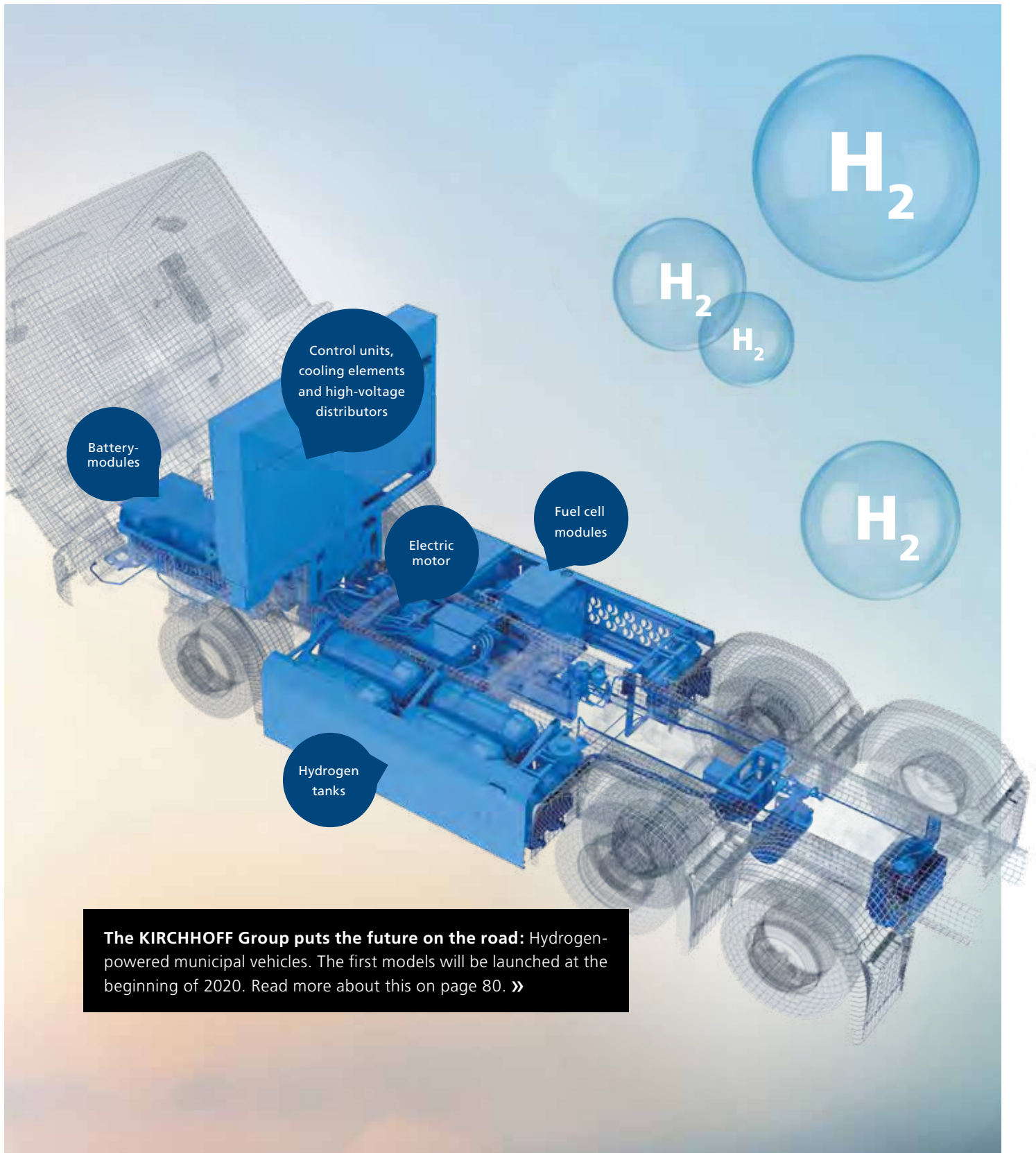


K»MOBIL

THE KIRCHHOFF GROUP MAGAZINE



The KIRCHHOFF Group puts the future on the road: Hydrogen-powered municipal vehicles. The first models will be launched at the beginning of 2020. Read more about this on page 80. »

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The crisis as an opportunity: a state of exhaustion opens up scope for creativity

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

“ After 10 years of upswing, the economy is exhausted, many labour markets hardly offer any skilled workers any more, globalization has stalled. The KIRCHHOFF Group cannot escape the generally difficult economic situation either, because the obstacles in world trade are particularly affecting countries such as Germany, which are successful in exports. In the automotive sector, we are also affected by the uncertainty of the population with regard to current mobility and its role in the future. The necessary climate discussion is not always conducted in an objective manner, complex interrelationships are not communicated in an understandable way, which makes people even more insecure. Instead of demanding bans and restricting individual freedom/mobility, it is important to discuss them in a more objective and differentiated way.

The world has adopted climate targets with a CO₂-free future. For emission-free mobility, we need green electricity or hydrogen produced by green electricity. In order to have both available in sufficient quantities, not only the production but the use of renewable energies must be expanded. The electricity grid required for transmission must also meet the requirements. Another factor is the digital networks that are needed to manage both the electricity grid and the new forms of mobility. Here we see the possibilities for shaping the future within the framework of digital transformation as extremely positive. »

Arndt G. Kirchhoff, Managing Partner of the KIRCHHOFF Group

The future needs innovations

The automotive industry not only has a long tradition, but also a good future ahead of it, because we are just inventing the car a second time. This can be seen, for example, in the annual research and development expenditure of the German automotive industry. Here, Germany spends 44 billion euros worldwide, Japan 30 billion, America 15 billion and China 6 billion. This is also reflected in the fact that, for example, over 50 % of patents for semi-automated or autonomous driving are registered by German manufacturers and suppliers. The figure for electric mobility is just under 40 %. Now we still have to convert our inputs into marketable products. A task that we always fulfil.

In recycling management and disposal, we can collect waste much more efficiently and recycle it as a raw material. Smart mobility also helps here. Route plans developed by us, only lead waste collection vehicles to sufficiently filled containers. For this purpose, they are equipped with level gauges and digitally networked with each other. In combination with on-demand services, we are highly innovative with the help of artificial intelligence. For 10 years now, our KIRCHHOFF Ecotec Group has been making its contribution to emissions-free waste disposal with its electrically powered refuse collection vehicles. In order to enable this sustainable mobility even on long trips without loss of payload, fuel cells powered by hydrogen will soon also be available as range extenders.

The future needs social cohesion

The success of climate and mobility changes require a digital infrastructure so that traffic routes and energy supply can be upgraded. Comprehensive planning procedures, regional planning procedures and approval procedures that can be implemented quickly are prerequisites here. These must not be obstructed. On the contrary, people in our society must show more consideration for each other in order not to unnecessarily delay or even prevent the common goal.

Digital transformation, low-emissions energy generation and mobility freed from fossil fuels can trigger a surge in growth and help to overcome the current phase of weakness in the global economy.

In our companies, we were able to expand our activities at many locations, promote innovations and present them at numerous trade fairs and exhibitions. The **KIRCHHOFF Group** with 13,750 employees worldwide will generate sales of 2.45 billion euros this year.

After a record order intake in 2018, the focus at **KIRCHHOFF Automotive** in 2019 was particularly on project handling, industrialization and production preparation for new orders. At the same time, we have continued to grow: new technologies and plants are expanding capacities and increasing the competitiveness of our locations worldwide. Large investments were made on new presses and welding equipment to supply the General Motors T1XX platform at our North American locations in Tecumseh, Dallas and Aurora. At the Portuguese plant in Ovar, we commissioned another press hardening line—the sixth of its kind in our company. In the Hungarian plant in Esztergom, new welding cells and laser cutting cells were installed on an extended production area in order to realize future order volumes for our customer Mercedes-Benz.

In 2019, KIRCHHOFF Automotive continuously developed and optimized safety-relevant lightweight components, especially with regard to modified bodies and requirements for electric vehicles. Among the highly regarded results of this research work are an economical lightweight battery housing and a crash-relevant front structure that acts as a protective shield in the event of a frontal collision and improves safety in all vehicles involved in the accident. Passengers in small cars in particular will benefit from this in the event of collisions with significantly larger vehicles.

KIRCHHOFF Ecotec continues to grow and welcomed new companies to the group in 2019. In July, ZÖLLER-KIPPER GmbH acquired 60 percent of the shares of the traditional Italian manufacturer FARID, FEG Brivio S.p.A. from the Orecchia, Mazzini-Martinelli

and Brivio families. FARID is one of the world's best-known suppliers of municipal vehicles and its products ideally complement our existing portfolio and market presence. The FAUN Austria team is also new to the network. The newly founded company includes long-standing industry experts who are responsible for sales and service in the Alpine region as well as Slovenia and Hungary.

The main goal was and is in the future: "Zero emission during disposal and street cleaning". To achieve this, we have developed a pollutant-free drive. The so-called ZOELLER-BLUEPOWER and FAUN-BLUEPOWER chassis drive with a battery pack that can be equipped with fuel cells and tanks to increase the range. In October, this unique development was rewarded with a funding decision from Transport Minister Andreas Scheuer. The first vehicles will be on the road at the beginning of 2020. At IFAT (4—8 May 2020), these zero-emission vehicles will be presented to the general public.

This year, **KIRCHHOFF Mobility** successfully strengthened its presence at trade fairs and events such as REHAB in Karlsruhe, REHACARE in Düsseldorf and a two-day mobility event in cooperation with GRUMA Automobile in Wurzen. We further expanded our market position in 2019. Since this year, we have also been offering a flexible conversion solution for the new Opel Combo, Citroën Berlingo and Peugeot Rifter PSA models with short and long wheelbases and the new NIVO rear cut-out conversion for transporting wheelchair users. The high quality of the conversions and the special competence in vehicle conversion are also highly appreciated by the vehicle manufacturers. Last summer, for example, Groupe PSA awarded us the quality certificate for handicapped-accessible conversions.

KIRCHHOFF Mobility AG is also particularly committed to helping athletes with disabilities. One of the first athletes who has accompanied the company from the very beginning is the Swiss sprinter and Paralympics athlete Abassia Rahmani from Wila. Only recently she received a new vehicle from KIRCHHOFF Mobility that has been adapted to her individual needs.

WITTE Tools was also able to win new customers in the private label sector last year. The sales network of the WITTE Tools brand was expanded, above all through successful participation in foreign trade fairs in Spain, China, Mexico and Poland. Joint trade fair participations with other German tool manufacturers under the motto 'German Quality Tools' became the recipe for success. A cooperation that creates synergy effects and ensures the effective development of new markets. Further activities of the initiative 'German Quality Tools' are planned: in 2020 there will be buyer events in select regions of Latin America.

In 2019, we invested in a fully automatic microfiber coating system to sustainably increase productivity. This is a particularly important acquisition for the MAXX Plus series, which is in great demand. In addition, the machine park was expanded by an additional 3-component injection molding machine. At the same time, we were able to further optimize our production processes. With these measures we see WITTE Tools well positioned for the future.

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 energetic cooperation. We look forward to continuing our good and successful cooperation.

My father, my brothers and I wish you and your relatives a Merry Christmas, all the best and much health in the New Year.

Warm, happy greetings!

Yours,

Arndt G. Kirchhoff

MAKING. MOBILITY. SAFE.

Social trends and technological progress have a major influence on tomorrow's mobility. Worldwide urbanization, demands to protect the environment, or even digitalization, are examples of this. Since the public's need for mobility is constantly increasing in a globalized world, the question arises as to what mobility must look like in the future in order to meet people's needs. Another factor is that the importance of private vehicle ownership and the emotional attachment to a vehicle is rapidly declining among people under 25. It is no longer necessarily a question of owning a vehicle, but rather of having access to it. These factors and many other aspects, have a major influence on the vehicle concepts of the future. The industry as a whole is experiencing the greatest change since the invention of the automobile.

The appearance, the design of the vehicles, the associated package that comes along with that including all the gadgets and interaction of assemblies and components externally and internally, is changing significantly. The use of electric motors instead of combustion engines not only changes the entire drive train, but also the bodywork. In an electrically driven passenger vehicle, the large engine block of the combustion engine in the front car is no longer necessary. On the one hand, this offers new possibilities to design the vehicle differently. On the other

hand, new challenges arise in the design of the front structure with regard to passive safety. For example, the front end must not become unstable in the event of an accident without the larger combustion engine. Passengers and occupants must be protected in the best possible way. In addition, in battery electric vehicles, 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 weight of electrically powered vehicles has a significantly lower influence on energy consumption than that of combustion vehicles, lightweight construction still plays an important role in these vehicles. The lighter a vehicle is, the less energy that has to be dissipated in the event of a crash.

Today and in the future, body development will focus even more on cost-effective, holistic and systemic lightweight construction in order to design safe vehicle concepts. KIRCHHOFF Automotive is also focusing on the continuous further development and continuous optimization of safety-relevant components. Here are four product examples presented by the company at the 2019 IAA: »

— Making mobility safe—this was the motto of KIRCHHOFF Automotive's presentation at this year's International Motor Show (IAA) in Frankfurt/Germany.

NEW HOT FORMING GRADES IN CRASH MANAGEMENT SYSTEMS

In a joint project with thyssenkrupp Steel Europe, the use of new hot forming grades (MBW1900) in crash management systems was tested. The result was a press-hardened cross member with a material strength of around 2000 MPa, which combines economical lightweight construction with optimum crash performance.

The geometry of the cross beam shows a changing opening direction. In the area of the crash box connection, the profile is open to the front, while in the middle it is open to the rear. This improves the performance of the cross member on the one hand, and allows longer crash boxes to be connected on the other, allowing more energy to be absorbed. In addition, the profile with alternating opening direction shows robustness to torsion. By dispensing with a strike plate, the weight, material and process costs are reduced.

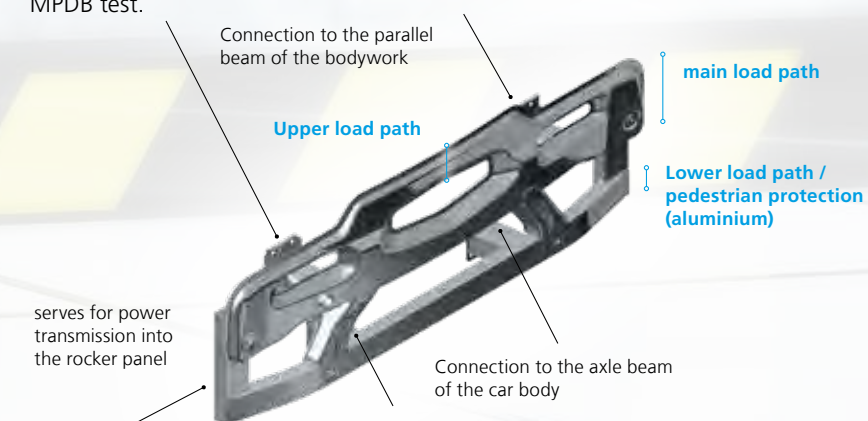
B-PILLAR WITH LESS WEIGHT AND BETTER PERFORMANCE

The example of a weight-optimized B-pillar illustrates how lightweight construction can be implemented economically in series production using press hardening technologies for frame structures and crash-relevant components. The material combination of press-hardened steel of 1500 MPa in the B-pillar and 2000 MPa in the reinforcement (patch area), results in a weight advantage with improved performance at the same time.



CRASH-RELEVANT FRONT STRUCTURE IN ACCORDANCE WITH THE LATEST (2020) EURO NCAP GUIDELINES FOR THE MPDB (MOTION OFFSET PROGRESSIVE DEFORMABLE BARRIER) FRONTAL CRASH TEST

The Mobile Progressive Deformable Barrier Crash Test will be introduced in 2020 by the consumer protection organization, Euro NCAP, and is intended to improve compatibility between accident opponents. The specially developed front structure acts as a protective shield and improves not only the safety of the person causing the accident but also that of the other party. In the event of a crash, the energy input is distributed and absorbed over a large area. KIRCHHOFF Automotive has further developed one of their core products in order to meet future passive safety requirements in accordance with the Euro NCAP guidelines with the new MPDB test.

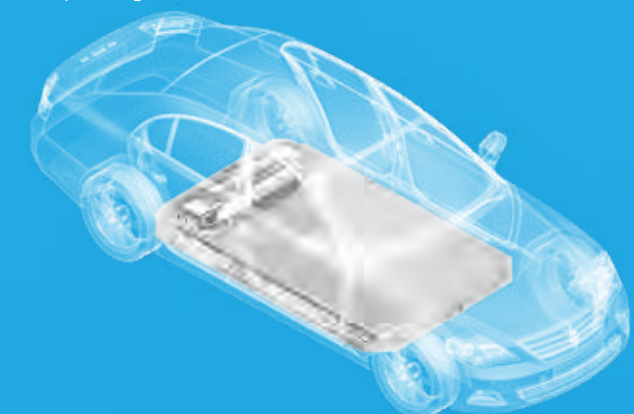


HIGH VOLTAGE BATTERY HOUSING FOR ELECTRIC VEHICLES

At the 2017 IAA, KIRCHHOFF Automotive presented an economical lightweight design concept. Over the past two years, the company has been able to further expand their expertise on the subject and consistently continue the development on it. The result is a virtual lightweight battery housing with a mass of less than 45 kg.

Parallel to the virtual product development, the manufacturing technologies were further developed and processes were optimized to solve known problems, such as leak tightness. For this purpose, prototypes with near-series methods that illustrate different concepts and offer solutions for production-specific topics were built.

Author: Prof. Christoph Wagener



1,785 Trees for a Green future

Responsibility for the environment and sustainability are reflected in the values at KIRCHHOFF Group. Words are followed by actions. Therefore, starting in Spring 2020, employees of KIRCHHOFF Automotive and KIRCHHOFF Ecotec, together with their family members, will plant 1,785 trees at 21 locations.

"Even if I knew that tomorrow the world would go to pieces, I would still plant my apple tree," a famous quotation from Martin Luther that is known to many. There is hardly another quote like this, which stands for environmental responsibility and sustainability amidst the background of the current climate discussions around the world.

"The number 1785 recalls the year the company was founded in Iserlohn/Germany. Rooted in tradition and geared for growth—that is what our company stands for. What better way to symbolize that than a tree, or better said, than 1,785 trees?" explains

Prof. Thomas Kirchhoff. As the cultural representative of the KIRCHHOFF Group, he organizes the tree planting campaign together with the human resources departments as part of the KIRCHHOFF Culture Life Initiative.

"In our family business, we think every day with our employees about sustainability, trust and innovation. By planting trees worldwide, we want to take up Christian Morgenstern's ideas, emphasize the need to protect our environment, set an example for others and make a small contribution to protecting our habitat. Furthermore, the trees are sponsored by employees at each location; ensuring that the trees receive the best care, maintenance, and growth even after planting," says Dr. Johannes Kirchhoff, Managing Partner of the KIRCHHOFF Group.

On factory sites in Germany, France, Poland, Portugal, the Czech Republic, Hungary, Canada, Mexico, the USA, China and even faraway Australia, the trees are a reminder of the future, and that environmental responsibility are not just words for the KIRCHHOFF

"Nothing is more a reflection of the world and of life than the tree. Before him I would think daily; before him and about him".

Christian Morgenstern



Superior Pak in Bundaberg/Australia started the tree planting campaign in October 2019. Rob Wrigley, Graham Black, Patrick Hermanspann and Dr. Johannes Kirchhoff (from left to right) planted the first trees during their visit to Australia. The grove is being planted next to the canteen. In the future, guests, employees and customers will plant a tree. There is also a book in which each tree godfather is immortalized.

Group. "With this campaign, we are encouraging all employees and their families to participate in this Corporate Social Responsibility (CSR) project and to make their own small contribution to the environment," explains Prof. Thomas Kirchhoff.

The trees are adapted to their new home's respective climate conditions. "This way, we not only ensure that they are resilient, but also give each of the participating locations a personal touch," says the cultural officer.

The first tree planting events for the families in Iserlohn and Attendorn will take place spring 2020. To make sure children can also take part, the trees will vary sizes and they will have the help of a gardener. To further the idea of sustainability, the employees will have the opportunity to sponsor a tree, which will entail taking care of the tree after it has been planted.

"Our campaign with the 1,785 trees is intended to motivate and act as an example of how everyone can do something good for our environment with

*"A tree reflects that.
He changes.
Changed, he restores himself and always
remains the same".*

Indianische Weisheit

small measures and their own behaviour. We should refrain from demanding what 'the others' should do or change and take the initiative ourselves," explains J. Wolfgang Kirchhoff, CEO of KIRCHHOFF Automotive.

Author: Prof. Thomas Kirchhoff

Dr. Kirchhoff Foundation— Commitment to Education, Art, Culture and Social Affairs

In 2019, the Dr. Kirchhoff Foundation once again became involved with communities in various ways. Here are some examples of the foundation's projects for social and charitable purposes.

PROMOTION FOR THE YOUTH PROJECT "EXPERIENCE OPERA"

Get a whiff of stage air, be there live! Every two years the Dortmund Opera House opens the big stage for a production with children and young adults from a local art school under the motto "Experience Opera". This would mark the third partnership event for the Opera Dortmund and the choirs of Märkisches Gymnasium Iserlohn (MGI).

For one year, the young performers, singers and musicians rehearsed together with the professionals of the music theatre, which was supported and supervised by their teachers. A team of directors, set designers and musical directors accompanied the student's rehearsals to help prepare the three performances that would later debut on the opera house stage. About 70 students of the MGI took over the choired parts and solo roles.

The staging of the Andrew Lloyd Webber musical "Joseph and the Amazing Technicolor Dreamcoat" was performed several times in July 2019 at the Dortmund Opera House and delighted audiences and actors alike. The unanimous conclusion: "A great project with musical-cultural education at the highest level, thanks to the support of the Dr. Kirchhoff Foundation."

MORE FUN AND GAMES FOR THE LITTLE ONES

The Schleddenhofer Swimming Club carried out extensive renovation measures at its outdoor swimming pool facility in Iserlohn/Germany. In addition to renovating the changing areas and sanitary facilities, a donation from the foundation also provided additional play facilities for children.



Youth project "Experience Opera". Every two years the Opera House Dortmund opens the big stage for a production with children and young people from a school - this year for the third time the choirs of the Märkisches Gymnasium Iserlohn (MGI) are part of it.

NEW MUSICAL INSTRUMENTS FOR MUSIC SOCIETY

The Music Society Lichtringhausen, has reorganized its youth work. In order to be well positioned in the youth sector and to continue training young musicians, new brass and woodwind instruments were purchased with the support of the foundation.

INTERNATIONAL AUTUMN DAY FESTIVAL FOR MUSIC IN ISERLOHN

The Dr. Kirchhoff Foundation supported the fall festival this year. With the help of this support, it was possible to set up a top-class concert program in Iserlohn, combined with intensive youth support and opportunities.

Author: Kerstin Garmatter



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Responsibility for Society and the Environment

— In 2015, KIRCHHOFF Automotive defined a 'Vision and Values' statement for the company. Now there is a 'Code of Conduct', which further develops the Vision and Values and contains additional policies. CEO J. Wolfgang Kirchhoff explains this Code of Conduct in an interview.

What was the reason to introduce a Code of Conduct?

J. W. Kirchhoff: Sustainability and social responsibility have become very important, especially after the great economic crisis of 2008/2009. The KIRCHHOFF Group has also recognized these issues as being of fundamental importance for the company. In May 2010, we joined the United Nations Global Compact, an initiative that unites companies that have committed themselves to adhering to 10 fundamental principles. In April 2011, our father Dr. Jochen F. Kirchhoff, together with the top executives of other large German companies, signed the mission statement for responsible action in business. In 2015, we introduced the KIRCHHOFF Automotive Vision & Values—a guideline that is the binding basis for our daily actions for each of us.

Recently, there has been a visible trend towards strengthening sustainability and social responsibility, which the automotive industry is undertaking in order to build trust in societies worldwide. To achieve this, our most important customers have formulated sustainability requirements in the form of a Code of Conduct. KIRCHHOFF Automotive is an important

partner for OEMs in automotive development and production. We believe that sustainable action in our company is our responsibility. As a logical further development, we have therefore developed our own Code of Conduct.

The Code of Conduct talks about social responsibility, responsibility for the environment and ethical and solid business relationships, among other things. What do they look like in concrete terms?

J. W. Kirchhoff: Our social responsibility focuses, among other things, on respect for human rights and working conditions. This is not just about health and safety, non-discrimination or harassment. It is also about prohibited child labour, forced labour or human trafficking and freedom of association—we must be sensitive to all these issues if we are a global company. With that, I have to say that our social responsibility initiatives go beyond the expectations of the company's stakeholders, such as cultural events and tree planting campaigns, to name but a few. We are also committed to preserving and promoting charitable projects and support voluntary work by our employees wherever possible. »



We also take our environmental responsibility very seriously. These include the economical use of natural resources and the reduction of waste, energy consumption and greenhouse gas emissions, the responsible use of chemicals, air quality and water consumption. As far as business ethics are concerned, the KIRCHHOFF Group has a long tradition of corporate management and compliance guidelines. But today there are new challenges in the business environment, such as trade controls and sanctions, antitrust law and intellectual property protection. On the other hand, we must give our employees a strong right to privacy and guarantee that they will not be sanctioned for their openness and their "whistleblowing".

What are the biggest challenges in terms of corporate social responsibility?

J. W. Kirchhoff: We believe that our approach to sustainability is an important success factor for the company. But the situation of the entire automotive industry is also important. That's why the commitments we make only make sense if the entire industry respects and follows the same principles. For this reason, supplier management is one of the greatest challenges.

What happens if a supplier violates these principles of conduct, e.g. does not pay his employees the agreed minimum wages or offers bribes to obtain orders?

J. W. Kirchhoff: To ensure responsible material procurement, we will verify that our suppliers do not knowingly supply products that are associated with human rights abuse, corruption and other violations of the law, or negatively impact the environment. This will be a prerequisite for supplier evaluation. If a supplier is found to have a deviation, we will demand

action to remedy all defects within a reasonable period of time. If violations persist in the longer term, we will not continue the business relationship with such a partner.

In its Code of Conduct, KIRCHHOFF Automotive undertakes not to use any raw materials that have been procured illegally or through ethically reprehensible measures. What means can be used to ensure this?

J. W. Kirchhoff: Our Code of Conduct is an integral part of our Terms and Conditions of Purchase and thus part of our supplier contracts. We expect our suppliers to respect the Code of Conduct, act in accordance with it, and implement it sustainably within their supply chain. In order to ensure this, our suppliers are encouraged to make supply chains and supply sources transparent to us as part of a self-disclosure process. This gives us insight, for example, into whether minerals used in the product are mined in countries that respect human rights and treat our environment responsibly. In addition, compliance with the Code of Conduct will be checked on site as part of supplier audits and is incorporated into the supplier qualification process and the subsequent supplier evaluation in the form of an assessment.

The interview was conducted by Andreas Heine, EVP Global Communication & Marketing.

All documents on the Code of Conduct can be found on our website under "<https://www.kirchhoff-automotive.com/deEN/corporate-governance/>".



J. Wolfgang Kirchhoff, Chairman of the managing board KIRCHHOFF Automotive, in an interview: "Sustainability and social responsibility have become very important, especially after the great economic crisis of 2008/2009. The KIRCHHOFF Group has also recognized these issues as being of fundamental importance for the company. As a logical further development of our Vision and Values guide the Code of Conduct was created."



New Products on the Road

Authors: Jana Mockenhaupt, Eva Rademacher

— The mobility concepts of the future—from electric to autonomous—also require bodies that ensure the greatest possible safety for all occupants in an emergency. Crash safety and body weight are important aspects in vehicle development. KIRCHHOFF Automotive also relies on the continuous further development and continuous optimization of crash-relevant lightweight assemblies for combustion and electric vehicles.



BMW Mini Electro Front Crash Management System

Technologies:

Load path 1: Forming, Laser cutting, MAG welding, Pickling, KTL coating
Load path 2: Bending and machining of aluminium extrusions

Production plants:

Mielec, Gliwice/Poland, Iserlohn/Germany

Capacity/year:

27,800 vehicles

Customer/Model:

BMW Mini Electric

"Cross Beam in Cross Beam" - Design for the BMW Mini Electric

The Crash Management System (CMS) for the BMW Mini Electro is the first system at KIRCHHOFF Automotive designed to meet the new requirements for Battery Electric Vehicles (BEV). In the event of a crash, the introduction of force into pure electric vehicle platforms can be optimally designed to meet the requirements of e-mobility. However, the body shell of the BMW Mini Electro was originally designed for combustion engines. It was therefore necessary to combine the requirements of an electric vehicle with the vehicle architecture of a combustion engine.

Due to the omission of the combustion engine, which occupies a large part of the engine compartment due to its dimensions and significantly higher weight than an electric motor, the power input and power distribution in the event of a crash have changed. The new CMS developed for the electric vehicle, must mainly compensate for the changed compartment space conditions in order to ensure continued occupant protection. It had to be designed in such a way that the new load cases specified could be met. This was achieved with a "cross beam in cross beam" design.

The redesigned CMS, which is designed for high bending stiffness, additionally protects the power electronics in the event of a crash until the power supply is switched off within milliseconds. For the first load path, high-strength steels with material thicknesses of 2-6 mm are formed and welded.



Crash-Management-System front



Mounting Plate



Cross Car Beam



It Runs and Runs and Runs—the VW T6.1

The VW T6.1 "Bulli" is entering the next round under the names Transporter, Caravelle, Multivan and California; optically refreshed and technically modernized. Our Company has also made a contribution to this. The technical innovations in the areas of digital technology and networking, as well as modern assistance systems, mainly take place directly in front of and around the driver and passenger. The integration of the latest generation of multimedia units and the new electromechanical steering required for the use of driver assistance systems, required a completely new dashboard and the development of a new Cross Car Beam behind it. This development comes from KIRCHHOFF Automotive. The new cross car beam contributes to making "Bulli" driving even safer, more comfortable and more modern thanks to integrated driver assistance systems. We have implemented industrialization at our relatively young plant in Gniezno/Poland which will supply the T6.1 vehicle after the VW Crafter.

The mounting plate will also come from our plant in Iserlohn in the future. It has been adapted to the new steering environment and our new Cross Car Beam as a front wall part between the driver's footwell and the engine.



Ford Puma Welded Assemblies

Technologies:
Spot welding, Projection welding, MAG welding, Sealer application

Production plant:
Craiova/Romania

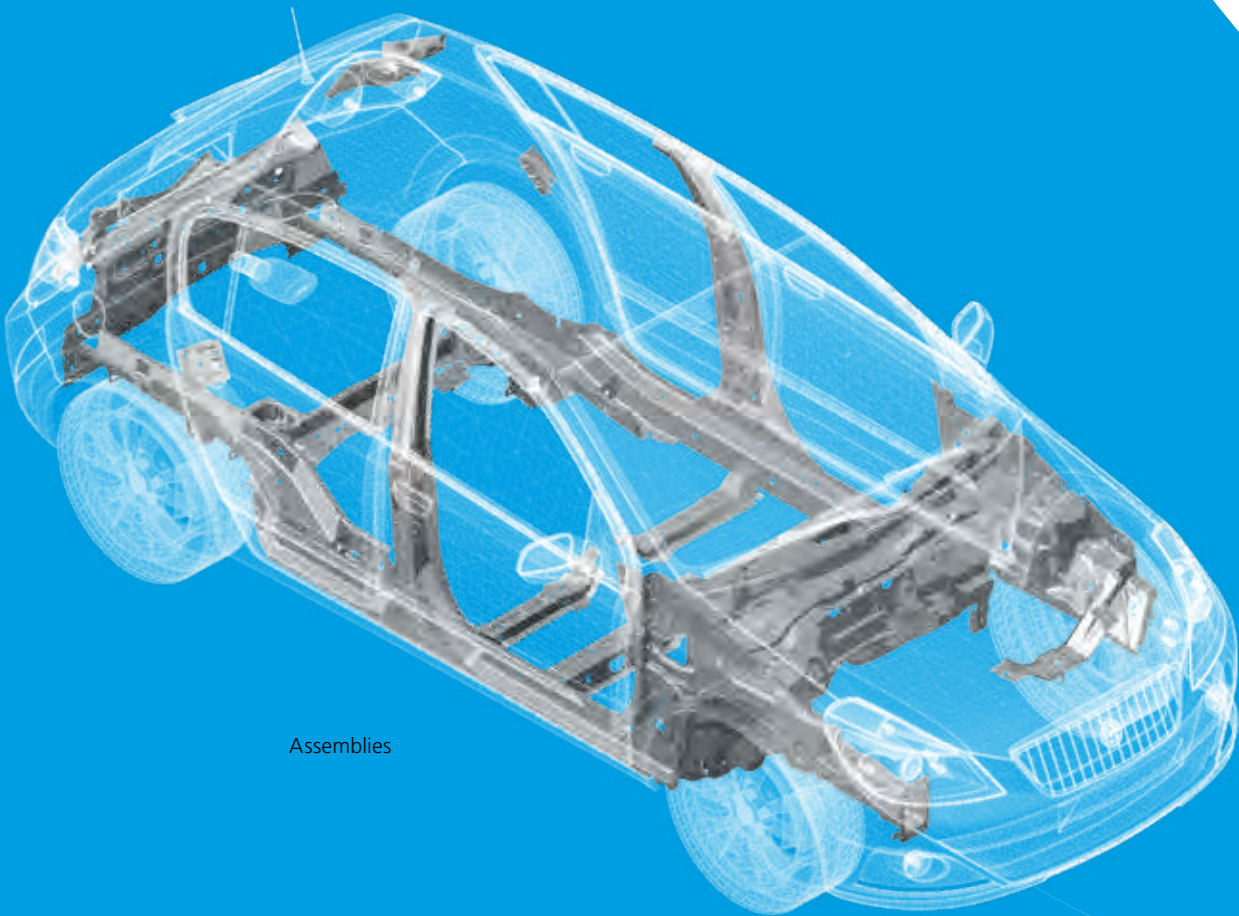
Capacity/year:
170,000 vehicles

Customer/Model:
Ford Puma

Assemblies for the Ford Puma

At the Romanian plant in Craiova, on Ford's production site, complex welded assemblies for the new Ford Puma are manufactured, which was recently unveiled to the public.

A total of 26 assemblies, such as front and rear across-car members, plenum, etc., are manufactured using various joining processes such as spot welding, MAG welding and projection welding. Currently at the plant, they are already welding parts for the Ford EcoSport to a similar extent.



Assemblies



VW T6.1 Module Cross Car Beam and Mounting Plate

Technologies:
Forming, Spot, MAG and Projection welding, E-coating, Automated bolt assembly

Production plants:
Iserlohn/Germany, Gniezno/Poland

Capacity/year:
185,000 vehicles

Customer/Model:
VW Bus T6.1 (PA)



**DS3 Crossback and Peugeot 208
Formed Parts**

Technologies:

Forming, MAG welding, Nut and stud welding, E-coating, Assembly of plastic attachments

Production plant:

Cucujaes/Portugal

Capacity/year:

15,300 (DS3 Crossback)
39,400 (Peugeot 208)

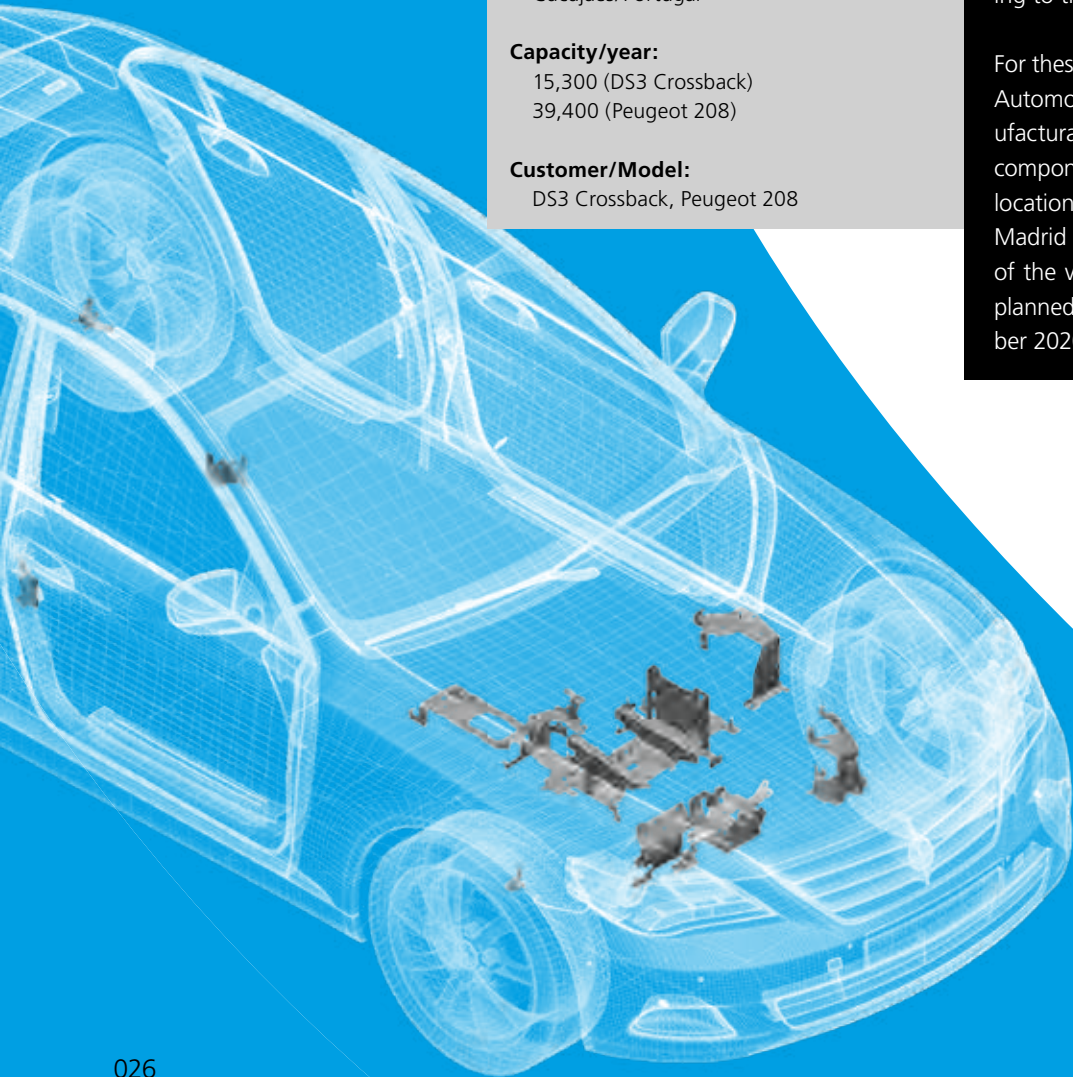
Customer/Model:

DS3 Crossback, Peugeot 208

**A Platform for Electric and Combustion
Engines**

KIRCHHOFF Automotive supplies a total of 21 different components for PSA's CMP platform. The special feature of this platform is that the design of the vehicles is the same for both drive types. The E variant is based on the combustion vehicle. KIRCHHOFF Automotive produces reinforcements and brackets for various electrical applications in the engine compartment and rear area for all e-models belonging to this platform.

For these "build to print" products*, KIRCHHOFF Automotive supported the development of manufacturability and performance validation. The components will be delivered to various PSA locations such as Poissy, Trnava, Saragossa, Vigo, Madrid and Tremery, with the market launch of the various vehicle models of this e-platform planned between September 2019 and September 2020.



LiXiang One Front and Rear Bumper

Technologies:

Aluminum Extrusion, Pressing, Aging, Machining, Riveting, Welding

Production plants:

Suzhou/China

Capacity/year:

20,000 vehicles

Customer/Model:

LiXiang ONE

**A new Customer, a new Electric Car—The
LiXiang ONE**

For the first time, our Chinese plant in Suzhou produces both the front and rear bumpers for an electric vehicle. This vehicle is the LiXiang ONE from Chinese vehicle manufacturer Chehejia, which we won as a new customer. According to the manufacturer, the batteries should have a particularly long service life compared to other battery and hybrid vehicles. The batteries in the LiXiang ONE can also be charged via gasoline generators to increase the range.

Close tolerances and high demands on quality and crash performance were decisive factors in the development of the bumpers. Good cooperation with customers and suppliers helped KIRCHHOFF Automotive to optimize the structure of the front bumper.





Mercedes-Benz GLB various body structure parts

Technologies:

Forming, Nut welding, Projection welding, Press hardening, Laser cutting, Spot welding

Production sites:

Side member/Side member assemblies: Attendorn/Germany
Reinforcement belt end fitting: Querétaro/Mexico
Stiffening of across-car beams: Esztergom/Hungary
Bracket cross member: Attendorn/Germany, Saarwellingen/Germany, Letterkenny/Ireland

Capacity/year:

Across-car member: 290,000
Side member assemblies: 125,000
Reinforcement belt end fitting: 125,000

Customer/Model:

Mercedes-Benz GLB

Coming Full Circle—Platform Parts for the Mercedes-Benz GLB

The Mercedes-Benz GLB was presented to the public for the first time at the 2019 IAA in September. The first vehicles of this SUV model, which is also available as a seven-seater, are to be delivered to customers at the end of the year. At several locations in Europe and North America, various structural body parts for the vehicle are manufactured.

For the first time, KIRCHHOFF Automotive Querétaro/Mexico will produce and supply parts like the reinforcements for the belt end fitting, directly from their local location to the Mercedes-Benz plant in Aguascalientes/Mexico. The across-car vehicle parts are manufactured fully automatically at the Attendorn/Germany site.

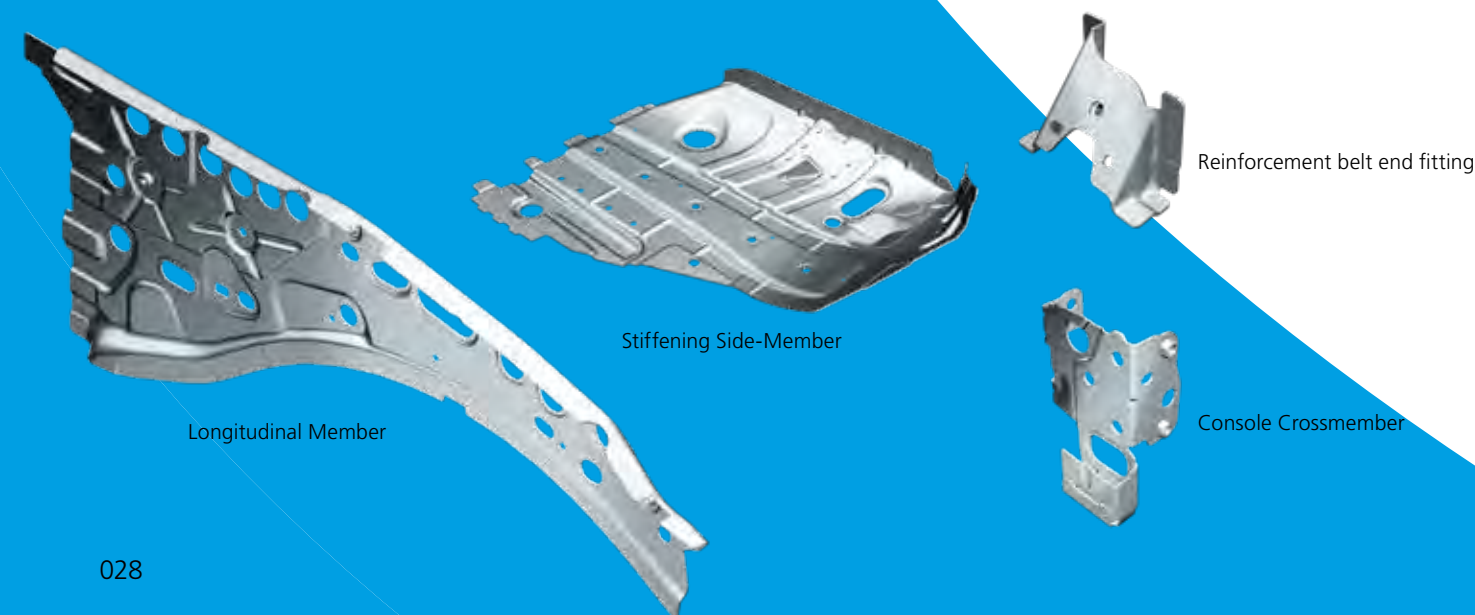
New square, new trade fair concept—the KIRCHHOFF Automotive Exhibition stand at the IAA Passenger Cars 2019



We make mobility safe—

Under this motto and with a completely new stand concept, KIRCHHOFF Automotive presented safety—relevant products for the vehicles of the future at the 68th IAA in Frankfurt/Germany. In keeping with the slogan of the IAA "Driving tomorrow", the focus at this trade fair, which is one of the leading mobility platforms, was on the future topics of autonomous driving, urban mobility, new mobility services and electric mobility. »

IAA PKW 2019



For KIRCHHOFF Automotive, this was the 12th time participating at the IAA since 1997. A crash test dummy with a front structure, made it unmistakably clear what the automotive supplier was presenting at this trade fair: safety-relevant lightweight solutions. The product on stand with the dummy were particularly lightweight and designed for the vehicles of the future and were presented alongside further developed innovative battery housings for e-mobility, which the automotive supplier had succeeded in combining high process reliability, lightweight construction and economy.

"The mobility concepts of the future—from electric to autonomous—also require bodies that ensure the greatest possible safety for all those involved in an accident, in an emergency. Our crash-relevant structural parts in hybrid design ensure that people are optimally protected in the event of an accident," explains Professor Christoph Wagener, Head of Research & Development at KIRCHHOFF Automotive. This message was also conveyed by the video, which ran over a large LED wall at the trade fair stand. A specially developed crash management system acts as a protective shield and the product designed by KIRCHHOFF Automotive focuses not only on the safety of the person causing the accident, but also on the safety of the other party (read more on page 8). »

The eye-catcher on the KIRCHHOFF Automotive booth: two weeks before successful at the 24h race in operation and now at the IAA—the Audi R8 of the Pole Racing Team, in which including Dr. Johannes F. Kirchhoff with us.

Right: Large crowds of visitors at the Press and trade visitor days.

Bottom: They discussed topics that move our region (from left to right): Andreas Heine (EVP Global Communication & Marketing KIRCHHOFF Automotive), Özgür Gökçe (Managing Director Märkischer Arbeitgeberverband), J. Wolfgang Kirchhoff (Chairman of the Management Board KIRCHHOFF Automotive), Felix G. Hensel (President of the Siegen Chamber of Industry and Commerce), Maik Rosenberg (Chairman of the Economics Committee for South Westphalia), Stephan Stracke (Managing Director Employers' Association Olpe), Arndt G. Kirchhoff (CEO KIRCHHOFF Automotive Holding).



Right: As part of a tour organized by the VDA (German Association of the Automotive Industry), Arndt G. Kirchhoff (center) led representatives of the Executive Board of PSA/Opel around our stand: Frank Jordan (Director Advanced Engineering) on the right and Matthias Brüggemann (Vice President Global Purchasing & Supplier Quality) on the left.



Right: An exhibition already exhibited at the IAA 2017 HV battery housings we have developed with regard to manufacturing technologies and process optimizations continuously has been further developed. We presented the result among others also Jörn Hasenfuß, member of the Member of the Board of Management Volkswagen Commercial Vehicles for the Procurement Department.

Bottom: NRW State Secretary Christoph Dammermann (centre) in conversation with Arndt G. Kirchhoff, Managing Partner of the KIRCHHOFF Group.



Facts and figures on the IAA 2019:

Making mobility a tangible experience—that was the declared aim of this year's IAA. At the IAA Exhibition, manufacturers presented their entire range of products and services from efficient gasoline and diesel vehicles to hybrid and plug-in hybrid models and electric and fuel cell vehicles. At the same time, the IAA Experience offered space for experiential mobility: off-road courses, E-Move Track, test drive and children's driving school became crowd-pullers. And during a three-day IAA Conference, more than 200 industry personalities from 25 countries discussed their visions and ideas for the mobility of the future. A total of 561,000 visitors came to the IAA, 22% of them from abroad.



Top: CEO KIRCHHOFF Automotive Arndt G. Kirchhoff (l.) together with CTO Dr. Thorsten Gaitzsch (r.) invites two leading representatives of Mercedes-Benz Cars to a tour of the stand: Dr. Gunnar Güthenke, Vice President Procurement and Supplier Quality (2nd from left) and Sabine Angermann (2nd from right), Director Procurement and Supplier Quality.

IAA PKW 2019

Right: Always well visited was the one inlounge atmosphere restaurant area at the KIRCHHOFF Automotive-booth.

Bottom: It was really well received—the the first IAA "extra layer", which we will with customers, friends of the Company and stand neighbours celebrated have.



This year however, it was not just a question of presenting the latest products. The focus was on the exchange with customers, suppliers and friends of the company. A special attraction was the restaurant area with its Mediterranean flair and feel-good factor. This year was the first KIRCHHOFF Automotive IAA stand after-party, which proved that this group knew how to work hard and play hard: a highlight for all that attended. »

Right: Simply delicious: fresh prepared cocktails—also not alcoholic—stood at the guests of the trade fair stand party high.





Bottom: Dr. Thorsten Gaitzsch (left), CTO KIRCHHOFF Automotive and the Chairman of the Board of Management from KIRCHHOFF Automotive, J. Wolfgang Kirchhoff, explain Sérena Salame, Purchasing, Senior Vice President Vehicle Parts Groupe PSA, crash-relevant lightweight structures from KIRCHHOFF Automotive for the mobility of tomorrow.



Top: He knows his stuff: Our crash test dummy knows what the frontal crash test is all about and what it's all about. Can protect him: A newly developed crash management system from KIRCHHOFF Automotive! Exciting MAKING.MOBILITY.SAFE. was staged on a large LED wall, almost turning into a cinema experience. Take a look the clip here: https://www.youtube.com/watch?v=QZxV1bdaLWg&feature=emb_logo

Right: Safety is the big issue at our 2019 IAA appearance. Our new crash management system ensures that the occupants of both vehicles involved are protected in the event of a collision. VDA President Bernhard Mattes (centre) had Prof. Christoph Wagener (2nd from left) explain the special features of the product.



Top: The second IAA week at KIRCHHOFF Automotive was all about information and exchange. The event started with a career day for pupils and students, followed by a meeting of regional representatives from politics and associations and the traditional visit of KIRCHHOFF trainees. The international meeting of all KIRCHHOFF Automotive Inside Sales managers concluded the event.

The result of this year's KIRCHHOFF Automotive IAA appearance was positive. "We received very good feedback. Our customers are very satisfied with our performance, our reliability and our quality," says Wolfgang Kirchhoff, CEO of KIRCHHOFF Automotive. Although a total of 15% fewer visitors came than in 2017, an overall consensus to the 2019 IAA, the automotive supplier from South Westphalia was nevertheless able to welcome board members and directors of its most important customers.

Overall, the IAA recorded a 25% decline in visitor numbers this year. The concept of a trade fair for the general public no longer seems to work in its present form. The question also arises for the IAA: what is the next step? Already at this trade fair, you could feel the change: less car show - more (mobility) experience and communication platform. The next 2021 IAA will continue to develop in this direction and at the same time, completely reinvent itself. Manufacturers and suppliers are currently working together with the VDA on the new concept. One can only be curious.

Author: Sabine Boehle

Two Reasons To Celebrate ...

...had the employees of the KIRCHHOFF Automotive plant in Esztergom/Hungary: This site has been in existence for 15 years and has grown continuously since then. Recently, three new production halls were built. On September 26, the inauguration was celebrated together with the 15th anniversary of the plant with around 75 guests. »



Top: Development of the KIRCHHOFF Automotive Plant in Hungary in the last 15 years. **Left:** Official inauguration of the new factory buildings, from left to right: Stefan Leitzgen (Global Chief Operating Officer KIRCHHOFF Automotive), J. Wolfgang Kirchhoff (CEO KIRCHHOFF Automotive), Janusz Soboń (Chief Strategy Officer KIRCHHOFF Automotive), State Secretary Dr. Pál Völner, Szilárd Méri (Managing Director Operations KIRCHHOFF Automotive in Hungary), Geza Körtvélyessy (Managing Director Administration KIRCHHOFF Automotive in Hungary)



01 Cutting the anniversary cake, from left to right: Stefan Leitzgen (Global Chief Operating Officer KIRCHHOFF Automotive), J. Wolfgang Kirchhoff (CEO KIRCHHOFF Automotive), Szilárd Méri (Managing Director Operations KIRCHHOFF Automotive in Hungary), Janusz Sobo (Chief Strategy Officer KIRCHHOFF Automotive), State Secretary Dr. Pál Völner. **02** Tour of the new factory halls (from left to right): Róbert Krisztián (Executive GM of Suzuki Zrt.), J. Wolfgang Kirchhoff (CEO KIRCHHOFF Automotive), Csaba Kilián (CEO Association of the Hungarian Automotive Industry - AHA), Géza Körtvélyessy (Managing Director Administration KIRCHHOFF Automotive in Hungary) **03** „J. Wolfgang Kirchhoff during his speech. **04** Around 75 guests attended the anniversary celebrations in Esztergom/Hungary.



Among them were many who contributed significantly to the development of the site, such as members of the Kirchhoff family, the management team, important business partners and customers. In his speech, J. Wolfgang Kirchhoff, CEO of KIRCHHOFF Automotive, vividly described how the plant in Esztergom was created in 2004 as a greenfield investment. "The trigger for building a plant in Hungary did not come from us at that time. KIRCHHOFF Automotive is very fast and dependable when our customers have orders or challenges for us. In this case, the challenge came from Suzuki Motor Company. We had already been supplying the customer for five years, but now they wanted to assemble a new vehicle line in Esztergom. If we also wanted to supply them, we had to go to Esztergom."

On a cold and snowy January day 15 years ago, the managing partners Arndt G. Kirchhoff and J. Wolfgang Kirchhoff, together with Janusz Sobo, managing director of the KIRCHHOFF Automotive plant in Mielec/Poland and now also chief strategy officer, visited the city of Esztergom to find a suitable location. In that same year, construction work began

on the new plant, which started operations with 22 employees and the supply of a single customer Suzuki. The building had to be expanded the next year to accommodate new orders, and the work continued year after year. It was not until this year that three new workshops for production and logistics were built. The total production area is now almost 31,000 m².

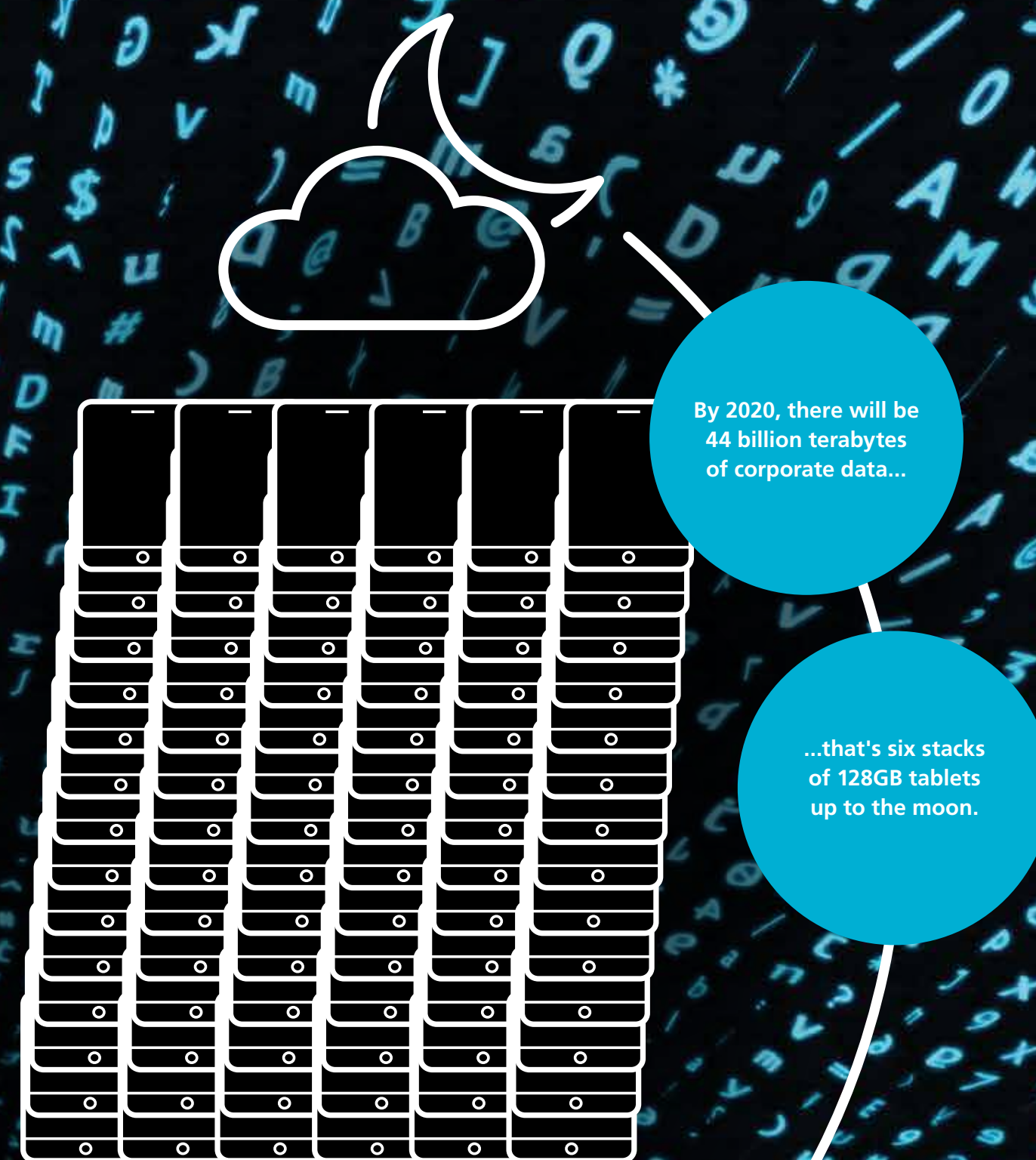
Today more than 900 employees work here and produce parts for more than ten different automotive manufacturers. The range of technologies has also developed continuously. Initially specialized in welding and joining technologies, the Esztergom plant today is one of the most advanced KIRCHHOFF Automotive plants with press hardening, 3D laser cutting, and automatic and transfer pressing technologies. "This development makes not only our management team and my family proud, but especially the employees in Hungary," said J. Wolfgang Kirchhoff.

Author: Eva Rademacher



A Roadmap for Digita- lization

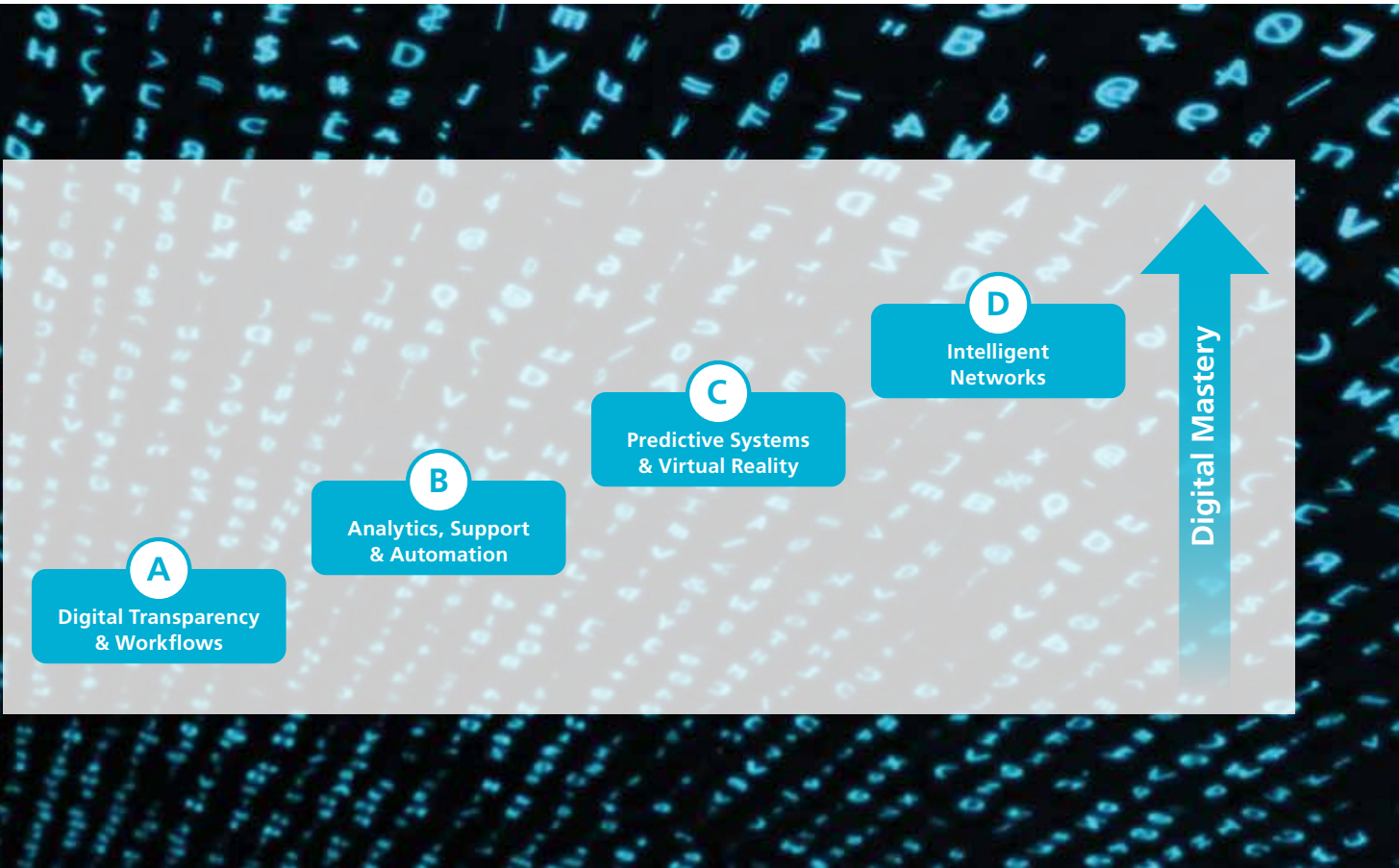
— Digital transformation, the Internet of Things, industry 4.0 and artificial intelligence—everything is initially based on the digital storage of data and information. The number of existing corporate data is already gigantic: 44 billion terabytes of corporate data are expected by 2020. The challenge is to evaluate this data, filter it and make it transparent so that it can be used effectively for the various business processes. KIRCHHOFF Automotive has developed a "Digitalization Maturity Roadmap" for this purpose. »



By 2020, there will be 44 billion terabytes of corporate data. That's six stacks of 128GB tablets up to the moon.



Digital Transformation Manager Dr. Kevin Berk presents the roadmap at the last KAPS Manager Meeting in Ovar, Portugal.



The four stages of the Digitalization Maturity Roadmap.

A team of specialists led by Dr. Kevin Berk is responsible for this digitization schedule. "We have developed a kind of roadmap to give a logical, systematic approach to digitalization that makes sense for employees and the company, because not every technological trend is equally helpful for both parties.

The roadmap is divided into four stages and what better example could be used to illustrate these than a car?

A – Digital Transparency & Workflows

We are used to our car showing us data such as speed, rpm or fuel consumption. What would we do without this information or with false information? Driving would probably be dangerous and difficult. At

KIRCHHOFF Automotive we also use data to manage our day-to-day business. However, there is still potential to improve: a lack of data, or data that cannot be accessed directly, is as bad as too much data.

In Step A, we ensure the appropriate data transparency, which ensures that we have the right data available at the right time and in the right form.

B – Analytics, Support & Automation

When you see the fuel consumption of a car, you can draw conclusions about which driving styles consume more or less fuel. If you adapt your driving habits accordingly, you will consume less fuel in the end. In addition, important vehicle functions are automatically checked by the vehicle system. Similarly, our daily processes can be made easier and more efficient.

In step B, we use data to support decision-making and automate simple processes.

C – Predictive Systems & Virtual Reality

Our vehicle computer shows how many kilometres can still be driven with the current tank of fuel. Or how to avoid a traffic jam in which you are not yet standing. This type of prediction is based on targeted data collection and analysis, which provide a relatively secure view into the future.

Step C involves the implementation of data from which forecasts can be generated. In addition, we can learn more efficiently through virtual environments, such as driving lessons in a driving simulator.

D – Intelligent Networks

Vehicles that communicate with each other? A dream of the future now a thing of today. Automated sharing of weather data or the beginning of a traffic jam with nearby road users can help to make road traffic safer.

A similar development is possible for the different enterprise systems (software and hardware) at the company. In the future, it will be a matter of communicating intelligently with each other.

Author: Dr. Kevin Berk



01



02



03

01 High Speed Welder - High-speed welding plant in Dallas, USA

02 Smooth start: The first press hardened parts rolled off the new press hardening line at the Ovar/Portugal site in October.

03 The plant in Tecumseh/USA has received three new presses: a 4,000 kN automatic servo press, a 5,500 kN servo transfer press (pictured here) and a 16,000 kN servo transfer press.

04 A new 4,000 kN press automat has started production at the Aurora plant in Canada.

05 A new 4,000 kN press automat has started production at the Aurora plant in Canada.



04



05

Modern and competitive

The KIRCHHOFF Automotive locations have invested. New presses, new technologies, and new welding systems, expand capacities and increase competitiveness.

Three New Presses for Tecumseh

The **Tecumseh/USA** plant has received three new presses: a 4,000 kN automatic servo press, a 5,500 kN servo transfer press, and a 16,000 kN servo transfer press with blank de-stacker.

This is a further step towards modernizing and increasing the competitiveness of the Tecumseh plant. The first of the three, the 4,000 kN press, started production at the end of August. At about the same time, the 5,500 kN press was delivered by heavy transport. Trial operation and production start-up took place in October. On this press KIRCHHOFF Automotive manufactures parts for the General Motors T1XX program. These include, for example, the Chevrolet Silverado and the GMC Sierra.

A 16,000 kN servo transfer press with sinker de-stacker will start production before Christmas.

A Smooth Start

The first press-hardened parts (reinforcements for Peugeot and Citroën vehicle models) at the **Ovar/Portugal** plant came off the 12,500 kN line in October. Within just one year, the plant's employees have acquired a sound knowledge of the technology.

KIRCHHOFF Automotive now has a total of six press hardening lines: two in Iserlohn/Germany, one in Gliwice/Poland, two in Esztergom/Hungary and one in Ovar/Portugal.

A New Program in Dallas

In 2020, KIRCHHOFF Automotive **Dallas/USA** will introduce the T1XX program at the plant for the customer GM. In preparation for the new program, new production and logistics halls were set up and complex welding systems were installed this year. The T1XX program comprises of seven assemblies for the T1 SUV.

Complete Assembly on Site

A new 4,000 kN press automat has started production at the **Aurora/Canada** plant. For the first time, an Arisa press was completely assembled on site at a KIRCHHOFF Automotive plant. At the same time, the current scrap chutes below the press were converted to an aluminum scrap system. As well earlier in April, a new 12,500 kN servo transfer press was put into operation at this location.

Author: Eva Rademacher



What's Your Color?

— The KIRCHHOFF Automotive employees in Iserlohn/Germany will soon be asking themselves this question with regard to their work area. Green, yellow, orange and red are the four security zones with different access authorisations, that will be available at the location starting at the end of 2019.

This change is necessary in order to meet the Information Security Management System (ISMS) requirements, regarding **physical security** and security against unauthorized access to sensitive data. The first measure to increase physical security began in the summer with the construction of a new 1,000 m long security fence around the entire plant's site. In addition, stricter access controls will be introduced on the plant premises and in the buildings by the end of the year.

In order to increase **security against unauthorized access to sensitive data**, the company areas

will in future be divided into four different security zones (green, yellow, orange, red). There will be coded access cards for each zone, which will also be used to control both laptop registration and access to print jobs.

Our company has invested around \$100,000 Euros in the new security measures at the Iserlohn site. TÜV Rheinland has awarded the system the ISO 27001 certificate.

Author: Frank Buchholzki



The new 3D measuring machine in Attendorn/Germany with a measuring range of 2 x 6 m.

— What was once the method used for measuring parts has been outdated since the start of production for the Audi e-tron due to the complexity and size of the components. That's why the Attendorn/Germany plant put a new measuring machine into operation this summer.

The previous measuring machine, with the measuring table sized at 1,50 m x 3 m, was just big enough for the circumference of the dashboard support for the Ford Mondeo, as well as the heel plate and sill of the VW Tiguan and Touran. Now the new measuring machine has been installed and the factory has a new 3D measuring machine with a measuring range of 2 m x 6 m. Relocation, re-clamping and constant adjusting for the new large welding assemblies are no longer necessary, resulting in significantly reduced measuring efforts. In addition, a second measurement can be prepared parallel to a running measurement on the other half of the measuring plate simultaneously.

Generating measurement reports is also faster and more efficient now. Using integrated software modules, online measurement reports, process analyses, and various other evaluations can be created. A so-called EagleEye camera also permits optical measurements, whereby the exchange of the measuring heads is automated. A new measuring room in the maintenance area has been created to accommodate the larger measuring machine.

The old measuring machine was moved to the Saarwellingen plant at the beginning of October. At its new home, it is used for measurements on new products for Mercedes-Benz, which are currently in the sampling and start-up phase.

Author: Eva Rademacher

\$500,000 For a Research Project



"It is a great thing to be able to partner with the University's Professors and students and knowledge share about technology. And it helps to obtain more support locally, from the Government and Institutes," shares Cheng Zeng, Research and Development Manager in Aurora.

The R&D Department at KA Aurora Corporate kick-started the partnership with the University of Toronto around 4 years ago that led to the NSERC (Natural Sciences and Engineering Research Council of Canada) grant research project that began in September of 2018. The collaboration resulted in the successful approval for nearly \$500,000 in funding over the next 3 years.

So why the interest in 3D scanning research? The research and development team has been developing 3D scanner technology since 2009 for a weld inspection project at the North York plant. Since then, over 26 3D scanner inspection cells have been implemented in KANA (KIRCHHOFF Automotive North America) and running on floor. Robotics are integrated with the technology on site to run automatic inspections for fasteners such as weld nuts, clips, studs, as well as welds and part dimensions.

Authors: Sherry Lay, Cheng Zeng

In recent years, our plant in Aurora/Canada partnered with one of Canada's most well known schools, the University of Toronto (UofT), to conduct 3D Scanning Research and Development work. Together, the two teams were able to develop a project that was awarded government funding.

Top: The entire unit of the scanner station for the Audi Q5 rocker was designed and built in the R&D laboratory of KIRCHHOFF Automotive in Aurora. This concerns both the design of the scanner cell and the control cabinet as well as the programming of the PLC and the linear motion control. "The team did a very good job. The self-built scanner cell of the R&D laboratory improves quality control and contributes to process optimization," says Cheng Zeng, Head of Research and Development at KIRCHHOFF Automotive in Aurora/Canada. **Right:** 3D Laser Scanner Cell Example at the Waverly/USA Plant



A Smartwatch app supports the employees when converting machines.

— Do you find that you cannot do anything with AMQP, MQTT and STOMP? Björn Wollny, Lean Production expert at KIRCHHOFF Automotive, did. Until he participated in the external workshop series "Digital Scouts".



Background

The workshop series "Digital Scouts" is conducted by the Mittelstand 4.0-Kompetenzzentrum Siegen as part of the Mittelstand Digital Initiative, which is supported by the Federal Ministry of Economics and Energy. Using digital prototypes, the use and benefits of new technologies will be investigated. The use of wearables for production processes was tested in a pilot project. Wearables' are small, networked computers—such as smartwatches—that you wear on your body. They support activities in the real world with (additional) information, evaluations and instructions. In this context, KIRCHHOFF Automotive is testing a new way to introduce standardized processes and to receive feedback and suggestions for improvement from employees in a simple and uncomplicated way.

The workshop "Digital Scouts", show participants how to easily and quickly build prototypes digitally in the field and whether an idea or technology can be beneficial for the company. In addition, it networks people in the region who deal with the topic and bundles diverse knowledge.

Frank Beckehoff, District Administrator of the Olpe district in Germany, is convinced that, "The idea of digital scouts is a good approach for actively shaping the changes and opportunities resulting from digitization in companies."

Björn Wollny is not only familiar with the AMQP, MQTT and STOMP protocols, he recently presented a project developed from this to NRW Labour Minister Laumann and the Olpe and Siegen-Wittgenstein District Administrators. Together with two employees of the Fraunhofer Institute FIT and the Mittelstand 4.0 Competence Center, Björn Wollny has developed a Smartwatch app that supports KIRCHHOFF Automotive employees in converting machines. It uses the AMQP message protocol for data transmission. A setup checklist developed in lean production workshops is displayed. Employees can record the individual steps and store comments. The resulting increase in data volume and quality gives us a much better opportunity to stabilize and reduce make-ready times.

The team around Björn Wollny is currently preparing a long-term test in everyday production with the support of IT. **"I am curious to see what findings we can draw from the pilot for future work simplifications and process improvements."**

Author: Eva Rademacher

Smart Thinking and Good Networking

Strong Partners for strong Growth

— Once a year KIRCHHOFF Automotive honors its best suppliers in the categories Raw Materials, Purchased Parts and Capital & Tooling. The awards take place each year for KIRCHHOFF Automotive Europe, Asia and North America. This year, the celebrations were hosted in Suzhou/China (Asia), Budapest/Hungary (Europe) and Markham/Canada (North America).

For the 2019 European Supplier of the Year awards in Budapest/Hungary, J. Wolfgang Kirchhoff, CEO of KIRCHHOFF Automotive, emphasized how important reliable suppliers are, especially in the current economic situation. He shared, "Despite the current discussions, the automotive industry will remain a strong industry because there will continue to be a high demand for individual and affordable mobility. KIRCHHOFF Automotive needs excellent partners to cope with growth and challenges".

The recipients of the 2019 Supplier of the Year Awards for the Raw Material category are: C.L.N. Slovakia s.r.o. (Slovakia), Suzhou Shinko-Shoji Material Co., Ltd. (China), and Samuel Automotive (Canada). In the Purchased/Bought-In Parts category: Boltun Corporation (Taiwan), Suzhou Lilai Auto Parts Co.,

Ltd. (China), and AK Tube LLC (USA/Mexico). Last but not least, for the Capital & Tooling category: LEWA Attendorn GmbH (Germany), CPM Tool CO. LTD. (China) and Duradie (Canada). All award recipients are partners to KIRCHHOFF Automotive globally and are outstanding performers in the industry.

When asked about what they foresee happening with the partnerships, market trends and future challenges in the automotive industry, the suppliers took the following positions: »

Author: Klaus Lawory



The Slovakian steel supplier C.L.N. Slovakia s.r.o., which received an award for Europe in the Raw Material category, supplies the KIRCHHOFF Automotive plants in Hungary and Poland. **"We are involved from the very beginning, from development to series production of the products - this strengthens the cooperation,"** says Managing Director Stefan Lisik. When he is asked about the development of steel prices, Managing Director František Popovič continues to hope for a new stability in the international scenario.

The Boltun Corporation from Taiwan was awarded as the best Purchased/Bought-In parts supplier for Europe. **"The foundation stone for our cooperation was laid in 2005 when Klaus Lawory (3rd from right) and his team visited Taiwan. In 2007 we started with the first series deliveries from Taiwan to Europe. Since then, both companies have grown worldwide,"** says Boltun Corporation Sales Director Jason Chen (5th from left).



Detlef Walter, Sales Manager for Robot Technologies at LEWA Attendorn GmbH, received the award for Capital & Tooling category for Europe. Cooperation with KIRCHHOFF Automotive in the field of automation and robotic solutions began in 1999. **"Today, joining processes with aluminum are of huge importance in the production of crash-relevant lightweight structures for automotive construction. This is why we developed the SpeedGun AluSpot, a special high-speed aluminum welding gun,"** says Detlef Walter.



"The China Automobile Industry Association predicts that sales of vehicles with innovative energy drives will probably reach 50% of total sales by 2030. To meet the increasing demand for aluminum alloy materials for such vehicles, Shinko-Shoji has introduced two new production lines in 2018," reports Sunada Noriaki, Managing Director of Shinko-Shoji Material Co., Ltd. in China. His company received an award in the Raw Material for Asia category.

Suzhou Lilai Auto Parts Co., Ltd. from China was awarded for the 2nd time in the category Purchased/Bought-In parts for Asia. Managing Director Yongming Yang sees the supplier industry as an important part of the supply chain in the automotive industry, that is facing significant challenges as well as opportunities. In 2020, his company is planning a new production line for battery packs with highly automated production facilities and an intelligent control system. "This saves labor costs and improves product quality," he shares.



CPM Tool CO, Ltd. received the Supplier of the Year Award for Capital & Tooling category for Asia. Kaela Nie, Sales Manager, says: "In 2014 we carried out our first joint global project with KIRCHHOFF Automotive - now business with KIRCHHOFF Automotive accounts for 10% of our annual turnover. With our strategic investments in employees, technologies and Intelligent Manufacturing, we see ourselves well positioned for the future".



Samuel Automotive received an award in the Raw Material category for North America. Vice President Luis Ponte is delighted with this award and says, "It demonstrates the high value that our automotive competencies have in North America. We have been supplying KIRCHHOFF Automotive with a steadily growing volume for years".

The tool manufacturer Duradie Technologies Inc. was honored in the Capital & Tooling category for North America. Owner and Manager Laurence Smith said, "Our entire team is very grateful to be honored with such a prestigious award. Our goal was, and still is, to provide world-class tools for the reliable production of quality parts for the global automotive industry".



AK Tube LLC received the award in the category Purchased/Bought-In parts for North America. "Being named Supplier of the Year by a strategic partner is an incredible honor," said John Waweru, Automotive Sales Manager at AK Tube LLC. "We offer a wide range of electro-welded steel tubes made of different materials. Our locations are strategically located close to KIRCHHOFF Automotive's plants."

So many possibilities

Eelaventh Kuddy works on a 500 ton transfer press and manufactures parts for Audi.



Background

Since 2016, KIRCHHOFF Automotive has employed almost 30 fugitives as interns or trainees at its German locations. "We are very pleased that Eelaventh Kuddy is the first fugitive to successfully complete an apprenticeship in our company. The key to success—in addition to the necessary motivation and interest in the respective training occupation—is first and foremost that you learn German quickly," says Daniel Kramer, Human Resources Manager at KIRCHHOFF Automotive in Attendorn.

— Eelaventh Kuddy is the first refugee to have completed vocational training at KIRCHHOFF Automotive. He came to Germany from Sri Lanka in 2013. After an internship and a collective bargaining support program, he has now passed the final examination and is a trained machine and plant operator.

"If you are interested, you can do anything. In Germany there are so many possibilities, and there is also a lot of help. There is no such thing in Sri Lanka," explains Eelaventh Kuddy. Civil war and violence caused him to flee. In Germany he graduated from secondary school, started an internship at KIRCHHOFF Automotive in Attendorn and took part in the TVFAF program ("Tarifvertrag zur Förderung von Ausbildungsfähigkeit"). With this, he worked his way up to a trainee position. A total of six refugees are currently undergoing training at the company's German sites, with a seventh beginning in the autumn. Eelaventh Kuddy is the first to pass the final examination.

"I think it's great and I'm really happy for him! When you think about all the things he's been through in his life, it's really great that he's now done it," says Marco Tesche, who supervised Eelaventh Kuddy as a trainer.

He also got help from Walter Gander. The retired vocational school teacher not only taught him the German language, but also gave him advice as to which professional direction to take. "Mr. Gander recommended that I do my practical training and later complete my training as a machine and plant operator. They also worked through examination tasks together. Instructor Marco Tesche was impressed: "Before the actual exam we did a test on the machines. I was very



Eelaventh Kuddy (l.) with his instructor Marco Tesche

surprised with what Eelaventh could explain to me, it was really amazing. I wasn't expecting that."

Now Eelaventh Kuddy is working on a 500 ton transfer press and produces parts for Audi. But he doesn't see himself at the end of the career ladder yet. "In the areas of incoming goods and quality, I would like to continue and learn more."

Author: Eva Rademacher

What's After Our Process?

— What happens with the KIRCHHOFF Automotive parts when they arrive at the customer? And what importance do they have in the final product, the overall car body? José Luis Martínez Aguilar from the Stamping department at the KIRCHHOFF Automotive Querétaro plant in Mexico wanted to know more about this.

To answer his questions, the Quality team took José Luis Martínez Aguilar on a guided tour at the facility of the KIRCHHOFF Automotive customer General Motors in Silao/Mexico. Here he could see what happens to the parts he produces after they leave the KIRCHHOFF Automotive plant.

Before the visit, the colleagues explained to him the internal processes and what KIRCHHOFF Automotive as a Company has to pay attention to in order to meet the customer's standards regarding quality, material sourcing, documentation, etc. During the visit at the GM plant, he then learned about these areas:

- **Body assembly area:** Here KIRCHHOFF Automotive parts – Inner Rail, Bar Assembly, Rad Support, Plenum Lower Front, among others—are processed in the work stations at GM. This included a tour of the robots that assist with welding for metallic structure assembly for the "Sierra" and "Silverado" trucks—for which KIRCHHOFF

Automotive in North America generates the greatest number of pieces.

- **Final assembly area:** Here the different parts that make up the unit as a whole car are assembled (Mechanical and motor system, electrical system, connections, lights and panels, board, moldings, tires, etc.)

From the importance of correctly receiving raw material in the KIRCHHOFF Automotive plant, to the GM processes for final assembly, the complete production process was outlined in detail to help answer José Luis Martínez Aguilar's question. And he was impressed. "My commitment is to produce good pieces the first time around. We are a key business partner in all of GM's process. Now I know the importance of what I produce," he explained.

Author: Abraham Morales

José Luis Martínez Aguilar at the Stamping press he works at in the KIRCHHOFF Automotive Querétaro/Mexico plant, producing Plenum and Mounting Brackets for the GM T1XX program.



KIRCHHOFF Automotive Mitarbeiter vor dem chinesischen Werk in Suzhou.

Different Floor, Different Task

— This is what is normal in China, but not necessarily for Germany employees. KIRCHHOFF Automotive provided this and other insights into everyday workflow for 21 students enrolled in the Chinese courses at the Hemer Comprehensive School. Back in March, they first visited the KIRCHHOFF Automotive plant in Iserlohn/Germany. A few weeks later, they visited the plant in Suzhou/China, as part of a trip organized by their school.

Author: Eva Rademacher

You can read what surprised and impressed the students in particular, in the statements:

"We enjoyed the canteen food very much. The Chinese sweets were even tastier than the meal. But the fact that we got carbonated mineral water was sensational!
In China this is not typical."

"We were quite impressed by the fact that there are many women in executive positions at companies in China. We learned when an employee has a child she has 128 days off and during this time she receives money from the state, a little more than her normal salary."

"In China, it is very much appreciated that the German colleagues are so open to the Chinese culture. Although the German members often find Chinese food unusual, they still try it."

"In China, the responsibilities of the company are divided by floor. For example, on the third floor, the focus is mainly on the Chinese market. The second floor on the other hand, is dedicated to technical exchange, and research and development. This requires contact with the parent plant in Germany, as the specifications are worked out there."

"Every year, employees take a three-day trip to the Suzhou area. It is intended to promote cohesion. There are also festivals or sports such as football, table tennis or badminton for them to participate in."

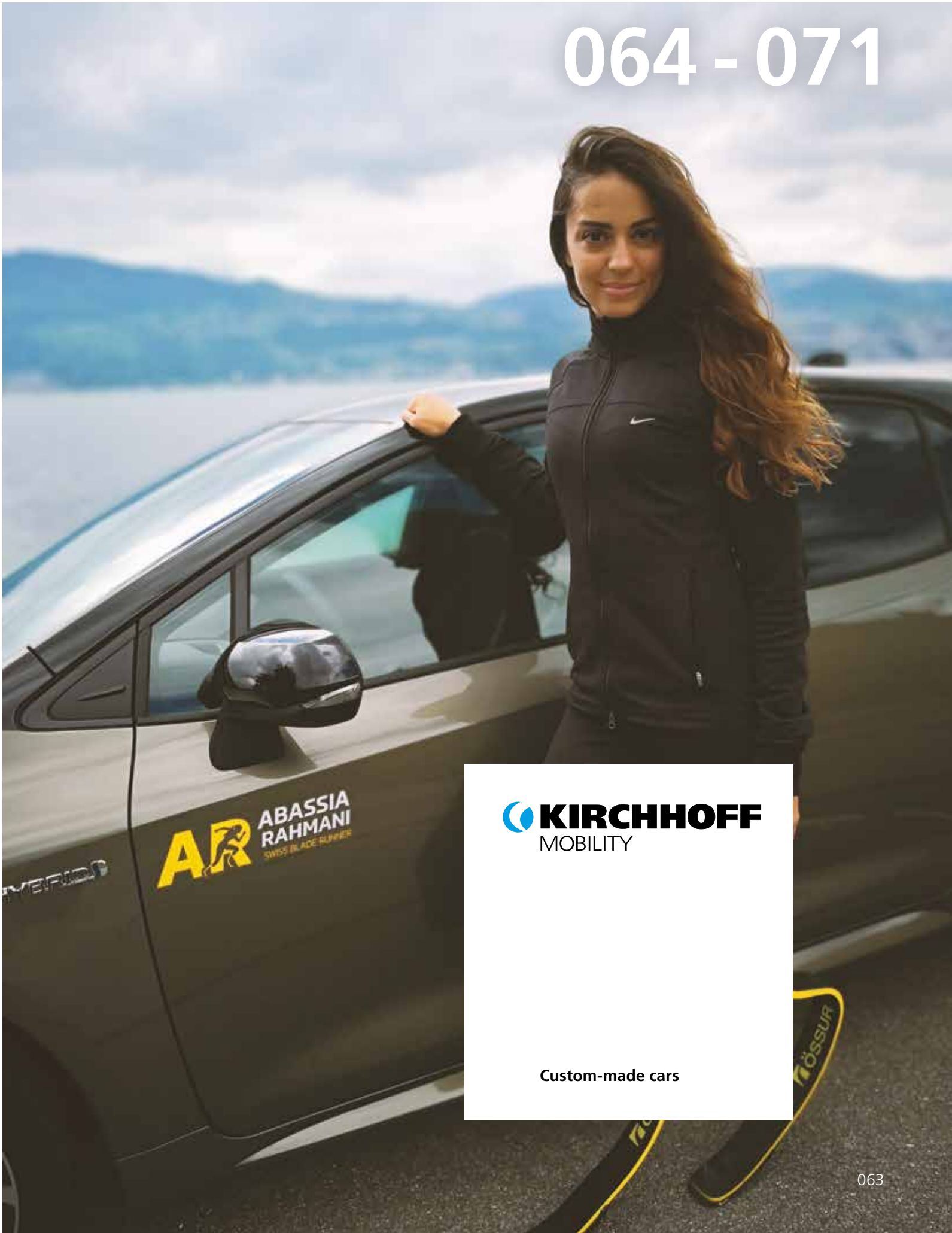


KIRCHHOFF Automotive has three production plants in China: Chongqing, Suzhou and Shenyang.

The company has not only given the pupils of the Hemer Comprehensive School an insight into their daily work at a Chinese plant, but has also provided financial support for their visit to China. Since 2015, the Hemer Comprehensive School has been offering Chinese as a subject from grade 11. This was initiated by Sabine Usov, who herself lived in Shanghai for 15 years.



- 064** Experience Mobility—in Cooperation with GRUMA Automobile
- 068** Made-to-Measure Car for Swiss Top Athlete Abassia Rahmani



KIRCHHOFF
MOBILITY

Custom-made cars

Experience Mobility— in Cooperation with GRUMA Automobile

Under the motto "Experience mobility", GRUMA Automobile and KIRCHHOFF Mobility presented new and innovative conversion solutions for the Mercedes-Benz passenger car and commercial vehicle models at the GRUMA Automobile branch in Würzen/ Germany early November 2019.



Jens Hocke, branch manager of KIRCHHOFF Mobility Berlin and KIRCHHOFF Mobility customer consultant Roy Fritzsche (left) in front of a barrier-free Mercedes-Benz Sprinter at GRUMA Automobile in Würzen.

Under the motto "Experience mobility", GRUMA Automobile and KIRCHHOFF Mobility presented new and innovative conversion solutions for the Mercedes-Benz passenger car and commercial vehicle models at the GRUMA Automobile branch in Wurzen/Germany early November 2019.

The Swabian car manufacturer has installed the "EasySpeed" hand-held control unit from KIRCHHOFF Mobility for accelerating and braking, shown here in the new Mercedes-Benz B-Class, directly ex works.

On the first day of the event, the focus was on conversion solutions for the commercial sector. Visitors were able to obtain detailed and individual advice on the various offers. The day's program was rounded off by various lectures on the subject of inclusion and disabled transport. 'Desired Touch' applied to all commercial vehicle models exhibited both indoors and outdoors. The Mercedes-Benz Sprinter, for example, presented the functionality of the flexible aluminum system floor. This special floor has a click system that allows optimum flexibility when seating a vehicle. This allows transportation companies to decide for themselves where and how to sit in their vehicles, which makes the transport of passengers with and without wheelchairs, more flexible and efficient.

The second day was dedicated to vehicle conversions for active and passive drivers. Product solutions for loading, boarding, and easier driving, were received with great interest by the visitors and could be tried out directly on site. The extensive range included the EasySpeed hand control from KIRCHHOFF Mobility, which Mercedes-Benz installs directly.

An educational event for both sides, organizers and visitors, which—as everyone agreed—had to have an encore presentation. **"With this event, we wanted to make the topic of barrier-free automobility more accessible. With a wide selection of conversion solutions, customization advice, and various presentations on relevant topics, I think we were more than successful,"** says Roy Fritzsche, customer consultant at KIRCHHOFF Mobility in Berlin.

Author: Souscha Nettekoven-Verlinde

Made-to-Measure Car for Swiss Top Athlete Abassia Rahmani

— In the K>Mobil issues 47 and 48, we reported about superstar Abassia Rahmani and her climb to the top of athletics. In 2019, at only 27 years of age, the Swiss native is one of the best para-athletes in Europe. Her participation in the 2016 Rio de Janeiro Paralympic Games and winning gold medal at the 2018 European Para Athletics Championships in Berlin for the 200-meter sprint, are among the most important highlights of her career. »



Abassia Rahmani in front of her new Toyota Corolla Hybrid, which KIRCHHOFF Mobility has individually modified for her so that she can operate the vehicle independently.



"My best moment as an athlete was [...] when I first won a national race against runners with healthy legs."

Abassia Rahmani

In an interview with KIRCHHOFF Mobility, Abassia Rahmani talks about her most beautiful moments as an athlete, her everyday training routine, her goals and of course, also about her new Toyota Corolla Hybrid, which KIRCHHOFF Mobility has equipped for her with the Carospeed hand control and the Ergo steering wheel knob.

What makes the sprint so special for you?

Abassia: Body and mind have to work in perfect harmony to be successful. This challenge fascinates and motivates me extremely.

How long have you been a sprinter?

Abassia: Sprinting and long jumping were already my favourite activities during school but I have only been competitive with the sport since 2014.

What has been your greatest sporting success and best moment as an athlete?

Abassia: My biggest sporting success was placing fourth at the 2016 Paralympic Games in Rio de Janeiro. My best moment as an athlete was when I won my first national race against runners with no disabilities.

Currently you are training hard for the Para Athletics World Championship in Dubai. What goals have you set for yourself?

Abassia: My big goal for the Para Athletics World Championships in Dubai is to reach the final over 100 meters. I haven't been able to do this distance at a world level yet.

What does a typical training day look like for you?

Abassia: I always start with a very well rounded breakfast. Then stretching or yoga exercises are on the agenda, followed by a first sprint training session on the tartan track (plastic track). With lunch and the following physiotherapy I do, I recharge my batteries.



Abassia in her Toyota Corolla Hybrid with hand control Carospeed for throttle and brake, steering wheel knob Ergo and pedal cover.

In the afternoon, I work in the office. In the late afternoon, I mostly learn and study for my schooling, which I would like to complete in summer. The day ends with a second training session in the gym and of course a strong dinner.

What role does a healthy diet and time for restoration play for you?

Abassia: Sufficient sleep and regular physiotherapy are extremely important, because the body can only perform 100% when you are well rested. The right nutrition is just as important; in competitive sports the body consumes an enormous amount of nutrients and one of my most important tasks as an athlete is to give my body this.

How do you manage motivating yourself again and again?

Abassia: When I have a bad day and don't really want to leave the house, I motivate myself by thinking about my teammates and the good feeling after training. As soon as I'm training, the motivation finds itself.

How do you like to spend your time away from training?

Abassia: I like to meet friends for dinner, read, and listen to music a lot. My days away from training can also be a bit more action-packed, various (extreme) sports appeal to me.

Reaching your goal quickly is now possible with your new Toyota Corolla Hybrid, which we were able to equip with the Carospeed hand control and the Ergo steering wheel knob. How do you like your new barrier-free Toyota Corolla Hybrid?

Abassia: The Toyota Corolla Hybrid is the perfect combination between sporty and environmentally friendly. I can store all my training gear in the large trunk. And the car just looks good. Of course the best thing is that I can drive the car on my own. Without the individual conversion of hand controls for gas and brake, and the steering wheel knob from KIRCHHOFF Mobility, this would not be possible.

What are – besides winning precious metal in Tokyo – your goals for 2020?

Abassia: In addition to the European Championships in June, I have to complete my professional degree at the same time and I would like to start my studies in sports management in September.

<https://www.abassia-rahmani.com>

<https://www.instagram.com/abassia.rahmani/>

The interview was conducted by Souscha Nettekoven-Verlinde.



074 MAXX Plus On Tour—in use at the IAA

076 Representing German Quality Together



WITTE
TOOLS

When function and
effect are in line.

MAXX Plus On Tour— in use at the IAA

In this 'MAXX Plus On Tour' story everything revolves around KIRCHHOFF Automotive's appearance at the International Motor Show (IAA) in Frankfurt. On September 10th, the IAA opened its doors first to journalists and later to the public. With 'MAXX Plus on tour' we take a look behind the scenes before and during an IAA.

Final spurt: 11 days before the official start of the IAA, the construction work started and all booth builders were ready to go. With them came countless truck loads of building materials, exhibition furniture, technology, exhibition products and advertising material—from crash test dummies to flower boxes, everything was there. Also included were the professional tools from WITTE Tools, which were in daily use by our booth builder.

The construction of the KIRCHHOFF Automotive exhibition stand was a special challenge this time. With a new space allocation as an island stand in Hall 9, it required much rethinking: the permitted space was no longer sufficient to fit a kitchen, a warehouse, and meeting rooms. So we presented ourselves for the first time at the IAA 2019 with a two-storey exhibition stand. Stricter fire protection requirements, additional static tests and an oversized combi-steamer, which was delivered on the last day of assembly and no longer fit through the door, caused mild to severe high blood pressure in all participants.

The MAXX Plus microfibre-coated screwdriver from WITTE Tools was used when the back wall of the restaurant had to be mounted in natural wood, when the LED panels for a large video wall had to be mounted, or when atmospheric party lights had to be installed respectively. In the meantime, a whole range of WITTE Tools have become a permanent in the oversized tool drawer trolley from our booth builder.

Day 1 of the IAA: As if there had never been a challenging construction period, the KIRCHHOFF Automotive stand shines in fresh splendour. We would like to take this opportunity to thank everyone involved for their tireless commitment and the perfect result. Special thanks go to our booth builder LISA Funktion & Design and our technology provider AVMS.

Author: Sabine Boehle



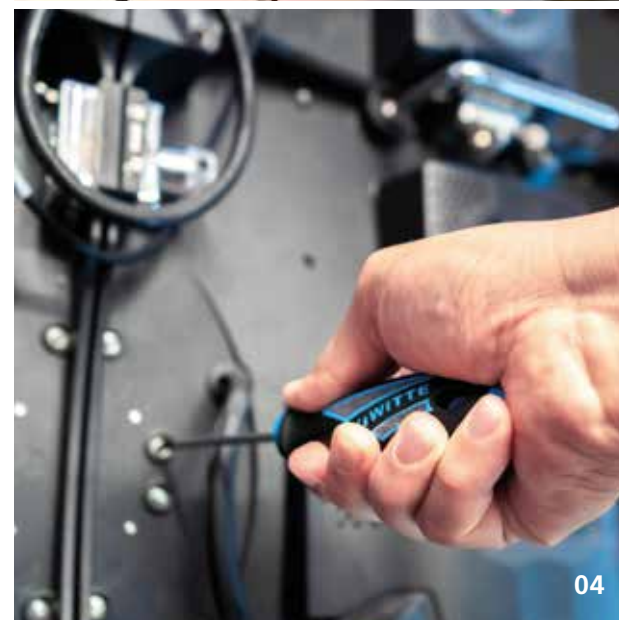
01



02



03



04



05



06

In the future we will not only report about the MAXX Plus in this series, but also send further WITTE Tools on their way.

01 The MAXX Plus screwdriver, which was displayed at the IAA Infocounter to attract the attention of the public, also enjoyed growing popularity among our customers. **02** The body-in-white has been completed, now it's on to the finer points. **03** To ensure that the crash test dummy securely holds the front structure developed by KIRCHHOFF Automotive, it is screwed onto holders that are directly connected to the dummy. **04** Our media agency screwing together the LED panels for a large video screen. **05** Huge back wall in wooden look - when things got tricky, the MAXX Plus screwdriver was there to help. **06** Pliers from WITTE Tools are also part of the tooling equipment of our booth builder.

Representing German Quality Together



The German Quality Tools joint stand at Ferroforma in Bilbao/Spain

Latin America Forum

WITTE Tools held its first Latin America Forum in September. Participating companies exchanged their experiences and discussed opportunities and challenges in the different regions of Latin America. The Best Practice Case "ABUS in Latin America" rounded off the exchange of experiences and gave an outlook on the next Latin America Forum in January 2020 at the company ABUS in Wetter/Germany.



— Trade fair appearances in cooperation with other German tool manufacturers – this creates synergy and ensures the successful development of new markets. For WITTE Tools, it is a concept that works!

WITTE Tools and five other German tool companies joined forces at the **INDUSTRY TOOLS by FERROFORMA** trade fair in Bilbao/Spain back in June, to launch the 'German Quality Tools' joint stand. As the only German Pavillon, the participating companies very successfully established new contacts, in particular with potential trade partners from Peru, Ecuador, Argentina, Colombia, Bolivia and Mexico.

The second joint campaign followed only three months later with a joint stand at the **Expo Nacional Ferretera in Guadalajara/Mexico**. The result was not only a very well-attended exhibition stand, but also valuable new contacts to potential trade partners in Mexico and throughout Latin America. The first orders from the new trading partners were received long ago – making a great trip "across the water".

Further events for the 'German Quality Tools' initiative are being planned. In addition to joint trade fair appearances, there will also be buyers' events in selected regions of Latin America in 2020.

"With the 'German Quality Tools' Initiative, we are showing a truly successful example of good practice in bringing together common interests and supporting each other in setting up sales structures in Latin America," says Martina Hageböling, Sales & Marketing Manager for the Latin America region at Witte Tools. The successful joint participation at Energetab in Poland showed that the joint concept also works successfully in other regions. "We will establish the joint concept throughout Europe. We were able to use the synergy effects of the joint stand in Poland and establish very good contacts beyond Poland to other Eastern European countries," confirms Christian Piccari, Area Sales Manager at WITTE Tools.

Author: Martina Hageböling



At the Ferroforma trade fair in Bilbao/Spain: Sandra Kapias, International Sales at WITTE Tools, talking to visitors from Ecuador.



The joint stand of the initiative 'German Quality Tools' at the Expo Nacional Ferretera in Guadalajara, Mexico.



The successful exhibition team of the joint stand at Energetab in Poland.



WITTE Tools at the **INDUSTRY TOOLS** by FERROFORMA



WITTE Tools at the **Expo Nacional Ferretera** in Guadalajara



International Hardware Fair Cologne

Peaked your interest? Visit us at the International Hardware Fair in Cologne/Germany. The WITTE team is looking forward to seeing you!



- 080 Good stuff
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- 098 Turning People's Heads in the UK!
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- 100 BENVENUTI A CASA FARID
- 102 Bonjour
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- 104 What bin is what in?
- 106 Awareness and raising awareness
- 107 Picnic in Wonderland
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KIRCHHOFF GROUP



KIRCHHOFF GROUP



KIRCHHOFF GROUP



KIRCHHOFF GROUP



ZOELLER GROUP

079

Good stuff

While hydrogen has been somewhat neglected in recent years, the energy carrier is currently very en vogue. KIRCHHOFF Ecotec has been dealing with this good material for some time now. In 2020, the first municipal vehicles with electric hydrogen hybrid drive will be on the road.

Control units,
cooling elements
and high-voltage
distributors

Battery-
modules

Charger
CCS 2.0

Electric
motor

On-Board-
Charger

Fuel cell
modules

Hydrogen
tanks



Minister Andreas Scheuer presents Burkard Oppmann (Managing Director FAUN Services) with the funding decision for the hydrogen vehicles.

Climate protection needs hydrogen. With this announcement and the approval of subsidies, the Federal Government smoothed the way for many companies to implement their vehicle technology with hydrogen this year. There is no end in sight. But there is still a lot to be done. For example, the expansion of the network for filling stations. The Federal Ministry of Transport is supporting hydrogen mobility with a further 23.5 million euros as part of the National Innovation Programme Hydrogen and Fuel Cell Technology (NIP). FAUN received 521,241.00 Euro for the KIRCHHOFF Ecotec for the development of the BLUEPOWER chassis. "Hydrogen, fuel cells and electricity move the future", said Transport Minister Andreas Scheuer at the presentation of the "Future Pay Cheques". "We have seen many studies and pilot projects in recent years. We need them now on the road—because today we have to convince the citizens that the technology works and is a real milestone towards CO₂-neutral mobility of tomorrow". In the medium term, hydrogen supply with the help of electricity from renewable energies is the most sensible option. A chance for our industry. Hydrogen can be produced by means of electrolysis in waste-to-energy power plants, a virtually closed energy cycle and 100 percent electric and emission-free municipal vehicles.

FAUN and ZOELLER prove that the technology works. The BLUEPOWER chassis drive with a battery pack that can be equipped with fuel cells and tanks to increase the range and offer the maximum payload. The first of these electric-hydrogen hybrid drive models will enter the test phase in January. On the one hand, a waste collection vehicle on a three-axle chassis and a sweeper on a two-axle vehicle. The electrical energy produced by the fuel cells from hydrogen is not only used for driving, but also for all body functions. The collection of household waste is frequently stopped, every few metres in densely populated areas. With conventional chassis, a lot of energy is converted at the brakes into heat that can no longer be used. BLUEPOWER chassis store this energy in the batteries for later use. This means that a BLUEPOWER vehicle requires up to 40 % less energy, is CO₂ and NO_x free and emits less fine dust into the air. Also the noise emissions are marginal, because all aggregates were optimized for quiet and energy-efficient operation. At IFAT ZOELLER will show the BLUEPOWER CLEANDRIVE variant with MEDIUM X2 body and FAUN the BLUEPOWER as ROTOPRESS and as VIAJET sweeper.

Author: Claudia Schaeue



How does BLUEPOWER work:
<https://www.youtube.com/watch?v=F6jt9pm0Sx8>



Dr Johannes F. Kirchhoff

Even more strongly connected to the industry



— The Federal Association of the German Waste Disposal, Water and Raw Materials Industry e.V. (BDE) appointed Dr Johannes F Kirchhoff, Managing Partner of the KIRCHHOFF Group, to its Executive Board by cooptation at its Executive Board meeting at the beginning of September.

Dr. Johannes F. Kirchhoff: "The BDE develops the guidelines and concepts of our industry and we have been active in this association for decades. With our waste collection vehicles, sweepers and service concepts, KIRCHHOFF Ecotec offers sustainable solutions for waste disposal logistics. I am pleased that I can now support the industry even more strongly in the management committee of the BDE and contribute our topics."

BDE President Peter Kurth is delighted about the additional manpower on the Federal Executive Board:

"Dr. Johannes F. Kirchhoff has been personally associated with many BDE companies for decades. As a partner in the further development of our industry, he shapes and influences the technical standard and thus the service quality. We are grateful that he is also committed to and supports our association through his co-optation on the Executive Board."

Author: Sonja Grässle

I'm gonna be a garbage man

The year 1994 marks a milestone in the history of FAUN. The Kirchhoff family from the Sauerland region entered the garbage truck business.

On November 1, 1994, the technology enthusiast Johannes Kirchhoff became a garbage collector, or rather a garbage truck manufacturer. Until then, the Iserlohn family of entrepreneurs had been involved with tools and automotive components and entered the garbage business by taking over the shares of FAUN AG. At that time, the vehicle specialist from Lower Saxony generated a turnover of 100 million euros.

A lot has happened since then:



For 25 years in the garbage truck business and still in the thick of it instead of just being there. Dr. Johannes F. Kirchhoff (left) was on a garbage collecting tour with the Managers of FAUN and ZOELLER in Berlin in 2019. His motto: "We need to know what worries the operators out there."



Today almost 2,000 enthusiastic great girls and great guys work for FAUN plants in Germany, Australia, France, Great Britain, Turkey and Switzerland. Garbage trucks and sweepers are our life.



The new Pfundskerl is from Hamburg



The new guy: Thorsten Baumeister (right) as COO together with CFO Matthias Kohlmann (left) and CEO Patrick Hermanspann (centre) of the FAUN Group.

— The products for which Thorsten Baumeister will be responsible in future are often still orange. He is familiar to this colour. But now the vehicles are much bigger than in his previous job. Born in Hamburg, he joined FAUN Group on 1 November as Chief Operating Officer (COO).

The new Pfundskerl is diplomatically avoiding the eternal conflict in the North of Germany, whether one is sympathetic to SV Werder Bremen or Hamburger Sportverein; in football he is neutral. His sports are more to be found on the endurance track, for example running a marathon. But at least he has now moved to a city whose club plays in the 1st Bundesliga.

In the first league for forklift trucks Thorsten Baumeister has been playing at STILL for the last 20 years. As Senior Vice President Plant Hamburg at the forklift truck and industrial truck manufacturer he was responsible for the production of forklifts, hydraulic cylinders and components for driver cabs at the plant in Geisa (Thuringia). He also managed international projects such as the construction of a new factory in Brazil.

As COO at FAUN, he will be responsible for the production plant for waste collection vehicles in Osterholz-Scharmbeck, the sweeper factory and the new plant in Grimma as well as the international

manufacturing plants in China and Turkey. He will also be responsible for materials management, supply chain management and the planned start of series production of BLUEPOWER hydrogen vehicles in 2021. Together with CEO Patrick Hermanspann and CFO Matthias Kohlmann, the 50-year-old Thorsten Baumeister now heads the FAUN Group. Patrick Hermanspann justifies the new addition as follows:

"Our group of companies has recorded considerable growth in recent years. New participations have also been added. It is our task to further expand this growth and to create necessary structures in an efficient form. I am sure that we have found the right man in Thorsten Baumeister, who will support us and advance us with his experience".

We are delighted with Thorsten Baumeister's start at FAUN, say 'Moin', and give him our motto right away: "Don't wait a minute. Get to work!"

Author: Claudia Schae

We're president!



The general assembly of the Chamber of Commerce and Industry for the Elbe-Weser region elected a new head. Matthias Kohlmann, CFO of the FAUN Group, is the new President of the IHK Stade.



This year FAUN celebrates its 50th anniversary as a member of the State Chamber of Industry and Commerce for the Elbe-Weser region. Both sides benefit from the cooperation, for example in terms of training and young talent or, most recently, in discussions on the topic of hydrogen mobility. We are now very proud that Matthias Kohlmann was unanimously elected as the new President by the General Assembly of the IHK Stade in September and is now at the head of the IHK. However, this honorary activity is not new territory for him, because he has already been a member of the IHK General Assembly for two years. Matthias Kohlmann: **"This new task is very close to my heart. It enables me, together with my colleagues from the companies and the employees of the IHK Stade, to help shape our location and the general economic conditions for the benefit of the companies and the people in this region."**

Kohlmann sees three topics at the centre of his presidency and would like to drive them forward in particular: He describes the hydrogen economy project, which was launched after the 1st Hydrogen Day of the IHK Stade 2018, as a "great opportunity" and which fits perfectly into the direction of the KIRCHHOFF Group's BLUEPOWER hydrogen drives. **"It offers us the opportunity to position our region as a model region for testing and expanding a cross-sectoral hydrogen economy and to become an essential component of a state, federal and EU hydrogen strategy in the future."**

Matthias Kohlmann also sees important challenges in the field of education: **"Well qualified and motivated specialists are the key to the future of our region"**. The next generation of skilled workers must be secured, digitisation in the education sector must be promoted and the education infrastructure must be maintained throughout the region.

Mr. Kohlmann eagerly awaits the results of the IHK Stade location survey among the member companies. **"Especially against the background of the results determined by the commission 'Equivalent Living Conditions' appointed by the Federal Government, it is important for us to find out where companies see starting points for creating reliable and attractive framework conditions for our rural region"**.

"We are extremely pleased to have found in Matthias Kohlmann a president who is as competent as he is committed and responsible, and we look forward to working together with great positive expectations," says Maïke Bielfeldt, Managing Director of the Chamber of Industry and Commerce.

The entire FAUN team stands behind the new president and is eagerly awaiting the many important topics to which he can devote himself in this office and wish him much joy and success!

Authors: Ina Westermann (FAUN) and Kirsten Kronberg (IHK Stade)



New IHK President Matthias Kohlmann, IHK Vice President Andreas Meyer and Managing Director Maïke Bielfeldt (from left)

Back to the future

Handing over the keys to a great project. (from left to right) Josef Holtermann (Head of Purchasing REMONDIS Lünen), Dr. Ulf Eversberg (Member of Bremerhaven City Council), Torsten von Haaren (Chairman of Bremerhaven City Council), Patrick Hermanspann (CEO FAUN Group), Torsten Neuhoﬀ (Mayor of Bremerhaven City), Stefan Ketteler (Managing Director BEG Group), Dr. Addissou Makonnen (Managing Director BEG Group), Thomas Templin (Chairman of BEG Supervisory Board)

In Bremerhaven the future is on its way. The first garbage truck powered by electricity from garbage drives at the BEG in the climate city in the North of Germany.

In 1989, the inventor "Doc" Emmett L. Brown from the movie "Back to the future" lets the DeLorean on the road by the power of the fusion reactor, which is fed with matter, i.e. garbage, into the future. 30 years later, we send heavy garbage trucks onto the road by means of garbage propulsion. At the end of October, FAUN handed over the vehicle key to BEG in Bremerhaven for a unique project in Germany: "Today we are handing over the first purely electrically powered refuse collection vehicle," says FAUN CEO Patrick Hermanspann.

Supported by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, the pilot project is a groundbreaking step

towards emission-free disposal and a valuable contribution to Bremerhaven. The cooperation for the project entitled "B.E.A.R." (battery electric waste disposal with robot support) started in 2012. The waste collection vehicle ROTOPRESS reaches a speed of 80 km/h. The auxiliary units (air conditioning, steering assistance, compressed air supply, on-board power supply, etc.) were also completely replaced by electrically driven systems. The energy, both for the drive as well as for the body and lifter, is supplied by a fast-charging battery pack. For this purpose, a high-performance charging station was installed at the site, which is fed directly from the waste-to-energy power plant (MHKW). How much power is required for driving

and collecting was determined in advance. Driving distances and energy routes were recorded. The battery pack was then determined. The team drives two shifts of ten tons each and 40 minutes of fast charging during the lunch break. The payload is 11,050 kilograms. The drivers and operators quickly got used to the electric driving experience. Almost like the "Mr. Fusion" from the Hollywood movie.

Another goal of the project is to research the required battery design. The aim is to achieve a battery life of at least eight years. In the course of the investigations on battery dimensioning, a general tool for planning battery capacity will also be developed. The prototype vehicle built

for the project is to be tested in real operation in Bremerhaven for at least 12 months. In addition to data on economic efficiency and technical reliability, data on the climate and environmental impact of the use of the vehicle will also be collected. The project results will be generated under the condition that essential findings can also be transferred to electrically operated heavy commercial vehicles in other areas of application (e.g. inner-city logistics).

Author: Claudia Schae

Hi team Austria!



— Since September FAUN has been on the road in Austria with its own team. The team around managing director Herbert Utz knows the industry and is really eager to take off in the Alpine region.

With FAUN Austria GmbH, FAUN founded a new own company in Austria, which is responsible for the countries Austria, Hungary and Slovenia.

The experienced eleven-member team is responsible for sales and service for the original FAUN refuse collection vehicles and sweepers. In the spring of 2020, a major demonstration tour is planned.

In addition, the youngest member of the FAUN family is official dealer and partner for the ZOELLER-Lifter systems as well as sewer flushing vehicles from ASSMANN. FAUN Austria also acts as a service partner for other body manufacturers in the region. Thus repairs and spare part deliveries quickly and simply unwound directly from one source. The service team is still operating from the workshop in Frauendorf an der Au. The 10 million Euro new building near Vienna has been decided, and as of 2021 customers can look forward to a new FAUN branch, which will provide the requirements of a modern workshop for municipal vehicles. Managing Director Herbert Utz: **"I'm very interested in the rapid accessibility and all-round care of our customers very important. We have currently three equipped customer service vehicles that are constantly in use and one service station. Our team has more than 300 years of experience in the industry and we offer our customers expert advice and optimal service."**

Author: Claudia Schaeue



Fully in business

— Superior Pak achieved numerous successes in 2019.

FAUN sweepers in Australia

Glen Fuller, manager for FAUN sweepers in Australia, has already tendered FAUN sweepers in Australian municipalities. Superior Pak has teamed up with Isuzu and Volvo for the product demonstration. With the FAUN sweepers, Superior Pak will also be able to expand this segment in the coming years and penetrate the market previously dominated by Bucher and Rosmech.



Superior Pak secures Veolia's national supply contract

At the beginning of 2019, Superior Pak received the three-year supply contract from Veolia Environment, one of Australia's largest waste management companies. Under the new supply agreement, Superior Pak will offer a complete turnkey package until December 2021, including Veolia's preferred cabin chassis brands Volvo and Isuzu. The contract already included around 50 units for 2019.



Investments for Superior Pak

Superior Pak supports the waste disposal company Cleanaway in fulfilling the largest municipal contract in South Australia, servicing more than 160,000 properties. For the Council Solutions contract, Cleanaway will invest in 38 new Superior Pak bodies and around 30 new employees. There will be a staggered delivery of the vehicles with 28 units in 2020 and another 10 units in 2021. Council Solutions is a joint initiative of the cities of Adelaide, Charles Sturt, Marion, Onkaparinga, Salisbury and Tea Tree Gully (Constituent Councils).



East Waste chooses Superior Pak

East Waste, a multi-city waste collection management company in South Australia, awarded Superior Pak a contract for 2019, 2020 and 2021 for its proactive exchange programme from old to new waste collection vehicles for approximately 5 units per year. In September, East Waste announced that it would commission the first fully electric waste collection truck from Superior Pak in South Australia in 2019.

Electro highly rated

In 2019, sales of electrically powered refuse collection vehicles were also very good: Cleanaway and SUEZ bought their first EV units for use on the municipal market. Envirowaste, Superior Pak's first EV customer, also purchased two additional EV units in 2019 to further complement its New Zealand fleet.

Author: Ross Burgess

Crossing made easy



— The FAUN TRACKWAY team participated in a week-long exercise with NATO combat groups in Saber Guardian, Romania. Here the Heavy Ground Mobility System operated in support of a Wet Gap Crossing at the Danube River crossing site in Bordusani, Romania.

The co-led Romanian and US exercise saw the 141st Manoeuvre Enhancement Brigade mission command the crossing operation which included support from the Romanian Engineer Battalion and the 50th Multi-Role Bridge Company.

The Heavy Ground Mobility System (HGMS) was partnered with Rheinmetall MAN Military Vehicles' (RMMV) HX77, which expediently laid FAUN's M150 TRACKWAY to provide ground stability and access points to the shore.

Exercise "Saber Guardian" has been organised since 2013, being hosted on a rotational basis by Bulgaria, Romania and Ukraine with a view of increasing interoperability at joint and multinational levels with the allied and partner states' armed forces.

The FAUN TRACKWAY team was very delighted to play a role in such a prestigious exercise following their participation at "Saber Strike" 2018 in Poland and grateful for the cooperation provided by the DIT DSO Export Support Team.

Author: Rachel Roberts



Saber Guardian 2019 in Romania: The Heavy Ground Mobility System was used to support the Danube crossing in Bordusani.

The Heavy Ground Mobility System supports now also the New Zealand Armed Forces

Making tracks to New Zealand

— FAUN TRACKWAY has completed its delivery of Medium Ground Mobility Systems to the New Zealand Defence Force.

Purchased as part of the Capability Branch's Logistics over the Shore (LOTS) project to facilitate the transfer of personnel, equipment and material from ship to shore and beyond, the Medium Ground Mobility System enables vehicles to navigate through challenging terrain by stabilising the ground conditions and allowing for a temporary and portable aluminium route.

Comprising of FAUN TRACKWAY M30H solution which is coiled onto a Spool; the TRACKWAY is deployed and recovered by their Medium Beam Dispenser which attaches to the CAT 938K. In under six minutes, up to 40m of M30H TRACKWAY can be deployed, with additional matting joined quickly and effectively to create a longer route or turning area; this is simply carried out by unloading the empty Spool and loading a second.

Chris Kendall, CEO at FAUN TRACKWAY Limited, said: "We were delighted to join the 5th Movements Company during the trials at Army Bay. Their professionalism led to a well-executed exercise of the FAUN TRACKWAY Medium Ground Mobility System."

"Our constant strive for engineering excellence drives us to deliver innovative systems that truly meet the needs of modern armed forces. This latest system will allow the 5th Movements Company to reinforce its over the shore capabilities."

Author: Rachel Roberts



Turning People's Heads in the UK!

— Simon Hyde, Managing Director of FAUN ZOELLER UK
speaks out why he admires ROTOPRESS.

Since my arrival at FAUN, I've never disguised my favour for the ROTOPRESS product. Change is never easy or quick and we did have a number of people who doubted what the performance of the product could offer and contribute to the waste and transport departments of the councils! Considerably reduced whole life costs, increased payload, longer product life and maximised uptime and utilisation.

In previous years, we would have sold about ten units a year and generally for a "green collection". Now all our hard work and commitment to the project is paying off. This year alone we have received orders for over 70 units with more to come, mainly going to local authorities who have trialled the equipment and

can see for themselves the benefits to their organisations, targets and goals. With the demands on the local authorities of needing operational costs minimised, the better use of assets and the challenge of collecting of different waste streams, I truly believe the ROTOPRESS can really make a difference.

Heads are definitely turning to the benefits of the ROTOPRESS and we have now expanded our demo fleet to help with the demand of trials and will also be ordering a mini demo on a 2.30 m width chassis and 8 m³ body.

Author: Simon Hyde

WILD WILD WEST

— A Family and Friends Day at FAUN ZOELLER UK.

On a bright sunny September afternoon, the whole FAUN ZOELLER team descended on a field at Alcott Farm near Redditch for the Bi-Annual Family Day. The theme this year was the 'Wild West' or Cowboys and Indians!

Families and friends of the employees all gathered together enjoying the sun, beverages and activities. This year we had the usual 'face painting' originally for the kids and a 'Bucking Bronco' which obviously brought out all of the 'Alpha Males'. Archery was also offered (which was well away from the Tipi!), Laser Clay Pigeon Shooting and lots of other games that kept us all amused... and then we let the kids have a go!

In the afternoon, the Line Dancers arrived and made us all look stupid but certainly helped us bring on our appetites... good job the Fish and Chip van turned up in the nick of time before the band. "The Wedding Crashers" entertained us with live music. Craig Mullen even got up and sang with the band (although he was reading the lyrics from his mobile phone!).



v.l.n.r. Stewart Gregory, Richard Horton und Simon Hyde

Once again, a fantastic time was had by all and wonderfully organised by Catherine. With these event, family members have the opportunity to get to know their colleagues and the team continues to grow together. We just can't wait for the 2021 event. Maybe it will have a BREXIT theme!

Author: Simon Hyde





01



02

BENVENUTI A CASA FARID

— Since July 2019 the Italian manufacturer FARID belongs to the ZOELLER Group and thus to our family of entrepreneurs.

The combination of the T1 press plate truck with the ZOELLER lifter is very well received by customers. FARID just won the tender in Milan for 150 of these units. The all-rounders for the household collection will be delivered in the next four years. One could not wish for a better start for the new cooperation.

It was only in July that ZÖLLER-KIPPER GmbH took over 60 percent of the shares of the traditional Italian manufacturer FARID, FEG Brivio S.p.A. from the Orecchia, Mazzini-Martinelli and Brivio families. The families will continue to hold shares in the company and Marco Orecchia will continue to successfully

01 Sealed with a handshake for a successful cooperation: Marco Orecchia and Thomas Schmitz (from left) **02** During the exhibition in Rimini FARID showed on their 500 m² Casa FARID booth the rear loader T1, the demo lifter ROTARY 2418, automatic side loader FMO Plus, the lightweight PN vehicle and the small waste collector MK 11. Next to it sweepers in the body sizes 6 m³ and one 4m³ compact sweeper from Comac **03** United: Rear loader FARID T1 with ZOELLER ROTARY 2418

manage his company as CEO. FARID employs over 550 people in Italy, the United Kingdom, France and Switzerland and has three production plants. In Italy, the company is one of the leading manufacturers of municipal vehicles of various body sizes and exports to over 80 countries. Thomas Schmitz, CEO of the ZOELLER Group, about the latest cooperation: "With this step we expand our range of products and services and are able to serve our customers even faster and more comprehensively by joining forces." Marco Orecchia adds: "The owner families Orecchia, Mazzini-Martinelli and Brivio are very much looking forward to the cooperation with ZOELLER. We are building on a very successful common future in a strong



03

group and can therefore offer an even broader range of vehicles and services". Vitale & Co and Giliberti Triscornia e Associati acted as financial and legal advisors to the FARID shareholders and the ZOELLER Group was represented by HLB Hussmann and TCA Triberti Colombo & Associati.

Author: Claudia Schae



Manuel Cournot has been CEO of our French company since August 2019.

Manuel Cournot succeeds Philippe Carpentier, who will retire. But not quite yet, because Philippe Carpentier will continue to advise the ZOELLER Group on various projects with his many years of experience. We would like to thank him for his commitment over the past 30 years and the successful establishment of SEMAT.

Manuel Cournot, who was previously CEO in the automotive and aviation sectors for medium-sized and larger companies, especially in America and various African countries, will take over as the new CEO. His expertise, including in finance, and his personality give him a deep understanding of the industrial environment. The 51-year-old is married, father of eight children, and is a strong golfer, sailor and scuba diver. We are delighted that Manuel Cournot is now the CEO of SEMAT and, together with his 300 employees, is keeping a close eye on developments in the French market.

Author: Isabelle Curot



Manuel Cournot introduces himself to the SEMAT team.



Always a good ride for the REMONDIS team (from left to right): Albert Schlieker-Steens (Technical head of REMONDIS), Philipp Scheuren (REMONDIS truck procurement), Josef Holtermann (Head of REMONDIS Central Purchasing) take over the new MEDIUM X2H from ZOELLER Sales and Service Manager Germany Jürgen Kowalke and Branch Manager Volker Hengstenberg.

With the MEDIUM X2H on the new Actros chassis, REMONDIS is relying on the safety of its teams and citizens during the collection tour.

In June, the new MEDIUM X2H went to REMONDIS into the operation. The press plate body is the most frequently used ZOELLER truck at the company from Lünen. According to ZOELLER branch manager Volker Hengstenberg, the reasons are obvious: "The extended comfort control is optimally coordinated with the chassis. The H version of the rigid, smooth-surfaced collection container is the 200 mm higher version with more volume on the same wheelbase. The MEDIUM X2H is a real workhorse that runs reliably".

In combination with the new Actros it's a perfect garbage truck. Because the the new Mercedes-Benz model is equipped with the latest safety packages, turn assistant and mirror camera "MirrorCam". During its tour, the MEDIUM X2H is mainly used in residential areas, inner-city and rural areas. areas on the way where special security is required. With safety well disposed of.

Author: Volker Hengstenberg

What bin is what in?

Yellow? Brown? Green? Grey? Everybody has been confronted with the question, in which bin should be which garbage now? An intelligent scanner identifies faulty throws and gives immediate feedback to the citizens. This improves waste separation, sharpens personal perception and actively separates for the environment.

The improvement of the recycling quota was passed in the Closed Substance Cycle Waste Management Act. According to the law, a recycling rate of at least 65 percent for municipal waste and a recycling rate of at least 70 percent for construction and demolition waste should be achieved by 2020. A challenge that begins with the budget.

The recyclables scanner offers support for better waste separation. The intelligent "waste scanner" was developed by the Austrian waste management company Saubermacher together with Graz University of Technology and Johaneum Research. The ZOELLER subsidiary STUMMER obstructs the scan equipment in its garbage vehicles and tests it in the material employment. For the time being the scanner is available in Austria and Switzerland. The European and world-wide selling will follow. Trade visitors of the IFAT can try out the scanner already in the coming year with ZOELLER.

ARTIFICIAL INTELLIGENCE (AI) MAKES IT POSSIBLE

The scanner is installed in the garbage truck and immediately analyses the material composition of the garbage after the garbage cans have been dumped. Using sensors and multi-spectral cameras, the surface is scanned and identified using a neural network. The "viewfinder" immediately detects whether, for example, glass or plastics have gotten lost in the residual waste. The AI system is designed in such a way that it constantly learns new things. Digital learning effect for citizens: via sms or an app, they immediately receive information about their personal separation quality. The DGSVO is adhered to, because only data on the separation quality is stored, not brands or address assignments. This also works for apartment buildings via a digital bulletin board developed by Magenta Telekom. Clever waste separation.

Author: Johannes Streif

Click here for the video:

<https://www.youtube.com/watch?v=Cz5wOc2L40c>



— We keep an eye on the environment - even at the workplace. We are constantly improving our technologies and standards in order to make the production of refuse collection vehicles as environmentally friendly as possible.

CEO Rainer Rohler receives the award "Environmentally Conscious Management" for EKOCEL.

Awareness and raising awareness

At the POL-ECO-SYSTEM 2019 fair, EKOCEL presented the latest developments in the field of special equipment for municipal companies. The presentation of new product technologies and innovative solutions was in the foreground.

At the 31st POL-ECO-SYSTEM, EKOCEL also pursued an ecological aspect: production and the development of new technologies and standards are designed to be as environmentally friendly as possible. In recognition of this, EKOCEL received the title "Environmentally Conscious Management". This prestigious award was received by Managing Director Rainer Rohler during the festive Envicon Congress Gala on 10 October 2019 at the Poznan trade fair.

SOME ASPECTS OF EKOCEL'S ENVIRONMENTAL DEVELOPMENT STRATEGY ARE:

- Minimising the environmental impact of the manufacture, storage, transport, use and disposal of our products and equipment.
- sustainable use of natural resources and reduction of pollution
- Realization of educational projects in the field of environmental protection, both within the organization and in the immediate vicinity.

Another award for EKOCEL followed: The renowned Acanthus Aureus Prize for the best architectural and graphic design of the exhibition stand was also awarded to EKOCEL at POL-ECO-SYSTEM 2019. The award emphasizes the positive image of the company, especially the implementation of the marketing strategy and the direct communication with the customers.

We would like to thank our customers and business partners for visiting our stand!

Author: Ewa Maj

Picnic in Wonderland

— It is already for the fourth time that ZOELLER TECH held a Family Day for its employees and their families.

The first picnic took place in 2014 shortly before ZOELLER TECH moved to its new headquarters in Rekowo Górne. At that time, the main focus was on visiting the new building and inspecting all corners and angles.

A lot has changed since then: Not only has the company gained in importance in the region, but the number of employees also increased from 350 to over 700 due to the expansion and expansion of production capacities. This year's family picnic was attended by almost 1,300 participants.

The excursion was mysterious, enchanting and magical—all thanks to Alice, who took the guests to her wonderland. Games, activities for young and old—many attractions and challenges for the whole family, but also group competitions for employee integration took place. Great games, dances and songs, all in the beautiful magical palace landscape and royal gardens of a hotel near the company. There was ice cream, balloons, inflatable play equipment, fun for young and old and delicious dishes to pamper the palate. Animators, pantomimes, jugglers and crazy artists seduced the guests into an enchanted, beautiful and fairytale-like world. Everyone felt like children again and is already looking forward to the next trip.

Author: Katarzyna Sterne

Welcome to our new home!

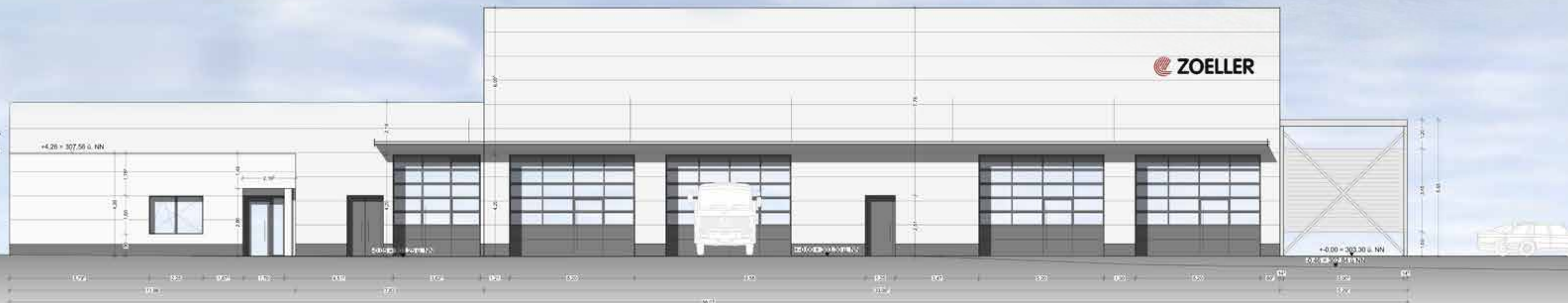
The team from Ebelsbach and Wörnitz welcomes customers to the new ZOELLER location in Fürth in December. Together with the waste management company Hofmann, the new building was designed and realized. The team of eight takes care of the customers in the Franconia and Upper Palatinate area.

THE TEAM CAN BE FOUND AT THE FOLLOWING ADDRESS:

ZÖLLER-KIPPER Ltd.
Hafenstraße 51
90768 Fürth, Germany

Author: Marcus Lemke

— In December, the Bavarian team moves into a new service base in Fürth.





*Merry Christmas
and a Happy New Year*