



moment[®]

Sales and logistics

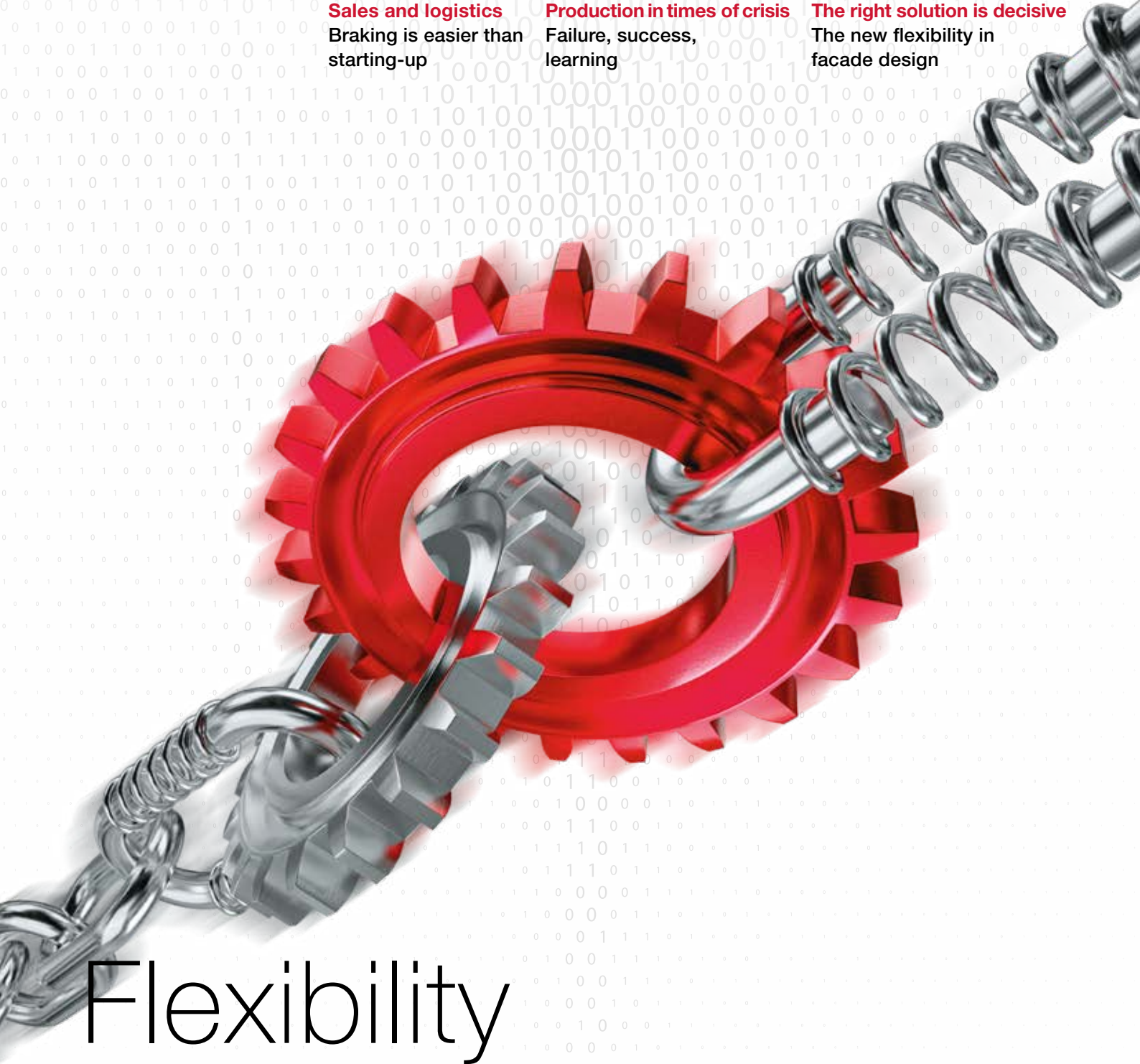
Braking is easier than starting-up

Production in times of crisis

Failure, success, learning

The right solution is decisive

The new flexibility in facade design



Flexibility

Key competence during the crisis

Includes annual report



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Dear partners of the EJOT Group,

For most of us, these days mark the anniversary of the time we have spent under the influence of the COVID-19 crisis. A year that few of us could have imagined or were prepared for. It was an emotional rollercoaster for many of us. From the first “malaise” when the pandemic approached, to serious worries about our own health or that of our loved ones, from economic fears to feelings of isolation and the loss of many things we take for granted. All regions and countries were affected at different times, sometimes feeling as if they had withstood the virus and then again looking into the abyss of skyrocketing incidence rates, rising R-values and other words that we did not know before and which now easily come off our lips. And by now, most of us also know someone who has died with or from COVID-19.

Our group of companies got through this crisis comparatively well, which we could not have imagined in the 2nd quarter of 2020. When orders on hand in the automotive industry are canceled or postponed to the distant future, as in the last week of March of the previous year, one looks to the future with great concern. We have all learned a lot during that time. We have adopted hygiene rules, separated shifts and concentrated on maintaining our ability to deliver and, with a bit of luck, we have managed to remain a reliable partner for our customers. This went from communicating with our customers and suppliers through new digital channels to flexibility in production and supply chain. Therefore we have made the topic of flexibility the focus of this issue of moment. In this magazin we write about what tasks we were faced with and how we approached them. A central question is how sustainable and crisis-proof is our supply chain and what can we do to further secure this chain.

*“Come gather 'round people
Wherever you roam
And admit that the waters
Around you have grown
And accept it that soon
You'll be drenched to the bone
If your time to you is worth savin'
And you better start swimmin'
Or you'll sink like a stone
For the times they are a-changin'”*

This Bob Dylan song is one of my favourites. It is a reminder that our world is constantly changing and we should prepare and adapt to it. Easily said and written, but we must work together to ensure that we continue to succeed at the task.

Do you have any suggestions? Criticism or feedback? We are looking forward to it. Please talk to our employees or write to us (moment@ejot.de).

Yours sincerely,

Christian F. Kocherscheidt
Managing Director



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KERI Anchors – For retroactive securing of three-layer panels

For buildings from the 1970s and 1980s that were constructed using the multilayer prefabricated concrete wall construction method, there is now a need for extensive renovation. The most important step before a new facade can be installed is securing the rain screen. The EJOT KERI system is the ideal solution.

The KERI anchor made of stainless steel (A4) consists of a double-cone bolt and two expansion sleeves. It is used to transfer transverse loads from the rain screens of the three-layer outer wall panels and offers a vertical load transfer from the existing building structure and the new facade system.

The KERI anchor is a fastening element approved by the building authorities for subsequent securing of three-layer rain screens.

Learn more at www.ejot.de/bau/keri-anker



ALtracs® Plus

Self-tapping multi-talent for modular LED light solution



TRILUX Mirona Fit LED Module – The ideal lighting solution for demanding environments and minimal dimensions with maximum power

Not only the production lines have to withstand the harsh conditions that often prevail in industrial and sports halls. The lighting in these halls must also be reliable at all times. With the Mirona Fit LED, TRILUX from Arnberg has developed a lighting solution for these demanding environments. For example, this light fitting is used in the Airbus halls in Bremen for rocket construction at a height of 52 metres. With a service life of 50,000 hours, it is very durable and hardly requires any servicing effort in operation. Due to the modular structure, this light series can be individually adapted and ensures occupational safety in all areas with a high quality of light.



ALtracs® Plus with Conlok® under-head profile – Secure connection of the LED modules with the support structure of the light fixture

An important factor for the ruggedness of this lighting solution is the fastening technology used for joining the LED modules to the support structure of the light fixture. As this demanding application requires direct fastening into the cast holes of an aluminium casting alloy, this is where the self-tapping ALtracs® Plus screw came in. In addition, the connection had to ensure permanent PE contact (“Protective Earth”) to protect against electric shock. This protection is achieved by a special under-head profiling on the screws

used. This Conlok® under-head profiling also increases the torque and loosening torques in the screw joint and thus also ensures adequate protection against vibrations caused by impacts or blows, as can occur in particular in sports halls.

EJOT wins DETAIL Product Award

EJOT was able to convince the jury and readers, and prevailed in the vote for the DETAIL Product Award 2020 for the CROSSFIX® substructure system for the rear-ventilated facade (VHF), thus winning the coveted award. With the DETAIL Product Award, the renowned architecture magazine DETAIL honours innovative building products, systems and materials in cooperation with archipinion. The products were evaluated in particular according to the criteria of design, innovative character, functionality, sustainability and integration capability.



ejothem® S1 short screw anchor

For secure fastening of thin insulation boards

If thin facade insulation panels are used, for example, in the renovation of listed buildings or in window reveal areas, there are additional requirements for washer anchors. In particular, the under-head geometry of the anchor plays an important role. The new ejothem® S1 short screw anchor impresses with its short under-head area and minimal installation depth for securely fastening particularly thin insulation panels



Trade fair

Expert lecture and digital stand at the virtual bauTage fair

The publishing house "Konradin", one of the leading specialist publishers in the industry for architecture, interior design, construction and design, organised the bauTage event from 11-18 from January 11-18, 2021 as a web conference with an accompanying virtual exhibit. Around 900 visitors came to discover and explore new products and industry topics at the event.



EJOT was part of the event with an expert lecture on the subject of "CROSSFIX® – the modern, rear-ventilated facade", and provided information about the innovative substructure system for the rear-ventilated facade (VHF) at a digital stand.

Environmental Protection

Climate-neutral green electricity

For EJOT, environmental protection and the sustainable use of resources are amongst the most important future projects. This also includes the continuous reduction of CO₂ emissions. An important step in this direction is the conversion to green electricity for the EJOT sites in Germany. The amount of approx. 39 GWh/a (39,000,000 kWh/a) purchased from DREWAG – Stadtwerke

Dresden GmbH saves approx. 13,000 tons of CO_{2e}. The EJOT site in Ciasna/Poland already completed the changeover in electricity purchasing last year. For an amount of approx. 5.4 GWh/a (5,400,000 kWh/a), approx. 3,500 tons of CO_{2e} are saved there. 100 percent hydropower provides climate-neutral electricity.



Photo: iStock

Tariff Transformation Tambach

Adjustment of working hours and wages to the NRW tariff



A new era began with the beginning of 2021 for the 560 employees at the EJOT production site in Tambach-Dietharz: the 35-hour week has been in effect since 1 January 2021. Working hours and remuneration are adjusted to the labour agreement applicable in North Rhine-Westphalia.

working hours despite the Corona crisis," emphasises Christian F. Kocherscheidt, managing partner in the EJOT group.

This makes EJOT the first company in the metal and electrical industry in East Germany to take this step. "We are pleased that we were able to align wages and

The tariff partners: the IG Metall trade union, works councils and employers, had agreed on a corresponding company collective agreement in December 2018. This company agreement provided for a gradual adjustment of the weekly working time of 35 hours by 2021, starting with the reduction to a 37-hour week in 2019.

Supply Chain Management

Sustainable and resilient through digitisation?!

Such drastic changes are evidence of the fact that logistics as a so-called “hygiene factor” is often only perceived when it does not work. At the same time, this provides an opportunity for company decision-makers to question developments in the past more thoroughly in order to derive improvements for the future. For supply chain management – i.e. the design and operation of the supply chains – two questions arise due to current events as well as observable developments:

- What does the trend of a stronger “green” awareness in society and politics mean for more sustainable, “green” logistics?
- To what extent can the own production networks, which are often integrated into global supply chains, become more resilient (i.e. more resilient or “weatherproof”) to turbulence in customer and procurement markets?

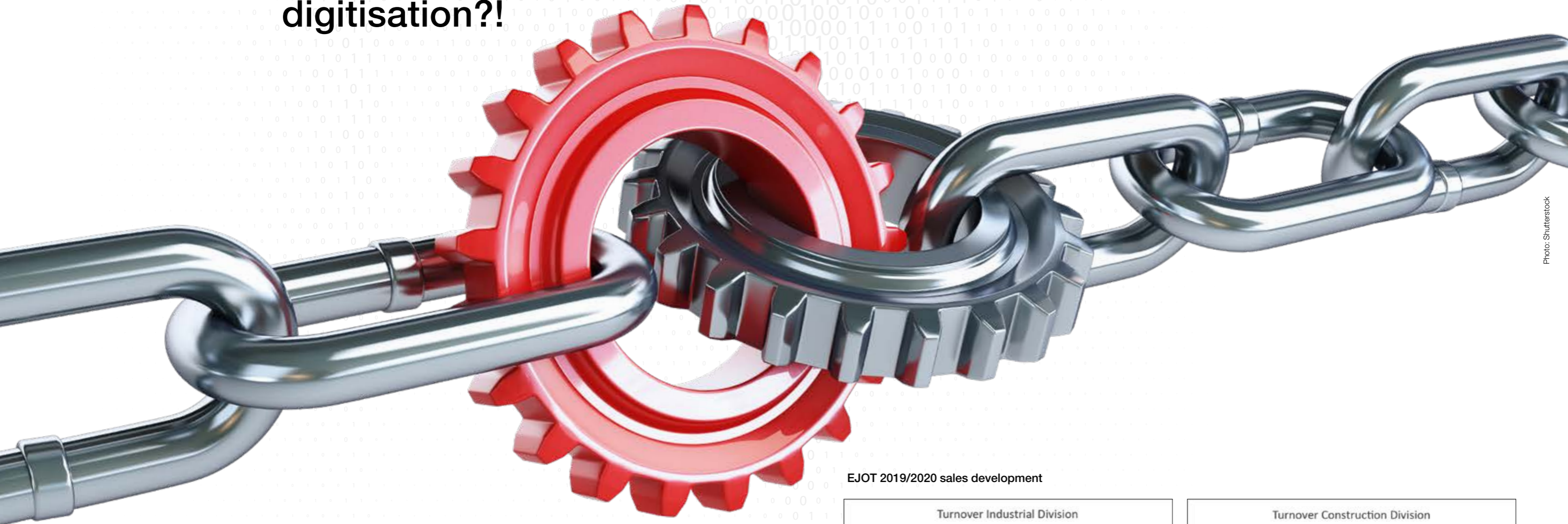


Photo: Shutterstock

Turbulent times bring reliability back into the consciousness of decision-makers. The pandemic, which has been going on for a year now, is an impressive example, as it is whirling up supply chain management: Broken supply chains cause production interruptions, disrupted goods cycles in containers lead to exploding freight rates e.g. a transport from China to Europe currently costs around \$ 10,000 (instead of the usual \$ 2,500-2,800) and also the customer orders deviate significantly from the previous year's values or budgets.

>>Text: Dr. Hans-Hermann Wiendahl, Martina Schiffer, Fraunhofer IPA

EJOT 2019/2020 sales development

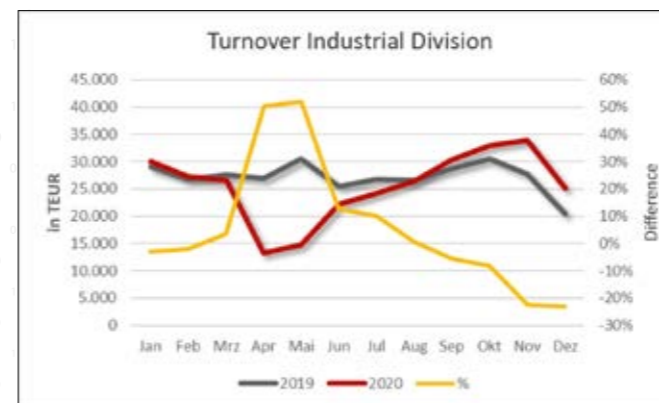
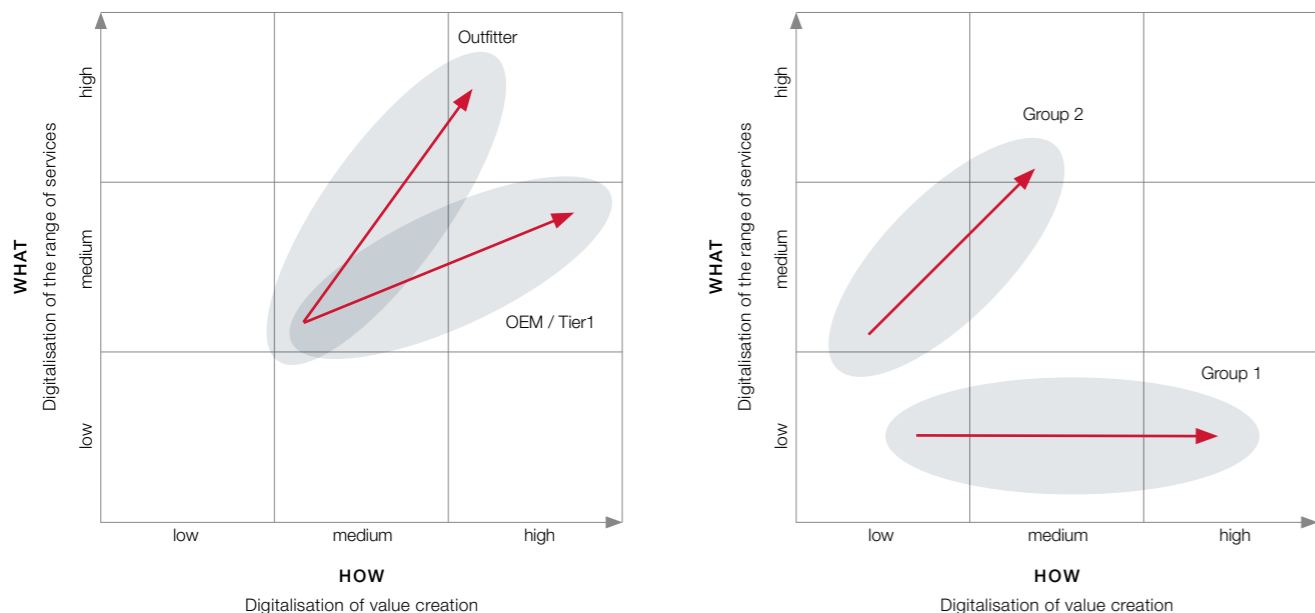


Figure 2

Digital development paths in automotive and mechanical engineering

A. Development paths OEM / Tier 1 as well as equipment suppliers

B. Development paths Tier 2/n suppliers



The first part of the article examines the digitalisation activities of companies from the point of view of the pace-setters of supply chains and explains the patterns of the digital development paths of OEMs and their suppliers that are recognisable today. The second part provides a prognosis for the future SCM, both for constant changes and for expected changes.

Digital development paths

The digitalisation of products and processes has been a fundamental driver of change in manufacturing companies for decades and has moved into public awareness in recent years under the keyword Industry 4.0. That's why companies should deal with the question of an effective digitalisation strategy. The development of a digitalisation strategy distinguishes between two basic perspectives:

- The digitalisation of the **service range** (what) considers the question: "Which products and services are offered to the customer?" This includes the perspectives Smart Product and Digital Services. An example would be the "clever screw" with two obvious applications: Firstly, monitoring the screwing in, which is what the screw assembly tools used today often do. Second, the monitoring of the holding function, for example via a corrosion monitoring system, so that the user receives an indication for replacement.
- The digitalisation of value creation (how) addresses the question: "How is a service produced for the customer?" This includes

the perspectives Smart Production and Smart Factory as prerequisites for a Smart Supply Chain. Such a supply chain then enables digitalised, near-real-time monitoring of technical and logistical processes.

Several studies examined the digitalisation strategies in various industries with a focus on automotive as well as mechanical engineering and plant construction. The essential findings are shown here in abbreviated form (Figure 2):

- OEMs and Tier 1 suppliers are digitalising both, the service range and the value creation.
- The consideration of the Tier 2/n suppliers shows two development paths:

The first group sees the main opportunities in value creation. They either see no possibility or no need to increase the digitalisation share of their products.

Representatives of the second group digitalise the service range and the value creation. Although they see greater potential on the service range side and focus on improving this.

With a view to the supply chain, questions of digitalised value creation are in the foreground. In order to be able to evaluate the opportunities and risks, the development trends must be examined more closely.

Figure 3

Supply Change Management 2040 – what stays the same, what changes?

	Overall	Source	Make	Deliver	Return
What stays the same?	<ul style="list-style-type: none"> • High reliability (delivery reliability, level of service) • High cost pressure • Clear process definition and transfer points • Standard containers • Paper-based processing 	<ul style="list-style-type: none"> • Single and Global sourcing approaches • Reusable packaging (serial business) 	<ul style="list-style-type: none"> • Lean principles • In-house means of transport (forklift, AGV, ...) • Mass Personalization 	<ul style="list-style-type: none"> • 3PL (Third Party Logistics Provider) • Reusable packaging (B2B serial business) • Manual handling last mile (B2C) • Real-time Track&Trace (B2B, B2C) 	<ul style="list-style-type: none"> • Complaints • Recalls and return campaigns • Returns (mail order)
What changes?	<ul style="list-style-type: none"> • Digital twin • Predictive Analytics • Agent based planning and control • IT-Security • "Green" awareness and regional products (B2C) 	<ul style="list-style-type: none"> • Collaborative platforms (in particular for C parts) • Business Analytics: real-time purchasing controlling • Digitization of the procurement processes • Glocalization approaches? 	<ul style="list-style-type: none"> • Additive production processes (especially for spare parts) • Real-time production monitoring 	<ul style="list-style-type: none"> • Autonomous means of transport and loading / unloading • Location-flexible parcel delivery (B2C) • Reusable packaging? (B2C) 	<ul style="list-style-type: none"> • Detailed return flow forecasts • Higher proportion of secondary raw materials

Development trends SCM 2040

Familiar challenges (high cost pressure, high reliability, ...) as well as more recent developments (increasing environmental awareness, digitalisation, ...) set the framework for a successful SCM. Our studies show that in addition to expected changes, many aspects also remain the same.

Figure 3 gives an overview along the phases of the SCOR model. The central goals and tasks of supply chain management (to deliver the right product, at the right place, time, in the right quantity, quality and at the right price to the end customer) continue to apply. The following applies across the board:

- A high level of logistics performance, i.e. in particular a high level of delivery reliability with short delivery times for contract manufacturing (or a high level of service for stock products), remains a decisive competitive factor. The high cost pressure across all processes also remains. For many markets, for example in the supply of trade or in automotive construction, these factors are now barriers to market entry.
- Clearly defined processes with clear transfer points, standard containers (such as containers and euro pallets) have been established; for the experts, a paperless supply chain is unimaginable in the foreseeable future.



Photo: Shutterstock

- New technologies and social trends shape the changes expected by the experts: effective supply chain management is based on complete, correct and up-to-date data. The addition “Big” or “Smart” reinterprets the data completeness with a view to the digitisation potential: an improved process understanding through different or more (big) or the correct (smart) data should facilitate or improve planning and control.

- The so-called digital twin (of products, machines and processes) opens up the possibility of analysing decisions or trends before they are actually carried out (preventive optimisation, i.e. anticipating industrial learning effects). This is closely linked with real-time condition monitoring and predictive analytics. Agent-based planning and control approaches should support the analysis, prognosis and the prediction of possible disruptions.

- Increasing hacker attacks are showing undesirable side effects of digitisation, so that reliability and IT security are becoming more and more important.

- One aspect of sustainability is the trend towards regional and “green” products among end customers (B2C). This affects all partners in the supply chain, supported in legislature by the controversially discussed Supply Chain Act (which holds companies liable for their purchases from suppliers, with regard to environmental damage and human rights). It is unclear to what extent end customers would pay more for this.

Classic procurement strategies such as single and global sourcing will remain, so-called glocalisation approaches will supplement these in the future. The motto “think globally, act locally” is intended to make companies more resilient and future-proof and to be able to serve their customers more quickly and in a more targeted manner. Collaborative platforms digitise purchasing processes and open up market potential, especially for C-parts management: comprehensive access to the required goods is thus easily possible.

What remains for production: design and operation according to the lean principles, internal means of transport (forklifts, AGVs, ...). Here, additive manufacturing processes are an important lever for mastering the continuously increasing product variety (mass personalisation) as well as the increasing complexity of products and processes. The extent to which greater use reduces the number of goods to be transported and thus makes a contribution to sustainability is, however, controversial.

For transport logistics, it is clear: Make transport more sustainable, flexible and autonomous – all those involved along the supply chain can only achieve these goals together. Artificial intelligence

should, for example, avoid empty journeys and better estimate transport types and frequencies. The following areas remain the same:

- Standard containers such as Euro pallets and sea containers continue to dominate physical logistics.
- 3PL logistics service providers, returnable packaging in series business with business customers and the manual handling of the “last mile” to private customers remain as well-known topics in customer deliveries. The parcel service provider UPS introduced a track & trace of its shipments, today a near real-time shipment tracking is standard with all providers and also possible with letters

of the German post (“digital postage stamp”). Many end users support the basic idea: Away from a linear way of thinking “take, use, throw away”:

- One thing is clear: a consistent circular economy increases the requirements for planning and control, as this links inflows and outflows more closely. The example of the sea container described at the beginning clearly shows the effect of such disturbances.
- However, the experts disagree on the use of returnable packaging in the B2C area. These are more likely to be seen in the food industry than in mail order, for example.

But the mail order business in particular (with millions of items returned and then destroyed annually) offers potential for returnable packaging or the use of secondary materials. Secondary materials are currently being used too little and fears of material flow disruptions and insufficient material quality dominate the discussions. Digitisation acts as an enabler here: data such as quality, material compositions, quantity structures, prices and processes are digitally available and therefore transparent; this should reduce or ideally avoid customer disappointment.

Overall, digitalisation of the supply chain opens up considerable opportunities but also risks:

- Data is and will remain the foundation of supply chain management; its digitised exchange increases completeness, accuracy and topicality. A more intensive company-wide data exchange increases the potential benefits: Current movement data in particular improve process monitoring and also allow more reliable demand forecasts. Our studies show: The technical experts estimate the benefit of the customer’s forecast data and the current order status of the supplier to be the highest. However, as long as those in charge of operations rate the benefits of the exchange of information significantly higher than the willingness to pass on their own data, the increase of such potential remains an empty promise.

- Closer networking harbours further risks: Every networked device is a potential data leak that hackers can attack, as Marc Elsberg impressively describes in his novel “Blackout”. IT security is therefore a decisive factor.

The task of the companies is to determine a level of detail of the internal and company-wide networking and digitalisation of their supply chains that is appropriate for their requirements and to implement this consistently. **E**



Dr. Hans-Hermann Wiendahl

Hans-Hermann Wiendahl completed an apprenticeship at Siemens AG and studied industrial engineering at the TU of Berlin. He then held several positions at Fraunhofer IPA and at the University of Stuttgart, while earning his doctorate and qualifying as a professor. After that he spent eight years in mechanical and plant construction and was responsible for the topics of general planning, production control and process design. During this time, Dr. Wiendahl played a leading role in the SAP implementation and simultaneously introduced an APS solution as project manager. Since 2016, Dr. Hans-Hermann Wiendahl has been back at the Fraunhofer Institute for Production Technology and Automation. He has around 25 years of experience in logistics consulting in a wide variety of industries.

Literature / Studies

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Supply chains put to the test

The Covid-19 pandemic disrupted global supply chains in many places and led to “serious impairments”. This is confirmed by a study by the credit insurer Euler Hermes. 94 percent of the companies surveyed in six countries had to struggle with at least temporary interruptions in their own supply chain in the past year (Germany: 95 percent).

According to their own statements, every second company manager has already reacted to the interruption of the supply chain and taken security measures, from insurances to “advance purchases” and stockpiling or emergency suppliers as backups. They have taken a close look at the supply chains and are now monitoring changes in much more detail, according to the study.

However, relocations of productions and new suppliers also play a major role in companies’ considerations for the future. In particular, the lack of protective equipment at the beginning of the pandemic had sparked discussions about bringing production back home. However, the majority of the companies surveyed are not currently considering such so-called “reshoring”.

“It is not uncommon for supply chains and their interruption to come into focus during a crisis: this has always been a hotly debated topic during the last three recessions, but most of those involved more talking than actually acting afterwards,” says Van het Hof, CEO of Euler Hermes Germany, Austria and Switzerland. “Some companies will relocate their production to their home country or their geographical vicinity, but we are currently not expecting a rapid and profound structural shift in trade through a strong relocation – with the exception of strategic sectors such as the medical and food sectors. Nevertheless, this discussion about supply chains and production sites is very important, as the companies are intensively concerned with how to position themselves as crisis-proof as possible.”

Of the 55% of companies surveyed that are concerned with relocating their production, only between 10% and 15% are considering actually bringing production “home”. In fact, more of the companies willing to relocate (30%), especially in Germany (44%), tend more towards “nearshoring”, meaning to relocate production to other EU countries – a compromise between geographical proximity and margin aspects.

Cost and risk are the main considerations behind supplier relationships. In addition to relocating production (55%), new supplier relationships are currently playing a major role for companies: 55% of the companies surveyed are also considering looking for new suppliers in the next six to twelve months. The companies often state that they would prefer suppliers in their own country – but not exclusively.

“The greatest patriots when considering building new supplier relationships are not surprisingly American companies,” says George Dib, economist and expert on world trade at the Euler Hermes Group. “The French would also prefer suppliers in their own country. The proportion is slightly lower for German companies – but this is also due to the fact that they already have more suppliers in their home country than other countries.”

76% of the German companies surveyed already have suppliers in the Federal Republic – that is significantly more than the average of 65% for all companies surveyed. In this respect, Germans fear concentration risks much more than their counterparts in other countries. When looking for new suppliers, the German companies surveyed want to look not only at their home country but also primarily at their Austrian neighbours. Around a third of foreign suppliers to German companies are already located there. In addition to Germany and Austria, China and France continue to play an important role.

When selecting suppliers, environmental aspects and the ability to innovate also play a key role for German companies. **E**

Euler Hermes

From mid-October to the beginning of November 2020, a total of 1181 companies in the automotive, mechanical engineering, information technology & telecommunications, chemicals, food production and energy & energy suppliers in five countries: Germany, USA, France, Italy and Great Britain were surveyed using an online questionnaire. 217 German companies were among the companies surveyed.

Euler Hermes is the global industry leader in credit insurance and a specialist in deposits and guarantees, debt collection and protection against fraud or political risks. The company, headquartered in Paris, is represented in over 50 countries and employs around 5,800 people worldwide. In 2019, Euler Hermes reported consolidated sales of 2.9 billion euros and insured business transactions worth 950 million euros worldwide.

Braking is easier than starting-up

“As if there were no tomorrow,” says Andreas Radel, Managing Director at EJOT TezmaK in Istanbul at the end of February in the EJOT Group’s weekly Corona Task Force with colleagues from the European and Asian sites. At the end of February, managing director Ralf Birkelbach also reports about “massive incoming orders” that cannot be conclusively explained. “We have to stay close to the customer, react fast and be flexible.”

>>Text: Andreas Wolf

Being flexible. What applies to sales is also necessary for colleagues in supply chain management: supply chains threaten to break down. The global shortage of steel and other raw materials is also causing uncertainty in the EJOT Group. “Ultimately, these are the effects of the Corona year 2020,” emphasises Markus Rathmann, Head of Supply Chain Management at EJOT. The roller coaster ride will continue in 2021, albeit under different circumstances than a year ago.

“We had to put on the brakes quickly,” remembers Elmar Hasselkamp, Sales Manager in the Industrial Division. The pandemic also spread rapidly in Europe, in March Germany went into lockdown and the car manufacturers closed their plants. Before we knew it, we were in crisis management, too. Slowing down is not so easy with a relatively high level of complexity in the EJOT industrial division with 5,000 customers and more than 12,000 parts. “Unlike in the 2008/2009 financial crisis, we reacted faster this time, faster than we ever thought possible,” Hasselkamp reveals. This includes precisely verifying the behaviour of customers: which orders are no longer required or have been postponed, which can be stopped immediately. “It is observed, classified and interpreted very closely.”

Everything was cancelled in May 2020. The large automatic small parts warehouse (AKL) with a capacity of 70,000 containers at the Herrenwiese site in Bad Berleburg was 90 percent full. A situation that had never occurred since the new small parts warehouse was built in 2015. The order situation changed over the course of the summer. “If this continues, we have to slowly step on the gas again,” remembers Markus Rathmann. This trend was also confirmed in August. At the end of August it was decided to end the reduced working hours. The first signals also went to the service providers, who were surprised: Apparently EJOT was quite early in this chain. Many were still very cautious and did not see so clearly that there was a wave of orders coming their way. Those were the

discussions in August and September. By October everyone had understood.

“In retrospect, we weren’t that bad at interpreting the numbers,” says Markus Rathmann. And that’s why this signal was given to the suppliers and service providers very early on. The biggest worry all summer long was the fear of the jolt upon start-up. Therefore: “We can brake better than start. But that is probably the same for everyone,” guesses Rathmann.

In the fourth quarter of 2020, when the wave of orders had reached extreme proportions, it was a matter of being extremely vigilant with regard to impending production line stoppages at customers’ sites. Where do we have to deliver quickly now? What can we take out? What is top priority. “That was extremely stressful for the colleagues in sales,” emphasises Elmar Hasselkamp. “We have never seen it with this intensity.” From zero orders in spring to record levels in autumn and winter. It is a considerable burden to report quantities for which it is clear from the outset that it cannot be achieved and that huge backlogs are building up. “It’s a dramatic situation.” Is there a flexible response? In this escalation, probably not, Markus Rathmann and Elmar Hasselkamp agree. “The employees were very dedicated in this extreme stressful situation and did their work with great motivation,” emphasises Hasselkamp. This shows the loyalty in a family business. “Instead of taking off on holiday, we worked through Christmas in production,” confirms Markus Rathmann. That helped enormously in reducing the backlog. “In this respect, we have already shown considerable flexibility, as have our external partners,” emphasises Rathmann. That would not have been possible without this support, especially since the order situation in January remained at a high level.

Now, the supply chains are causing concern, especially the extreme surge in demand on the steel or plastic granules markets,



which is leading to considerable delays in deliveries of raw materials worldwide. We also felt these problems with the wire supply, says Rathmann. “Meanwhile,” says Rathmann, “we order our quantities with a lead time of up to six months.” Rathmann does not see the need for a broader positioning with more suppliers. In the end, it is the same steelworks behind it that supply the market with raw material. “We avoid single sourcing and get our wire from multiple sources anyway.”

It is extremely difficult to plan these crises as we have experienced them now in advance with strategic considerations on the drawing board. Rathmann: “What we are good at, however, is reacting quickly in such a crisis. We are relatively agile and turn all the screws.”

E



Crisis Management: Failure, success, learning

Questions for Dr. Wilfried Pinzl

Dr. Pinzl, how did you react to the crisis in March 2020 in your division?

We neither failed nor was everything completely successful. Rather, I would say that after a short learning period in April, we mastered the challenges of the first lockdown well. Of course, it took some time at the beginning to adjust to the rapidly changing situation from March 2020. As early as May, we were able to almost completely replace the productive capacities that could not be used due to a lack of orders with reduced working hours. All structures in the division reacted in a disciplined and consistent manner.



Dr. Wilfried Pinzl

Managing Director of the THREAD FORMING division at the EJOT site in Tambach-Dietharz

How did the situation develop then?

A recovery became apparent in the middle of the year and incoming order numbers increased again. The demands on the team grew quickly as a result. The main challenge was to manage the transition period partly with reduced working hours and partly with full performance of the team present so that the growing customer requirements could be delivered on time. In September we were the first manufacturing division in the EJOT Industry division to suspend the reduced working hour structure. From then on we were almost overrun with orders from our customers and quickly found ourselves in a critical backlog situation. Beginning in October, we climbed to a top level in the weekly output in the pressing work step, which is equally applicable to the subsequent operations. The backlog situation has long been defused, although we are still working at this high level of performance.

Are there any particular moments or situations that remained in your mind?

In autumn 2020 it was the rapidly increasing arrears that led to such a memorable moment. The backlogs were only the trigger. Rather, it was the sober realisation that you have to accept that capacities are finite. The team working on the machines and systems had produced quantities that we had never managed to achieve in any phase since the introduction of the 4-shift model in mechanical production, and still the backlogs increased. Here lies the demand for new ideas as to how we have to position ourselves in order to be able to react even more flexibly to such challenges in the future in this volatile economic world. **E**

In the field of tension between flexibility and standards

Questions for Michaela Klein-Schmidt

Ms. Klein-Schmidt, the consequences of the Corona pandemic challenged us hugely and continue to challenge us to this day. What effects did this have in quality management?

For EJOT it also meant, among other things, dealing flexibly with situations that could not be planned. But flexibility is a double-edged sword for companies today. On the one hand, we experience that more and more willingness to change is required. It is not only the Corona pandemic that is causing more extreme fluctuations, which we did not know to this extent. The customer also requires EJOT to be adaptable when deliveries are made to new plants. In addition to individual complaint events, the harmonisation of the utilisation situation – especially with our numerous new processes and locations – is a major challenge in the company.

Where do you see the limits of flexibility?

We live in a world in which standards are becoming more and more important and we have to comply with comprehensive requirements when changes are made. Almost every change in production has to be documented and often coordinated with other authorities or the customer. This is based on empirical values that changes can lead to subsequent problems, which have been documented in various standard requirements or customer requirements. That is why it is difficult and demanding to work in this area of tension and to live up to these contradicting expectations.

Are you working on solutions?

Quality management tries to deal with this situation together with the customer and the other departments with two aspects. Every change requires comprehensive communication. Flexibility can only be achieved through early and extensive involvement and with transparent project structures and responsibilities. Because: The more information I have about a change, the better I can handle it.

What does that mean in concrete terms for every change?

First of all, risk assessment is a must. Will the change affect

my processes? Are there any risks to quality or delivery performance? With past knowledge (e.g. about complaint events) and good basic knowledge, I can evaluate what needs to be considered. Even if the descriptions are formulated abstractly, they are the daily bread in operational quality management. We managed to do this across all borders in the EJOT-QM world as well as with the other departments and sites. That means we can handle the new requirements. We know that we are moving in the right processes here, even if things get difficult now and then. **E**



Michaela Klein-Schmidt

Head of quality management
EJOT group

The right solution is decisive

Why flexibility can significantly influence the decision to purchase

How did that saying go again? Some of us are good at dealing with a crisis, some of us not so much. But in times of Corona not everyone always wants to talk about a crisis.

Or rather, not everyone should always talk about it. Because the current scenario with its undoubtedly negative aspects ultimately determines the current reporting in the media on a daily basis. So the question is, what positive effects the current situation can have for companies. Because the effects are here and they are of great importance.

>>Text: Lars Schröder

The subject of flexibility, for example, can have such a positive effect. At first glance, it is a word with a vague meaning. But how can the meaning be narrowed down? The one who adapts to the needs of others is flexible – to name just one example. But who is meant by the “others”? At best, in the B2B segment, the customer groups, or to use the words of a marketer, the target groups. And with that, we are already deep in the matter of things.

The target groups

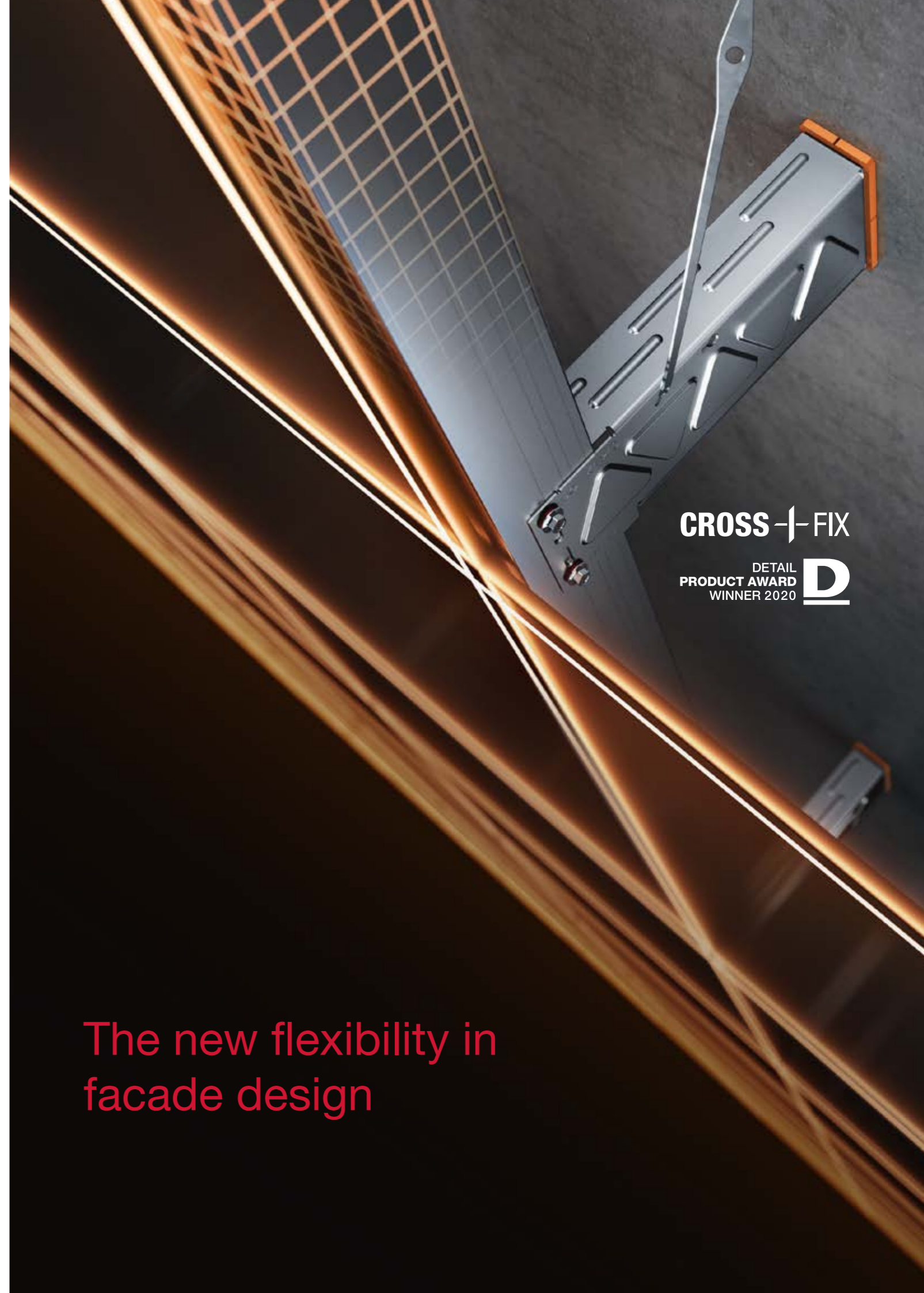
What do companies do to adapt to the needs of their target groups? They often ask themselves at an early stage whether they are seen as a pure provider of products or whether they – and that goes far beyond the first aspect – want to be a solution provider, i.e. want to offer customer-specific and needs-based solutions. A question of corporate strategy without a doubt, especially since other aspects also come into play here. Real solutions for a wide variety of applications work best when they are based on high quality products. But that's not all, because it also requires a high level of consulting competence and expertise so that everything works and the customer ultimately receives a solution that is convincing not only in terms of quality, but also, for example, from an economic point of view. An example of such a scenario could be, that in the construction sector fewer fasteners are required for the construction of a certain building without the statics being negatively affected in any way. Or the installation of fasteners, for example on the roof, could be simplified with special tools so that more fasteners can be installed per unit of time. On windows, for example, roller shutter guide rails can

be bridged with a spacer element in order to still secure lanyard rails safely and in accordance with the requirements. Without a doubt, these are all methods of increasing profitability, and thus downstream, the productivity as well.

Cross-trade solutions

Flexibility means a lot more. Product ranges and related solutions are constantly evolving in many companies. If we refer again to the construction sector, many trades are very closely interlinked, and the fastening and anchoring technology in the surface of the roof, wall and facade is often used across trades. This not only opens up new opportunities in the sale of fastening solutions, but also new target groups. If, for example, contractors and dealers were the focus for a long time, architects, specifiers or construction engineers can quickly join them. Because these target groups also have special needs and requirements. They can be covered, for example, by providing digital planning details and data paired with specific system solutions such as the CROSSFIX® substructure system for the rear-ventilated facade or the mounting elements for attaching add-on parts. As a company, being able to respond to the needs of new target groups at short notice is also a type of flexibility – a special and important one.

In summary, it can be said that an ideal scenario can be outlined as follows. A customer has a civil engineering challenge that needs to be solved. And the partner they have chosen will find the right solution for this in their product portfolio and with their extensive expertise. In the best case, this solution can positively influence the assembly process, i.e. optimise it.



The new flexibility in facade design

CROSS-FIX
DETAIL
PRODUCT AWARD
WINNER 2020 **D**

The new flexibility in facade design

Flexibility – no other word better describes the necessary reactions to the current situation worldwide. This term also plays a major role in the construction industry, be it in the cladding of ventilated facades, in urban development plans or facade design.

>>Text: Lars Schröder and Carina Grebe

Sustainable cladding of aesthetic rear-ventilated facades

It is not just the building envelope, i.e. in this case the aesthetic component, that is important to architects and specifiers when planning a building. Because the cladding elements of the facades must also be attached securely, efficiently and permanently – and preferably, be invisible.

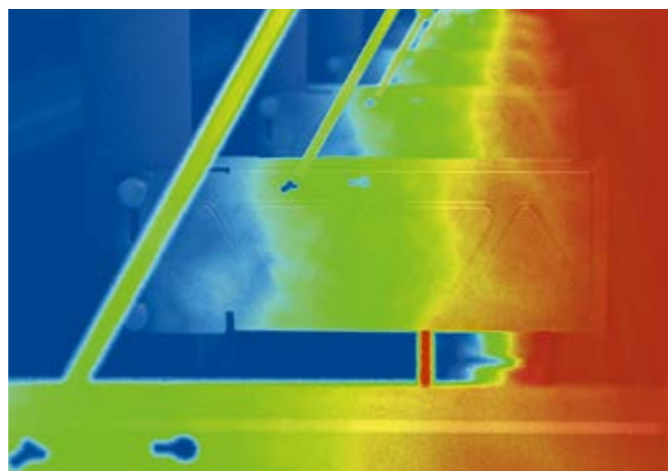
In rear-ventilated facade construction, also called VHF, ecological and economic aspects are increasingly important, which contribute to the topics of energy saving and, as a result, climate protection.

With a substructure system such as that offered by EJOT under the name CROSSFIX®, many features can be combined under the umbrella of flexibility. CROSSFIX® is the first of its kind that



Maximum load capacity through optimized static load capacity

bridge compared to aluminium. This energy efficiency enables a lower insulation thickness in the substructure and thus an increase in the usable area – this enables the achievement of significantly improved U-values.



Maximum energy efficiency through minimal thermal bridges

But not only the aspect of flexibility when attaching the support profiles comes into play here, there are also significant advantages with regard to the usable area of the rooms behind the facade. Thanks to the energy efficiency described above, the wall structure can ideally be optimised, thereby increasing the effective usable area. This opens up new, flexible planning options for the architects.



Maximum flexibility through vertical and horizontal mounting options for support profiles

is made of 100% stainless steel and can be used for horizontal and vertical assembly of the support profiles that are necessary to accommodate the cladding elements of the facade

The advantages of stainless steel

In addition to the resulting maximum flexibility, the stainless steel material used offers further significant advantages over systems made of aluminium.

The high strength properties of stainless steel enables maximum load-carrying capacity and thus expands the design freedom in the planning and execution of rear-ventilated facades. In addition, the console made of stainless steel creates only a minimal thermal



Increased usable area through lower insulation thicknesses in the substructure

Facade greening – flexible green spaces

In addition to the rear-ventilated facade, the sustainable design of other facades is also an important issue. Because climate change is heating up our cities, and at the same time green areas are becoming scarce. However, these are particularly necessary in city centres in order to have a positive influence on the CO₂ balance, reduce harmful substances and ensure good air quality. They also promote leisure activities and relaxation and increase well-being. The maintenance and expansion of these areas are particularly important.

The greening of facades in particular offers an optimal solution in these cases. In urban areas in particular, in which no new planting is feasible due to a lack of space, it offers a flexible option to build green spaces and thus improve the climate in the long term. Vertical greening has many advantages. In summer it provides shade for the facade, keeping the interior pleasantly cool, and in winter it has a heat-insulating effect. In addition, it has positive effects on sound insulation. The plants dampen the noise and also bind harmful substances. In addition to the positive aspects for the



The EJOT ISO-Bar ECO enables flexible fastening solutions for green spaces

residents, the animal world also benefits from the green facade. The plants provide habitats for small animals, which are scarce in city centres. Many countries and cities have recognised this trend and offer various funding programmes for green facades.

The greening of the facade does not only offer advantages from an ecological point of view. The flexible design possibilities for facades are almost endless here. This “green architecture” leads to an upgrading of the grey areas of the city. Green buildings have a special charm and shape a unique appearance.

Flexible attachment on ETICS facades

When fastening facade greening systems to facades with thermal insulation, not only the secure, but also the thermal bridge-optimised installation in the surface plays a major role. With the new Iso-Bar ECO greening system from EJOT, greening on ETICS facades can now also be implemented easily, safely and with optimised thermal bridges.

The EJOT Iso-Bar is a thermally separated fastening element for subsequent and therefore flexible fastening on thermally insulated facades. The reinforced glass fibre plastic provides minimal thermal bridge effect. This can help effectively prevent unnecessary heat loss as well as the risk of internal condensation. It is anchored using injection mortar and it can be fixed into concrete as well as into solid and perforated brick. Due to the possibility of cutting to length on site to suit the insulation thickness, a more manageable product range can be stored on site, also reducing storage space. The EJOT Iso-Bar is available in four lengths and thus ensures a completely flexible usage on-site.

The special adapter enables the attachment of cable systems for greening. In addition to the Iso-Bar ECO fastener, EJOT offers a complete system for fastening on thermally insulated facades.

The right solution for all applications

Flexibility is certainly only one of the strengths of the EJOT Construction Division in relation to the previously described structural-physical facade issues. Of course, the same applies to EJOT's second strong pillar, the Industrial Division with its diverse target groups in a large number of industries. It is a strength of the entire global EJOT group.

The installed fasteners and solutions are invisible in most cases. But they all have one thing in common – they are indispensable. **E**



www.ejot-crossfix.com

Teamwork for the customer

Q&A

>>Interview: Andreas Blecher



An unprecedented situation placed high demands on the sales department of the Industrial Division, particularly in terms of flexibility, teamwork, readiness for action and speed of reaction. The task was to map the performance set-up known to the customer overnight with a different sales approach.

Mr. Amos, the main topic of this issue of moment is the topic of "Flexibility". In what specific situation did you have to react particularly flexibly in the last few months?

Especially at the beginning of the pandemic, in the first lockdown, it was very difficult. From one day to the next, direct, personal customer contact was no longer possible, although customer service still had to be maintained. As a result, the learning curve in dealing with all conceivable digital platforms such as WebEx, Skype or Teams was inevitably quite steep. This change required a high degree of flexibility.

Let's be honest. How did that work out for you? After all, we were suddenly confronted with a situation that had never occurred before.

Overall, I think, the changeover went well. Ultimately, everyone, we at EJOT and our customers, were in the same boat. This was also associated with a high degree of mutual tolerance. Nobody got upset when a participant in a web conference temporarily lost the connection. No questions asked, after re-establishing contact, we started again where we had left off. It also happened that in times of home-schooling or closed daycare centres a child joined the conference for some time. But these situations also gave the whole subject a human touch. From a technical point of view, our IT did a good job, disconnections or complete failures were the exception.

EJOT has a large automotive share in the Industrial Division. How hard did the Corona crisis hit this area?

At the beginning of the pandemic, from mid-March to June, the drops were drastic. In this situation, it helped us a lot that our Construction Fasteners division went well throughout 2020. We experienced that in other times of crisis, e.g. in the financial crisis of 2008/2009 as well. We benefit from the fact that the business cycles in the manufacturing and construction industries are different. This makes EJOT a reliable and stable partner. The second half of 2020 was also exciting. As fast as the econ-

omy had slowed down, it picked up speed again. Coming from reduced working hours, acceleration values like in Formula 1 were required overnight. It goes without saying that something like this cannot be achieved without a little bit of "friction". Personally, I was deeply impressed by the huge commitment of each individual here to quickly pick up speed again.

Mr. Amos, please give a brief assessment: What do you think, how will things continue this year?

That is very difficult to predict. Incoming orders at the beginning of the year are still very high for us, although, on the other hand, one must expect another slowdown in the automotive industry due to the shortage of semi-conductors. In addition, the global effects of the Corona pandemic continue to accompany us. Due to the large number of development projects, in particular due to the current technological change in the automotive industry, we as development partners for our customers in the field of fastening technology are optimistic about the future. So there is still much to do. Let's tackle it! In the end, we can only work on what is within our direct sphere of influence. And that is what we will focus on.

Let's go back to your sales activities in detail. Asked very directly: How can you sell screws today without any direct contact with the customer?

The answer is: you can't! We can't just sell from a catalogue. Our business model differs significantly from providers such as Bofrost. Please don't get me wrong here, I have nothing against a catalogue concept, it just doesn't work for us. We don't just sell screws, we sit down with our customer and work together to create a solution tailored to their requirements. In doing so, we not only keep an eye on the product we have supplied, but also on the entire process chain. Starting with the mathematical preliminary design, through validation, to series implementation – also taking into account the customer's existing parts. Since we focus purely on the topic of fastening technology, it is not

so rare that we have a better overview of the products used by the customer than the individual designer with whom we work. Nobody has as much time to worry about fasteners as we do at EJOT. And our customers benefit from this time.

Is this also reflected in your developments?

Indeed it is. At the end of 2019, for example, we launched the EVO PT®, a screw that significantly simplifies the issue of standardisation in the area of direct plastic fastening without compromising its mechanical properties. Accompanied by significantly expanded options in the area of mathematical pre-design and the finite element method, we come back again to explanation as to why we cannot sell from the catalogue.

How do you see the future of sales after Corona in your business?

I think WebEx, Teams, and Skype are not going to leave us entirely. On the other hand, we will also be on site for our customers again in the future. The topic of fastening technology is, although apparently purely C-parts, of great relevance in the overall context of construction. This makes joint testing, experiencing and developing with physically available parts indispensable. That was also my experience in the first lockdown in March last year. Customers actively demand this. Not everything can be conveyed digitally. Many ideas "come to life" on the way to the meeting room. A well-timed Teams meeting does not allow such solutions that arise out of chance. **E**



Dipl.-Ing. Michael Amos

Dipl.-Ing. Michael Amos started his career at EJOT 19 years ago as a dual student. After studying mechanical engineering, he switched to the technical office. Since 2008 he has been working as an application engineer in sales in the Industrial Division. From July 2021, Mr. Amos will take over the management of sales division V.

EJOT goes digital

Online training offers of the Construction and Industrial Division

For several years now, digitalisation has been one of the defining topics in the industry.

From production (“Industry 4.0”) to the digital possibilities of addressing customers, it runs through all functional areas of an industrial company. The Corona pandemic has undoubtedly given this development an enormous boost, also at EJOT.

From one day to the next, customer seminars as face-to-face events were no longer possible and alternative formats had to be developed at short notice in order to keep customers up to date on topics related to fastening technology.

>>Text: Andreas Blecher and Lars Schröder



Photo: iStock

With the TEC ACADEMY of the Construction Division, founded in 2020, EJOT offers customers and partners the opportunity to learn about current topics and trends in the construction industry as well as various EJOT products and their applications. The digital training offer includes online seminars on a variety of topics, YouTube videos and guidance texts, as well as a new podcast series. The materials are available to users flexibly and free of charge, regardless of time and place.

The idea of the EJOT TEC ACADEMY is based on a multi-stage system. At www.ejot.de/ta the focus is on digital training content in form of online seminars. These offer content on important topics, deepen customer contact and provide information on current topics and trends in the construction industry as well as on various EJOT solutions and their applications. Questions such as

“What distinguishes a modern, rear-ventilated facade? What errors can occur during screw assembly? Or: How do I choose the right mounting element for my application?” are discussed here by EJOT experts and explained in an understandable manner.

The offer is supplemented by so-called professional seminars, which are offered once a year and this time in digital form. The professional seminars are addressed specifically to dealers and contractors and selectively talk about the respective focal points. In one or two days, customers and interested parties can expand their expertise in fastening technology, gain extensive knowledge of the basic conditions under German building law and deal with the right product selection depending on the application using approval-compliant guidelines.

In the future, the modules described above will again be supplemented by face-to-face events and the concept of the TEC ACADEMY will be rounded off.

In the Industrial Division, the core topics of the face-to-face customer seminars were extracted and combined into three modules for a new online training series, the INTENSIVE WEB SEMINAR. The premiere was in September of last year; and due to the great demand, further dates followed in November and February of this year, in April also as an English-language version for international customers. On two days each, the participants were brought up to date with the current “state of the art” in the subject blocks of direct fastening in plastics and light metals as well as joining techniques for mixed and lightweight construction. The core content of the modules was product and application information important for practice, enriched with interactive applications and live presentations of helpful digital tools such as prognosis programs or application checks.

In order to make the web seminars as varied and informative as possible for the participants, a moderator led them through the events, who promptly took up questions and comments from the participants and responded to them at a thematically appropriate point together with the respective speaker. It was this direct interaction with participants and speakers that made these online training courses so attractive and made a major contribution to their success. The organisation of the web seminars took place in Microsoft Teams, whose chat function offered very good communication opportunities for the actors.

Based on this experience, the online training courses will be continuously expanded this year in order to offer customers an even broader range of topics. In addition to the three basic modules, there will be six further thematic blocks, for example assembly strategies for direct fastening connections, special fastening solutions for lightweight construction materials or special joining techniques in electromobility. The first web seminar with the extended content starts in May (4 - 6 May), the second web session is planned for September (21 - 23 September). Due to its ideal suitability for knowledge transfer, the new web seminar series will also play an important role in the industrial division in the post-Corona era, in addition to the face-to-face events. **E**

Vocational training instead of no training

The vocational school is closed. The inter-company training shops and universities as well. The company has reduced working hours for several months, and many colleagues work from home. The production halls and offices are temporarily deserted. What happens now to over 100 trainees and participants in the dual study programme who are sitting at home?

>>Text: Andreas Wolf

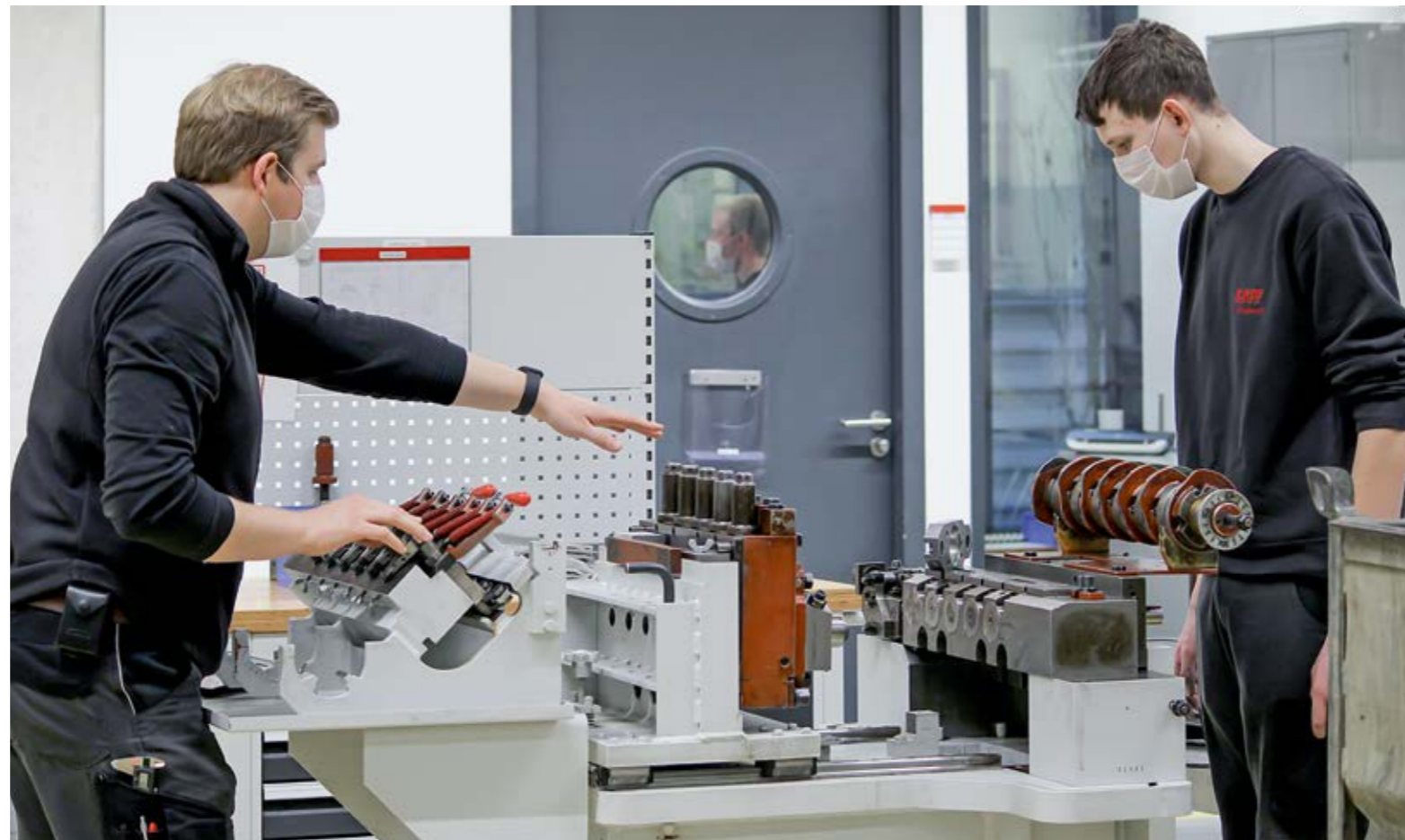
The corona pandemic has changed the world, and brought many things to a standstill. What has not changed, however, is the total time of the training: “We still only have three and a half years to complete the training with all its content,” says Andreas Kurth, Head of Training and Studies at EJOT. And what has also not changed is the knowledge that young people have to acquire in their training or studies if they want to pass their final exams in the end. “That is a very crucial point that we have been dealing with for a few months now,” Kurth says to describe the difficult situation. Corona made all tried and tested procedures, processes and ideas obsolete.

In order to cope with this challenge, not only flexibility is required, but also personal commitment that goes far beyond normal everyday work. The show must go on. “We cannot have non-productive time now for weeks and months,” Kurth makes clear.

The reaction had to be quick and flexible: when schools and training shops were closed during the first lockdown, the team of instructors from the EJOT learning workshop, together with the Cornelsen publishing house, installed the online platform “eCademy” within a few days. Each trainee has their own access and can find learning units there based on the school plans and the curriculum. The learning platform also offers maths training or exam preparations. The educators can assign individual learning packages and give digital homework. In the course of the day, the EJOT learning workshop looks after trainees in small groups in practical periods while complying with Corona requirements, and teaches a group in homeschooling at the same time.

Setting up a learning platform is one thing, the practical implementation with the trainees is a much greater challenge: “It’s a huge undertaking,” emphasises Helmut Zacharias, head of the learning workshop at the Herrenwiese site in Bad Berleburg. The trainees have to find structure in their home-schooling or will be unhappy because they cannot manage it. Simply distributing a few tasks and saying, do these today – that is nowhere near enough.

“We quickly introduced the ‘Early Bird Meeting’, a video conference via Microsoft TEAMS: Digital work starts at 8 a.m. News from



Training with distance and medical mouth and nose protection: The trainer Lukas Brune (left) explains to apprentice Hendrik Schuppener how a multi-stage forming tool works.

the company and information about Corona were translated into more ‘youth-appropriate language’ and passed on. The general situation is discussed as well as daily Corona topics that need to be dealt with. The next morning, an apprentice will give a short presentation on this. It is also about making young people aware of fake news when it comes to Corona. Subject matters from the vocational school are also discussed. “On the days when there

was no vocational school, we provided the trainees with learning packages via our learning platform,” says Helmut Zacharias. And at the end of the meeting there is always a short virtual game. “This is important in order to have something human, something fun in the communication,” says Zacharias. That worked out pretty well at first.

However, it quickly became apparent that the Early Bird Meeting was not enough. The intensity of support is far too low: “We are now holding another meeting at the end of the working day and optionally also at lunchtime,” says educator Lukas Brune. And questions can be asked throughout the day.

The discipline improved greatly over the course of the year: camera on, microphone off, everyone is at the computer on time. But there were technical hurdles as well: not every trainee has a computer or laptop at home, and tries in vain to work on the

to be constantly aware, so that everyone can keep up and the weaker ones don’t fall by the wayside.

Speaking of communication: one insight from the Corona pandemic is the need to involve the trainees on a digital platform within the company. “There are already specific plans for quick implementation,” says Andreas Fey, who is responsible for digitisation projects at EJOT. Here, too, the crisis is an important impulse and accelerator for change,” emphasises Fey.

In the meantime, the trainees have recognised the seriousness of the situation. After a year and a half, most of them are about to take part in the first half of the final exam, the result of which contributes to 40 percent of their final grade. No time to relax at home in front of the computer. Personal responsibility has grown. This is also confirmed by Patrick Herms, who is about to complete his training as an IT specialist. For a year now, he has been working in close coordination with his trainers almost exclusively from home and is getting along quite well. And the final exam? “It will be challenging,” says the 23-year-old respectfully. When it comes to home-schooling with his vocational school, he definitely sees room for improvement: “Going to work at 7:30 in the morning at the start of school without a task requires a lot of flexibility,” he says tellingly.

“Despite all the flexibility, digital tools cannot completely replace face-to-face training as we know and appreciate it,” emphasises Andreas Kurth. This also applies to career orientation. Internships have not been possible in the company for a year. This gut feeling, which is important for the applicant and also for the company, this gut feeling is missing: Do I like it there? How are the colleagues? What is it like? But above all, the sense of doing it yourself is missing from an internship. A whole year group is deprived of the possibility of a practice-oriented professional orientation. “We have such an extensive program of internships, career exploration days, potential analyses, Girls Day, voluntary internships during the holidays, training days, trade fairs or training ambassadors in schools – everything has stopped,” Kurth continued. This cannot be replaced with newspaper advertisements and social media channels. “This ‘Come to us and we will offer you a great programme for three weeks, take you by the hand and explain to you with passion what we do here’, we miss that as well.”

The students in the dual study programme also learn to deal with the new situation. “A high level of flexibility, greater independence and definitely also advantages,” as mechanical engineering student Moritz Kuhly sums it up. Lectures can be accessed at any time on the Internet. There is no need to drive to university, which saves time. It becomes confusing, of course, when every professor and lecturer provides their study documents on a different platform. “I made myself an Excel spreadsheet, so as not to lose track of everything.” And online exams are tough sometimes: 60 tasks in 60 minutes and by no means just multiple-choice questions. “On those days the clock runs mercilessly,” laughs Kuhly. The last time he was at university was in September. No first semester party, no beer in the pub with fellow students. We all miss it. **E**

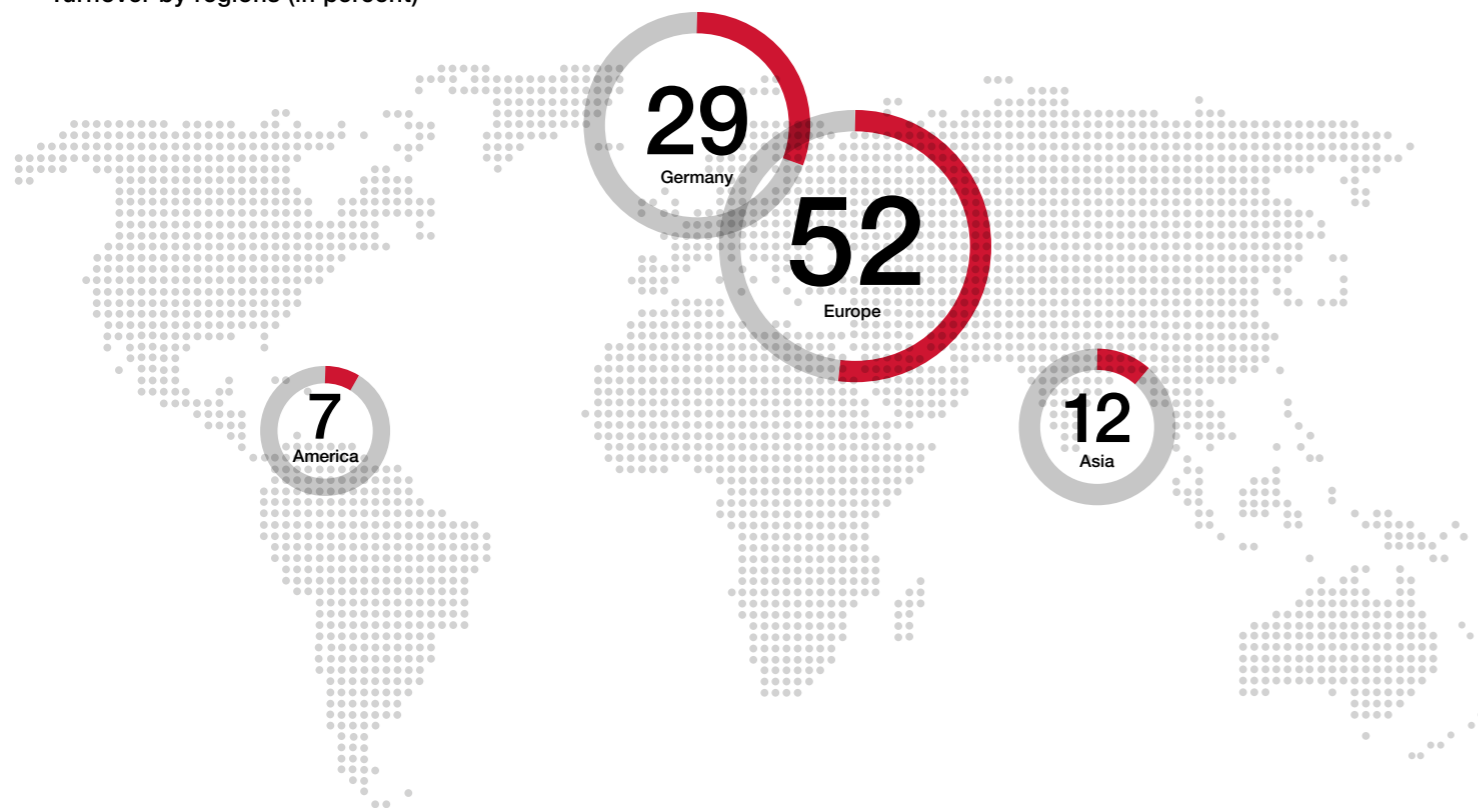


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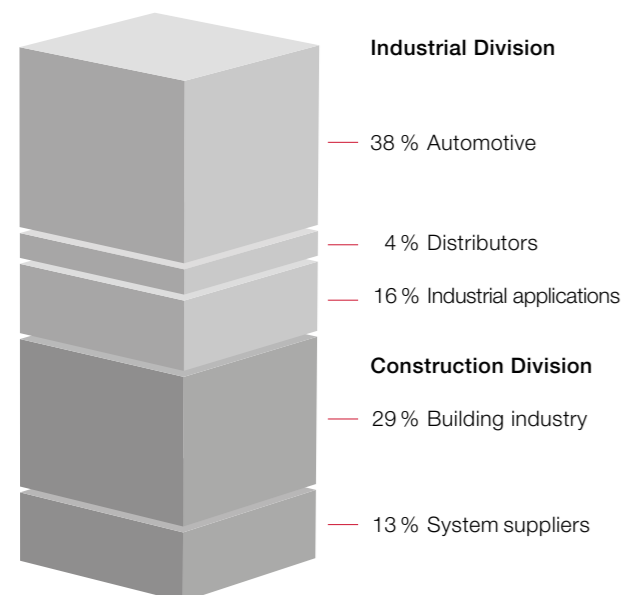
2020

Operating figures

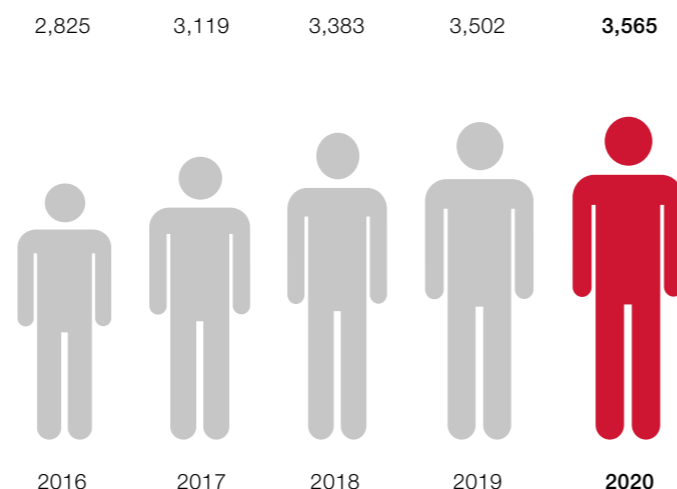
Turnover by regions (in percent)



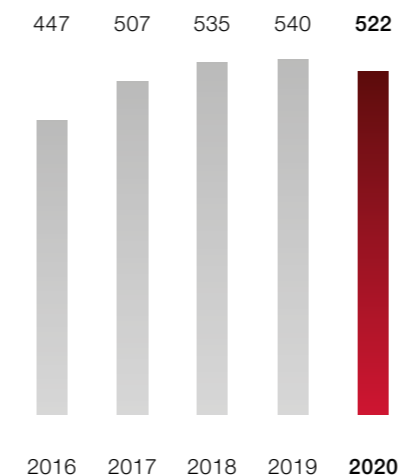
Turnover by customer groups



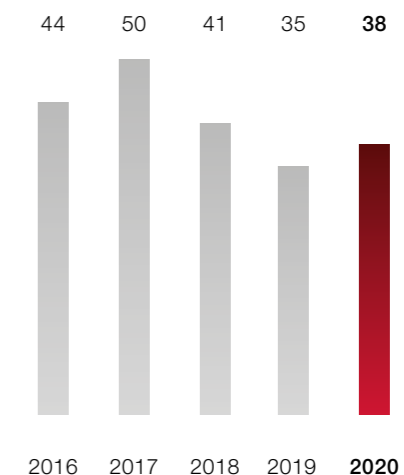
Employees (yearly average)



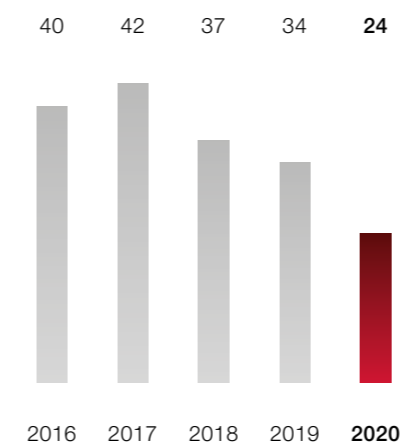
Turnover (million euro)



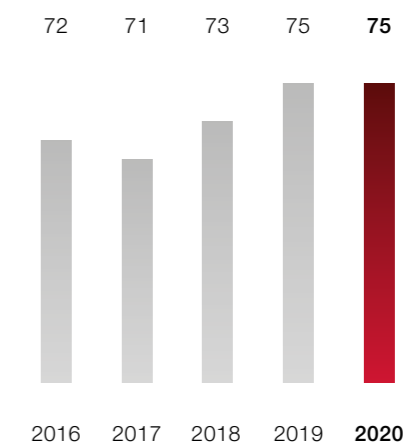
EBIT (million euro)



Investments (million euro)



Equity ratio (in percent)



» Based on 460 million euros in our Corona forecast, we achieved sales of 522 million euros at the end of 2020 and an EBIT of 38.1 million euros, which was slightly better than the previous year. We see how important it was to be conservative in our financing and thus to defend our high equity ratio. «

>> Christian F. Kocherscheidt, managing director

Management Report

Confidently going into the year 2020

"For 2020, the optimists will dominate over the pessimists." This was the result of a December 2019 survey by the Institut der Deutschen Wirtschaft among the most important business associations in Germany. "A faint glimmer of hope, but no all-clear," was the mood shortly before the turn of the year.

After a mixed year in 2019, we too, for the EJOT Group, looked to 2020 with confidence. Our order level at the beginning of the year continued the positive trend from the last quarter of 2019 and we were able to work with vigour on our projects and for our customers. But then the Corona crisis took its course. All forecasts and surveys, plans and annual budgets quickly became obsolete.

The news from China in January 2020 was somewhat unsettling. We heard of a novel virus spreading from the city of Wuhan, which seemed to be similar to other epidemics that had their origin in Asia in recent years: bird and swine flu, SARS and MERS. Well, we had survived those too, but it was nevertheless unusual that public and economic life in China was completely shut down for the Chinese New Year celebrations.

We also came to a complete standstill at our production site in Taicang, which lasted for several weeks. Here in Europe we thought that it would be difficult to capture and control a virus, but that it would then spread at such speed surprised companies, the state and society.

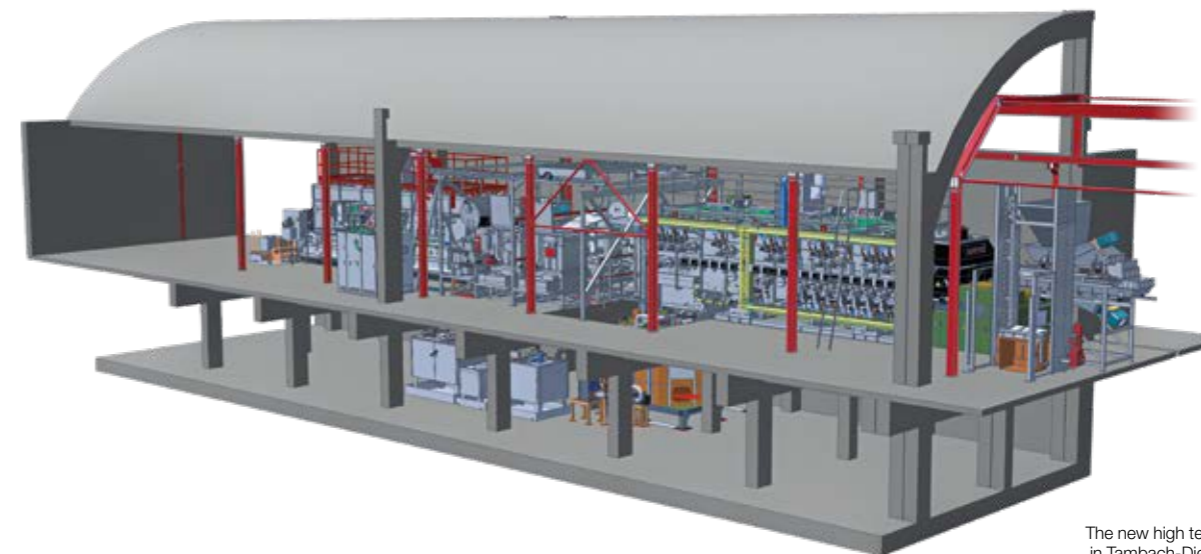
A first outbreak at an automotive supplier in the Munich area seemed to be well controlled when we received reports from northern Italy, which increased dramatically every week. Different

countries were subsequently shut down in their activities by the governments and Germany closed the borders with our neighbouring countries on March 16. One week later we were in a "lockdown". From one week to the next, the world economy stalled or even came to a standstill. At EJOT, this affected us in all of the countries in which we operate. Whether in our production or trading companies, we experienced the greatest crisis with the greatest drop in turnover in our company's history.

Massive wave of cancellations

At the end of March, we were hit by a massive wave of cancellations in our industrial business, as with most automotive suppliers. The order backlog melted like butter in the sun. It became clear that we had to prepare for a crisis whose effects would be at least as profound as the 2008/09 financial crisis. A "Corona Plan" that was developed within a short period of time made the effects on us clear: Our sales forecast for the year was reduced by 100 million to 460 million euros. It was immediately clear that we had to budget and save money wherever possible. Especially on ourselves, because our biggest expense is the personnel costs. In such situations, everything that does not directly lead to sales and earnings needs to be scrutinised. If everything collapses – at least for a little while – then "cash is king" applies, i.e. liquidity takes precedence over everything.

It paid off that we economised strongly after the financial crisis of 2008/2009: We didn't spend more than we took in. And because we had some good years in the past, we were able to generate surpluses and thus build up a cushion for crises. This financial backing was needed now, in the crisis.



The new high temperature furnace in Tambach-Dietharz.

Securing our ability to deliver was just as important as the economic side, so that damage to our customers and thus also to us could be averted. To do this, we had to ensure that we could maintain deliveries at all times, even in the event of Corona outbreaks in the company.

Crisis management in the EJOT group

Occupational health and safety, as well as hygiene rules, went from "framework" to essential component. A task force was set up with which almost all locations were digitally included in our crisis management. We started with the large German production areas and some European companies as well as our location in Taicang, China. After all, the colleagues there had experiences from which we could learn, because our Chinese subsidiary was one of the first companies to pass the review by the national health commission and received approval to resume production on 10 February 2020. February 10, 2020. Almost all other national companies quickly joined the group-wide crisis management team. We had to deal with a lot of new topics that we didn't have much knowledge of.

From the beginning it was important to inform the employees, who were naturally worried. Personal impositions, such as wage cuts and massive entry into reduced working hours, made us all worried about what the future of the company would be. Weekly status reports on the intranet on the development of incoming orders and sales at all EJOT locations were just as much a part of the crisis communication as situation reports from the EJOT subsidiaries.

Low point of the crisis in April

April was the lowest point. (Almost) no car was built in Europe and (nearly) no parts from suppliers were required. But it also became clear that the German and international construction industry continued to run, as did customers from other industries, and that some countries were less affected, or emerged significantly faster than Germany from the deep valley. A ray of hope for all of us was to see how we in Taicang, China, coped with the crisis better from week to week. It was to become our role model for the EJOT Group.



Corona outbreak in China //

At the beginning of January, we received the first reports of a novel virus in China. We are still experiencing the consequences today to an extent that we could never have imagined back then. The EJOT plant in Taicang, close to Shanghai, was also badly affected, so that it was temporarily closed at the end of January.



ClickBuild® takes-off //

The Start-Up ClickBuild® is going to simplify and digitize the processes in roof renovation in order to offer roofers a comprehensive service so that they can concentrate on their core competencies. The idea was presented for the first time at the BauDigital trade fair in February. More Informationen at www.clickbuild.de



Night of education //

The event was deliberately set at a date after the mid-term reports were issued, as a start of the application phase. A mixture of entertainment and targeted information, completed with a range of services for applications, made the event a complete success. The last presence event before the spread of the corona pandemic.

Establishing the Corona-Taskforce //

At the beginning of March, an international corona task force was set up to respond to the immediate effects of the corona crisis. Part of the crisis communication included securing the supply chain, dealing with business trips and exchanging information about the current situation in the subsidiaries.

Management Report

May was also very weak, but a little better than April, and in June we managed to switch from red to black figures in our results. However, this was only possible due to the unprecedented savings program and very great discipline in implementation. Reducing working hours were the most important instrument for the company's resilience in the crisis.

Over the summer the situation improved further. More and more subsidiaries recorded higher orders and better results. Since September we have seen the automotive industry return in power. Additional orders were placed, deadlines brought forward and we are now required to be extremely committed and flexible. What a dramatic improvement in the economic situation we experienced, with the capacity situation being so difficult at the same time.

This development can be seen in the global production-scale quantities of our fastener companies: we had a monthly production of 904 million pieces in March, this fell to 406 million pieces in April and even to 387 million pieces in May. In November we were at 1.1 billion parts – a new record in our company's history.

Reduced working hours ended in October

Initially, production sites in China and Turkey played a decisive role in this and now also increasingly the German plants. The result was that the forecast for the annual result could be raised from month to month.

Based on 460 million euros in our Corona forecast, we achieved sales of 522 million euros at the end of 2020 and an EBIT of 38.5 million euros, which was slightly better than the previous year. We were able to end the reduced working

hours as early as October. The salary payments from reduced working hours were increased to 100 percent and all agreed salary cuts were repealed. This was all the more remarkable as the second Corona wave hit us with great severity in Europe in the fourth quarter. This time the supply chains were able to overcome the challenges even better. This also applied to our group, because thanks to our hygiene measures, major failures due to COVID-19 could be avoided.

What remains of that roller coaster ride through 2020? We see how important it was to be conservative in our financing and thus to defend our high equity ratio. Our two main pillars, industry and construction, help us to remain stable. Both industries have different business cycles. While the automotive market often comes into crisis earlier mostly with very significant cuts, the construction industry generally continues to run stably, falls into a not so deep hole and recovers faster.

Our team spirit is important, because we have seen a great willingness and commitment by everyone, to help make sure that our EJOT ship stays afloat. Our success should not be taken for granted. Particularly positive in these difficult times is also the very cooperative relationship between the works council and management.

Positive outlooks

Many other things have also developed in a positive direction in the business year 2020. In the construction division, our ETICS Fasteners division did well. With our self-developed anchor configurator, we were able to offer our customers a simplification in the selection of anchors and thus strengthen our customers' loyalty to us. A new profile production started in Lithuania, which further strengthens our position with our

Photo: iStock



Timber construction – just one of many topics that will be in focus in 2021

customers. Our anchor production in Russia has also started. When it comes to construction screws, we were able to supply our customers with high adherence to deadlines, also spurred on by a record production volume from the plant in Bad Laasphe. We were able to deliver at any time and stayed in contact even under Corona conditions. The new product areas timber construction, CROSSFIX®, ClickBuild®, installation and the building trade range are developing positively and give hope for higher sales in 2021.

In our branch of industry, important decisions have been made for the future. We installed a new, large tempering furnace in Tambach-Dietharz, especially for our case-hardened FDS® screws and will soon also have a large capacity for micro screws. Also in Tambach-Dietharz, a zinc lamella system, which EJOT played a key role in, will be set up and put into operation in autumn 2021. With this system we will significantly reduce the ecological footprint of our zinc lamella coated screws. A large international mechanical engineering company has been commissioned with the series production of a self-developed prototype of our new press-roller combination (HR6 L), which will be introduced in our group of

companies as a standard double-press machine from 2022.

In England, we have reacted to our limited space and are expanding the site near Leeds, which, despite BREXIT, is intended to ensure that we can continue to develop well in the United Kingdom. In Mexico we got off to a good start with our own construction subsidiary in Mexico City, and new production facilities for our two joint ventures, EJOTATF and ASYST Technologies, have been built in San Luis Potosi at our large site. At EJOTATF we will have our in-house electroplating shop on site this year, which will have a positive effect on delivery capacity, flexibility and position in the market.

Not to be forgotten is also the strong digitisation push: working from home, webinars, digital customer contacts instead of face-to-face meetings, virtual cooperation with the appropriate tools offer us new opportunities that have changed our collaboration significantly. At the same time, we all increasingly understand how important it has become to further penetrate IT infrastructure and software. That too is a lasting legacy of the Corona year.



Expansion in Tambach //

The second construction stage of the heat and surface centre at the Tambach-Dietharz site has been completed. The zinc flake system will be installed in this new part of the building and is expected to go into operation in autumn 2021. To the side of the new hall there are further offices and meeting rooms



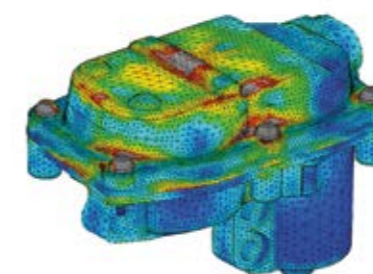
Digital Meetings //

The General Manager Meeting (GMM) was also carried out digitally at the beginning of September. With participants from all EJOT sites and from different time zones. The important exchange of information within the EJOT group could also be ensured in Corona times. A successful premiere.



30 years EJOT Sweden //

EJOT Sweden looks back on 30 years of history. The company was initially founded as a joint venture between EJOT and Avdel. Since 2015 EJOT Sweden is fully integrated into the EJOT group.



CAE Services Industrial Fasteners //

Another digital service is made available to customers. The component service life is simulated and calculated with the help of finite element methods.



Management Report

Moderate growth

In a great joint effort, we managed the crisis year 2020 surprisingly well. But what happens next? A sentence from a comment in the trade journal Automobilwoche aptly describes the initial situation: "... 2021 starts in the middle of the pandemic. There is actually no 'new normal'. We live in a permanent state of emergency. This affects the financial substance of the companies as well as the psyche of the customers ..."

Of course, we continue to think about (and plan) how 2021 could go for us. The key points of our budget for 2021 are the expectation of moderate growth of € 20 million to € 540 million, the dimension of 2019. That could lead to a result on par with the previous year. In this case, we expect a significantly higher investment volume than in the past year 2020 in order to make up for investments that we had postponed into the future due to the pandemic

The year 2021 will also be marked by capacity expansions, which will also be reflected in "stones and iron". This is already visible in Sherburn-on-Elmet with the expansion of our national company EJOT UK. Then even more clearly with a big step that we want to take in Turkey, the new building on our property in Çerkezköy. Here, a factory will initially be built for industrial fastening technology in order to increase the capacity of the old production facility in Küçükköy, which is working at the limit, to the currently required level and to optimally design the processes. This major project will be completed in summer 2022. Sales, administration and initially also the smaller building fasteners production will remain at the former location in Istanbul-Küçükköy for now.

But capacities are also being expanded in Germany. It is high time to give the development areas of the Construction Division and Industrial Division more space. Due to the high level of urgency, the expansion will start with the Construction Division. On our "In der Aue" terrain in Bad Laasphe, there will be a concentration of development and product management activities, the Tech Center Construction.

Our digitisation activities will be continued intensively. With the DIGITALUM joint project, we are investing in the digital training and further education of employees and the population at the Wittgenstein site. At ClickBuild® we rely on successful customer projects in order to get into the growth phase with our digital business model in the construction industry and we continue to invest in our e-com activities, also at the Industrial Fasteners Division, to promote our classic industrial business.

At our annual project workshop, which took place at the beginning of November, we also dealt with other strategic projects that are more likely to have long-term effects. We are transferring our previous efforts to save energy and CO₂ into a sustainability project. Climate change is on everyone's lips and we want to achieve real reductions in consumption by means of the previous goal of a disproportionately low increase in our CO₂ consumption. An ambitious undertaking, especially since CO₂-neutral steel or plastic granulate can not be expected for a long time. But with more solar installations, the entry into electromobility of our vehicle fleet and more LED lighting, etc., there are starting points for a measurable contribution to climate protection.

Many things are underway. There are plenty of opportunities and risks for our group. We imagine where the EJOT Group should be in five or even ten years. How do we want to adapt even better to the upheavals in the automotive industry? In view of Asia's rapid economic development, we have to ask ourselves how we can better participate in it. And if Europe is currently not at the forefront of digitisation worldwide, but rather American or Chinese companies are to be found there, we want to continue to seek closer

contact with these companies and markets. Another important project in the coming financial year will be the conversion of our core companies into the European legal form of the SE. Today, Europe represents 85 percent of our business. Even if we take a closer look at our business on the other continents, we will not neglect our core, a European company with German DNA. This reflects our confidence that we will continue to be a reliable partner for our customers also in the 99th year of our company's history. E

Christian F. Kocherscheidt

Wolfgang Bach

Angelika Wetzstein

Dr. Frank Dratschmidt

Ralf Birkelbach

Dr. Rolf Künkel



Certification Career and Family //

After the initial certification in 2011, EJOT has successfully passed the re-auditing for the third time with a high quality standard.



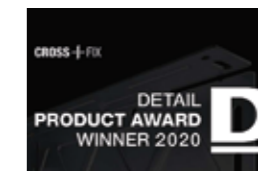
Pro-Line Campaign //

Successful campaign for the introduction of the EJOT Pro-Line Profile. The comprehensive product portfolio for connection and plastering profiles includes high-quality product solutions for different fields of application in External Thermal Insulation Composite Systems. www.ejot-proline.com



Dieter-Ulbrich Award //

Moritz Kuhly awarded with the 500 Euro Dieter-Ulbrich prize. He is the best apprentice at EJOT in 2020 and finished his industrial mechanic apprenticeship with 98 out of 100 points. Grade: Very good. The 21 year old is also the best apprentice in the IHK district of Siegen-Wittgenstein / Olpe. In only two years Moritz Kuhly finished his training – another record breaking achievement. At the same time he is studying mechanical engineering at the University of Siegen.



EJOT wins DETAIL Product Award 2020 //

EJOT was able to prevail in the vote for the DETAIL Product Award 2020 for the CROSSFIX® substructure system for the rear-ventilated facade (VHF) and thus win the coveted award.

Management Report

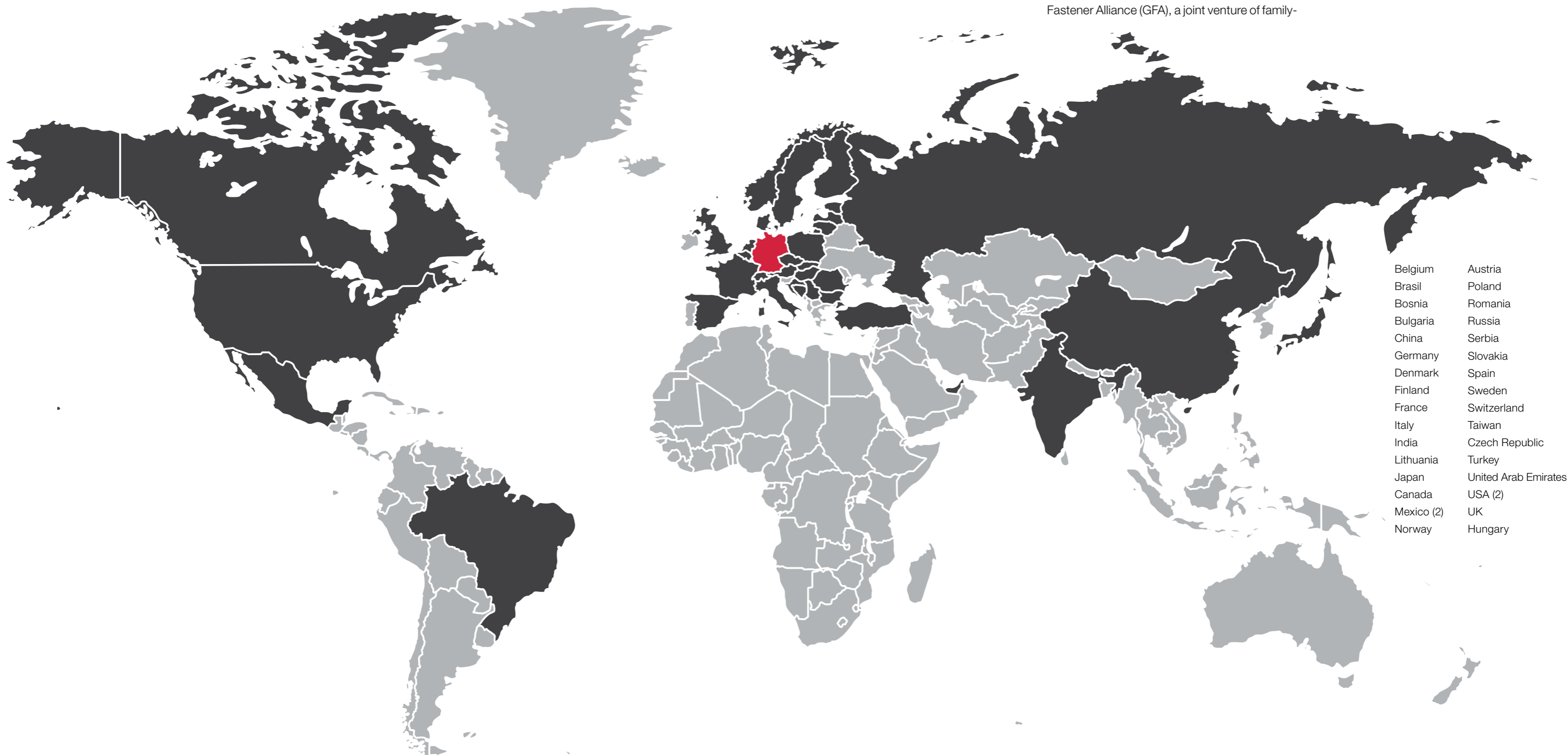
International

EJOT is a European market leader in fastening technology. In Europe, our numerous sales companies and offices guarantee direct customer contact and fast availability of our products.

Global availability is ensured by EJOT production facilities and sales offices in North America and Asia. Our international presence is also guaranteed by our membership in the Global Fastener Alliance (GFA), a joint venture of family-

owned businesses working in fastening technology. Some of the EJOT product solutions are also available to an international circle of licensees. They ensure, for example, the supply of the Delta PT® screw to the vast world market, or wherever we are not directly on site.

For more information about our companies and partners, please go to www.ejot.com



EJOT Group

The chart shows the existing divisional organisation of the EJOT Group. The EJOT Holding GmbH & Co. KG bundles the strategic management and the central services of the Group. Below it are three interim holdings with affiliated German and international companies. Within these companies varying forms of the two divisions, or eight business units respectively, of the EJOT Group are presented.

Our Industrial Division (Industrial Fasteners and Engineered Plastic Components) are mainly active in the automotive and industrial sector. The Construction Fasteners Division focuses on roof, window and facade fixing, as well as mechanical fixing technology for External Thermal Insulation Composite Systems.

Management



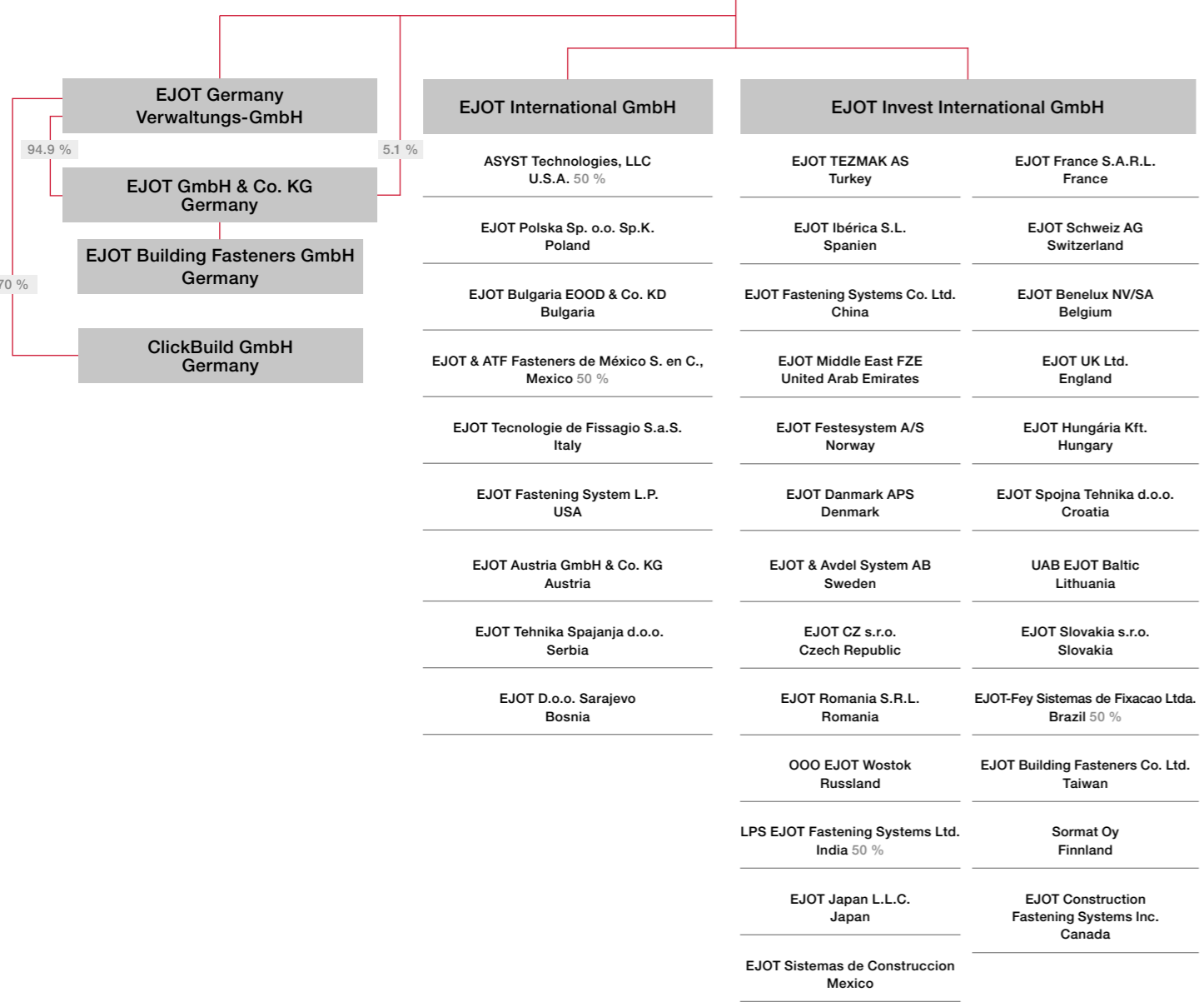
Management (from left):

- Wolfgang Bach
- Ralf Birkelbach
- Angelika Wetzstein
- Dr. Rolf Künkel
- Christian F. Kocherscheidt
- Dr. Frank Dratschmidt

The Advisory Board (from left):

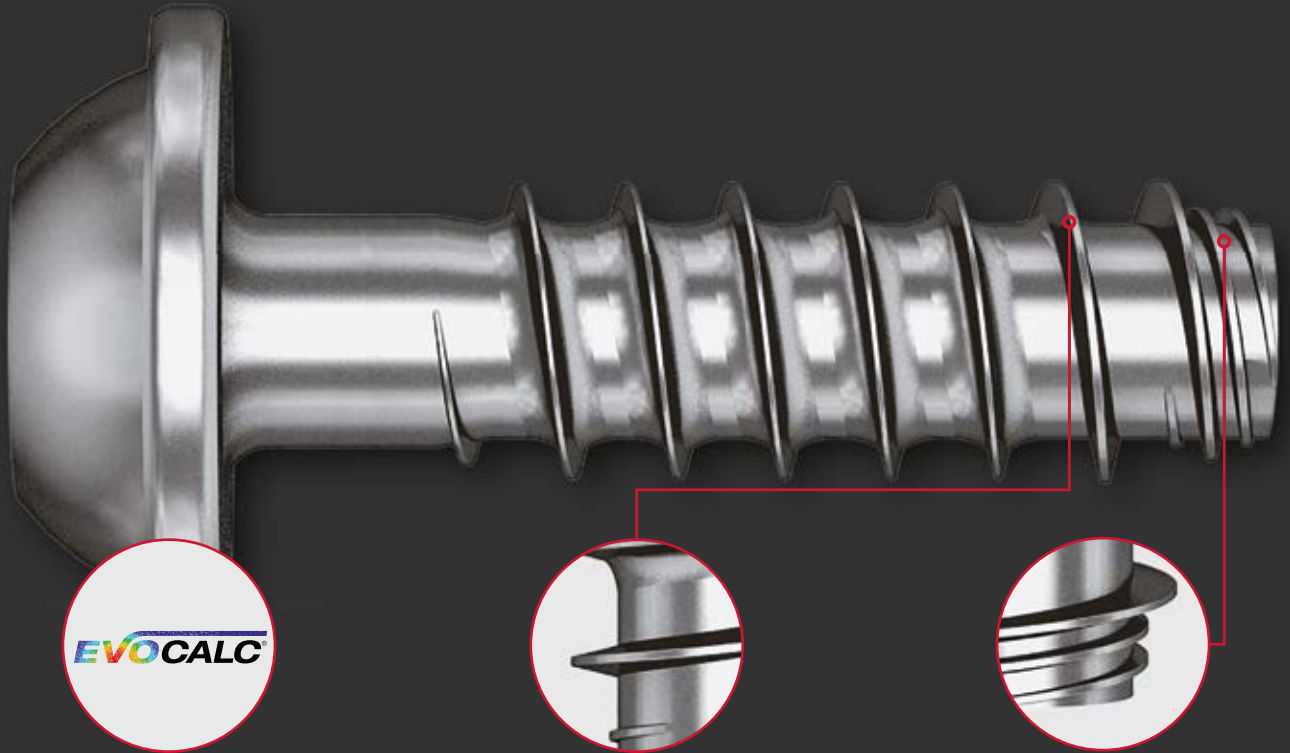
- Dr. Claus Hoffmann
(Former CFO Robert Bosch GmbH, chairman of the advisory board)
- Prof. Dr. Thomas Bauernhansl
(Head of Fraunhofer IPA, Stuttgart, Institute Director IFF, University of Stuttgart)
- Prof. Dr. Christina Berger
(Former head of the centre for material science at Darmstadt Technical University)
- Dr. Hans-Toni Junius
(Chairman of the management C. D. Wälzholz)
- Kathrin S. Kocherscheidt
(Judge at the district court Koblenz, shareholder)
- Jean Dufour
(former member of the management at Bosch Siemens Hausgeräte GmbH)

EJOT Holding GmbH & Co. KG



EVO PT®

Is all about you



EVO CALC®

Determination of design and assembly parameters and exclusive CAE services

Thread forming zone

Standardisation potential as thread forming torque is independent of installation depth

Lead-in thread

New lead-in thread for stable installation process through automatic centering

The EVO PT® screw for your economical success:

Advantages for Design engineers

- > Maximum mechanical safety
- > Precise performance forecasting
- > No thread inserts necessary
- > Relieving the time budget

Advantages for Quality managers

- > Reduced effort for sampling, series and inspection
- > Low error potential
- > Reduction of the variety of parts

Advantages for Process engineers

- > Maximum plant availability
- > Maximum process reliability
- > Reduction of the variety of parts
- > Error avoidance
- > Harmonised assembly concepts

Advantages for Purchasers

- > Competitive purchase prices
- > Consolidation of quantities
- > Reduced complexity
- > Low total project costs
- > Consolidation of suppliers

www.ejot.com/industry

EJOT® The Quality Connection

EJOT®