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KIRCHHOFF GROUP

K›MOBIL

THE KIRCHHOFF GROUP MAGAZINE

New becomes neutral.

ENGINIUS

FAUN GROUP

ENGINIUS - With the new brand, FAUN is launching climate-neutral load transport on the road and making a contribution to a cleaner environment. Read more on page 020 ›

Content

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the KIRCHHOFF Group magazine

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Arndt G. Kirchhoff, Chairman of the Advisory Board of the KIRCHHOFF Group

No Easy Times

The pandemic has had the world in its grip for two and a half years, with increasingly disrupted supply chains in many material groups, especially the bottlenecks in the semiconductor industry. Russian president Putin's savage war in Ukraine and the necessary consistent sanctions by the West have shown a dependence on Russia for raw materials, especially gas. ›

A halt in gas supplies would cause additional difficulties for many important branches of basic industries, such as chemicals, metal production, glass, rubber, and paper manufacturing. International supply chains are interlinked in the globalization process in such a way that the failure of even one medium-sized supplier can lead to global shutdowns.

Since March of this year, freedom of movement has been restricted in China due to newly emerged COVID-19 cases. Since China represents the largest market in the world for many economic sectors, additional burdens are now being placed on the global economy. Growth in China declines for the first time in many years. The world is faltering and everything is now being done to develop new and further sources of supply in order to become more independent and improve response capabilities.

We must recognize that our model of a free society with democracy, rule of law, and market economy is not accepted everywhere in the world, but that autocratic systems with command structures are blocking the further development of globalization. In addition to our moral strength, we must maintain and further develop our economic strength in order to provide future generations with an even better basis for life.

We should do everything we can now to achieve climate targets more quickly and to expand renewable energies, including the production of hydrogen and synthetic fuels to replace natural gas and other fossil fuels. Therefore, we need to get a boost in digitalization to become more efficient, manage resources, and develop innovations for marketable products more quickly. World trade must be revitalized to enable better cross-border cooperation via free trade agreements, whose agreements have also stalled.

The UN Conference in Rio in 1992 discussed the three-pillar model of sustainability, in which ecological, economic, and social goals ideally stand side by side on an equal footing. It was also the basis of the 2015 UN Climate Change Conference in Paris, where the goals for 2050 were set. According to this, the goals and measures are to be formulated in such a way that the living conditions of all people on earth improve without endangering the existence of the natural foundations of life for later generations.

"Corporate responsibility"

Entrepreneurial freedom is not limitless; there is a responsibility towards the common good and society. For the massive transformation of industries that is necessary for the interests of sustainability, we need long-term, binding targets set by policymakers and appropriate freedom to achieve the best solutions through openness to innovation, personal responsibility, and competition. The structural change necessary for transformation requires a joint effort by politics, business, science, and society. The long-distance race for digitalization and decarbonization cannot be won nationally. The opportunities for technological progress, which combines the principle of economic freedom with the principle of social balance and ecology, must be seen globally to overcome protectionist and nationalist narrow-mindedness. Material and energy costs play a major role in companies. Resource efficiency, the increase of raw material productivity, and the processing and reuse of already used raw materials still require significant improvement (recycling to secondary raw material). Greenhouse gases can be further reduced through the spread of green energy and climate-neutral gases derived from it, such as hydrogen. This is another reason why it is so important that we remain open to technology, continue to promote synthetic fuels in addition to hydrogen, and not overuse the internal combustion engine to death or ban it. There are 1.4 billion cars in the world with internal combustion engines that can only be operated in an environmentally friendly way with defossilized fuels.

"What we're doing"

Our companies has the essential task of establishing sustainability management, seeking economic success, and social balance. This is not a new task for us. We have been dealing with sustainability issues for 20 years and hold DIN EN ISO certificates 14001, 45001, and 50001. For KIRCHHOFF Automotive, these activities can also be read about in our annual sustainability report (https://www.kirchhoff-automotive.com/de/corporate-governance/verhaltenskodex). However, we want to get even better at reducing our CO_2 footprint in particular, even though our company only has a small impact on the overall CO_2 footprint of our products - more than 90% of CO_2 is generated during the production of steel and aluminum before we process it further. In this regard, we held a four-day workshop in May at which senior management confirmed our ambitious sustainability roadmap and agreed on additional measures to reduce CO_2 during production. These include the further development of our consistent resource-saving lightweight design while increasing the amount of recycled secondary material, and the increasing use of renewable energies.

Our Ecotec companies developed and launched trucks with electric drives more than 15 years ago. Two years ago, we succeeded in launching the BLUEPOWER, a hydrogen-powered fuel cell truck for waste collection vehicles and sweepers. Now we are going one step further. Under the new ENGINIUS brand (see also the report on pages 20-23), we are doing further pioneering work for the mobility of the future, and at a new plant next year, will also be equipping normal trucks for delivery and distribution traffic with fuel cells.

Dear customers, friends of our company, and employees, on the following pages of this issue of K>MOBIL you will find further exciting articles on our activities relating to the important topic of sustainability, which we in the KIRCHHOFF Group see not only as an obligation for future generations, but also as an opportunity to make our companies even stronger and more economically successful in competition.

We wish you a wonderful summer season and good luck!

Yours

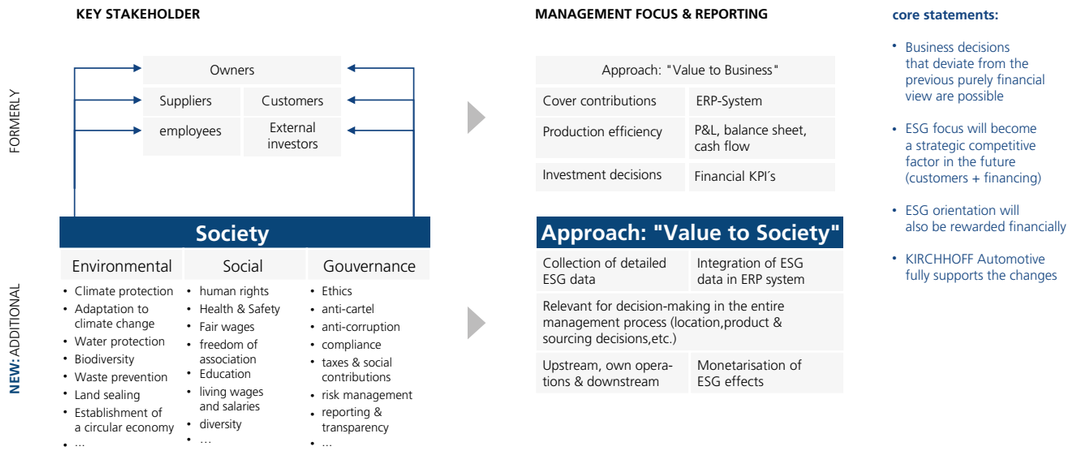
Arndt G. Kirchhoff

AUTHOR: CLAUDIUS BENSBERG
CFO KIRCHHOFF GROUP

Sustainable Management and Action Becomes a Strategic Success Factor

The KIRCHHOFF Group sees the implementation of the EU taxonomy as an opportunity for its companies, despite considerable additional bureaucracy, extensive requirements for data provision, and system adjustments. CFO Claudius Bensberg gives an overview.

Social and political developments significantly expand the circle and focus of stakeholders



In the future, **"ESG" (Environmental, Social, and Governance)** reporting will become an integral part of the annual reporting of large companies. This also significantly expands the circle and focus of stakeholders.

European climate policy is intended to play a pioneering role worldwide in achieving the climate and energy targets defined at the Paris Climate Agreement of 2015. The aim is to demand and promote sustainable economic activity, which should also serve as a driver of growth and prosperity. However, this requires a common understanding of the term "sustainable". **The establishment of the uniform EU classification system for sustainable activities, i.e. taxonomy, defines when an economic activity is to be classified as ecologically sustainable.**

There are extensive reporting obligations on the classification of economic activities, which have been summarized in the draft of the Corporate Sustainability Reporting Directive (CSRD). This represents a significant expansion in the previous reporting obligations for companies, both in terms of the content, scope, and disclosure obligations, as well as the group of those required to report.

Beginning January 1, 2023, all "large" companies with a balance sheet total of more than 20 million euros, sales of more than 40 million euros, and a workforce of more than 250 people will fall under this regulation.

For international groups, such as KIRCHHOFF Automotive or KIRCHHOFF Ecotec, reporting is consolidated at the highest level. This means that the required information must also be included for subsidiaries outside the EU, and European law also becomes binding for non-European companies.

In order for an economic activity to be classified as sustainable, it must make a significant contribution to at least one of the environmental goals, but must not significantly harm any of the other five other goals ("do not significantly harm principle") and must respect minimum social standards.

What constitutes a significant contribution has already been published for the first two environmental goals, and has also been defined by very detailed technical criteria. Further specifications are currently being developed and/or published by delegated acts.

The transformation to a sustainable economy requires very high levels of investment that cannot be initiated with government grants and funding alone. Substantial private capital will also have to be deployed. Therefore, the EU has implemented an incentive system for increased sustainability: appropriate financing options. Through green bonds, investors can make certified investments in sustainable areas via the capital market.

In the future, banks' refinancing options will also be linked to the sustainability of the use of funds (i.e. sustainability of the entrepreneurial activities of bank customers). Put simply, this means that non-sustainable economic activities will result in significantly higher financing costs (interest rates). At the same time, it will become substantially more expensive and more difficult to obtain adequate insurance coverage. Banks and insurance companies will have to classify their own activities accordingly, beginning as early as January 1, 2022. ›

The environmental objectives of the EU taxonomy relate to:

1. Climate protection
2. Adaptation to climate change
3. Sustainable use of water and marine resources
4. Changing to acircular economy
5. Pollution prevention
6. Protection of ecosystems and biodiversity

Compliance with minimum social standards is essentially about:

1. OECD guidelines for multinational enterprises
2. UN guiding principles on business and human rights
3. International charter on human rights

Sustainability in the sense of the EU taxonomy has been anchored in the corporate strategy and the KIRCHHOFF mission statement at the KIRCHHOFF Group for some time.

The end result is that the EU is trying implement the transformation to a sustainable economy via financing regulation. Already, sustainable companies can finance and insure themselves more easily and more favorably.

The legally mandatory reporting from the EU taxonomy is often referred to as ESG reporting. The abbreviation "ESG" refers to the environmental, social, and governance categories. It supplements the usual annual financial reporting (consisting of a balance sheet, income statement, cash flow, notes on the financial statements, and a management report) and will eventually become an integral part of the annual reporting of large companies. All components of this new reporting method are also subject to audit requirements.

This also expands the circle and focus of stakeholders for this reporting, as shown in the chart. In Scope 1, the reporting is only related to the company itself. This means, for example, that the contribution to climate protection made by our economic activities in our plants and administrations is measured. In Scope 2 and 3, upstream and downstream activities will also have to be reported in the future. This means that reporting will take place along the entire value chain, starting with the extraction of raw materials and further processing by our upstream suppliers, going through further processing of our products by our customers, to the use of the products by end customers.

This demonstrates that our own reporting is dependent on information that must be obtained from our upstream suppliers. The same applies to reporting by our customers, who in turn will require extensive details from us.

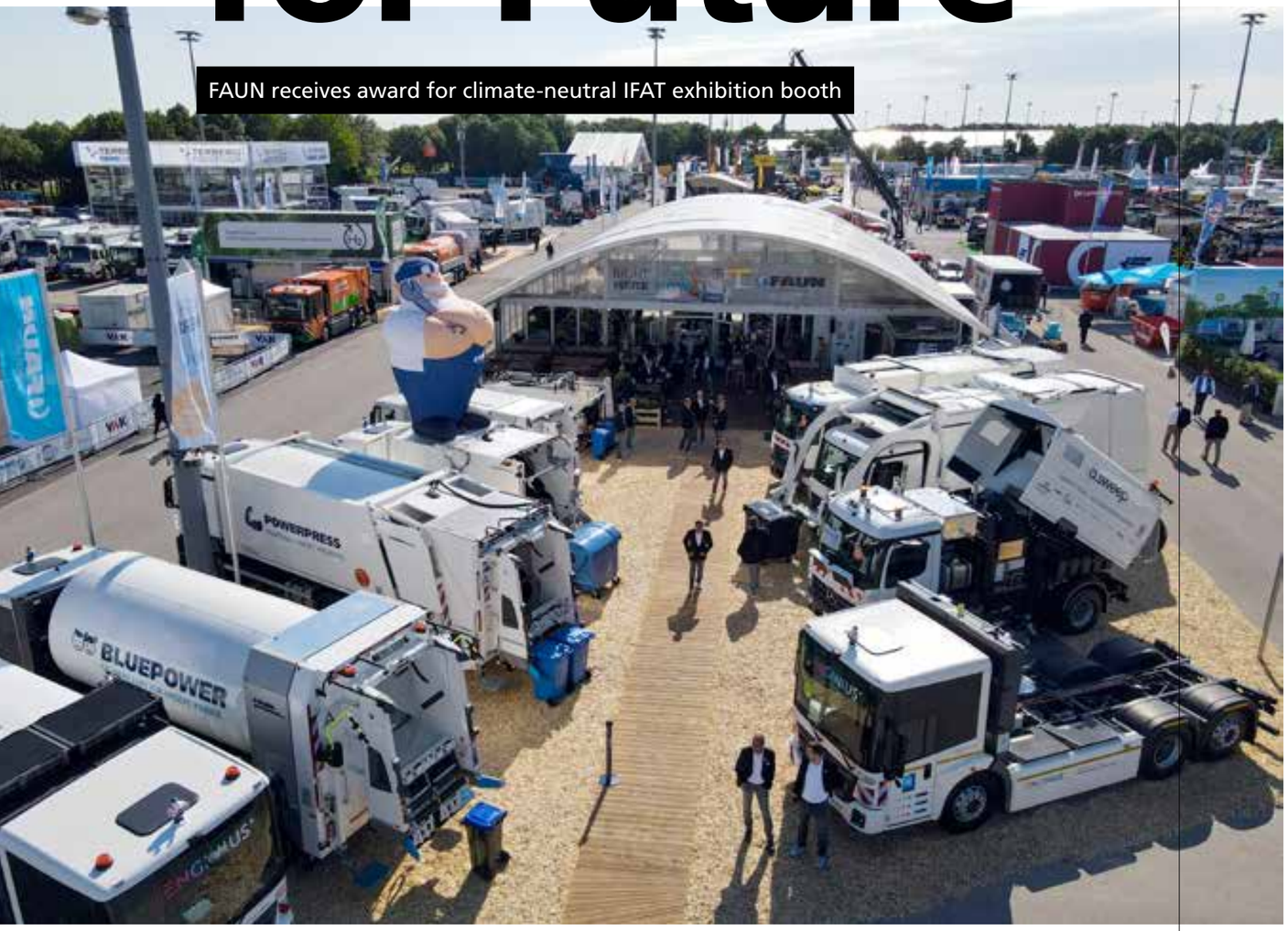
Effects on the KIRCHHOFF Group: Sustainability in the sense of the EU taxonomy has been anchored in the corporate strategy and the KIRCHHOFF mission statement at the KIRCHHOFF Group for some time. Compliance with minimum social standards has also been reflected in our Code of Conduct for decades, and is constantly being developed further. The same applies to our customers. Automobile manufacturers have already anchored extensive sustainability criteria in the supplier scoring models that are included in the evaluation for tenders. Our municipal customers at the KIRCHHOFF Ecotec Group are already committed to sustainability principles by law. The waste management companies we supply also contribute significantly to the goal of a circular economy through their own activities. In some cases, our customers' requirements even go beyond the standards required by EU taxonomy.

Although the implementation of the EU taxonomy requires considerable additional bureaucracy, extensive requirements for data provision, and system adjustments, it is proactively supported and driven forward by the KIRCHHOFF Group. In cooperation with our customers and in the relationships with our suppliers, employees, financiers, and society, we as the KIRCHHOFF Group understand sustainable management and compliance with minimum social standards to be strategic success factors. ■

AUTHOR: CLAUDIA SCHAUE
MARKETING & COMMUNICATION MANAGER FAUN GROUP

One Week for Future

FAUN receives award for climate-neutral IFAT exhibition booth



The following items were taken into account for the calculation of the amount of CO_2:

- Booth equipment, all electrical equipment
- Booth construction materials
- Transport of stand construction materials and stand equipment
- Assembly and dismantling personnel (travel to and from the stand, transport and accommodation)
- Booth personnel (arrival/departure, transport and accommodation)
- Booth catering
- Printed materials
- Waste

During the planning and construction of the booth, the use of reusable materials and furniture, natural products and recycled materials as well as local products for catering were taken into account. That's why we are particularly pleased to receive the IFAT Sustainability Awards.

This year, the FAUN Group's booth at IFAT, the world's leading exhibition for environmental technologies, which took place in Munich from 30 May to 3 June 2022, was all about sustainability. In keeping with IFAT's objective as the world's leading exhibition for water, wastewater, waste and raw materials management, FAUN's 1,700 m² booth was certified climate neutral and was awarded the IFAT Sustainability Award.

FAUN paid strict attention to compliance with the highest sustainability standards and to compensating for any emissions produced. FAUN CEO Patrick Hermanspann: "For our booth, the motto was avoid, reduce and recycle". Environmentally friendly materials were used for the booth design, which can largely be reused or recycled afterwards. FAUN did not use any brochures or flyers this time, instead all documents were available digitally via QR code. Reusable, plastic-free and regional was also the motto for the booth catering.

Remaining emissions were calculated in detail and compensated via a certified carbon offsetting project by myclimate (turning waste into biogas for small farmers in Vietnam).

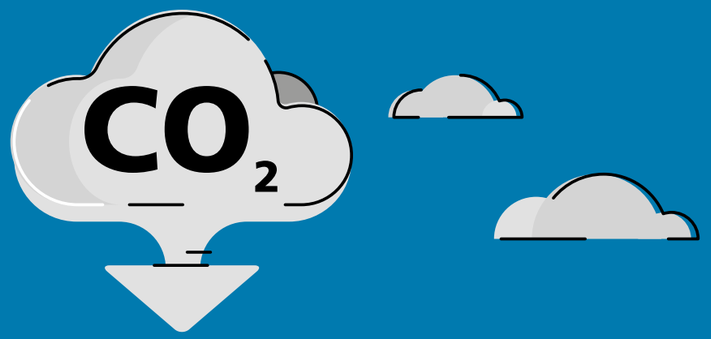
Patrick Hermanspann: "Environmental technologies are our core topic. We are therefore pleased that IFAT 2022 itself has become a flagship in this area through numerous initiatives and that we have been contributing to this through our climate-neutral booth. ■

myclimate neutral Event
myclimate.de/01-22-909867

AUTHOR: STEFAN LEITZGEN
GLOBAL COO KIRCHHOFF AUTOMOTIVE

Road Map for CO_2 Reduction

Most CO_2 at KIRCHHOFF Automotive is produced by the energy used to: operate production machines and technical infrastructure systems, and heat factory buildings and offices. Looking forward, only electricity generated without burning fossil fuels (oil, gas and coal) will be used.



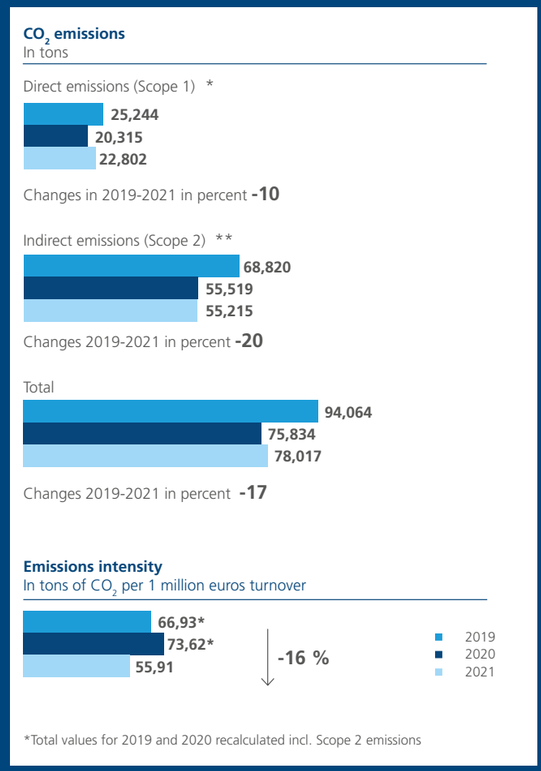
The rapid increase of greenhouse gases in the earth's atmosphere is the cause of global warming. Today, this is as scientifically undisputed as the fact that humans have caused this increase with industrialization. Greenhouse gases such as CO_2 (carbon dioxide), CH4 (methane), N2O (nitrous oxide [laughing gas]) and the group of F-gases (fluorinated hydrocarbons) are directly responsible for changes in the global climate.

The European Union and national legislators are trying to limit global warming to the 2015 Paris Climate Conference target (1.5 degrees global warming by 2100 compared to the 1850-1900 period) with a series of laws. These climate laws affect all greenhouse gases, but because of its great importance, are generally associated only with reducing CO_2. All other greenhouse gases, each many times more harmful than CO_2, are converted to CO_2 equivalents for simplicity. In Europe, CO_2 accounts for about 80% of all greenhouse gases.

The German Climate Protection Act stipulates, among other things, that all companies must be climate-neutral by 2045. Therefore, in 2045, every company in Germany may only emit as much CO_2 as it can reduce by other means. Since it is virtually impossible for industrial companies in particular to capture CO_2 (e.g. by managing their own forests), the focus is on reducing CO_2 emissions.

Most CO_2 is produced by the consumption of electricity and natural gas for the operation of production machinery and technical infrastructure systems. This is followed by the heating of factory halls and offices. Thus, to meet climate targets in 2045, all electricity consumed must be generated without burning fossil fuels (oil, gas, and coal). Furthermore, production plants and heating systems that still burn natural gas today must be equipped with plants using alternative technology or converted to run on biogas by 2045. ›

KIRCHHOFF Automotive CO_2 emissions in tonnes 2019 to 2021:



*Scope 1 emissions are directly caused by facilities or plants owned or controlled by KIRCHHOFF Automotive. Examples include emissions from combustion in owned or controlled boilers, vehicles and emissions from owned or controlled process equipment, e.g. hot forming equipment.

**Scope 2 emissions are indirect emissions resulting from the consumption of purchased energy, e.g. electricity. These emissions are a consequence of KIRCHHOFF Automotive's activities, but occur at sources that we do not own or control.

Since all countries in which KIRCHHOFF Automotive operates production sites have committed themselves to climate targets similar to those of Germany, we have drawn up an individual plan (roadmap) for achieving climate neutrality for each site.

Not only do the governments of the countries in which we produce demand a reduction in CO_2 emissions, but all of our customers do too – and at a much faster rate than the legal requirements stipulate.

- Energy monitoring and reduction of energyconsumption
- Purchase and production of renewablygenerated electricity
- Switching from natural gas to renewablygenerated electricity or biogas
- Introduction of new low-CO_2 or CO_2-freetechnologies

For years, some of our plants have been operating an energy management system. This helps us to record electricity and gas consumption in detail and reduce it through a variety of different measures. This system will be applied to all sites worldwide by spring 2024.

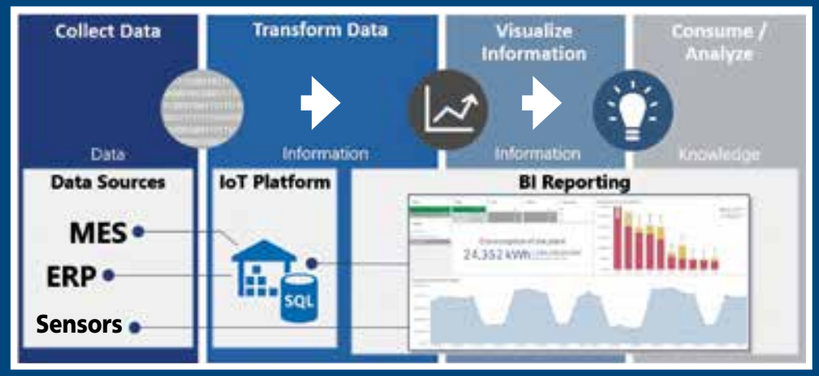
Over 600 machines and plants worldwide will be equipped with measuring sensors in the next few years, which will transmit consumption data directly to our digital manufacturing platform (DMP). From there, data can then be accessed for statistics, analyses, and comparisons between plants. For the purchase of our electricity, we have been pursuing a global plan since 2019 with the aim of procuring only CO_2-neutral electricity by 2030. Depending on local and regional availability, preference will be given to electricity produced purely from renewable sources. If this is not possible, we will use CO_2 certificates to compensate.

In addition to purchasing electricity, we will also invest in the production of solar power. We have drawn up a matrix across all our sites, which we will use to determine the order of our investment projects. This takes into account factors such as annual sunshine hours, electricity costs, subsidies, and the liberality of the local electricity market.

The most technically challenging part of our CO_2 roadmap is retrofitting our production facilities that still use natural gas. This mainly includes our drying ovens at the paint shops and the ovens at our hot stamping plants.

Alternative technical concepts are being evaluated and assessed for profitability within a small group of experts. These range from the use of hydrogen to the installation of biogas plants. It is difficult to assess which concepts will ultimately prevail, but the teams are already excited about the work on them. ■

Process representation: Collecting, processing, and evaluating data



MES = Manufacturing Execution System
(machine and production data acquisition)

ERP = Enterprise Resource Planning
(enterprise resource planning system)

SQL = Structured Query Language
(standardized programming language for database management)

BI Reporting = Business Intelligence Reporting
(process for displaying and analyzing data and information for management)

Greenhouse gases such as CO_2 (carbon dioxide), CH4 (methane), N2O (nitrous oxide [laughing gas]) and the group of F-gases (fluorinated hydrocarbons) are directly responsible for changes in the global climate.

AUTHOR: CLAUDIA SCHAUE
MARKETING & COMMUNICATIONS MANAGER FAUN GROUP

New Brand: Ideas Become Ideals

ENGINIUS is the new brand with which FAUN is launching hydrogen-powered vehicles on the road making a contribution to a cleaner environment. ›

They are ready to tackle climate change with ENGINIUS: Carlos Aramayo and Thorsten Baumeister (both Managing Directors ENGINIUS GmbH), Dr. Johannes F. Kirchhoff (Managing Partner), Hans-Georg Tschupke (Head of Department Hydrogen Economy Office, at the Senator for Economics, Labour and Europe in Bremen) and Burkard Oppmann (Managing Director and CSO Germany of FAUN) (from left).

Engineers, geniuses and a lot of passion: the ENGINIUS team

View into the production hall where the BLUEPOWER vehicles are given their hydrogen life.

Georg Sandkühler, Head of Development ENGINIUS explains the technology.

FAUN is now producing hydrogen-powered vehicles in series using the new ENGINIUS brand. "Transport and logistics play a central role in all economic sectors. Climate-neutral load transport based on renewable energies is therefore an important step on our way to the Circular Economy. This is exactly what we stand for with our new ENGINIUS brand," says Dr Johannes F. Kirchhoff, Managing Partner of the KIRCHHOFF Group.

At the brand launch event in May, the scenic atmosphere of the FAUN production hall with its white floating balloons and glowing corporate colours gave an inkling that a new era was dawning. "Our vision is climate-neutral load transport. With ENGINIUS we want to become the European market leader for hydrogen-powered trucks for short and medium-distance transport by 2030," says Patrick Hermanspann, CEO of the FAUN Group. The ENGINIUS team as well as numerous guests from business and politics were present at this great moment.

The ENGINIUS product range includes two chassis. The carrier vehicles come from Daimler Trucks and are equipped with the latest alternative technology in Bremen. The BLUEPOWER for refuse collection or sweeper bodies has been successfully in use in the districts since 2021. CITYPOWER, a new prototype for freight and goods transport, will be launched on the market in 2023. The basis is the two-axle Atego from Daimler Trucks. "We see immense potential for the CITYPOWER in particular due to its flexibility and versatility," says Patrick Hermanspann. This means that in future the production capacities at the Bremen plant will be successively expanded. About 45.9 million tonnes of carbon dioxide are caused by road-based freight transport in Germany. Worldwide, freight transport even contributes to around ten percent of global carbon dioxide emissions. This is now to come to an end.

For the brand development process, FAUN enlisted the support of the creative and neuromarketing agency Kochstraße from Hanover. While the blue tones in the logo express safety, the red conveys energy and progress. The company name ENGINIUS is composed of the associations engine, genius and engineering.

With the foundation of ENGINIUS, FAUN is transferring its experience in the field of hydrogen drive into an independent company. ENGINIUS is managed by Carlos Aramayo and Thorsten Baumeister as managing directors. Carlos Aramayo has been working for FAUN for many years and most recently took over the further development of the alternative drive division as Division Manager. Now, together with Thorsten Baumeister (COO of the FAUN Group) and the team of 60, he will take ENGINIUS to the next level.

Refuse collection vehicles using the green fuel hydrogen have already been successfully established in numerous cities such as Berlin, Duisburg or Brussels. The success can not only be measured mathematically in terms of emissions; residents themselves also notice a change in air quality and noise.

We have won. ENGINIUS has received the H2Eco Award, presented for the first time this year by the German Hydrogen and Fuel-Cell Association (DWV) and the Deutsche Messe AG, for its hydrogen-based drive. The award was presented to Thorsten Baumeister (Managing Director of ENGINIUS GmbH) by Werner Diwald (Chairman of the Board of DWV; left) and Arno Reich (Division Manager at Deutsche Messe; right).

"Our vehicles are on the road where children play and families live. For this reason, it is important for us to minimise the emissions of our vehicles. Now we are going one step further and making our know-how available to everyone who is interested in a noiseless, emission-free, clean and sustainable transport of goods and loads," says a very proud Patrick Hermanspann.

ENGINIUS is entering one of the most innovative markets in the mobility industry and is setting its targets high. "Ideas become ideals, new becomes neutral and impossible becomes incredible" - this is the vision of ENGINIUS. The course has been set and with ENGINIUS we are ready for the road to a climate-neutral future. ■

From contacts to partners: www.enginius.de

This was the brand launch of ENGINIUS:

INTERVIEW: CLAUDIA SCHAUE
MARKETING & COMMUNICATIONS MANAGER FAUN GROUP

Pioneers of the Road

BLUEPOWER refuse collection vehicles have been in use since 2021. Wirtschaftsbetriebe Duisburg and USB in Bochum are among the first municipal operations. We asked Christian Kley, Technical Managing Director of USB Bochum GmbH, and Thomas Patermann, Spokesman of the Board of Directors of Wirtschaftsbetriebe Duisburg, as well as their teams, what their experiences with the new, clean hydrogen refuse collection vehicles are like.

Claudia Schaue: What was your motivation to use a hydrogen refuse collection vehicle?

Christian Kley: Better climate protection thanks to innovative solutions and the most beneficial thing for Bochum was the basic motivation for us to get interested in a hydrogen vehicle. It is important to involve all the people, especially the commercial staff who drive the vehicles. That's the magic formula at the USB; that you work as a team, everybody makes their contribution, that's how the joint success comes about.

You have to know when you invest in new technology that something can always happen. Managing any issues that arise is important and it works well. If hydrogen is going to become popular, the price will have to adjust. If there are no more subsidies, we won't be able to buy any more vehicles.

Claudia Schaue: How does it feel to drive the hydrogen refuse truck?

Patrick Gehrbrandt, Driver at the USB Bochum: I would describe the driving experience as very responsive, we no longer have any delays and when you get used to it, it's a fine thing.

Claudia Schaue: And the reactions of the people?

Patrick Gehrbrandt: The reactions of the residents are consistently positive. We drive the truck and you don't hear anything. The background noise is zero and that causes a stir when we drive through the streets with the hydrogen refuse collection vehicle.

Burkard Oppmann,
Managing Director
FAUN Group

Christian Kley, Technical
Managing Director USB
Bochum GmbH

Thomas Patermann,
Spokesman of the Board
of Directors Duisburg

Claudia Schaue: How satisfied are you with the payload and handling of the BLUEPOWER?

Luca Seeger, Refuse Collector at USB Bochum: The payload is comparable to a diesel vehicle. With the BLUEPOWER, we can even load a tonne more on a workday. This compensates for the heavier empty weight caused by the batteries and fuel cells. The driving experience is very similar to that of a normal truck. The team has to be trained to handle the vehicle differently. For example, we have a touch display where different driving programmes can be set.

Claudia Schaue: Is the operating range of the BLUEPOWER sufficient for your application?

Thorben Schäfer, Head of Waste Collection at USB Bochum: The vehicle is used for the daily collection of residual waste. The daily volume is around 650 to 700 containers and 20 to 22 tonnes. In the beginning there were a few doubts about the payload and whether the operation range would be suitable. We haven't encountered any problems, we have good reserves and hardly any downtimes which is comparible with the diesel vehicle. Depending on the driving behaviour of the driver, the hydrogen filling station is visited every third day. The infrastructure has to be further expanded so that such vehicles can be used to dispose of waste all over Bochum.

Claudia Schaue: In Duisburg, the situation is similar. Mr Patermann, will hydrogen become established?

Thomas Patermann: All municipal companies have large vehicle fleets that drive in the cities. We need alternative drives for the transformation. Hydrogen is a subject that we have to promote. We will not be able to rely exclusively on fully electric vehicles. Hydrogen for heavy trucks, buses and waterway vessels will be the fuel that we have to rely on in my opinion.

Claudia Schaue: What do you wish for the future?

Thomas Patermann: We simply need more courage and pioneering spirit. Where would we be today if our ancestors had not had this pioneering spirit. We have to stop with the chicken-and-egg principle, but really start and move the subject of hydrogen forward. This applies to the entire value chain. From production to transport to use in industry and transport. We have to move forward courageously without hesitation.

Claudia Schaue: Mr Oppmann, you are a real hydrogen fan and it is partly thanks to you that we are already collecting waste in many cities with hydrogen-driven vehicles and operating a real, clean circular economy.

Burkard Oppmann, Managing Director and CSO FAUN Germany: I am very pleased that we have found courageous and open companies in Bochum, Duisburg and also in Berlin and Aachen that have taken this step with us. But we are not at the end yet. We are on the way to climate-neutral freight transport. We are taking the next steps and will put another hydrogen truck on the road in 2023 under the name CITYPOWER (see also pages 20 - 23), which is ideal for freight and goods distribution transport. ■

Join the video:

AUTHOR: MICHAEL RANK
GLOBAL EXECUTIVE VICE PRESIDENT PROCUREMENT KIRCHHOFF AUTOMOTIVE

Sustainability in the Supply Chain

The conflict in Ukraine makes it abundantly clear to us that sustainability cannot be a purely political endeavor. Sustainable actions satisfy the needs of the present without risking the needs of future generations. This also involves the basic human needs for safety, freedom, and good health, because at the beginning of every supply chain there is a human being. ›

In this respect, it is only logical that companies extend their voluntary commitment to responsible corporate governance to their entire value chains. Furthermore, political and increasing legal requirements are ensuring companies' compliance with human and environmental rights in their global supply chains. At this point, the Supply Chain Act may be mentioned as an example.

Sustainability has also been an integral part of the KIRCHHOFF Group's mission statement and corporate strategy for a long time. Compliance with minimum social standards has also been reflected in our Code of Conduct for decades. Our suppliers are obligated to comply with this in the Supplier Supplement. This also includes informing KIRCHHOFF Automotive about irregularities and violations.Like automotive manufacturers, we have already anchored sustainability criteria in the evaluation models for suppliers, which are taken into account when selecting suppliers and are incorporated into award decisions. These factors are becoming increasingly important. Sustainable supply chain management will become a driver of value creation and a success factor for our company in the future.

In addition to efforts for increasing the acceptance of transparency via the Supplier Self-Assessment (SAQ) within the supply chains, compliance with the specified sustainability requirements is also checked on site. We draw on a standardized verification mechanism for assessing the sustainability performance of companies in automotive supply chains.

The Responsible Supply Chain Initiative (RSCI) e.V. association, of which we are a founding member, developed this verification mechanism with manufacturers, suppliers, and other associations.

Responsible Supply Chain Initiative (RSCI) Founding Members:

- AUDI AG
- Bayerische Motoren Werke AG (BMW Group)
- Brose Vehicle Parts SE &Co. KG
- CLEPA AISBL
- Business Network for Corporate Responsibility AISBL
- Daimler AG
- Dr. Ing. h.c. Porsche AG
- Ford-Werke GmbH
- KIRCHHOFF Automotive GmbH
- Magna International (Germany) GmbH
- MAN Truck & Bus SE
- Robert Bosch GmbH
- Schaeffler AG
- German Association of the Automotive Industry (VDA) e.V.
- Volkswagen AG

The goal: to establish a high level of sustainability in the automotive industry's supply chains.

The operational phase of RSCI's program started at the beginning of 2022, during which we will conduct initial pilot audits of suppliers on a risk-based basis. In this context, verifying compliance with minimum social standards is just as important as defining and tracking the tangible contribution that the supply chain will have to make in achieving environmental targets. Environmental targets, such as the reduction of greenhouse gas emissions discussed in the Paris Climate Agreement of 2015, will only be achieved through a contribution from each individual link in the value and supply chain.

The first step for us in 2022 is to determine the location of greenhouse gas emissions in the supply chain (Scope 3), both upstream at suppliers and downstream at customers. The necessary concepts and system adjustments are currently being developed. Many of our customers have embarked on the path toward climate neutrality, and are also placing increased demands on our products. Thus, our supply chain is asking for optimized solutions in regards to their carbon footprint.

KIRCHHOFF Automotive is one of the 15 founding members of the association "Responsible Supply Chain Initiative RSCI e.V." The aim of the association is to support all players in the automotive sector by establishing a high level of sustainability in supply chains.

When thinking about meeting sustainability criteria, there is often concerns about rising costs and administrative efforts. In principle, this is conceivable (e.g. switching to sustainably operating suppliers). The current upheavals, associated uncertainties, and costs in supply chains show that this view is one-sided. Here, it is important to keep an eye on the overall costs for the company and society. At KIRCHHOFF Automotive, we see a sustainable supply chain as a future competitive differentiator and a key success factor. ■

This autumn, WITTE Tools is replacing its previous injection molding machine with a specially designed model. The new machine is not only technically state-of-the-art, but also promises energy savings of at least 30% in the overall system.

Let's Save Energy: Using Improved Technology

For the production of screwdrivers at WITTE Tools, the injection molding machine is of central importance. It heats colored plastic granulate up to 250°C and injects it into shape under high pressure, which gives the bright blade of each screwdriver its useful and characteristic handle. This plant and its very complex production steps requires a correspondingly large amount of energy.

In order to contribute to resource-saving production, WITTE Tools is replacing its previous injection molding machine with a specially designed model in the fall of this year.

The new machine not only has state-of-the-art technology, but also promises energy savings of at least 30%. Significantly improved insulation of the heating system and the use of lower-loss and more efficient servo motors make these savings possible. Since 2022, WITTE Tools has been using certified green electricity from renewable sources for its entire production, thus reducing its CO_2 footprint as best as possible.

Pre-assembly of the new machine will begin in September, after which it will be set up in the company's home town of Hagen and commissioned on the site of the old machine. Appropriate training for the operating personnel will take place in advance at the plant manufacturer's premises. The production sequence can also be shortened and help save other resources such as plastic, which is made possible with reduced sprues. A corresponding mold concept is already being worked on in Hagen.

After being dismantled, the old "power guzzler" will have its recyclable materials recycled, while making way for the resource-saving successor of the next generation. ■

AUTHOR: ANI TEUBNER
MARKETING & MEDIA DESIGNER DIGITAL & PRINT WITTE TOOLS

The topic of sustainability is becoming increasingly important and influences our daily life and actions. From nutrition to environmental protection to the smallest principles of action, sustainability is relevant in every industry. Thus, even through the acquisition of new machines in tool production, a more careful use of resources is also essential.

The handles of the screwdrivers consist of up to three components. The plastic granulate, which can be coloured as desired, serves as the raw material, which can, for example, provide a better grip with a soft component.

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

KIRCHHOFF Culture Life (KCL)
The in-house initiative KIRCHHOFF Culture Life is a Europe-wide program with which the KIRCHHOFF Group aims to offer its employees and their families cultural events of a special kind. A variety of cultural activities and participatory events are held occasionally at the sites. The program is wide-ranging and includes music, literature, art, photography, and special activities such as tree planting.

01


02


03


04


05

01 Dr. Johannes F. Kirchhoff, pictured right, with the initiator of the tree planting campaign, Prof. Thomas Kirchhoff. **02** The start has been made: over 25,000 trees and seedlings have been planted so far as part of this campaign. **03 + 04** Employees from our plant in Ovar, Portugal, plant trees together with their families. **05** At the German FAUN site in Osterholz-Scharmbeck, a small forest with 5,000 trees has been created in memory of Lore Kirchhoff, the mother of shareholders Arndt, Johannes (pictured), Eva and Wolfgang Kirchhoff.

Trees for the Future

It all started in 2018 with an idea: "Let's plant 1785 trees at each location as a contribution to the environment and as a reminder of the year the company was founded in Iserlohn, in 1785." KIRCHHOFF Automotive Cultural Officer Thomas Kirchhoff suggested this.

It did not take much persuasion to convince the shareholders of the KIRCHHOFF Group of this idea. The project "1785 Trees for the Future" was soon launched. Since then, employees at many KIRCHHOFF Group locations have planted trees together. The first campaigns started in 2019 in Iserlohn, Attendorn, Mainz, and Osterholz-Scharmbeck. In 2020, planting campaigns followed in Portugal, Italy, Hungary, Romania, and Poland, at three of the company's sites in Gliwice, Mielec, and Gniezno/Rekowo.

Additionally, a small forest with 5,000 trees has been created at the German FAUN site in Osterholz-Scharmbeck. This was planted in memory of Lore Kirchhoff, the mother of shareholders Arndt, Johannes, Eva, and Wolfgang Kirchhoff.

In total, employees and their relatives have planted over 25,000 trees. The local forestry offices are on hand to advise them during all planting campaigns. Depending on the soil and climate conditions, the tree species selected include summer and winter lime, beech, sycamore maple, oak, various fruit trees, and even exotic redwoods from California.

"We will continue to plant trees in 2022," promises Thomas Kirchhoff. The next tree planting campaigns are planned at KIRCHHOFF Group sites in France, the Czech Republic, and the USA. It's a small but important contribution to our environment. ■

INTERVIEW: ALEXANDRA BRABENDER,
COMMUNICATON AND MARKETING SPECIALIST KIRCHHOFF MOBILITY

Mobility without Limits

A Renault E-Kangoo converted by KIRCHHOFF Mobility with rear cut-out.

Vehicle conversions individually adapted to accommodate the customer and his or her restriction shows how even ill, elderly, or injured people can regain some freedom in a sustainable way. KIRCHHOFF Mobility offers versatile, user-friendly, and individually adapted mobility aids, also in e-vehicles.

In this interview, Holger Pape, Managing Director of KIRCHHOFF Mobility, discusses the most important topics related to e-vehicle conversions for people with disabilities.

Alexandra Brabender: The percentage of employees traveling in an e-vehicle has visibly increased at our automotive locations over the last two years. Mr. Pape, what are your thoughts on this trend toward electromobility in regards to conversions for people with limited mobility?

Holger Pape: The trend toward electromobility is definitely discernible, also among our customers. There is movement in the market among both vehicle manufacturers and converters. More and more high-roof station wagons and minibuses are being electrified. This means that almost all vehicles that are usually suitable for a hatchback are basically available fully electric.

Alexandra Brabender: What consequences does this have for KIRCHHOFF Mobility?

Holger Pape: We had to carry out some renewals and further training internally. For example, we held a "high-voltage training course" on handling e-cars. In addition, we purchased new tools and restructured the workplaces in our workshops. However, this also opens up new opportunities for us because all drive types, whether hybrid or electric, tend to be individually convertible for people with limited mobility. For the mobility-impaired, there is usually a basic vehicle subsidy, and depending on the restriction, there is also a complete vehicle subsidy. Additionally, there is the general state subsidy for electric vehicles. As such, e-vehicles are increasingly in demand. This is also a good idea for our customers, since they don't usually drive long distances and the vehicles are mainly used for shorter daily commutes. So, I believe that the acceptance of electric vehicles, also from the point of view of environmental awareness and sustainability, is very high among our customers.

Alexandra Brabender: Your customers also include many commercial operators, such as cab companies that transport the disabled. Is there any sign of a switch to e-mobility in this customer segment as well? ›

Simple e-car charging is often impossible for people with mobility impairments. Photo Credit: EMG (European Mobility Group) https://www.mobilitygroup.eu/news/europe-ready-electric-revolution

Holger Pape: This development is still proceeding rather hesitantly in the commercial sector. Basically, I notice that as soon as the vehicle manufacturers offer the corresponding e-vehicles, the market starts to move. Furthermore, passenger transportation was severely restricted due to the pandemic and is now gradually increasing again. As a result, the demand for motor vehicles for people with limited mobility and special vehicles is increasing again, as is the desire for e-models. There are currently several conversions for e-vehicles with us, these include the E-Kangoo and the Mercedes E-Vito.

Alexandra Brabender: Before buying an e-vehicle, everyone asks themselves how and where they can charge their new e-mobile. You offer your customers an all-round consulting service for vehicle conversions. Does this also include charging stations?

Holger Pape: There is currently no demand for charging stations at our sites. However, our next step will be to equip all locations with charging stations or at least with a wall box. We will soon be submitting applications for funding for this. However, this also depends on how the cities, municipalities, and energy providers intend to assist with this initiative as well.

Alexandra Brabender: The infrastructure expansion with charging stations is slowly progressing. How are handicapped-accessible parking lots coping with e-charging stations?

Holger Pape: The realization that parking spaces with e-charging stations also need to be made handicapped-accessible has actually penetrated at the association level in Germany as well as throughout Europe. I believe that we need to rethink this – not only in Germany, but also throughout Europe. Standardized regulations would have to be created, and charging station providers should also pay greater attention to handicapped-friendly use.

Alexandra Brabender: In your opinion, what would have to be taken into account when it comes to charging stations that are accessible to people with disabilities?

Holger Pape: If there are sidewalks or edges in the way, or even sometimes trees, branches, or roots, then that is of course not accessible for physically impaired (in this instance, wheelchair users in particular) e-car owners. The trend is at least for charging parks to be covered to shield from rain and other precipitation while you charge your vehicle. Even though these parks are becoming more and more comfortable, that doesn't automatically mean that the charging stations are handicapped-accessible and easily accessible. In other words, we need to ensure that the cables are long enough, that the site is not sloping, and that there are no sidewalks or edges in the way. However, both the Association of Vehicle Converters in Germany (VFMP) and the European Association (EMG), in which we are active, are making a strong case for this issue! ■

The charging stations are often difficult to reach for wheelchair users with vehicles standing close together.
Photo Credit: EMG (European Mobility Group) https://www.mobilitygroup.eu/news/europe-ready-electric-revolution

ONE OF US

CONTINUOUS IMPROVEMENT

In 2008, Hugo Ferreira started working as manufacturing engineer at the KIRCHHOFF Automotive plant in Ovar, Portugal. In 2015, he was promoted to KAPS (KIRCHHOFF Automotive Production System) director and subsequently moved to Attendorn, Germany. Three years later, Hugo took over a global role in KAPS and helped kick-start the digitalization initiative at KIRCHHOFF Automotive. **"One great thing about KIRCHHOFF Automotive is that working hard is rewarded with new career opportunities. Fortunately I am just one of many cases,"** says Hugo. In 2022, he was promoted to managing director of operations at KIRCHHOFF Automotive Portugal. According to Stefan Leitzgen, COO at KIRCHHOFF Automotive, "Hugo's career is a great example of turning opportunities into professional growth. Imagine a young engineer, eager to learn, looking to gain international experience and taking challenges when they show up. Combine this with passion for the job, resilience, and commitment to the company, and you see what is possible."

AUTHORS:
NICOLE KREBS – MARKETING ASSISTANT OF MANAGEMENT KIRCHHOFF ECOTEC
VIMALA PEHNELT – EMPLOYEE DEVELOPMENT MANAGER KIRCHHOFF AUTOMOTIVE

Employee development – a sustainable investment in the future

Development initiatives in the KIRCHHOFF Group

- KATE Talent Program
- Management development
- Mentoring/Coaching
- Upskilling/Reskilling
- Training-on-the-job
- Job rotation
- E-learnings/Presence trainings
- Train-the-trainer (TTT)
- Stays abroad/secondments

Targeted and sustainable employee development has become even more important in times of skills shortages and digital transformation. But how does employee development work? This is described by impressive best practice examples from the KIRCHHOFF Group:

2014 saw the launch of **KATE** (KIRCHHOFF Automotive Talent Education), a now well-established program for identifying and promoting talent worldwide. The goal is long-term employee retention and additional training to help employees grow into specialists and managers. The two-year program includes joint development topics as well as individual development measures.

KATE graduate **Nazif Okyay** started as an apprentice at KIRCHHOFF Automotive in 2003 and is now a process technician with management responsibility. In 2003, he began training as an industrial mechanic, developed into a press shop coordinator, became a foreman, and after various advanced training courses, a process technician. Today, he represents the plant manager and foremen in the press store and has leadership responsibilities. For Nazif, KATE was both a learning experience and a challenge. He had not dealt with tasks such as learning new communication techniques in his previous experiences. Now, this employee development experience helps him when working with his employees: "In particular, I've learned to reflect on myself and thus look at goals and problems from different perspectives."

When talent is lacking in a particular area, **RESKILLING / UPSKILLING** becomes increasingly important. Existing employees are further developed and trained within their fields, or in some cases, learn completely new skills altogether.

Alexandra Schneider-Kiss started in 2017 as an external English language trainer, training managers at our Hungarian location in Esztergom. Today, she has a permanent position there as an HR Training & Development Specialist. In 2019, Alexandra started at KIRCHHOFF Automotive in customer service for logistics. The newly created position in HR Development as a HR Training & Development Specialist in October 2021 offered her both a challenge and an opportunity. Here, she was able to build on her previous skills as a language trainer. Alexandra says, "Change in this form is never easy, but I had so much support from my colleagues and my direct supervisor." Alexandra thinks it's especially important to like what you do and enjoy growing with yourself.

MENTORING is another component of employee development. The focus here is on using the employees' existing knowledge to improve their own talents. The experienced mentor supports and advises the mentee on a new task or project. The important thing here is the targeted regular exchange between mentor and mentee. Since mentoring is about personal and professional development, the chemistry between mentor and mentee plays a special role - it doesn't work without mutual trust.

Since 2021, **Kathleen Kane**, Global Vice President Quality in Troy, USA has been regularly exchanging ideas with her mentor, Armin Berthold, Global Executive Vice President of Manufacturing Engineering in Attendorn, Germany. Kathleen says: "For me, mentoring means that I can expand my own way of thinking and seeing things. You get a much broader differentiated view of the organization, outside of your day-to-day business." Kathleen Kane is grateful for mentoring because "mentoring broadens your horizons. I can test and develop my own ideas and strategies in a safe and innovative space. I am helped by objective feedback, advice, and experiential values from a long-time leader like Armin Berthold." She recommends this method of employee development to anyone who wants to make an impact on the organization and change their mindset and perspective. "It benefits all levels in the organization, not just executives." ❱

FAUN management ceremoniously presented the certificates to Hagen Leopold, Stefanie Janning, and Tim Plate (front row from right to left).

FAUN also relies on talent from within its own ranks to fill key roles. Department management, executive management, and the HR department select young talents who have a high level of performance and development potential.

The aim of the **FAUN Talent Program**, which comprises seven seminars, is professional development for those aiming towards becoming a manager. Within a maximum period of three years, training is provided in presentation and communication techniques, self and time management, leadership skills, change management, team development, and conflict and project management. Since the start of the FAUN Talent Program, 17 employees have already successfully completed the seminars. We present three of them here as representatives:

Stefanie Janning has been holding her certificate since December 2021: "I started back in 2014. At that time, I had just been appointed head of the department in work preparation, and later in production planning. At the Talent Program, I learned important soft skills that I needed for my new job," says the FAUN talent. She interrupted her participation for a few years of parental leave. "I was very pleased that I was able to continue the program after my parental leave and that FAUN continues to rely on me. What I learned helps me today with project work in my current position in engineering," adds the 40-year-old.

Another graduate is **Hagen Leopold** from financial accounting. "In particular, the techniques I learned for conducting conflict discussions gave me confidence in my day-to-day work," he reports, "because many challenging tasks have been added here."

Promoting social skills such as how to deal with stressful situations (resilience training) was also something **Tim Plate** found very beneficial: "Before I was offered the position of deputy head of contract design in 2018, I was mainly involved with technical issues as a design engineer." He said he really appreciated the interaction and exchange of experiences with the other participants who came from different departments.

These are just a few methods of employee development at KIRCHHOFF Automotive and FAUN. We offer all employees the opportunity to drive their own development to the best of their ability. Together with them, we can shape the future. ■

AUTHOR: MEL FULTZ
FORMER PLANT MANAGER WAVERLY KIRCHHOFF AUTOMOTIVE

A Second Chance: From Homelessness to Team Leader

The KIRCHHOFF Automotive plant in Waverly, USA supports former drug addicts in making a fresh start in their careers.

Today, Ben Buck leads the Honda Accord team at our Waverly, USA plant.

Since 2019, the Pike County region in Ohio, USA has been offering a support program with internships at companies. It is designed to help drug addicts leave addiction behind and re-enter the workforce. Ben Buck has participated very successfully in such a program - today he leads the Honda Accord team at our KIRCHHOFF Automotive plant in Waverly, and has been clean for almost seven years. Werk in Waverly und ist seit fast sieben Jahren clean.

His story is an inspiring example of how hard work and a second chance can make all the difference: Poor decisions at a young age landed Ben in prison for seven years, followed by homelessness and a return to drug addiction. After a near-fatal overdose, his children were the reason Ben sought treatment and a fresh start: "I lived in the back of a Jeep Cherokee and filled out thousands of job applications. I always answered truthfully about whether I had ever been convicted of a crime," Ben says, even though he knew that was probably why he wouldn't be hired. He had quickly lost faith in the community, industry, and support programs.

However, Ben didn't give up. "In 2017, I joined KIRCHHOFF Automotive in Waverly as a temporary employee. I was excited because I landed a really good job. I worked harder than anyone else. I was always honest with my supervisor and team leader. He was understanding and didn't hold my past against me." Ben was then able to participate in the Transitions Work Experience Program, which is designed to help people transition out of drug addiction. "I was quickly offered a full-time position, and a few years ago I was even able to move up and lead others.

Helping people quit drug addiction and make a fresh start: Ben Buck did it.

In the last five years, Ben has lost more than ten friends and relatives to drug addiction. "It tears lives apart. I'm very happy to have overcome this and firmly believe that recovery and employment go hand in hand." He celebrated his birthday on January 13, which marked his being clean for 82 months.

"We are very grateful for Ben's passion and commitment, not only to the Waverly plant, but to those who come from similar circumstances," says his plant manager at the time, Mel Fultz. "We will continue to do everything in our power to help our community fight drug addiction and its consequences." Ben Buck is also grateful to our company: "Tomorrow, I could start working at another company in Waverly. But they didn't save my life." ■

Transitions Work Experience Program
The program in the Pike County region of Ohio/USA has been in place since 2019 and is designed to help drug addicts leave addiction behind and re-enter the workforce. In May 2020, KIRCHHOFF Automotive in Waverly set up internship positions for the program. Eleven interns participated in this program last year. More than half of them were offered full-time employment and more than a third will continue to work full-time at the Waverly plant.

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

KCL calendar picture of an 8-metre-high fork jutting out of Lake Geneva near Vevey.

KCL Culture Initiative

Successfully launched online and from 2022 with "real" contacts

What is KCL? "I would call it 'cultural taster courses', where you broaden your horizons and also get to know colleagues differently or in a completely new way. It's fun!" says Claudia Schaue, Marketing & Communications Manager at FAUN. She was present at tree planting activities, the photography workshop, and the livestream "KIRCHHOFF on Air".

The launch of KIRCHHOFF Culture Life (KCL) for the Ecotec business unit was unfortunately different than expected due to the pandemic restrictions in 2020 and 2021. Nevertheless, many projects have been implemented, although differently than planned. This cultural initiative of the KIRCHHOFF Group serves to motivate employees and communication - and it has been very well received.

In November 2019, the first events were still able to take place at the KIRCHHOFF Ecotec sites in Osterholz-Scharmbeck (FAUN) and Mainz (Zöller). This is where the group-wide **tree planting campaign** for the Ecotec business unit started. But just a few weeks later, COVID-19 caused the works and events to be postponed or even cancelled. Fortunately, alternatives were provided by various online events with great results. For example, a beautiful **annual calendar** was created with photos taken by employees from Germany, Austria, and Switzerland, on the theme of nature and landscapes. Under the guidance of professional photographer Sascha Schürmann, participants learned how to use a camera, tips and tricks on selecting motifs and perspectives, and even graphic design.

The establishment of small **company libraries** is another campaign that was first established in Mainz and Osterholz-Scharmbeck. The idea of offering employees at the plants **free organic fruit** once a week was also successfully introduced and received at KIRCHHOFF Automotive.

The tree planting campaign was also able to take place at other locations under pandemic conditions. 1,785 trees were planted by our employees in Vinovo, Italy, at the Farid Industries plant. Schoolchildren from the community also took part in the event. They had painted pictures, written poems, and sang songs about the trees. From now on, they will follow the growth of the trees throughout their school years. They had also built bee and insect houses. Finally, the enthusiastic mayor of the Vinovo municipality declared the project a top priority.

"Because of the Coronavirus pandemic, I had to limit the initiative to outdoor activities, where a greater physical distance was possible. Additionally, we were able to offer online events such as the KIRCHHOFF photo calendar. But of course I would have preferred in-person contact with employees, especially at the beginning of the new initiative," says KIRCHHOFF Group Cultural Officer, Thomas Kirchhoff. "Hopefully, we'll make up for that soon. This is the best way for us to succeed in connecting the company with the community at our sites."

Major art events are planned for 2022, during which KIRCHHOFF Culture Life hopes to delight our employees with lots of surprises. ■

KCL produced an annual calendar with nature photos taken by employees from Germany, Austria and Switzerland, which was distributed to all employees at the sites there.

The company libraries function according to the motto: "One in – one out". Here, every employee can exchange books or simply borrow one.

The tree planting campaign in Vinovo, Italy, the location of Farid Industries (KIRCHHOFF Ecotec), was very well received.

ONE OF US

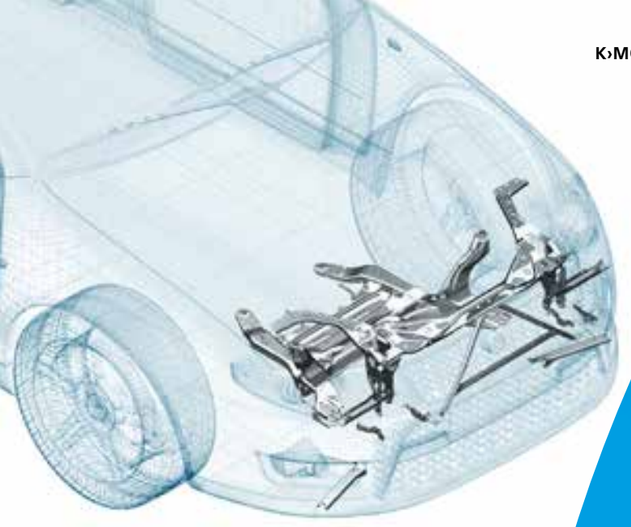
EXCELLENT

Zhou Ni is a process development manager in Suzhou, China, and contributes many of his ideas to continuous improvements. He made a notable contribution during the BMW G08 project; under his leadership, a new process flow was introduced for the production of aluminum extrusions. **"Zhou Ni is a talented individual who is both hardworking and innovative. Introducing a process that has never been used before, especially on a new project, requires a wealth of experience and knowledge. It also requires overcoming many difficulties and perseverance.** I am very happy for his success," says Managing Director (China) Wen Leyendecker. For his special performance in this challenging project, Zhou Ni received the Excellence Award from KIRCHHOFF Automotive last year.

AUTHORS:
SABINE BOEHLE – COMMUNICATON AND MARKETING MANAGER KIRCHHOFF AUTOMOTIVE
VANESSA WILKNISS – MANAGER INSIDE SALES / ASSISTANT TO VP SALES KIRCHHOFF AUTOMOTIVE

New Products on the Road

Our focus is on the further development and continuous optimization of crash-related lightweight assemblies for combustion and electric vehicles. We have taken this approach in the design for a front end structure, and in the production of hot-formed structural parts with high crash relevance for e-vehicles. Additionally, we have developed a modular front axle beam that enables use at platform level with three different drive variants.



BMW Active Tourer – Front end and front axle beam

Frontend Technologies:
Forming, resistance welding, e-coating

Front Axle Beam Technologies
Forming, MAG welding, pickling, e-coating, waxing

Production Plants
Mielec, Gliwice/Poland

Capacity/Year:
100,659

Customer/Model
BMW Active Tourer

Tried, tested, and newly developed – front end and front axle beam for the BMW Active Tourer

In November 2021at their plant in Leipzig, BMW started production of the 2 Series Active Tourer, the first vehicle on the modular FAAR WE platform. After a successful first life cycle, BMW is starting the market launch of the second Active Tourer generation with an internal combustion engine. The fully electric variant and the plug-in hybrid will follow in the coming weeks.

KIRCHHOFF Automotive supplies BMW with a specially developed front wall and front axle beam components. A major challenge in the development of both products was the implementation of a modular system for all vehicles of the FAAR WE platform. We succeeded in doing this for the front wall by creating a competitive design with a high priority on weight and integrity. The front axle beam, produced for the first time for BMW, also crossed the finish line with a homogeneous design despite the different challenges of the three drive systems. Find out more on pages 54 - 57.

Mercedes-Benz – EQE A- and C-pillar / Roof frame

Technologies
Hot forming, laser cutting, spot welding

Production Plants
Iserlohn/Germany,
Esztergom/Hungary

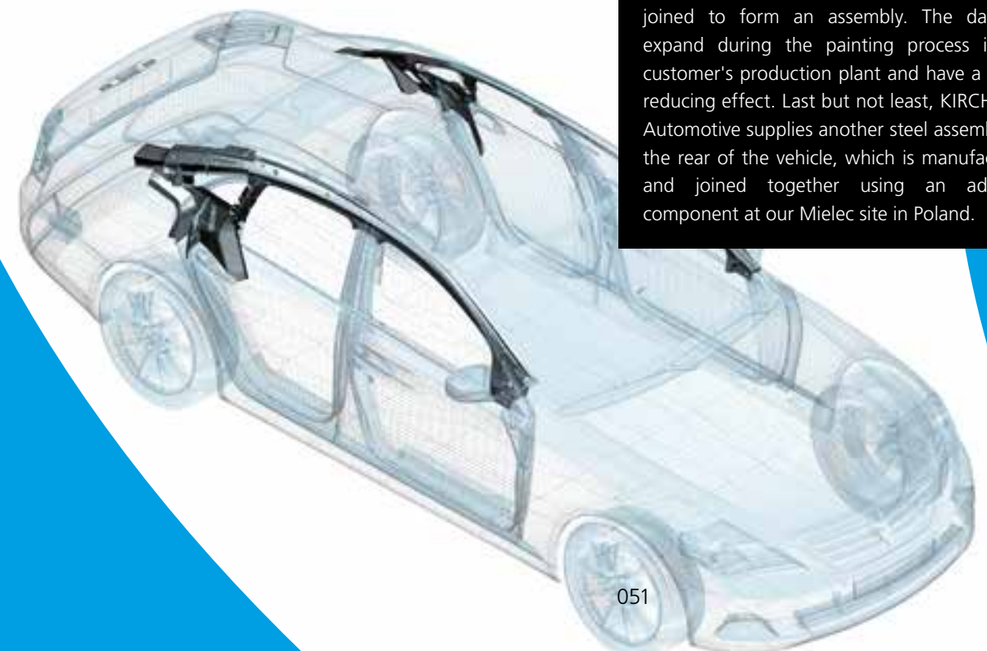
Capacities/Year
56,000

Customer/Model
Mercedes-Benz EQE

Crash-related structural parts for the EQE

It was presented to the public for the first time at the IAA Mobility 2021 in Munich, and now the vehicle is launched in the summer of 2022. The all-electric EQE from Mercedes-Benz is the next model on the EVA2 platform after the EQS. KIRCHHOFF Automotive also supplies various products to the Mercedes-Benz plant in Bremen, where the EQE is built.

With the electric sedan, Mercedes-Benz aims to satisfy the growing demand for electric vehicles, particularly compared to Tesla's Model S. To ensure the necessary safety of the occupants, KIRCHHOFF Automotive produces, among other things, hot-formed structural parts with high crash relevance for the new series. These include the A-pillar and the roof frame, which are conceptually similar to the products of the C-Class. We also supply the C-pillar, in which various steel parts and dampers are joined to form an assembly. The dampers expand during the painting process in the customer's production plant and have a noise-reducing effect. Last but not least, KIRCHHOFF Automotive supplies another steel assembly for the rear of the vehicle, which is manufactured and joined together using an adhesive component at our Mielec site in Poland.



Opel Astra – Cross member

Technologies
Forming, welding

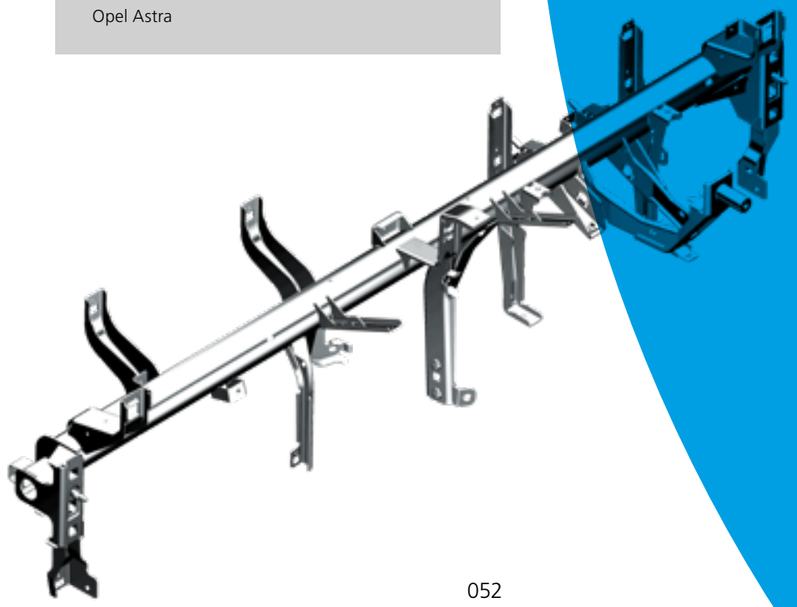
Production Plants
Mielec (Forming) and Gliwice (Welding) / Poland

Capacity/Year
202,532 (LHD) / 27,618 (RHD)

Customer/Model
Opel Astra

Almost a tradition: Cross car beam (CCB) for the Opel Astra

The KIRCHHOFF Automotive plant in Gliwice, Poland has now been the supplier for this highly complex component for three model series. Instrument panel carriers are used in the automotive industry for body construction, in order to fix the dashboard or instrument panel and give them additional rigidity. Furthermore, the instrument panel carrier is used to hold components such as the steering column or the airbag mount. An instrument panel carrier can also be used to further stiffen the vehicle body and thus make an important contribution to the safety of the vehicle's occupants. The individual components for the instrument panel support are cold-formed at the Polish KIRCHHOFF Automotive plant in Mielec. With 130 weld seams and a weld seam length of almost two meters, they are then joined at the plant in Gliwice using MAG welding. The instrument panel carrier is then delivered to the cockpit integrator Yanfeng, based in the Czech Republic. From there, the complete cockpit goes directly to the line at the Opel plant in Rüsselsheim, where the Astra is mass-produced alongside the Insignia.



Acura Integra – Cross car beam and fuel filler lid

Technologies
Forming, projection welding, MIG welding, assembly (cross car beam), adhesive (fuel filler lid)

Production Plants
Waverly/USA (cross car beam),
North York/Canada (fuel filler lid)

Capacities/Year
25,000 each (cross car beam, fuel filler lid)

Customer/Model:
Honda Acura Integra

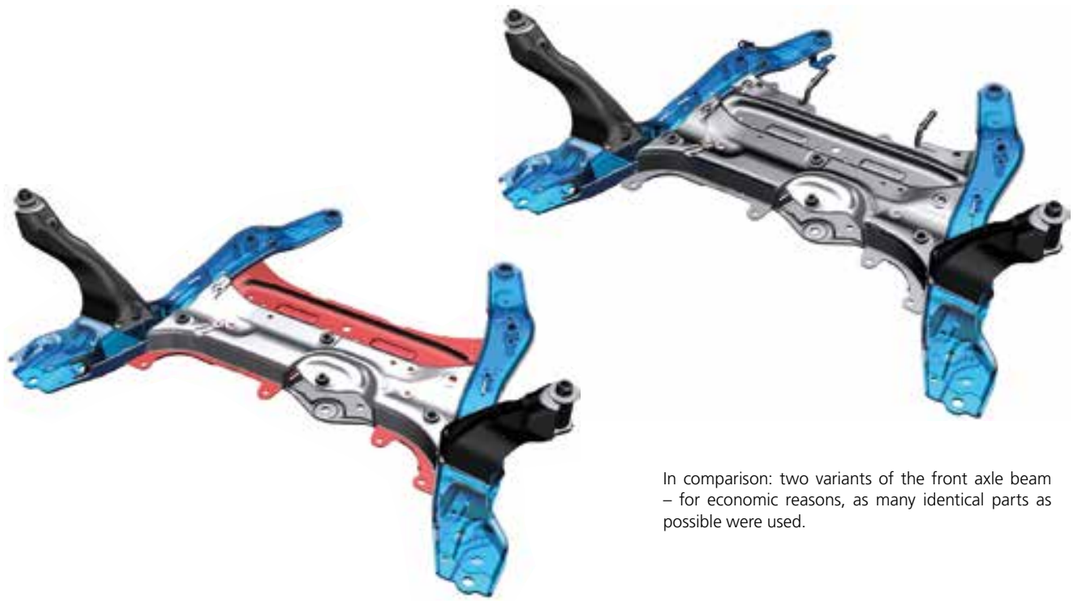
Acura brings back the iconic Integra

After a long absence, the historic nameplate made its return mid-2022. This new Integra is based on the Honda Civic platform, but for the first time in the model's history, it is equipped with a turbocharger and offers a standard six-speed transmission. It also has a limited slope differential to improve traction, and a sport-tuned suspension for better handling. KIRCHHOFF Automotive manufactures the cross car beam and the fuel lid for the new model. The cross car beam is not only used in the new Integra, but also in the Civic platform. The renovated Integra rolls off the production line at Honda Marysville Auto Plant in Ohio (USA).

AUTHOR: JOSEPH BARTZIK
PRODUCT DEVELOPMENT SENIOR SPECIALIST KIRCHHOFF AUTOMOTIVE

Convincing Concept for a Highly Complex Component

KIRCHHOFF Automotive has developed a new front axle beam for various BMW models.



In comparison: two variants of the front axle beam – for economic reasons, as many identical parts as possible were used.

Welding line for the front axle beam

Newly developed front axle carrier
for various vehicles of the BMW
FAAR WE platform.

The components for the [illegible] are joined using the MAG welding process at the Polish plant in Gliwice. Handling robots equipped with appropriate component grippers transfer the components within the welding line. Reliable online weld seam monitoring is ensured by state-of-the-art laser scanning technology.

The front axle beam is a complex chassis component for the further development (WE) of the BMW platform for the front-wheel drive architecture (FAAR). KIRCHHOFF Automotive started the development in September 2016. A convincing concept enabled us to win the contract.

The particular challenges in developing the front axle for various vehicles of the FAARWE platform is the large number of variants for the classic combustion engine, battery-electric vehicles, and plug-in hybrids. This means that during development, the axle carrier was adapted for each type of drive. Despite this high level of complexity, the primary objective of this development project is to create economical variants of the front axle beam for the respective vehicles. To achieve this, KIRCHHOFF Automotive has chosen the strategy of using as many identical parts as possible.

Another challenge is the requirements for the new legal crash load cases and the increased loads defined by BMW. Here, there are the three specifications AZT (Allianz Zentrum für Technik-Test), small or narrow overlap, and the buckling load case. This requires special solutions to reconcile the maximum permissible weight with crash safety. With clever design and local reinforcements, we were able to meet all requirements in the simulation, the physical component tests, and all other tests in the complete vehicle. ■

AUTHOR: CHENG ZENG
RESEARCH AND DEVELOPMENT MANAGER KIRCHHOFF AUTOMOTIVE

Two Years of Research on "Gen-3" Pay Off

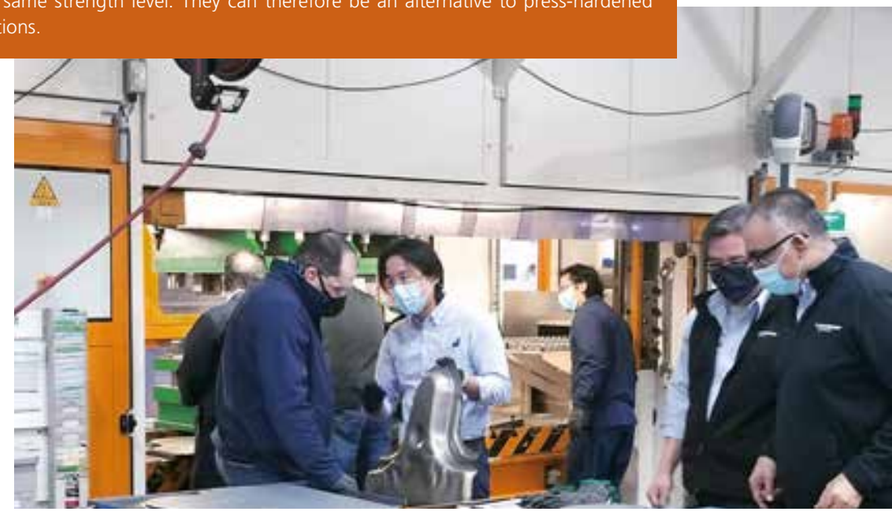
Welding gun and welding robot in the KIRCHHOFF Automotive R&D laboratory.

For several years, the so called 3rd generation of steel ("Gen-3 steel") has been under development in the automotive industry. The research and development team at KIRCHHOFF Automotive in North America has also been working intensively on this for two years.

"Gen-3" is a new grade of steel created to provide ultra-high strength properties and excellent specific energy absorption through microstructure changes during crash events. Depending on the application, it saves weight compared to the current industry standard of dual-phase (DP) steels. Compared to hot formed parts, costs can be reduced on manufacturing processes and CO_2 emission.

The use of Gen-3 steel is an excellent opportunity for the North American KIRCHHOFF Automotive plants to enter the high-strength body-in-white (BIW) market. At a technical level, the company has already begun development partnerships with OEMs and completed a number of key development works, including:

Gen-3 steel:
Third-generation steels are multiphase steels developed for improved formability combined with high strength. Steel producers use different alloying concepts and process routes to produce these modern steel grades. These Gen-3 steels are characterized by improved ductility during cold forming compared with othersteels with the same strength level. They can therefore be an alternative to press-hardened steels under certain conditions.



Demonstration run at the KIRCHHOFF Automotive plant in Aurora / Canada.

- Testing of raw material purchased from two North American suppliers. In physical tests, these were compared to material cards used in the simulation for the forming behavior of Gen 3 steels. Material cards evaluate formability based on mechanical material properties.

- Construction of a demonstration tool capable of exceeding elongation and formability limits for Gen-3 steel. Dimensional studies were performed with this tool to understand spring back and forming tolerances, and to compare the results with the predictions from the simulations.

- Studies on the company's presses for press force and press bed size, with regard to suitability for forming and manufacturing potential products from Gen-3 steel.

- Comparison studies on the CO_2 emissions of products made from Gen-3 steel and hot formed products.

- Detailed welding studies for various welding processes with reduced risks of Liquid Metal Embrittlement (LME), as well as studies on weld stack-ups (joining of two or three layers with one weld spot or seam) and the development of welding parameters to achieve a robust process.

Now, the two years of detailed research and development work are paying off: for the first time in the company's history, it has won business for a Gen-3 product.

KIRCHHOFF Automotive sees great potential for the North American automotive industry in the high formability and ductility of Gen-3 steel. The North American KIRCHHOFF Automotive plants have already established a very good partnership with three steel suppliers who are actively developing Gen-3 steel. ■

AUTHORS:
LENA SOLBACH – ASSISTANT TO EVP GLOBAL MANUFACTURING ENGINEERING KIRCHHOFF AUTOMOTIVE
GERHARD BROCKHINKE – GLOBAL DIRECTOR MANUFACTURING ENGINEERING KIRCHHOFF AUTOMOTIVE

So Close, but Also Far Away

With the pandemic and its associated travel restrictions, new communication channels are required. KIRCHHOFF Automotive has used one of these at its plant in Shenyang, China: interaction via VR (virtual reality) data goggles.

KIRCHHOFF Automotive uses the glasses here as a supplement to online conferences. It is intended to enable a new type of efficient communication and support. The primary goals of the project are to reduce travel and be able to respond more quickly to support requests.

During a one-year proof of concept, the KIRCHHOFF Automotive Central Manufacturing Engineering (CME) team successfully tested this type of "Visual Remote Assistance" (VRA) in Attendorn and recommended it for introduction within the company. The hardware consists of a helmet with permanently attached data goggles equipped with a small monitor, several microphones, and a camera. The system can be operated hands-free using voice commands. The installed camera records the user's environment and shares it with an expert, who is not on site. The expert can connect online using the TeamViewer Pilot and provide support by giving voice instructions or interacting with the user's field of view.

With the help of these VR goggles, the CME team supports their Chinese colleagues during the installation of a new welding system and the assembly of a new press. Try-outs and maintenance at existing plants will also be easier in the future, because experts from all over the world can provide support via this tool. ■

Jonathan Wu, Stamping Maintenance Supervisor in Shenyang/China, tests the use of the data glasses during a machine setting.

Online view of the specialist on the user's environment. The specialist can insert visual cues, which are projected directly into the user's field of view by means of the glasses.

AUTHOR: ANI TEUBNER
MARKETING & MEDIA DESIGNER DIGITAL & PRINT WITTE TOOLS

New Drive: The TOBI®-Bit

Product Presentation at the International Hardware Fair Cologne

The collaboration between the development teams of companies Bogenus and WITTE Tools resulted in a revolutionary product extension: the TOBI® drive system, for which WITTE Tools will supply the bit in the future. The optimal interaction of a perfected bit profile with the corresponding screw enables a maximum contact surface between tool and screw head, thus remaining almost wear-free.

The new drive solution has been optimized compared to the tried and tested TORX® bit with its characteristic star profile. Both drives, TORX® bit and TOBI® bit, significantly reduce the risk of slipping out of the matching screw head.

With the TOBI® bit however, the screw head is held in place simply by placing it on the bit - without any magnetic forces at all. The ready-to-use screw remains axially aligned, thus ensuring functionality even under difficult conditions, such as overhead or in hard-to-reach areas. Precise assembly is also possible with one hand.

For example, the automotive and construction industries benefit from the already patented drive system. Here, tool and automation costs can be reduced in automated assembly and malfunctions due to wear can be avoided. The TOBI® bit also holds stainless steel screws without any problems. These are particularly popular with craftsmen.

In the future, users will be able to switch to the improved drive system; the compatibility of TOBI® and TORX® makes this change easier. The TOBI® bit is to make its first live appearance at this year's International Hardware Fair in Cologne. ■

Have we made you curious? Visit us at the largest tool, building and DIY supplies fair in Germany! The WITTE Tools team is looking forward to seeing you.

The new TOBI® Bit significantly reduces the risk of slipping out of the matching screw head. With the TOBI® Bit it is held in place simply by placing the screw head on it – without any magnetic forces at all.

INTERNATIONAL HARDWARE FAIR COLOGNE

SAVE THE DATE!

INTERNATIONAL HARDWARE FAIR COLOGNE

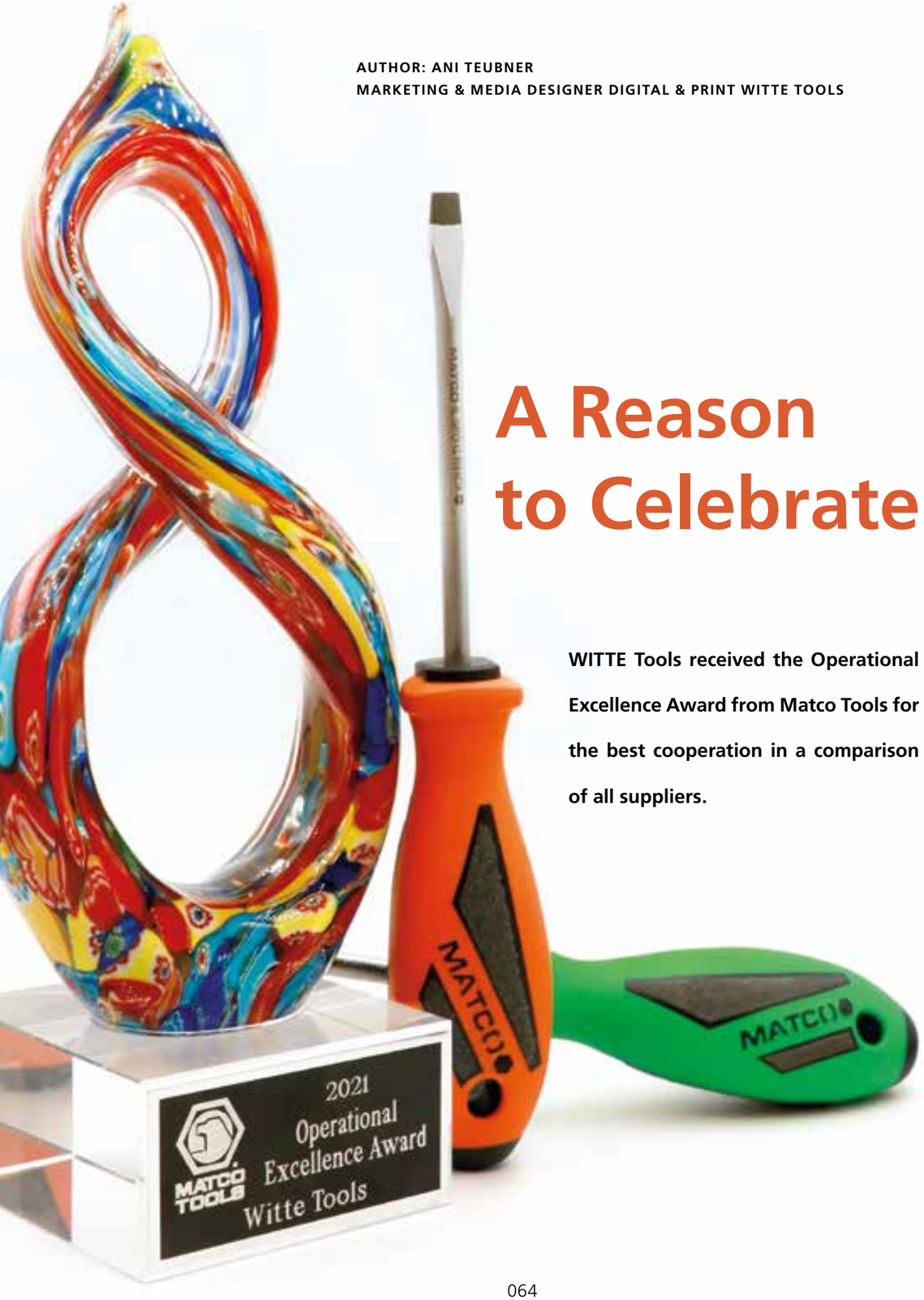
25.09.-28.09.2022

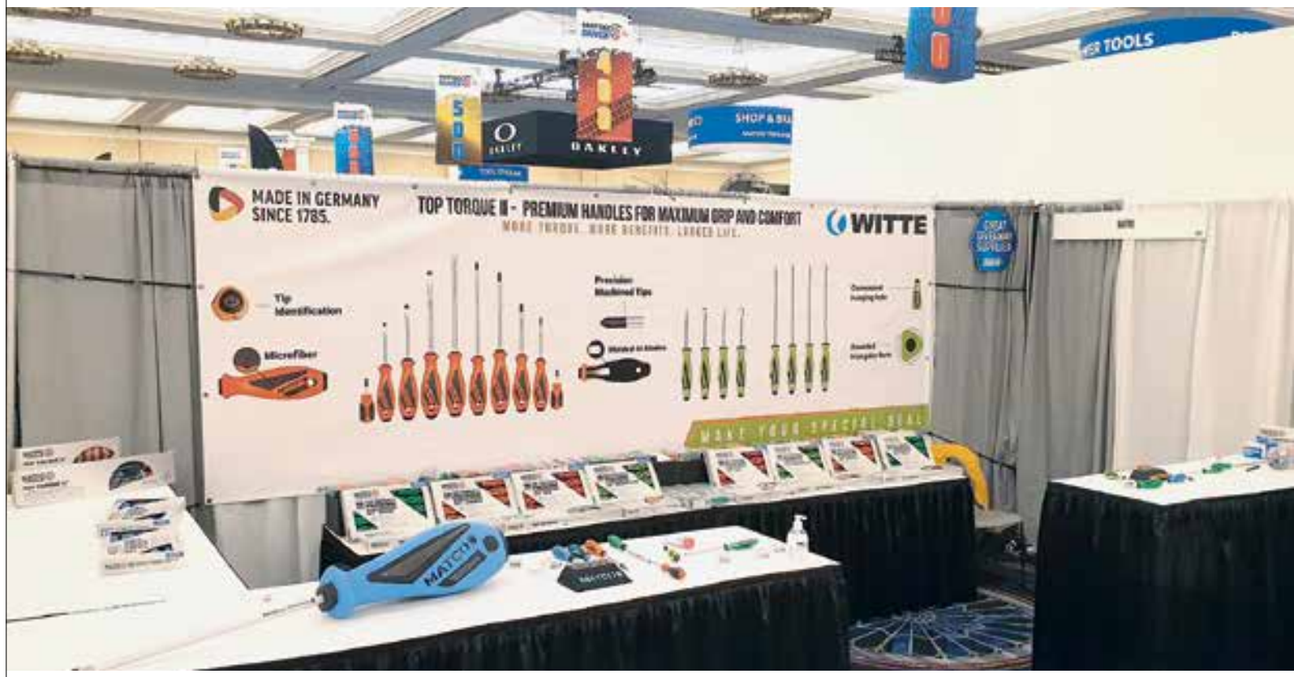
Hall 10.2, Aisle C, Stand 1

AUTHOR: ANI TEUBNER
MARKETING & MEDIA DESIGNER DIGITAL & PRINT WITTE TOOLS

A Reason to Celebrate

WITTE Tools received the Operational Excellence Award from Matco Tools for the best cooperation in a comparison of all suppliers.





The WITTE Tools booth at Caesars Palace in Las Vegas, USA.

The award was presented during the Matco Tools Expo 2022 exhibition, which took place in February in the middle of the Mojave Desert in the US state of Nevada at Caesars Palace in Las Vegas. Of all international Matco partners, WITTE Tools was able to show the best overall result in its cooperation with Matco.

Thus, the German premium tool manufacturer won this award last year through their punctual delivery of products, the support and supervision of promotional campaigns, and prompt responses in communication. Likewise, the granting of advertising discounts and the general growth in purchases contributed to the positive rating. With this award, MATCO Tools also honors its willingness to continuously improve and optimize the quality of its products for a growing customer satisfaction.

Alexander Hingst, Head of Sales and Marketing, accepted the award together with Christian Piccari, Area Sales Manager for WITTE Tools: "This award makes us very proud. It is the result of excellent internal cooperation – from development to production to marketing."

Matco Tools has been one of WITTE Tools' major private label customers for over two decades. Matco customers, who mainly include professional craftsmen, appreciate the "made in Germany" quality of WITTE Tools. The bestseller among Americans is a screwdriver with a triangular handle. Its specially developed ergonomic handle design and its non-slip, patented microfiber coating ensure optimum power transmission with a rotation angle of 120°.

The US tool distributor Matco offers this screwdriver series under its own name in five different colors, and also has other tools with special blades produced by WITTE. ■

IFAT 2022

Back again at last! The IFAT - the world's leading trade fair for water, sewage, waste and raw materials management. In Munich, the companies of the KIRCHHOFF Ecotec family exhibited their highlights and products from 30 May to 03 June.

"The strong, international participation at the trade show in these challenging times is impressive. Nowhere else are so many representatives from technology providers, user industries, municipalities, science and politics coming together to advance solutions for environmental and climate protection. It is good to see that IFAT is back stronger than before. Because it is a very important, sustainable driver for the circular economy and environmental industry," says a delighted Dr Johannes F. Kirchhoff, Managing Partner of the KIRCHHOFF Group.

During the obligatory tour of the trade fair at the opening of IFAT, Dr Johannes F. Kirchhoff (left) explains the BLUEPOWER hydrogen vehicle to the Federal Minister for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection Steffi Lemke (right).

Smarter and safer refuse collection vehicle: VARIOPRESS with Smart Compaction System (SCS) for the automated and energetic optimized control of the compaction in the refuse collection vehicle and the Reversing Safety System (RSS) to prevent accidents in the rear area of the refuse collection vehicles.

Unique and approved: The Smart Compaction System (SCS) was awarded third place in the VAK Innovation Award 2022 in the category Assembly / Component / Control Technology. Claudia Schaue (Marketing & Communications Manager FAUN GROUP) and Peter Knüfermann (Manager Technical Sales & Support at FAUN) receive the award money of Euro 1,000 from VAK President Oliver Dippold.

With the RSS, you have the traffic in view and under control. Additionally, the unique RSS is approved by SIBE Switzerland, a certification agency accredited in Switzerland and notified in the EU.

K›MOBIL 58

VISYOU: Smart and safe, the FAUN FRONTPRESS and SIDEPRESS vehicles with VISY assistance system for rear-space and area monitoring, collision protection and positioning determination.

The new MEDIUM X2L, height reduced by 200 mm is ideally suited for applications with low passages and in the equipment version crane it is perfect for combination with a body crane. An ideal volume is achieved with the proven MEDIUM X2 tailgate. With the hydraulically folding UFC hopper the body offers maximum flexibility in 3 different positions.

Second place in the VAK Innovation Award in the category Assembly/Components/Control Units was awarded to ZÖLLER-KIPPER with its Worker Protection System II (WPS II). The award money of Euro 2,000 was presented by Philipp Eisenmann (Exhibition Director IFAT at Messe München) to Jürgen Kowalke (left), Head of Sales and Service Germany, and Dr.-Ing. Bojan Ferhadbegovic (in the middle), Head of Development and Design at ZÖLLER-KIPPER.

Play It safe! Upon request, the refuse collection vehicles of ZÖLLER-KIPPER can be equipped with all assistance and safety systems which improve the working place of the operative and make it safer. At the fair IFAT, the vehicle Medium X4 including the enhanced air cleaning system CleanOption 2.0, the Worker Protection System II (WPS II) for monitoring the working area, ViSy, visual systems for periphery monitoring, the system Bi-Line for fall protection and the safety footboard was presented as a prime example.

KIRCHHOFF ECOTEC

100% Performance, 100% Electric. The new e-lifter generation EPSILON convinces with the use of low maintenance components and standardised assembly groups. The reduced lifter weight allows high payloads. During the low noise emptying process, a high refuse collection performance is achieved. EPSILON is the only lifter with an direct electric drive on the market and is therefore characterised by the lowest battery-electric energy consumption.

IFAT Sustainability Award - FAUN for climate-neutral IFAT booth awarded: Stefan Rummel (Managing Director Messe München), Mark Speckenbach (Marketing FAUN), Claudia Schaue (Marketing & Communications Manager FAUN GROUP), Harald Rettich (Team Leader Corporate Partnerships myclimate), Patrick Hermanspann (CEO FAUN Group), Prof. Dr. Martin Faulstich (Jury and Director Inzin e.V.), Thorsten Glauber (Bavarian State Minister for the Environment and Consumer Protection) (from left to right)

Right here. Right now: The FAUN exhibition team at the IFAT 2022.

Servus to IFAT 2024, 13 - 17 May in Munich!

Simon Hyde (Chief Executive Officer, in the middle) introduces the new commercial team at FAUN ZOELLER UK at IFAT: Regional Business Managers Liz Carroll, Duncan Angus, Barry Fulls, Ben Lord. (l.t.r.) Not pictured: Regional Business Manager Ian Brown, Commercial Director Stewart Gregory and Business Support Manager Alun Williams.

SPONSORED BY THE

Federal Ministry of Education and Research

FAUN presents a.sweep, the concept of an automated driving sweeper. This project has emerged from the Transatlantic Autonomous Driving Alliance (TADA), whose aim is to create a network linking US and German companies around new vehicle technologies. The project is funded by the German Federal Ministry of Education and Research (BMBF) and the Michigan Economic Development Corporation (MEDC).

Technik entscheidet: The IFAT exhibition team of ZOELLER

ONE OF US

INFECTIOUS PASSION

Jan Šimon, a design engineer at ZOELLER Systems, is not only a technology enthusiast in his job. In his spare time, he devotes himself to his passion, model building. Jan has been so successful that he has won several competitions. A few years ago, he was asked to take over the running of a club at a local community centre. Since then, he has been teaching this hobby to children aged 8-16 every Tuesday. **"Together with children I build everything from jet planes to moon rockets," Jan proudly reports.** "Especially in our fast-paced times, model building is a nice balance. With a lot of patience and perseverance, you create something with your own hands," he adds. Infected by his passion, his protégés also take part in competitions and reward his commitment with their own awards.

AUTHORS:
PETER SCHMID – HEAD OF SALES & MARKETING SCANTEC GMBH
FREDERIK LÖSCH – MARKETING MANAGER ZÖLLER-KIPPER GMBH

Digital Interferant and Recyclable Substance Detection

Less problematic waste thanks to digitalisation and artificial intelligence

Artificial intelligence (AI) is a branch of computer science that deals with the automation of intelligent behaviour and machine learning. Artificial intelligence usually refers to the attempt to emulate certain decision-making structures of humans, for example by building and programming a computer in such a way that it can process problems relatively independently. (Source: Wikipedia)

Deep learning is a branch of artificial intelligence in which the human brain is imitated by artificial neural networks. Deep learning processes information and makes it easy to analyse large data sets. It is used to recognise images, understand texts or make better decisions. (Source: www.datasolut.com)

ZÖLLER-KIPPER GmbH, a member of the KIRCHHOFF Ecotec family, is breaking new ground in digital contaminant and recyclable substance detection. In October 2021, a contaminant detection system for identification of metals in waste was introduced, and has been successfully integrated into the lifter systems of the refuse collection vehicles.

Now, the Mainz-based company also offers optical recognition of recyclables with the help of "artificial intelligence" (AI). The new AI technology uses various camera systems that capture anonymized image data of the waste in the hopper after each emptying of a container. The data is then processed using DeepLearning algorithms developed in-house. Currently, this system is designed for organic and residual waste.

Installed in the ZOELLER rear loader: SmartScan for optical detection and qualitative determination of the waste composition in the dumping area based on image recordings classified by artificial intelligence.

SCANTEC
ZOELLER GROUP

The SmartScan is located inside the closed vehicle in the area marked in red.

In combination with the metal detector "DeepScan", this will increase the qualitative analysis of the waste composition either before or at the time of emptying. Both systems for detecting contaminants and recyclables in waste collection are marketed and further developed by SCANTEC GmbH, a newly founded subsidiary of ZÖLLER-KIPPER GmbH.

Thomas Schmitz, Managing Director of ZÖLLER-KIPPER GmbH, is firmly convinced: "Thanks to the regular recording of the waste composition, incorrect throw-ins is quickly detected." This knowledge can subsequently be used by municipalities and citizens to significantly improve separation behaviour. Other advantages include a reduction of problematic substances in the waste as well as a reduction in the amount of residual waste. Furthermore, the quantities of recyclable materials to be collected can be increased and costs saved. "With its digital solutions, SCANTEC GmbH will make a significant contribution to achieving recycling targets, better closing of material cycles and compliance with the various regulations," Schmitz summarises. ZÖLLER-KIPPER is thus taking another step towards sustainability and circular economy. ■

AUTHOR: CLAUDIA SCHAUE
MARKETING & COMMUNICATION
MANAGER FAUN GROUP

Bienvenue à la Famille

New member of the KIRCHHOFF Ecotec family – FAUN takes over vehicle manufacturer ValMétal from France.

Since the beginning of the year, the French family business ValMétal has been part of the FAUN Group. Jacques Daval, who remains with Val'Air as the company's managing director, founded the company, which is based in La Côte, in 1995 and today employs 50 people.

The Val'Air vehicle division is well known. Under this name, the French company produce sweepers in body sizes from five to fifteen cubic metres and battery-electric 3.5 t chassis for mounting universal bodies with a payload of two tonnes. The range is completed by special municipal vehicles, spare parts and a comprehensive after-sales service. Most of the products are exported (60% share), primarily to Scandinavia and Switzerland. The factory covers a production area of 12,400 m². In addition to vehicle manufacturing, metal processing is another mainstay of ValMétal.

"I am very pleased that with ValMétal we can welcome another French company to our group. Together we will produce first-class sweepers and environmentally friendly electric vehicles," says Patrick Hermanspann, CEO of the FAUN Group. Thorsten Baumeister, COO of the FAUN Group, adds: "With the integration of Val'Air products, I see great synergy effects with regard to the development of new vehicles/sweepers and battery electric drives." Allez, en route! ■

AUTHORS:
CLAUDIO ZIMMERLI – HEAD OF SALES & BUSINESS DEVELOPMENT KOCO SOLUTIONS AG
NICOLE KREBS – MARKETING ASSISTANT OF MANAGEMENT KIRCHHOFF ECOTEC

Good Above and Below Ground with KOCO

A future model: Smart waste management with digital solutions from KOCO

Underground compost/organic waste containers from Contena Ochsner with a Villiger Liftomat system

It is well known that rubbish containers do not necessarily beautify the cityscape. Other problems are the lack of storage areas and unpleasant odours from waste. Swiss cities therefore rely on underground containers that are embedded in the ground.

As part of the Smart City project in Marly, Switzerland, in the canton of Fribourg, KOCO Solutions AG presented two smart underfloor waste collection solutions together with its partners G. Kolly SA, Pöttinger Entsorgungstechnik and Villiger Entsorgungssysteme AG: Both the organic waste container and the large press container are inserted via an above-ground metal column. The metal column combines design with smart function. In addition to a modern look, it is equipped with software from KOCO Solutions as well as a card reader and a display.

Pöttinger press container with a Villiger Quadromat Press-System Lifter

Identification of the customer takes place via a card reader

Each customer receives a chip card that he or she holds in front of the card reader for identification when he or she wants to dispose of waste. By means of an automatic connection to the KOCOwallet, the system checks the customer's credit balance and shows it on the column display. If there is sufficient credit, the lid of the column can be opened and the waste can be thrown in. If the credit is used up, the lid remains closed and the customer can top up their credit via the KOCO app. An interface to the common digital payment systems has been programmed for this purpose.

The disposal costs are calculated according to weight. For this purpose, a weighing system was integrated into each metal column. Weight and disposal costs are shown on the display. After confirmation by the customer, the data is transmitted to KOCO and the costs are automatically deducted from the credit balance. Depending on the contract, billing by monthly invoice is also possible.

The smart solution is suitable for both commercial and private customers. "For example, in a housing estate, the costs are not redistributed to all residents across the board, but everyone pays for the waste they produce according to the polluter pays principle," explains Claudio Zimmerli, Head of Sales & Business Development at KOCO Solutions AG in Switzerland.

"For the commercial sector, our digital solution is in use at Zurich Airport, for example. Normally, the costs are redistributed to all facilities such as shops and restaurants. But a watch shop certainly produces less waste than a fast-food restaurant. With the smart KOCO waste collection solution, everyone now pays for exactly the waste they have disposed of," adds Zimmerli. ■

ONE OF US

TWO ORIGINALS

Neil MacDonald (left), production design engineer, and Gwyn Parry, production manager, have over 80 years' experience between them at FAUN Trackway Limited (GB). Both started their apprenticeships as fitters in September 1979. During this time, they have developed and produced many products together such as the Heavy Ground Mobility System (in the photo), which facilitates the rapid deployment and recovery of temporary roads and access routes for defence operations. What do the two like most about their jobs? The project work - from the initial idea through to full production, alongside collaborating with their colleagues.

AUTHORS:
HERBERT UTZ – MANAGING PARTNER
FAUN AUSTRIA
NICOLE KREBS - MARKETING ASSISTANT
OF MANAGEMENT KIRCHHOFF ECOTEC

FAUN Austria presents a Rotopress with e-drive and integrated washing system

SMART & CLEAN

This special waste collection vehicle developed by FAUN Austria can be found in the Lake Constance region, in the 3-country triangle of Germany, Austria and Switzerland. The vehicle is characterised by a unique clean and smart waste collection solution. The battery-electric ROTOPRESS not only collects waste, but also identifies the customer and weighs the waste. Additionally, a "washing system" is integrated in the vehicle, which cleans the waste containers on request.

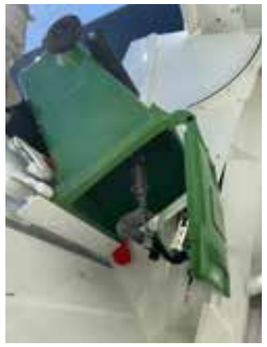
How does it work? Each waste bin is equipped with a programmed chip that guarantees a unique customer allocation. When the bin is emptied, the chip is read by an identification system on the lifter. There is also a weighing system on the lifter, which weighs the waste in the bin. This enables the municipality to charge the customer only for the waste that has been generated.

In addition, the service ordered by the customer is stored on the chip, such as the emptying interval or the cleaning of the bin. If a corresponding customer order exists, the refuse container can be washed after emptying. For this purpose, the refuse collection vehicle is equipped with a water tank for 1,600 l fresh water and a water tank for 1000 l dirty water. With a 100 bar high-pressure pump and rotating washing heads, which are protected at the side in the Rotopress lid, two containers can be cleaned simultaneously in about 4 seconds.

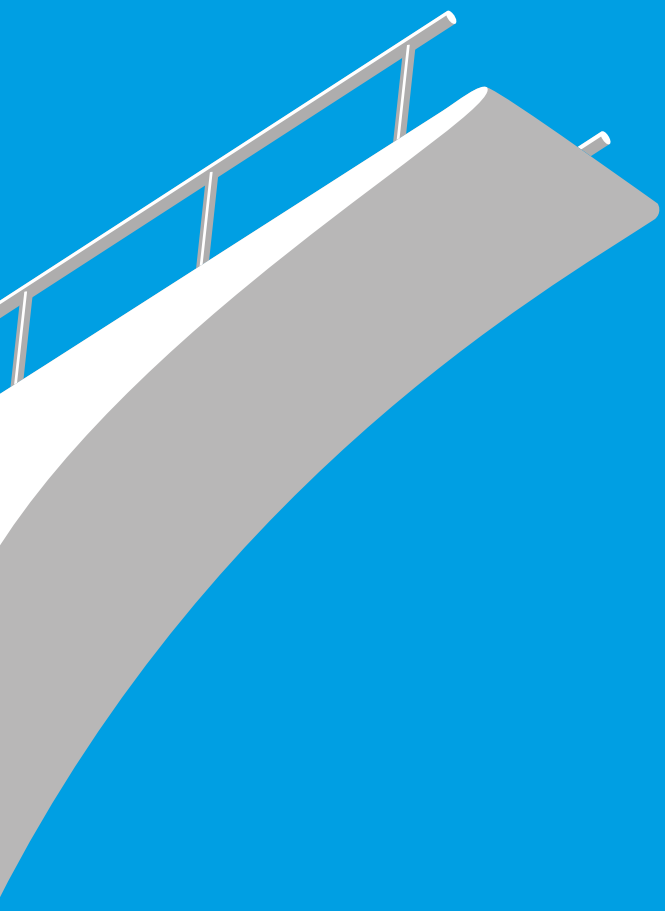
Conclusion: The Rotopress is clean through and through - the ride is CO_2 free, thanks to the electric drive, and the waste container is washed hygienically clean. ■

The high-pressure gun can also be used for manual cleaning, e.g. in the area of refuse collection points or for cleaning the outside of refuse containers.

The rotating washing heads in extended position (in the red marked area), ready for the washing process.



The rotating washing heads in the bin during washing with high pressure, after the bin has been emptied beforehand.



We wish you a restful summer.

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