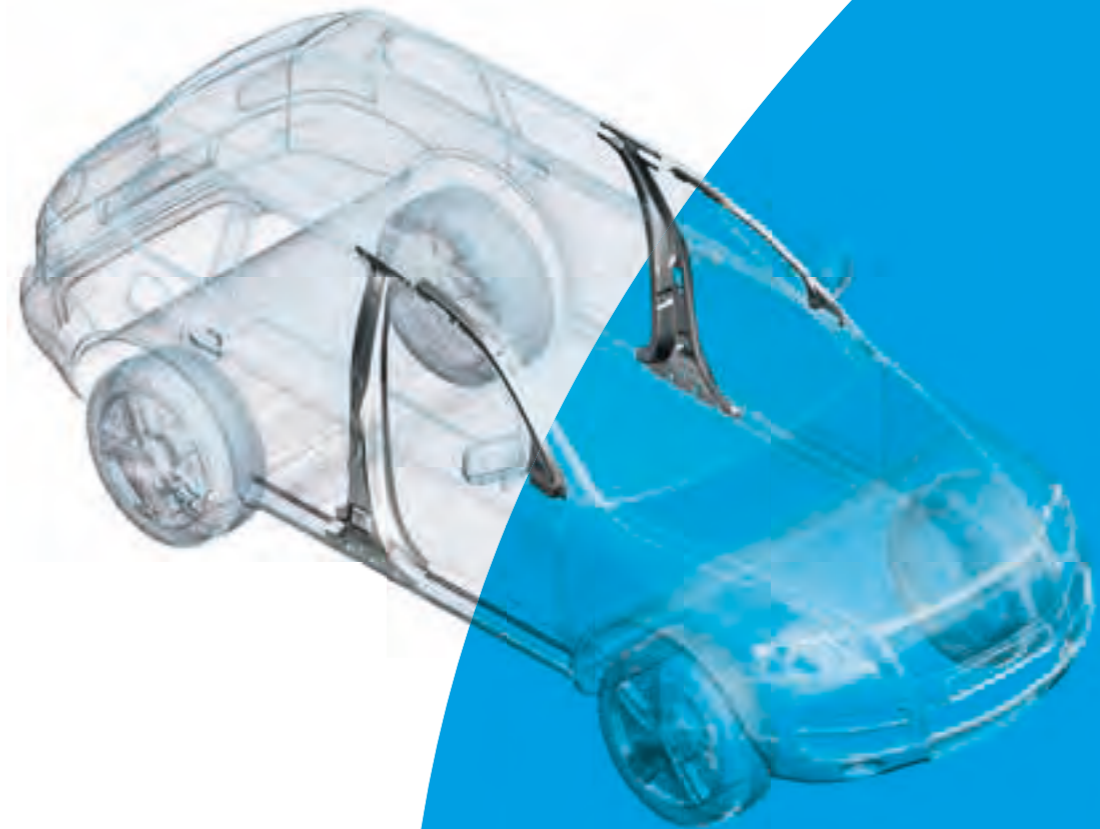
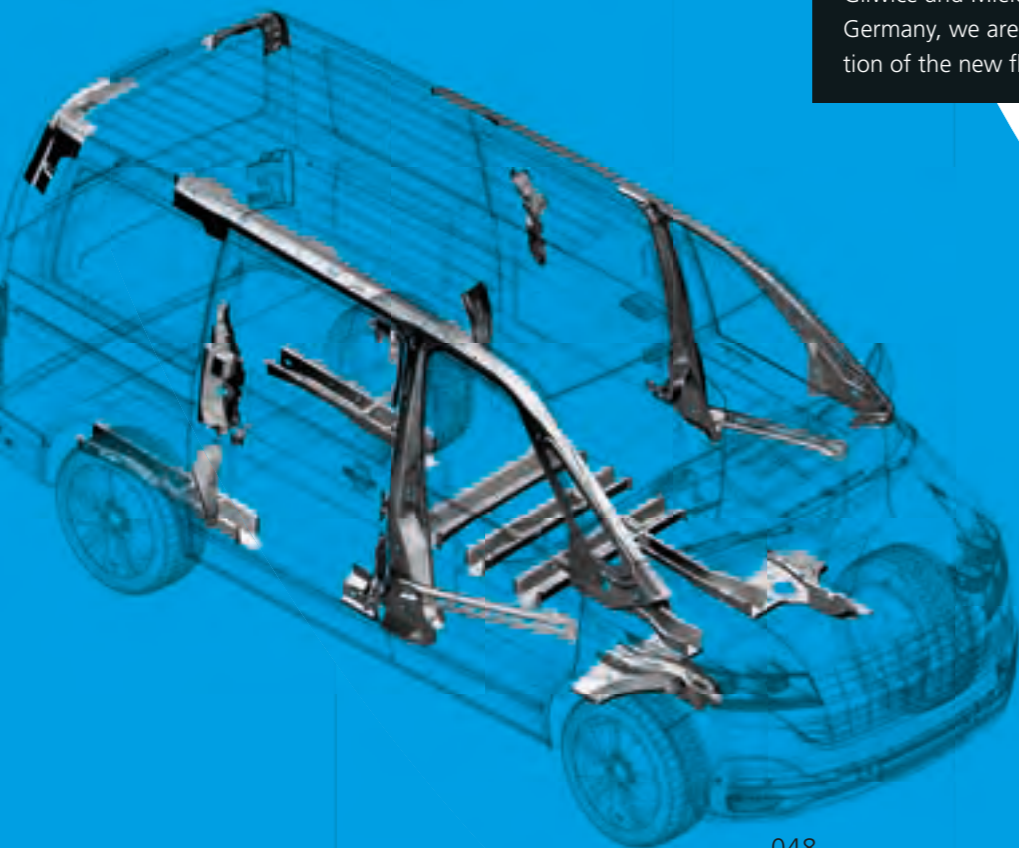
Customer/model

VW Multivan

The "Bulli" is a Cult

Whether it's a vehicle for families and individuals, a reliable daily companion for trade and logistics, or a "California" camping bus for travel and leisure fans, the **Multivan** is as much of a part of Volkswagen commercial vehicles' DNA and Hanover, Germany, as is Bahlsen cookies or Continental tires.

Now in its seventh generation (hence the internal type designation "T7"), the vehicle—initially only as a Multivan—was presented at this year's IAA. For us, "the T" has also been a familiar name in our product portfolio for many years. With the T7, we are continuing this success story. The range of parts is growing considerably. With a total of 15 hot-formed and 17 cold-formed components from our plants in Gliwice and Mielec in Poland, and Attendorn in Germany, we are contributing a significant portion of the new floor and body structure.



Kia Sportage (NQ5e)—A-and B-Pillar

Technologies

hot forming, forming, laser cutting, projection welding

Production plants

Gliwice / Poland

Capacity/year

174,000

Customer/model

Kia Sportage (NQ5e)

First Hot Formed Parts for Kia

The new **Kia Sportage** is a compact SUV that is offered as a PHEV (Plug-In Hybrid Electric Vehicle) variant as well as with diesel and hybrid drive (HEV). The fifth generation Sportage is based on the same platform as its new corporate brother, the Hyundai Tucson. In contrast to the spacious long-wheelbase version presented in Korea, a shorter, coupe-like model variant has been developed for the European market. The A- and B-pillars are the first hot formed components to be produced for Kia. The pillars, which will be hot formed on the hot forming line in Gliwice / Poland, will make a major contribution to the stability and crash safety of the body of the new Sportage in the future. Over the next six years, around 174,000 pillars will be produced there each year. These will be supplied to SUNGWOO HITECH s.r.o., in Ostrava, Czech Republic, where they will be installed in the complete side panels of the car for Kia.



Optimally Designed for E-Mobility

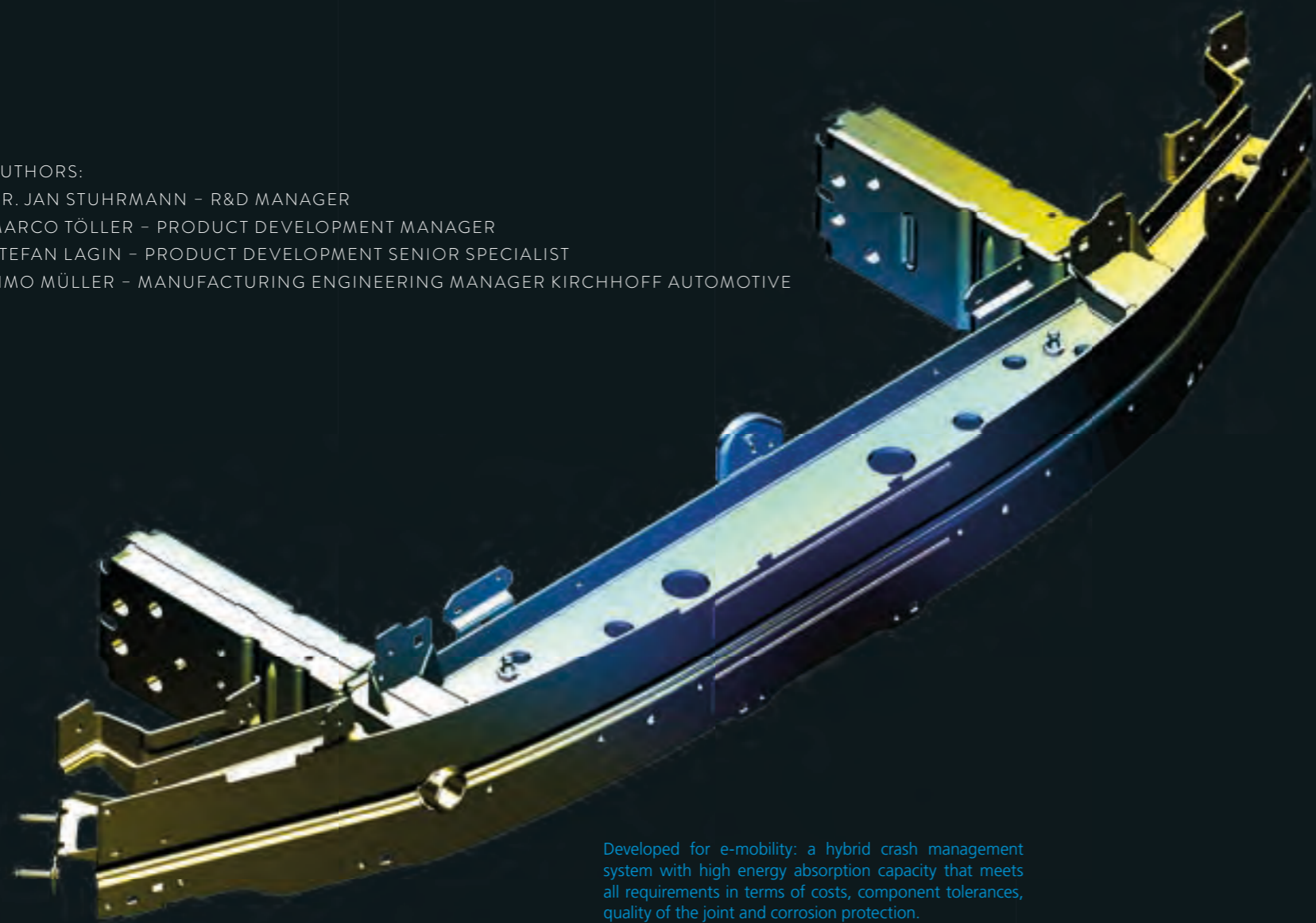
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STEFAN LAGIN – PRODUCT DEVELOPMENT SENIOR SPECIALIST

TIMO MÜLLER – MANUFACTURING ENGINEERING MANAGER KIRCHHOFF AUTOMOTIVE



Developed for e-mobility: a hybrid crash management system with high energy absorption capacity that meets all requirements in terms of costs, component tolerances, quality of the joint and corrosion protection.

E-vehicles lack the large engine block of the combustion engine, and the front is often shortened. Without an adaptation of the body, the consequences of a collision can be dramatic. For the BMW iX (i20) electric SUV, KIRCHHOFF Automotive has developed a crash management system (CMS) that compensates for these changed construction space conditions as much as possible, thus ensuring optimal occupant protection.

New development: Crash Management System with large energy absorption capacity in pile crash

The CMS developed by KIRCHHOFF Automotive weighs 26 kg and meets these changed requirements primarily through a novel crossmember design. In this concept, the crossmember is constructed from two horizontal webs, and a front and rear cover plate. This differs from the typical completion with a deep-drawn hat-shaped crossmember and a strike plate. For the high central load resulting from the high-speed crash requirement, high-strength steels with material thicknesses of 2 to 6 mm are formed; these are partly laser-cut, and laser or MAG welded. Only through this interaction can the crash boxes absorb energy in the smallest possible way through the well-known effect of wrinkle buckling, even in the case of central impact.

Due to the large material thickness of up to 6 mm and the 6 m weld seam required for the built-up crossmember alone, this concept could only be suitably implemented for series production by using the laser joining process (laser seam length 6146 mm, MAG seam length 4255 mm).

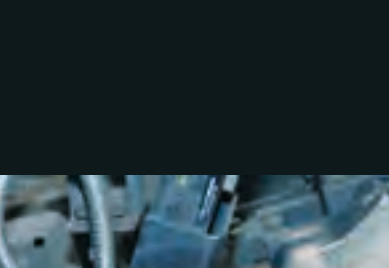
Hybrid Joining Concept

In developing the crash management system, we relied on a hybrid joining concept. The combination of MAG and laser welding processes meets all standards in terms of costs, component tolerances, joint quality, and corrosion protection.

The **MAG welding process** is particularly suitable at compensating for production-related component tolerances. It possesses better gap bridgeability and is a cost-effective joining process. A disadvantage, however, is the high heat input caused by the process, which can lead to high welding distortions, among other things. Therefore, the welds are generally only made in sections. For the crossmember, however, a continuous connection of the web plates to the cover plates is essential to guarantee the required high-strength and stiff component behavior under crash loads. ▶



top: New production line with fully automated process steps **module 1:** laser welding **module 2:** handling and fastener welding **module 3:** MAG welding and inline rework **module 4:** handling and discharge of the finished cross-member assembly **bottom:** Seam tracking sensor for exact positioning of the laser beam.



The **laser welding process** is very well suited for this purpose. Due to the combination of locally applied thermal energy and typically high welding speeds, only comparatively low welding distortions occur.

However, this process is better known for joining thin sheets that overlap. The laser beam welds through the upper sheet and produces a joint with only small joint widths in the contact area. In contrast, the present sheet thickness combination of 3 and 6 mm was welded in a "T-joint", in which the two joining partners are positioned perpendicular to each other. The strength of the joint can be adjusted to requirements by selecting suitable welding parameters. An additional seam tracking system ensures exact positioning of the laser beam. The "zero gap" in the joining plane that is required by the process to ensure high weld seam quality, is achieved by means of virtually burr-free laser-cut web plates. After crash tests on fully welded CMS, no failure was detected in the weld seam.

Fully Automatic: Laser Welding System for E-Vehicles

At the KIRCHHOFF Automotive plant in Iserlohn, Germany, series production for the front crash management system of the all-electric BMW i20 successfully started in July, 2021. A new complex production line was put into operation for this purpose. A special feature is that all process steps from laser welding to robot handling, fastener welding, MAG welding, marking, and ejection, are fully automated.

The laser welding technology is a novelty for the Iserlohn plant—it was newly introduced at this location. The manufacturing of the individual parts requires a high degree of accuracy and a corresponding pick-up concept for the joining process during laser welding. For example, the adjustment elements on the bumper are screwed in during a separate assembly operation. The adjusting elements are decisive for the joint pattern (gap dimensions) on the vehicle.

The central positioning of the production line in the plant enables logistical linkage to the milk run concept. This ensures the optimum flow of materials from the individual components to the finished painted crash management system.

For more information on the product, see page 45. ■

ONE OF US



” MUSIC IN THE BLOOD—

that's what Jeff Banks, Production Supervisor at our plant in Manchester, USA, has. He performed with his band Southern Moss at the Lynchburg Music Festival, whose main sponsor this year was KIRCHHOFF Automotive. The motto of the festival: music meets whiskey, because Lynchburg, Tennessee, is the home of the Jack Daniels distillery. With classic southern rock and some of their best hits, Jeff and his band got the crowd singing along. "Jeff's vocals are wonderful and his band has some great riffs," thinks Jeanne Short, internal HR officer at KIRCHHOFF Automotive in Manchester. **"We are proud to have such talent in Jeff at our plant."**

AUTHORS:
HOLGER FISCHER, TIMO MÜLLER, RON BIGELL,
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All in One Flow

Automated one-piece flow concept for manufacturing the underrun protection for the new Škoda Enyaq e-SUV



From washing to laser welding to packaging, our new aluminum underrun protection for battery housing of the VW MEB platform is created in Iserlohn, Germany in one (production) flow. To make this possible, our global manufacturing engineering team collaborated with the Iserlohn team to develop an appropriate lean layout. The result is a manufacturing concept of an automated one-piece flow process of approximately 1,000 m².



Together with the Iserlohn team, the global Manufacturing Engineering team developed an automated one-piece flow process; this process ensures the production of the underrun protection for the Škoda Enyaq in one flow. Among many others involved in the project, those responsible from Iserlohn were (from left to right): Ron Bigell (Manufacturing Engineer), Timo Müller, (Manufacturing Engineering Manager), Stefan Klör (Plant Manager, Welding and Surface Technology), and Holger Fischer from Attendorn (Manufacturing Engineering Manager, ME Center).

The heart of the welding line is the laser cells equipped with robots and laser sources. The special feature of the process is the laser head; it has multiple integrated functions such as seam search and gap monitoring. Therefore, it can adaptively control the welding process. The quality of the welded seams is inspected and evaluated online. The welding head can also work with the search and scan sensors independently. This has made it possible to reduce unproductive downtime. A total of three variants of the underrun protection are produced in the line.

Not only was it a challenge to use aluminum as a material for the first time, but the Iserlohn site was also tasked with the associated production processes of washing and laser welding, as well as the logistics for the material flow.

In order to produce blanks of this size (the largest type measures 1,345 x 1,861 mm and weighs approx. 17 kg) and to ensure the required speed at the forming press, an automatic stacking line was integrated. Another objective in the design of the destacking system was to handle the widest possible range of existing hotforming blanks with this system as well. Fluctuations in the component position are compensated by an integrated optical system. The components are stacked alternately on one of the two blank carts. This enables uninterrupted operation of the line.

Following the successful SOP (start of production) of a laser-welded crash-relevant bumper in July 2021, another laser-welded product for the e-mobility sector is now beginning a highly automated series production at the Iserlohn site.

Learn more about the aluminum underrun protection for the VW MEB platform on page 46. ■



KIRCHHOFF MOBIL 57

KIRCHHOFF AUTOMOTIVE



AUTHOR: CORINA MANDA
ASSISTANT TO THE PLANT MANAGER

„Ford Highway” — an important connection

After many years of waiting, work began this year on the motorway between Craiova and Pitești. This is good news because the new road will almost directly connect our two KIRCHHOFF Automotive plants in Romania. The motorway is to end very close to our plant in Căteasca, Argeș County. This will facilitate and speed up transport between our two plants, where we mostly produce products for our customer Ford.

Gabriel Porojan, Managing Director of KIRCHHOFF Automotive in Romania, explains: "At the beginning of next year, we will be able to drive on a 40 km section, and the entire motorway will be fully operational by the beginning of 2024. This motorway is very important for our plants because we will be able to cover the same distance in half the time. Moreover, the construction of the road will reduce our logistics costs and increase flexibility in resource planning between our plants in Craiova and Pitești".

The European Commission will contribute 726 million euros to the construction of Romania's 121km Craiova-Pitești motorway, an official statement said. The project, which is part of the Trans-European Transport Network, includes the construction of two lanes in each direction, ten connecting sections and 75 bridges, or crossings.

The new motorway will improve the traffic situation in the region. Currently, the average driving speed is below 60 km/h and the number of fatal accidents is 5.8 % higher than the Romanian average. The then significantly reduced travel time between Craiova and Pitești will reduce transport costs and increase the economic efficiency of the Romanian road network.

The Craiova - Pitești motorway is also known as the "Ford motorway". Ford benefits from the new fast connection; because currently the US car manufacturer produces two SUV models in Craiova, the EcoSport and the Puma, which are mainly sold in the European markets. The new high-speed route facilitates product deliveries from the Ford plant in Craiova to Western Europe and thus also secures the Ford plant location.

Diverting long-distance traffic along the motorway and out of urban areas will reduce congestion, pollution and accidents, and improve the quality of life for local residents. At the same time, it will promote the economic development of the region and improve access to jobs. ■



K-MOBIL 57

KIRCHHOFF MOBILITY



During planning, special emphasis was placed on a friendly and inviting ambience because "we want our customers to feel comfortable and happy to come."

The heart of the building is the bright and friendly workshop area. The halls offer enough space for FAUN employees to work on up to 20 vehicles simultaneously, and thus provide the best conditions for large orders in the future. There is also sufficient space for the after-sales area in the new large storage area.

KIRCHHOFF Mobility gives people with mobility impairments more freedom in their everyday lives, thanks to their conversions. With the new location, KIRCHHOFF Mobility also gains a bit more freedom and independence. Now, there is plenty of space for customer vehicles, customer service, and a bright, open workshop area with its own handover room – this provides a good basis for the new start in Austria under Managing Director Martin Sturzeis.

AE Robust is the third company under the common roof. AE Robust is responsible for the distribution of waste containers. It operates at a larger warehouse with corresponding office space at the site.

Similarly to how the KIRCHHOFF Group is managed, KIRCHHOFF Mobility and FAUN Austria now work together at the new location. The move into the newly constructed building not only facilitates communication, but also promotes possible synergy effects. Since the founding of FAUN Austria, both companies have discovered the advantages of mutual collaboration and can now further develop together. ■

As part of the KIRCHHOFF Group, both companies will eventually operate on a 10,000m² site, directly at the Stockerau Ost freeway exit just 30 km north of Vienna, and about 30 minutes by car from Vienna Airport.

Due to the pandemic, finding an ideal space and location, in addition to the actual construction phases, posed particular challenges. Nevertheless, the project was a success: Herbert Utz (FAUN Managing Director), Martin Sturzeis (Mobility Managing Director), and their teams were all the more pleased that the project could be completed without major delays and within the calculated budget.

FAUN Austria consists of a 14-member team and is responsible for the sales and service of FAUN refuse collection vehicles and sweepers, ASSMANN sewer cleaning vehicles, and ZÖLLER lifters in Austria, Hungary, and Slovenia.

Together Under One Roof

What was previously two separate addresses has now become a spacious, centrally located, and modern KIRCHHOFF Competence Center - the joint branch of FAUN Austria and KIRCHHOFF Mobility Austria.



ABOVE: The bright and spacious workshop halls offer FAUN employees enough space to work on up to 20 vehicles at a time. **LEFT:** New consulting and sales room at KIRCHHOFF Mobility. **RIGHT:** Large workshop area and plenty of space for customer vehicles such as the Caddy 5 with rear entry "ProLine".



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Facelift for Product Flyers

This summer we completely redesigned our homepage to make it more user-friendly. Following this online "facelift", our product documents now also appear in a new design with up-to-date content on our products, services, and conversion options.



The master layout, which we developed together with our external graphic designer, had to have the following qualities: clarity and compact design. As such, we designed brochures that address each of the individual product categories, such as "driving and operating aids" or "loading aids". Previously, there was a single flyer for each product, which meant a lot more paper and expenses.

Now, each product has found its place in their individual categories. These are listed in brochures with informative pictures and descriptions that are available in multiple languages, including German, French, and Italian. ■



ONE OF US

” REAR CONVERSIONS THAT MAKE YOU HAPPY

Thole Baumann has been with KIRCHHOFF Mobility in Bad Zwischenahn / Germany for 12 years as an automotive mechanic. Currently, he has been a workshop manager for several years. His specialty is in rear conversions. "I was involved in the development of a kit for the Caddy 5: Newly developed materials installed, tested, and technical adjustments made where necessary." The results of this line of work is something he is proud of: **"Experiencing the joy of people in wheelchairs who regain mobility through my work fills me with pride."**



AUTHOR:
ANIKA TEUBNER
 MARKETING WITTE TOOLS

¡Bienvenido de nuevo a México!
Welcome Back to Mexico!

WITTE TOOLS was guest at
 the Expo Nacional Ferretera
 (National Hardware Expo)



Alexander Hingst (left in picture) and Martha Sobek (right) with customers from Costa Rica.

Expo Nacional Ferretera (ENF) is considered Latin America's largest event for professionals and companies in the hardware, construction, and electrical industries. Last year, the manufacturer of high-quality screw driving tools, WITTE TOOLS, had to refrain from attending the trade fair due to the pandemic. Fortunately, for this year's 32nd ENF from September 9—11, 2021, two representatives were able to travel to Guadalajara, Mexico, with a small product selection of their specially crafted tools, which are made in Germany.

Having personal contact with potential new business partners is important to build trust. Trade fairs offer an optimal framework to develop working relationships while highlighting one's company and its products. Without events like these, an indispensable platform for exchange is missing.

Alexander Hingst (Head of Sales and Marketing) and Martha Sobek (Sales and Marketing, Latin America) experienced a completely new trade show concept. Rather than presenting via the usual stand in one of the halls, the concept unfolded as an elite program for establishing contacts. Similar to speed dating, this involved potential partners switching places to consider the possibilities of a shared future. Albeit less romantic, this concept of "matchmaking" proved to be very effective; during the fair, WITTE representatives proved to be interesting partners and were able to impress many Latin American prospects, establishing themselves as promising contacts.

There is no substitute for personal contact with customers and sales representatives. Pictured here with the owner of Ferreshop S.A. de C.V., Abel Villagrán Lores, in Mexico City.



Due to the pandemic, the capacity of the elite program had considerably less visitors during the tour. Only about half of the smaller exhibition areas were visited, but this did not diminish the positive overall impression.

In the course of their stay, Alexander Hingst and Martha Sobek also visited their long-standing partner "Ferreshop, S. A. de C. V." in Mexico City. As a satisfied customer, the hardware dealer was very happy about the personal visit from Germany and proudly showed the guests around his sales rooms, past the showcases filled with WITTE tools.

The time spent in Mexico has reiterated the importance of personal contact with existing and new business partners. "We returned thoroughly satisfied with new trade connections in our luggage and look forward to the successful further expansion of activities in Latin America," says Alexander Hingst. ■

New service workshop at
FAUN Environnement

A Lot is Moving at KIRCHHOFF Ecotec

AUTHOR: NICOLE KREBS
MARKETING ASSISTANT OF
MANAGEMENT KIRCHHOFF ECOTEC

Investing, building, modernising

A lot is happening within the KIRCHHOFF Ecotec family. To be strategically well positioned in the future and to react quickly and flexibly to changing market requirements, several locations have undertaken optimisations. Within production and assembly, this was done with the aim of making production processes more efficient, bringing outsourced processes back in-house and increasing occupational safety. However, major conversions and new buildings have also been implemented or are nearing completion. Ecological aspects were taken into account in all construction measures. Here are just a few examples of the extensive measures and changes:



All change at FAUN Environnement in Guilhaud-Granges, France:

New facilities:

- 6 kW laser cutting machine with automated sheet loading incl. building extension
- Welding robot for small parts with automatic part recognition and independent adjustment to the required welding process
- Robot line for welding of rear parts with automated transport system for the heavy rear parts (weight up to 2 t per rear part)
- 17 robots to assist with order picking, stocktaking, goods receiving and quality control
- Two 7-tonne cranes for safe vehicle disassembly during repairs
- Treatment of the dirty water from the wash boxes
- Recycling of the scrap produced and reuse for the production of new steel sheets

Construction measures:

- New automated warehouse incl. photovoltaic system with a 1,600 m² area for 9,900 storage locations
- Construction of a second building with 1,200 m² for storage of larger parts is being planned
- Conversion of the old warehouse into a production hall for outsourced production processes
- Expansion of customer service and vehicle rental with 800 m² of workshops, 2,500 m² of parking for up to 40 rental vehicles and direct access to the road
- Planting of 82 trees and almost 260 shrubs around the FAUN site



FAUN Viatic broke ground for new plant in Grimma, Germany on 1st September 2021

- 2022 planned start of production on the 58,000 m² site
- 8,500 m² production hall
- Production of street sweepers with conventional and fuel cell drive systems
- Conveniently located in Grimma's new commercial and industrial area on the A14 motorway between Leipzig and Dresden

Groundbreaking ceremony in Grimma with State Secretary Petra Köpping, Lord Mayor Matthias Berger, Managing Partner Dr. Johannes F. Kirchhoff, 1st assessor Gerald Lehne, FAUN COO Thorsten Baumeister, Goldbeck sales engineer Elke Krüger and FAUN Viatic Managing Director Helmut Schmech (from left)

Sustainable investments at FAUN in Osterholz-Scharmbeck, Germany:

Installation of a solar system on the roof of the production plant

- Installation of a 750 kWp photovoltaic system
- 637,000 kWh/a of energy is generated
- 88.5% is used directly for internal power supply

Expansion of chassis parking area

- 10,000 m² paved parking space for chassis
- Enlargement of the existing area
- No more external parking space required

Photovoltaic system at FAUN



Production expansion at ZOELLER Tech in Rekowo Górne, Poland:

- Expansion of the production plant to increase production capacities (from 1,200 to approx. 1,690 waste collection vehicles per year).
- Second laser cutting system for sheet metal incl. sheet metal storage system BasicTower with fully automatic loading and unloading and
- BasicTower with small footprint enables space-saving storage of large metal sheets
- Shortly before completion: fully automated press brake including bending robot
- In planning: fully automated welding processes using welding robots

Laser cutting system for sheet metal incl. fully automatic loading and unloading and BasicTower

New building of STUMMER in Austria



All new and more space at STUMMER in Bischofshofen, Austria:

New facilities:

- New sanding and modern washing box
- Modernisation of the paint booth including all exhaust air and filter units
- Exhaust air system of the painting booth with heat recovery (efficiency of about 85 %)
- Conversion of the heating system to district heating—CO₂ neutral

Construction measures:

- Thermal and structural renovation of the company headquarters and vehicle production.
- New photovoltaic system:
 - 60% of the electrical energy can be self-generated as a result
 - Surplus electricity produced can be stored and used when needed at a later date
- New building with around 1,600 m² of assembly area as well as additional warehouse and further office workplaces
 - Creation of 15 new jobs

New space for the SEMAT plant in La Rochelle, France:

New facilities:

- In-line flow assembly to reduce cycle times
- First painting booth with dry filters to reduce rinsing water
- Improved wastewater management and waste recovery
- Welding fume extraction and air renewal
- In planning: optimisation of production processes (e.g. plasma cutting, welding robots, surface treatment by grinding)

Construction measures:

- New yard to improve traffic flow for customer service and spare parts business
- 2,800 m² new space to install Warehouse Management System
- First step in photovoltaic roof covering
- Renovation of changing rooms and canteen

New warehouse at SEMAT



New CNC machining centre with robot arm

New production facilities for ZOELLER Systems in Ricany, Czech Republic:

- New painting robot with up to 20% material savings and up to 50 % increase in capacity while maintaining the same quality compared to manual painting
- New CNC processing centre with robot arm and automation (80% capacity saving)

First Warm-Up

With presentations at two major trade fairs in autumn, the ZOELLER Group is warming up for the upcoming IFAT 2022: NUFAM in Karlsruhe/Germany and Pol Eco in Poznan/Poland

AUTHOR: FREDERIK LÖSCH
MARKETING MANAGER ZÖLLER-KIPPER



NUFAM: Finally present again

From 30 September to 3 October 2021, the first major public trade fair after the long-forced break took place in beautiful Karlsruhe. Not only for ZOELLER, but also for customers from Baden-Württemberg and beyond, it was a successful start making all want more face-to-face events! In great weather, many good discussions were held and the latest ZOELLER products were examined by the numerous visitors.



At the NUFAM in Karlsruhe/Germany, three vehicles represented the ZÖLLER fleet: the Micro XL with 359 lifter on a Canter chassis, the Medium X4 with Delta 2322 Premium Lifter and the Micro HG SL 240 with fully electric Sprinter chassis.



At the POL ECO in Poznan/ Poland, EKOCEL was awarded for two of the exhibited products: The "ZLOTY MEDAL" in gold went to the FAUN sweeper on the BLUEPOWER hydrogen chassis and to the new ZOELLER Medium X4 with electric chassis. In picture from left to right: Mario Ringl (Export Manager Sweeper at FAUN), Krzysztof Sosnowy (Export Manager at ZOELLER TECH Sp. z o.o.) and Rainer Rohler (CEO at ZOELLER TECH Sp. z o.o.)

EKOCEL: A medal shower in Poznan

The annual POL ECO trade fair in Poland, in which EKOCEL participates every two years, is a good opportunity to meet all customers and partners in one place to show new and current technologies. In addition to the management and sales department, EKOCEL designers and engineers also present the products and explain the development process from design to production to the customers and all interested parties.

EKOCEL received three awards—for two particularly innovative products and the best and most modern exhibition booth. ■





A Special Honour...

...was bestowed on the French waste collection and sweeper supplier SEMAT, which belongs to the ZOELLER Group, in summer. From over 2,300 applications, 120 companies were selected to show case french know-how in the courtyard of the Elysée Palace. Among them was SEMAT from the ZOELLER Group. Two employees were invited to visit the event as part of a weekend trip to Paris.

AUTHOR: FREDERIK LÖSCH
MARKETING MANAGER ZÖLLER-KIPPER



"Welcome home—a classic car returns"

In 1945, Fernand Rey founded the SEMAT company. Eleven years earlier, the then SITA engineer invented a unique compaction system for refuse collection vehicles. The classic waste collector that has now returned to its place of birth is also equipped with this system.

It was designed by Rey and has been in production since 1943. The historic refuse collection vehicle was in full use in the metropolis of Paris until the 1970s. This endurance was based on the revolutionary features of the time: Thanks to the novel compaction mechanism, the complete payload of the collection container could be utilised in regular operation for the first time. In addition, the refuse collection vehicle was mounted on an electric chassis even then and had a range of 50 to 70 km. Now this pioneer of refuse collection vehicles can be admired on the SEMAT site. ■



TRACKWAY® gives wings

AUTHOR: RACHEL ROBERTS
HEAD OF MARKETING FAUN TRACKWAY

When things have to move fast. Teaching hospital John Radcliffe near Oxford relies on mobile helicopter landing mat from TRACKWAY®.



The contract which was awarded earlier this year, sees John Radcliffe hospital's helipad being relocated whilst essential maintenance work is carried out to the West Wing building exterior over the next two years. In support of the project, military personnel seconded to the UK Defence and Security Exports, Export Support Team under command of Capt Ade Whitehouse RE, deployed the 20m x 20m helipad and adjoining access route in Oxfordshire.

The TRACKWAY®, which is interlocked in multiples using tongue and groove joints, was completed with lighting array and lane demarcation provided by Systems Interface Limited. The Helicopter Landing Mat is secured to the ground using Vulcan Earth Anchors supplied by Anchor Systems Limited.

Chris Kendall, CEO at FAUN TRACKWAY® limited, said: "Our TRACKWAY® solutions are renowned for their quality, versatility and environmental benefits. Whilst ensuring pilot, crew and passenger safety, the systems improve the load bearing capacity of the ground underneath, making it perfect for use as a temporary helipad, and eliminating the issues that come with concrete landing mats. During the two-year period, the ground conditions will not be hindered and once the system is lifted, the area will be as it was". ■



It's a wrap!

AUTHOR: SIMON HYDE
CHIEF EXECUTIVE OFFICER FAUN ZOELLER UK

FAUN ZOELLER UK rediscovered itself during the pandemic and created an experience world for employees and customers.



When the first national lockdown was introduced in the UK in March 2020, the FZUK directors decided to use the time created by the disruption to take a hard look at how the UK company presents itself to clients and the working environment of its employees.

Chief Executive, Simon Hyde explained: "Because of the coronavirus, we weren't allowed to visit our customers, trade shows were cancelled and most of the organised demonstrations of our vehicles were either postponed or cancelled allowing time for our customers to organise collections. But business had to continue, so we activated our clear and practiced crisis plans and were completely operational within 24 hours. All employees were working from home with the exception of the Field Service support team who remained active in the field."

The company realised immediately they would have to switch all communications at headquarters in Redditch over to employees' homes, and ensure that full IT systems were available, in order to allow clients quick access whenever they needed it.

"Because we were ready, we knew it would all work, and I am very proud of how quickly we were up and running," said Simon Hyde. "And then, with virtually no travelling and no exhibitions our costs were significantly reduced which allowed us to think about our future, our plan and how the world would be post COVID! It gave us the opportunity to make investments in what we were going to need for the future." The UK team realised that while their employees who service and fix clients' vehicles would need full support to be able to continue to work around the country safely, others could then continue to work flexibly—with more time at home, and in a way that suited the company and the employees. Quite simply, COVID has changed the way we work and how we would in the future.

The original lockdown gave us the time and space to talk through our ideas on refurbishing our headquarters. That might seem like a bold decision in a pandemic, but the break in normal life gave us the opportunity to think big. We have rebuilt the interior to give employees a welcoming and pleasant environment as well as creating a new Customer Experience Centre. All we've got to do now is to welcome our clients back when it's safe and sensible to do so."

Commercial Director Stewart Gregory commented: "The sales team has done a great job of maintaining revenue but are raring to get out to clients again. And the lockdown has made me realise that one of our biggest strengths is the human side of our business. "We're now even more ready to invest in our people, seeing how they have worked so hard and so amazingly during the pandemic. Since the country has 'opened up' we have had several customer experience days, video shoots, and seminars that have proved a great success. We are absolutely delighted with the response of our employees and our clients, current and new. This system has allowed our creativity to demonstrate the full capability of the team, the products and future technology. We have already several events planned and will hopefully be entertaining the Group Board of Directors in the New Year." ■

ONE OF US

” FATHER AND SON—A GREAT TEAM

Fred Funck is a locksmith at the head office of ZÖLLER-KIPPER in Mainz. When senior Funck retires in a few years, his succession is already arranged. His son Niklas is ‘in the starting blocks’ and learning diligently from his father. Fred Funck is proud to train his son himself. “He inherited his craftsmanship from me”. This is something very special for Niklas Funck too: **“We are like a big family here. I already knew most of my colleagues before I started. That made a lot of things easier for me.”**

KIRCHHOFF Culture Life—a photo calendar by employees for employees


**AUTHOR: PROF. THOMAS F. KIRCHHOFF
CULTURAL REPRESENTATIVE OF THE
KIRCHHOFF GROUP**

In digital workshops, participants from many KIRCHHOFF locations worldwide received tips and advice on how to turn “normal” photos into special photos. “Get out of your comfort zone” was one of the professional photographer’s pieces of advice and “play with the motifs”. The task was to look for a motif and then “shoot” it from many perspectives and in different daytime and lighting moods.

The result was impressive landscape motifs that are presented in four different photo calendars. In the locations where workshops took place, the employees can now look forward to a small Christmas present—the large format photo calendar by employees for employees. ■

Scan the QR code and view more calendar pictures on the KIRCHHOFF Culture Life website culture.kirchhoff-group.com





**Merry Christmas
and a Happy New Year!**