

# SOLUTIONS.

The company magazine of the Blumenbecker Group



**1400** STAFF

**22** COMPANIES

**30** LOCATIONS

## A STRONG **GROUP**

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With a wide range of products and services, the Blumenbecker Group assists you in achieving your goals. All of our activities, including the automation of plants and machinery, the development of innovative robotics solutions, the supply of products from C parts to machine tools, the inspection, maintenance and repair of your plants, and special-purpose machine building, are supplied from a single source – wherever you are in the world.

# WE DELIVER SOLUTIONS

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Surviving in today's globally competitive market means producing goods in a way that is flexible, reliable, fast and cost-effective. As an **international industry** service provider we have made it our mission to support our customers in this in the best possible way. We see ourselves as **a partner to our clients** and base our approach on intensive dialogue in line with the company philosophy: **listening carefully, finding the right answers and putting these into practice reliably and on-time.**

**11** COUNTRIES

**> 200** MILLION TURNOVER (2017)

# EDITORIAL



DEAR CUSTOMERS AND PARTNERS,

Welcome to the first edition of our new company magazine SOLUTIONS. As an international industrial services provider we aim to give flexible, reliable, immediate and cost-effective support to our customers in their production processes. Blumenbecker does this through a broad portfolio of products and services.

So it's time to look beyond the established view of the Blumenbecker companies and discover a new side to our business. Learn more about Blumenbecker's national and international clients and see how we produce tailor-made solutions designed for individual needs.

Digital transformation is a current hot topic and SOLUTIONS will be reporting on new developments and in-house experiences acquired en route to the digital future.

We wish you an enjoyable and inspiring read.

Dr Wolfgang Fink  
Group Managing Director

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*Cover photo:*

*Augmented Reality: AR glasses provide digital clues for the optimal execution of individual work steps*

BHARAT FORGE CDP

# FORGING WITH CERTAINTY



An all-inclusive care package for the **quality testing of crankshafts**

**20** years of successful collaboration

**5** participating Blumenbecker companies

**8** QUANTEC KR C4 robots

# QUALITY TESTING GOES AUTOMATIC

Whether it's stub axles, wishbones, crankshafts, pistons or bucket teeth, Bharat Forge CDP in Ennepetal is the supplier of choice when it comes to forged chassis and motor components, and non-automotive systems too. And its reputation is a global one. The CDP company, which is part of the Indian-owned Kalyani Group, has been producing steel forgings for 175 years. This specialist in complex forgings uses automated production lines in the manufacturing process. Quality testing at Bharat Forge CDP is also highly automated. This is the only way in which the extensive quality checks demanded by the automotive industry can be carried out cost effectively.



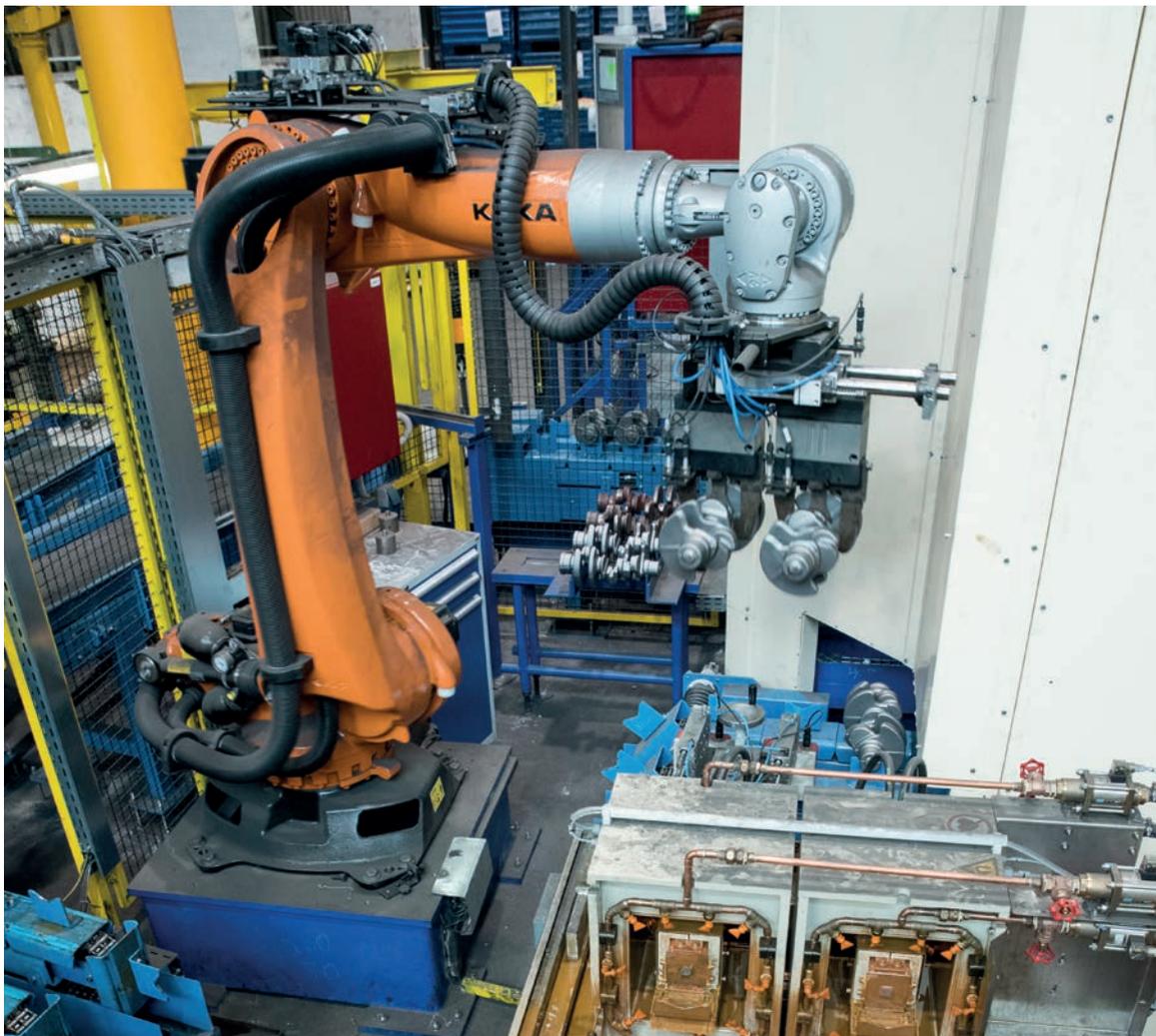


YOU DON'T DO AUTOMATION  
TECHNOLOGY FOR FUN,  
**YOU DO IT OUT OF PASSION.**

Thomas Hagemann, Department Manager, Blumenbecker Automatisierungstechnik GmbH  
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# »Quality is the primary objective.«

Stefan Schippan, Plant Planning, Bharat Forge CDP



## LARGE-SCALE PROJECT CALLS FOR A COMBINATION OF SKILLS AND EXPERTISE

Blumenbecker Automatisierungstechnik GmbH has already undertaken a number of projects for BHARAT FORGE CDP in Ennepetal. These orders included the automation and commissioning of a new quality testing machine, the modernisation of an existing quality

testing line and the replacement and reprogramming of eight Kuka KR Quantec production-line robots. All this was completed in just five months.

## FIVE BLUMENBECKER COMPANIES PUT TOGETHER AN ALL-INCLUSIVE CARE PACKAGE

A complex project with an extremely ambitious timetable. What really paid off here was that the Blumenbecker Group can access all the required skills and know-how in-house. From planning and switchgear construction, the development of operating software and robot/SPS programming through to robot decommissioning and installation – the operation involved five Blumenbecker companies from Germany, the Czech Republic and Slovakia. The fact that the project was effectively coordinated from a single source meant that Bharat Forge CDP only had one point of contact for all issues arising. According to project manager Erich Burghardt this was an ›all-inclusive care package‹ that impressed everyone involved.

**250+**  
**CRANKSHAFTS**  
**AN HOUR**



CDP  
PROJECT  
VIDEO





# TOGETHER TO A DIGITAL FUTURE

## DIGITAL EXPERIENCES MADE BY BLUMENBECKER

Improving procedures, working more efficiently and more safely, developing new products and services, providing added value to customers: these are issues that concern every sector of industry.

### THE INTRANET COMMUNITY

»If we are still to be successful in 20 years' time we will have to embrace and understand technological development and adapt it for the Blumenbecker agenda«, explains Group Managing Director Dr Wolfgang Fink in assessing the need to confront digital innovation head-on. Since 2016 Blumenbecker's intranet system has hosted a ›digitisation community‹ whose aim is to bring together the accumulated knowledge of the various business units based at more than 30 different sites inside and outside Germany. This provides a platform where all those who want to help shape digital progress within the wider company can exchange information with like-minded colleagues and set up interdisciplinary working groups. Regular workshops are held where these ›digital champions‹ can keep each other informed of the status of ongoing projects.

### DIGITAL EXPERIENCE DAY: EXPERIENCING TOMORROW'S TECHNOLOGY FIRST-HAND

The ›digital champions‹ held their first Digital Experience Day in the summer of 2017. The 50 participants were able to immerse themselves in future technologies and experience in-house digitisation projects first-hand. Some well-known partners were recruited for the event, including the Fraunhofer Institute, which was represented along with two technical highlights – flying drones and the HoloLens Package station.

MORE DIGITAL  
EXPERIENCES



## DIGITAL EXPERIENCES WITH THE WOW FACTOR

Participants were able to witness short demonstrations at the individual workstations and even get in on the action themselves. Points of contact were quickly established around a number of themes of interest. How does it feel to wear data goggles to help with wrapping and packaging or to receive instructions on repairing machinery? What kind of work can flying drones undertake? What can artificial intelligence do? How can a clip-on exo-skeleton make physical work easier? There was plenty of knowledge and inspiration to be had in respect of these and other future-related topics.

»We want to integrate as many of our staff members as possible into the digitisation process, to constantly expand their horizons and give them fresh impetus«, says Dr Fink in explaining the strategy now in place for the digital future. »And both Group-wide and transnational exchanges are also important in this respect«, emphasises Astrid Blumenbecker, a majority shareholder in the Blumenbecker Group. »This is the only way to avoid inventing the wheel all over again.«

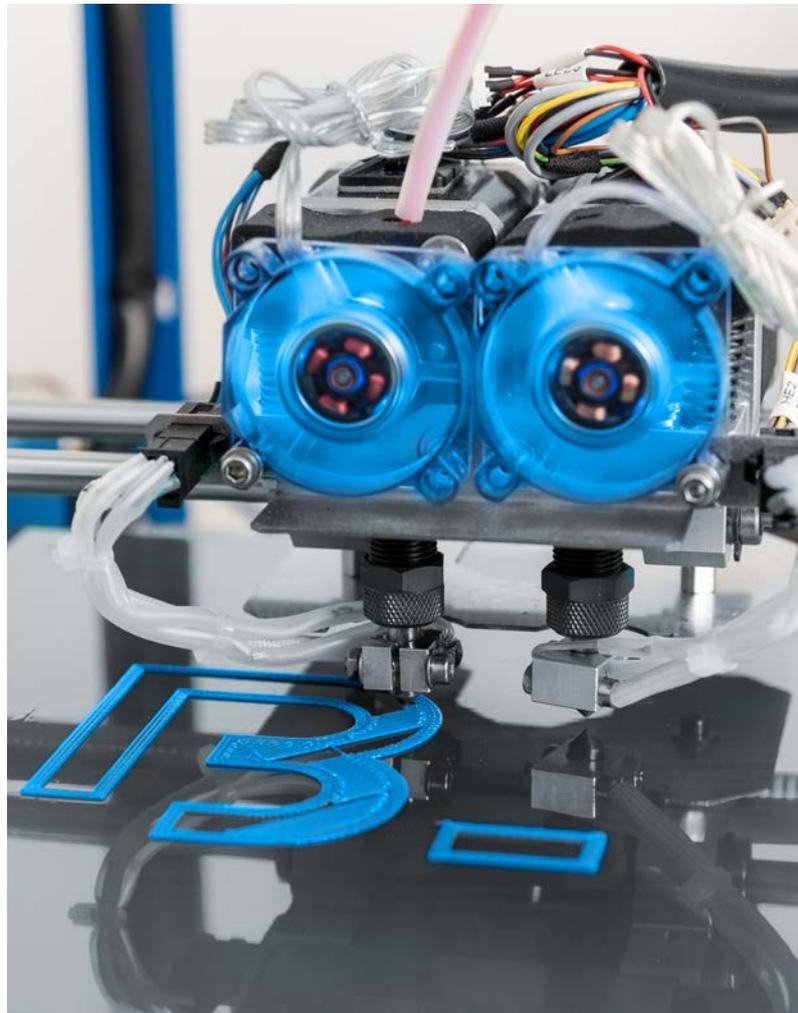




» We want to integrate as many of our staff members as possible into the digitisation process. «

Dr Wolfgang Fink, Blumenbecker Group Managing Director





## PAPERLESS ACCOUNTING

B+M Blumenbecker introduced paperless accounting in 2010. Since then the company has digitally recorded more than one million documents a year. This means that less storage space, less paper, less toner and fewer printers are required. Going digital instead of using paper not only protects the environment but also saves 60 to 80 percent of the costs. Staff no longer have to painstakingly search out documents and now have immediate access to the information they need.

## SOLUTIONS FROM THE 3D PRINTER

End caps with the Blumenbecker logo, individually designed nameplates, handling objects for robot training sessions, safety covers for use when repairing welding robots, chopping devices for a cable-duct saw: Blumenbecker is finding more and more uses for 3D printing technology. And all members of staff are being invited to ask themselves how 3D printing can make their workplaces more secure and operating processes more straightforward.

# 4

## AUS 20+

DIGITISATION PROJECTS  
UNDER WAY AT  
BLUMENBECKER

## BUILDING MANAGEMENT TECHNOLOGY

The energy needs of Blumenbecker Automatisierungstechnik's new production shop have been controlled by a building management system since 2015. Decisions such as ›turn down heating‹ and ›open windows‹ are no longer taken by the staff but by the management system's central command centre. The facility also has an automatic lighting control system that is governed by external light levels. Sensors are used to measure how much light is entering the building from outside and how high the proportion of artificial light has to be to provide a satisfactory level of illumination.

## SMART DOLLY

The Smart Dolly is Blumenbecker Technik's answer to the digital future of baggage transport. The on-board tracking system spells an end to unnecessary searches. A quick glance of the system is all that is needed to know exactly where the dolly is on the airfield. You can also identify at any time which dolly is loaded up and which is empty. Moreover, each dolly can be assigned its own workload profile so that servicing work is only done when it is really needed.

# 130 DRIVES



# IN 12 DAYS

## Overhaul at the Brökelmann + Co oil mill

It's all running like a well-oiled machine at Hafenstraße in Hamm, where Brökelmann + Co produce edible oil on a grand scale: rapeseed oil, sunflower oil, safflower oil, frying oil and walnut oil, all of which are sold by the owner-run company under its own labels Brölio and Noury as well as under generic trade brands. The company range also includes feedstuffs, wholemeal and fatty acids. Blumenbecker Industrie-Service acts as a servicing and maintenance partner for the company's technical plant.

### OIL MILLS AND OIL EXTRACTION

The original oil mill was set up in Hamm in 1226, shortly after the town's foundation, and the Hamm Oil Mill was then acquired in 1845 by Friedrich Brökelmann and associates. Today, more than 170 years later, the mills remain the core of the edible-oil production process. It is here that the seeds and kernels are squeezed dry after cleaning and rolling in screw presses. Brökelmann produces two thirds of its oils this way. What's more, the edible-oil specialist does it all by the so-called ›extraction‹ method, a process whereby the oil is recovered from the seeds using hexane gas.

### A HIGH-TECHNOLOGY PROCESS WITH 130 DRIVES

»Today the production of edible oil is a high-technology process«, explains Frank Tüttmann of Blumenbecker Industrie-Service. He continues: »At Brökelmann's there are more than 130 motors, gearboxes, pumps and fans operating in the mills and extraction hall alone. And processing more than 1,500 tonnes of oilseeds a day without fail means that every single one of these has to perform trouble-free.«



## A CHALLENGING OVERHAUL IN AN EXPLOSIVE ENVIRONMENT

Every 18 months Brökelmann shuts down a large part of the plant so that a major overhaul can be carried out. This was done again in 2017, with Blumenbecker as the servicing partner. As soon as the machines were stationary the engineers had to act quickly and competently to ensure that the downtimes were kept to an absolute minimum. The ambitious target of 14 days for 130 drives was extremely tight. This was a real challenge, especially as 110 of the drive units were located in the extraction hall. And this was the area where the highly explosive gas hexane was being used. Specially trained staff and special tools were required to work on the explosion-proof machines. Just seven days were set aside for the maintenance work in this sensitive area. And even before the Blumenbecker specialists could set to work they had to ensure that the extraction hall was completely free from any potentially explosive hexane.



»Blumenbecker completed  
all the work to our  
fullest satisfaction and in the  
short deadline specified.«

Alexander Steinweg, Manager Mechanical Maintenance,  
BRÖKELMANN + Co - Oelmühle GmbH + Co

## PROJECT MANAGERS ON SITE

The go-ahead was finally given and the overhaul could commence. The service technicians then got down to some serious work. The drives not only had to be serviced but also re-calibrated and issued with a test certificate. The project management team was able to remain on site throughout thanks to a specially installed accommodation container. This meant that Blumenbecker could react quickly to any unplanned situations and carry out additional work if needed. This really paid off in the end. Instead of the scheduled 14 days the Blumenbecker Team only took 12 days in total to overhaul the 130 drive units.





01

01

*The project management was constantly on site during the overhaul in order to react flexibly to unforeseen situations.*

02

*In order to maintain machines in the explosive environment, specially trained staff and special tools are required.*

## CONTACT PERSON



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02

**110**  
**EXPLOSION-PROOF**  
**DRIVES**

# WHATEVER THE TASK: **WE DELIVER SOLUTIONS.**

Are you planning to relocate your production facilities? Do you want to modernise an existing plant? Do you need somebody to inspect, maintain or repair your plants and machinery? Do you require machine tools or factory equipment? Are you looking for a reliable partner for factory or process

automation or innovative robot solutions? Whatever it is you are looking for – Blumenbecker is your reliable and professional partner, who is always there for you. Our various divisions offer you a wide range of services from under the same roof.



# MORE THAN 100,000 ITEMS TO GUARANTEE BAKING PERFECTION

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## Kuchenmeister relies on Blumenbecker expertise for its industrial needs

When you buy a ready-to-eat cake in the supermarket or discount store you will almost always be serving up a Kuchenmeister product. The Kuchenmeister company, which is based in Soest, is the market leader in Germany for ready-made cake specialities and the world's biggest producer of baumkuchen and stollen. This industrial bakery employs more than one thousand people at a number of production sites and supplies pure baking enjoyment to 80 countries around the world. Regular annual awards attest to the high quality of the company's products.

### KNOWING WHAT REALLY MATTERS

A high quality awareness is exactly what led the bakery company to choose Blumenbecker. The Group has ready access to the entire spectrum of industrial supplies: from tools and machinery, welding equipment, drive systems and engineering and machining technology through to work safety apparatus. Jörg Tiekmann, who runs the Soest site and is key account manager for Kuchenmeister, has been looking after the food company for nearly 30 years. And he knows a thing or two: »When you are manufacturing food products on a large scale like Kuchenmeister, you need partners who know what really matters.«





# BLUMENBECKER **DELIVERS SOLUTIONS,** NOT JUST PRODUCTS.

Ralf Bott, Head of Technical Design and Development,  
Kuchenmeister GmbH

## MORE THAN 100,000 ITEM AT THE CLICK OF A BUTTON

By working with Blumenbecker Industriehandel, Kuchenmeister is able to select from more than 100,000 items and can order any unit and number without any minimum quantity restriction. The bakery usually orders the products digitally – using individual e-procurement solutions. These customised online shops are tailored precisely to meet Kuchenmeister's needs and are linked to the company's warehouse management system. Authorised personnel are able to initiate orders by themselves with just a few clicks of the button. This eliminates much of the administrative effort normally associated with the ordering process, which really pays off when it comes to C-items.

## PERSONAL CONTACT COUNTS

In spite of all these digital conveniences, this long-standing business relationship has always relied on personal contact. And as the first point of call for all Kuchenmeister sites Tiekmann is always ready to help resolve issues of any kind. The two companies have traditionally worked closely together right from the planning stage, notably when it comes to precision solutions like drive technology. »This is the only way to provide solutions that will produce real added value for the customer«, says Tiekmann confidently.

*Jörg Tiekmann (left) in conversation with a customer*



## CONTACT PERSON



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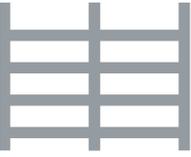
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*More than 100,000 articles – a logistical heart: The central warehouse and goods distribution centre in Beckum*





**3.500 m<sup>2</sup>**  
of storage space



**5.400**  
shelves

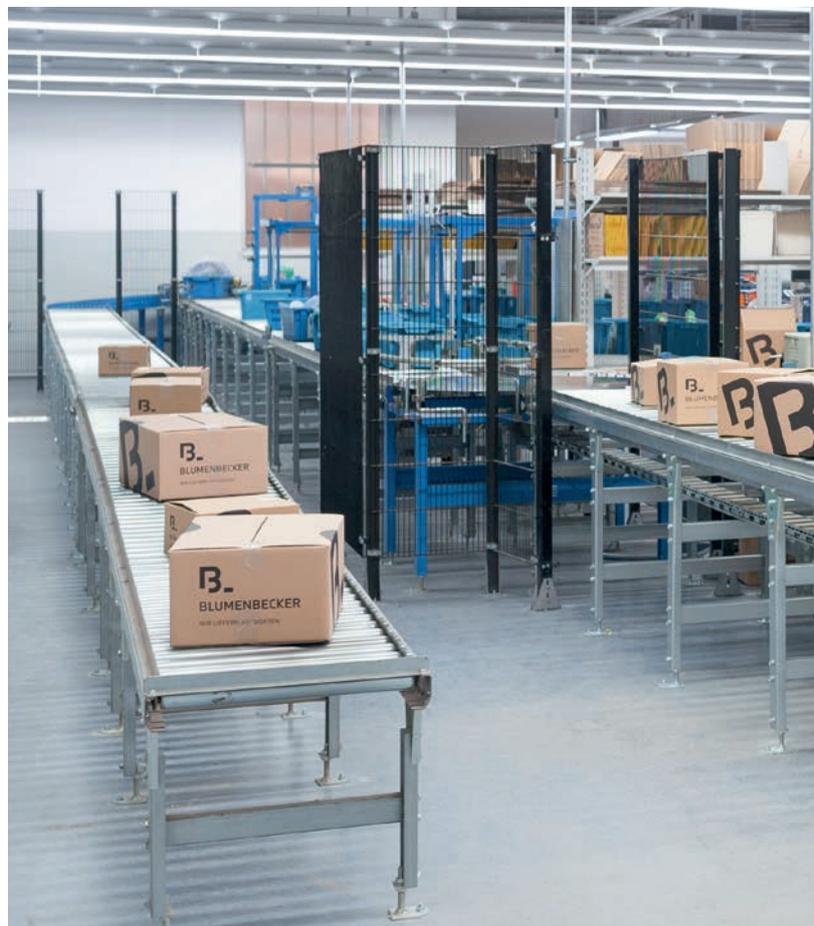


**1.500**  
spaces for  
heavy items

## CENTRAL STORES AND GOODS DISTRIBUTION CENTRE

Order today for dispatch right away. The Kuchenmeister bakery company has come to appreciate the value of this service, which has been made possible by efficient logistics. Blumenbecker has links with Europe's largest purchasing association, E/D/E, maintains its own branch warehouses and also operates a very efficient central storage facility and goods distribution centre in Beckum. More than 750 individual packages are sent out from here to customers every day. Depending on the type of product, the size of the package and the delivery address these orders are either delivered in the company's own vehicles or by haulage firms or parcel service. There is also an in-house UPS link to handle 24-hour shipments, while for emergency SOS orders Blumenbecker is able to deliver by courier within two hours.

For Olaf Lingnau, the managing director at Blumenbecker Industriebedarf, this all-inclusive service is self-explanatory: »Our aspiration is not only to meet customer expectations but to exceed them.«





**750**  
**PACKAGES**  
**DAILY**



# BLUMENBECKER IN POLAND

## THREE COMPANIES – ONE SUCCESS STORY

### BLUMENBECKER POLSKA SP. Z O.O

 Katowice

 since 2004  100

### BLUMENBECKER ENGINEERING POLSKA SP. Z O.O

 Katowice and Krakow

 since 2006  160

### BLUMENBECKER HANDEL I SERWIS SP. Z O.O

 Katowice and Opole

 since 2008  14

### HOLDING BRANCH ESTABLISHMENT

 Katowice

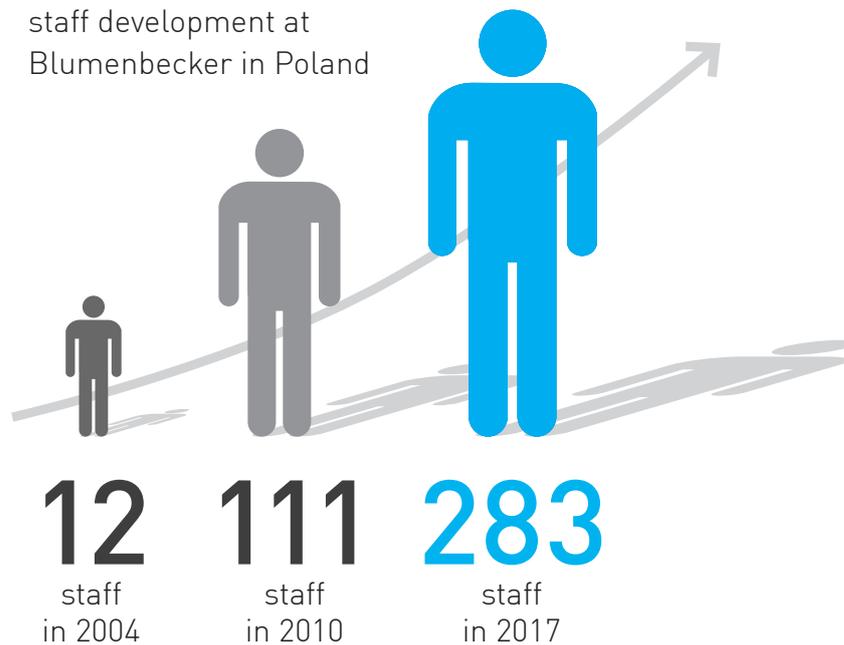
 since 2015  9

The Blumenbecker Group's presence in Poland consists of three operational companies and one branch office. Something that started out with just 12 employees and a warehouse about 13 years ago has now developed into a real success story. The companies in question, representing the three business units automation technology, engineering and industrial trade, now employ nearly 300 people. Blumenbecker has chosen its location well: Katowice is one of the most dynamic regions of the country and has been labelled Poland's Silicon Valley.

#### BLUMENBECKER POLSKA

Blumenbecker's involvement in Poland began in 2004 with switchgear construction work. This initially meant supplying equipment to Blumenbecker customers in eastern Europe and also providing cover for peak orders taken by Automatisierungstechnik in Beckum. Blumenbecker Polska now has a state-of-the-art production plant where switchgear is built to the highest quality standards for clients all over the world.

staff development at  
Blumenbecker in Poland



#### BLUMENBECKER HANDEL I SERWIS

It all began in 2008 when the German company Kuchenmeister wanted its Polish factory in Chrzanów to be provided with industrial supplies from Blumenbecker. And the customer base has really expanded since then, with new clients including an establishment in Opole that markets accessories for power distributors.

#### BLUMENBECKER ENGINEERING POLSKA

Blumenbecker Engineering Polska started out as a business acquisition in 2006. It now provides engineering solutions for well-known customers all over the world, including VW, FIAT, IKEA and BSH (Bosch-Siemens Hausgeräte). In 2017 the company was awarded the MTP gold medal for having developed an Industry 4.0 application in conjunction with Siemens and KUKA. It has its headquarters in Katowice and also runs an office in Krakow.

*The development and  
Test centre in Katowice*





# KATOWICE

## WELL WORTH A SECOND LOOK

© Wojciech Radwański

Katowice will never win any beauty competitions. Compared with neighbouring Krakow, the town is something of a newcomer. There are no 700 year-old buildings or romantic market squares. And yet Katowice is still worth a visit, for while at first glance it may appear fairly unattractive, it can on closer inspection reveal a wealth of hidden charms.

Katowice is a young town. It was founded in the 19th century and was granted town status in 1865. Coal and steel contributed to its rapid growth. It now has a population of 300,000 and is the largest city in Silesia. In recent years the former working-class town has awoken from its post-industrial slumber and Katowice is now one of the most innovative, culturally dynamic and economically active regions in all of Poland.

### KATOWICE MODERNISM

Katowice has its own architectural brand: Katowice modern architecture. If you walk through the city and keep your eyes open, you will soon see this plain and unfussy style all over the place. The Polish architects were very much inspired by Western innovation. One example of this is the 1934 ›skyscraper‹ created by Tadeusz Kozłowski, a 14-storey steel-frame structure. It was at the time the tallest building in Poland and one of the highest in all Europe. It now stands surrounded by a number of Art Nouveau blocks.

## INSIDER TIPS

### THE NIKISZOWIEC MINERS' SETTLEMENT

Definitely worth a visit is the Nikiszowiec miner's settlement. This was built in the early years of the 20th century as a residential district for employees at the Giesche mine. The nine large accommodation blocks in red brick are grouped around inner courtyards. A series of doors and gateways provides an uninterrupted view of the site and its layout. Close by lies the old colliery house that was part of the Wilson shaft. This massive building now houses an outstanding gallery of contemporary art.

### CULTURE IN ITS MANY FACETS

Art and culture play a huge part in the life of Katowice today. The city is home to several orchestras and an academy of music. It also has an active jazz scene with live performances regularly held at the many clubs dotted around town. Culinary offerings range from traditional Silesian to more exotic dishes. And there are coffee shops aplenty too. From nostalgic patisseries and modern espresso bars to hippy-style cafes, there is something to suit all tastes.

### DISCOVER KATOWICE

Anyone wishing to discover Katowice can get there quickly and easily by plane. City centre hotels are inexpensive and visitors can communicate in English and occasionally in German too. For more details visit [www.inyourpocket.com](http://www.inyourpocket.com), where you can download a handy travel guide with all the key information.

**The Silesian Museum** (Museum Śląskie), which occupies a former mine site, combines regional identity with current architecture and houses a number of exhibitions, including Silesian history, modern art and paintings from young Polish artists.

**Address: ul. T. Dobrowolskiego 1**



**DARIUSZ RYBARSKI**  
Managing Director of  
Blumenbecker  
Engineering Polska

**SARP** – the club-art-gallery of the Association of Polish Architects – is a cutting-edge restaurant and, at weekends, a venue for jazz, soul and electronic music.

**Address: ul Dyrekcyjna 9**

**Mariacka Street** and the surrounding area is home to more than 200 clubs, cafés and restaurants as well as numerous jazz clubs, pubs and micro-breweries.



**WOJCIECH  
SENDEROWICZ**  
Managing Director of  
Blumenbecker Polska

*Worth seeing: the mining settlement Nikiszowiec in the southeast of Katowice – © Wojciech Radwański*



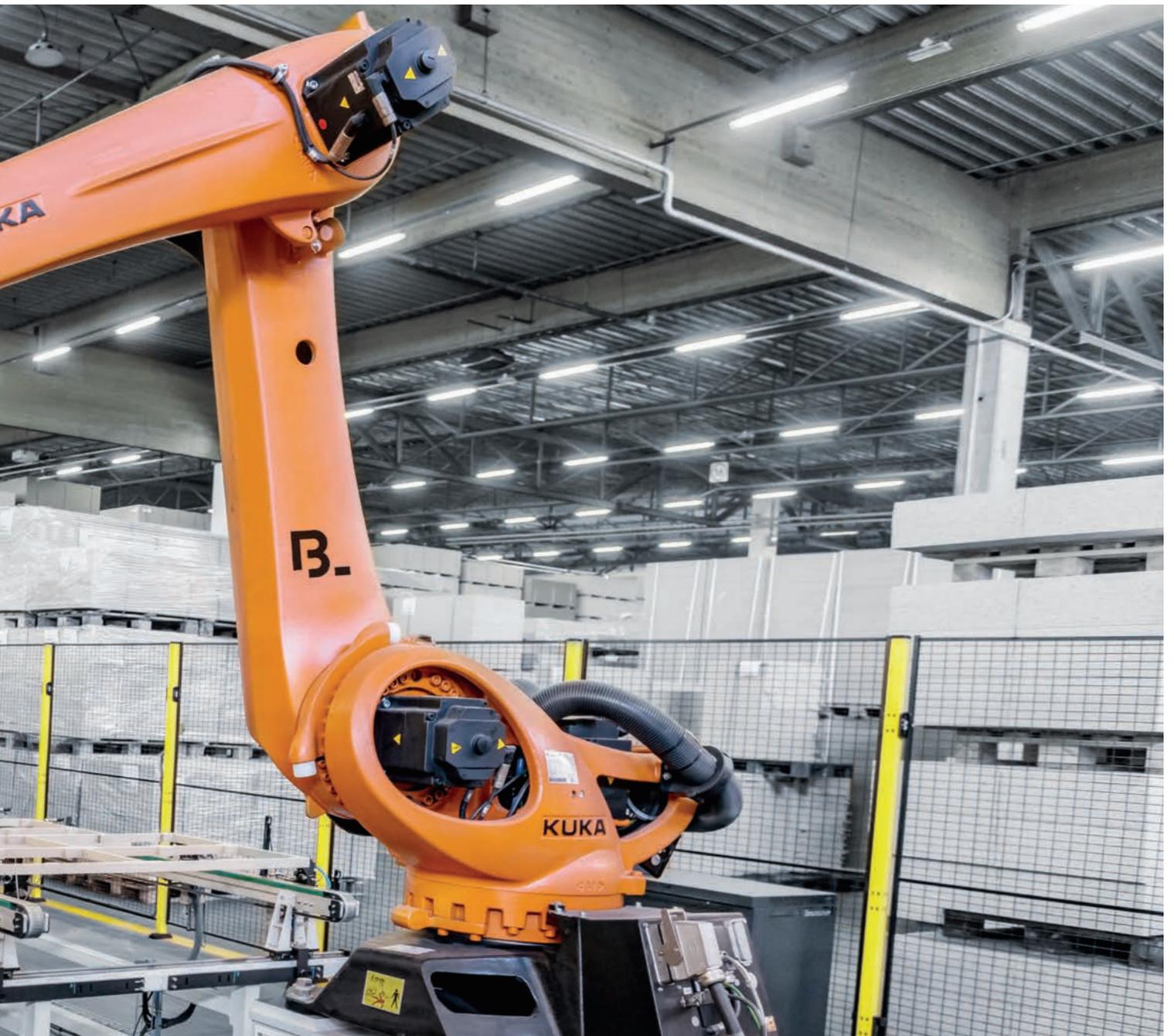
*Highly commendable: Katowice has a lively jazz scene*





# IKEA Industry

## **A FRAME EVERY 10 SECONDS**



9 frame types

50 metres of production line

360 frames per hour

IKEA is the world's leading manufacturer of wooden furniture and is well-known for the importance it attaches to achieving maximum efficiency in its production processes. Most IKEA furniture items consist of standardised modules. Here the Scandinavian furniture giant has come to rely increasingly on sandwich elements for the construction of tables, cabinets, beds, chests of drawers and shelves, such as the popular KALLAX range. The sandwich elements consist of frames filled with lightweight materials like honeycomb paper. The sandwich method gives the furniture a stable structure, cuts down on weight and reduces raw materials consumption.

### **AUTOMATIC BONDING AND JOINING OF FRAMES**

Blumenbecker Engineering Polska has set up a 50 metre-long production line for sandwich frames at the IKEA plant in Lubawa. »This is a very complex system where for the very first time we have combined the processing modules for bonding and joining«, explains Rafał Wójcik, Blumenbecker's Technical Director Deputy General Industry Division, adding: »There has never been anything like this before«. The development, construction, automation and installation process lasted one year and involved Blumenbecker Engineering working closely with technology partners Armech. All the components were specially designed and produced by Blumenbecker for IKEA Industry, IKEA's production division.

### **NINE DIFFERENT FRAME TYPES**

The production plant can produce nine frame types: frames in different sizes and thicknesses, optionally with or without a centre rail. An operator terminal is used to switch quickly and easily from one frame construction type to another. A new frame leaves the production line every ten seconds. The finished frames are then loaded onto pallets by a robot with a gripper arm that was specially designed by Blumenbecker.

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## IDEAS AND RELIABILITY THAT STAND OUT

IKEA Industry and Blumenbecker have now been working together for ten years. And for good reason, according to Mariusz Biniek, technical director at IKEA's Zbąszynek factory. »In order to keep one step ahead of the competition we at IKEA Industry are always looking for new technological solutions. And we have always been confident in Blumenbecker's ability to come up with new ideas time and time again.« And dependability has always been a valued factor too, for as Biniek points out: »When it comes to complex projects with tight completion deadlines we need a partner that we can absolutely rely on«. The production line that Blumenbecker installed at the Zbąszynek plant has been in operation since the autumn of 2017 and IKEA Lubawa factory has already placed the next order for the frame production process.

01

The two project managers Rafal Rzepa (left) and Boguslaw Grzybek setting up the plant

02

All work steps of the 50-metre-long production line can be viewed from the control console.

10  
YEARS  
OF COOPERATION



01

02



» We have always been confident  
in Blumenbecker's ability  
to come up with new ideas.«

Mariusz Biniek, Technical Director at IKEA's Zbąszynek factory



VIDEO OF  
FURTHER  
PROJECTS





# SMART DOLLY IS CALLING

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Intelligent tracking system  
for airport ground equipment



# SMART DOLLY

INTELLIGENT &  
DISMOUNTABLE

individual  
service intervals

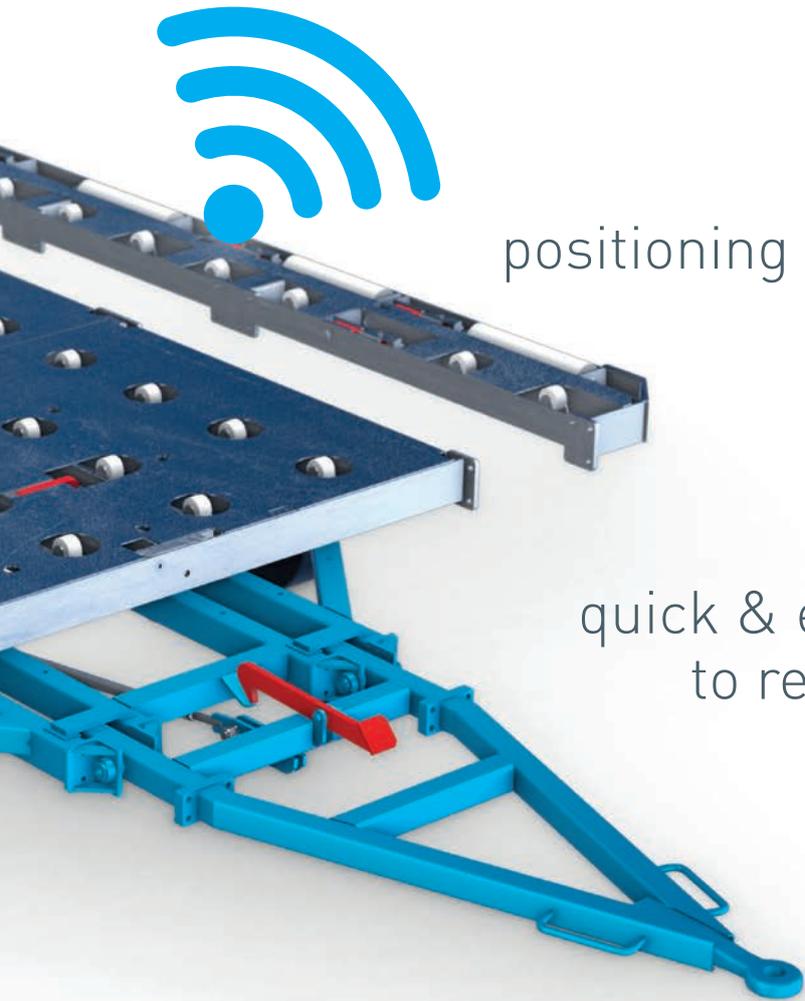
status tracking

A normal day at a large German airport: towing tractors flit to and fro across the airfield with one or more trailers – or dollies – in tow. The dollies transport baggage and freight and distribute consumable supplies. Yet quite a few of these trailers will be left standing abandoned on the airport apron and in the adjacent buildings. »At a large airport there may be hundreds or even thousands of dollies just parked up somewhere«, explains Ralf Herzog, Managing Director of Blumenbecker Technik. The upshot: lots of searching by the tractor driver, particularly when a specific trailer has to be found. Well, Blumenbecker and the Magdeburg-based Fraunhofer Institute for Factory Operation and Automation (IFF) are now working together to change all this. Blumenbecker has been designing and building airport ground equipment for more than 30

years, as well as undertaking repair and maintenance work. The specialist manufacturer of airport dollies, passenger stairs and so on is now collaborating with the research team led by the Hon.-Prof. Dr.-Ing. Klaus Richter of the Fraunhofer IFF on the development of an intelligent tracking system for airport ground equipment.

## TARGETED INFORMATION TRANSFER

At the core of the new system are radio sensors that are affixed to the dollies. These GSE trackers record the exact position and status of the dollies and transmit this information in real-time to a central control station where the data from all the trailers is compiled. The system knows the exact whereabouts of each individual dolly, whether it is parked-up or coupled to a



positioning function

quick & easy  
to repair

tractor and whether it has a payload or is empty. The system transmits the information to the tractor drivers out on the airfield who are then able to head for the dolly they require.

#### MARKET READY BY THE AUTUMN OF 2018

A pilot project has now been running at Leipzig Airport since February to test the intelligent tracking system in a valid field trial. Some 30 airport ground units were fitted with radio transmitters and the associated radio technology. The new product is expected to be on the market by the autumn of 2018.

POSITIONING  
VIDEO



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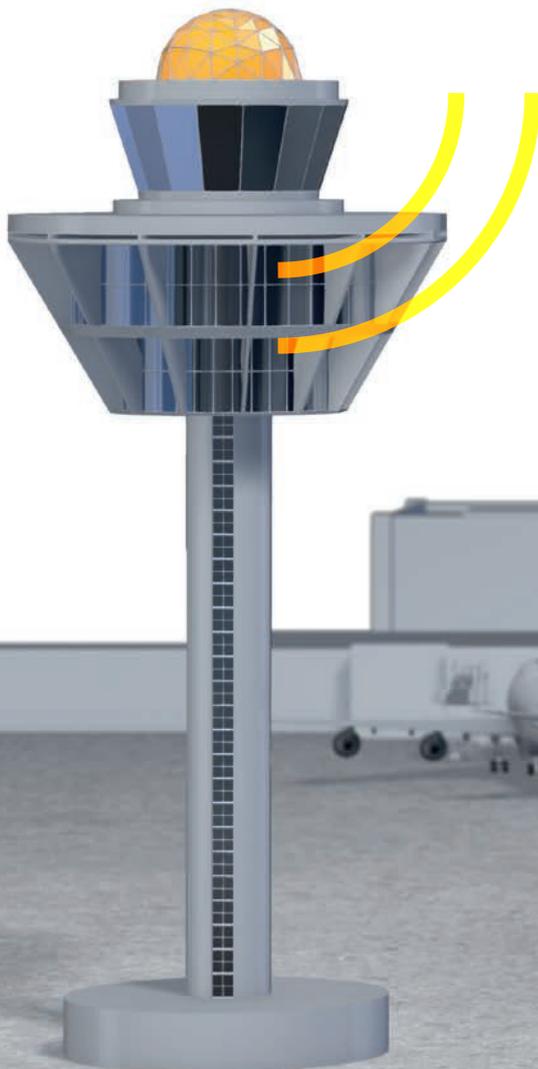
# 3

## Questions to...

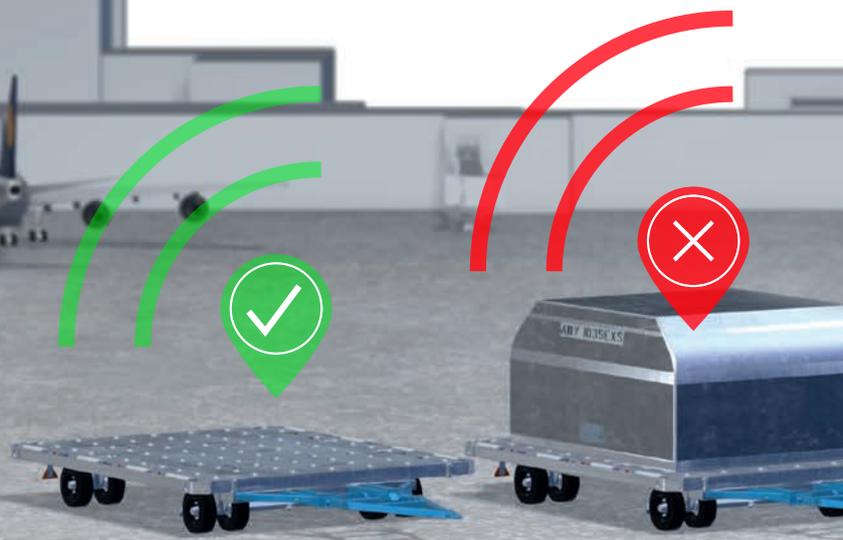
Hon.-Prof. Dr.-Ing.  
**Klaus Richter**

*Alternative tracking systems have problems with buildings. How does the Smart Dolly perform in this respect?*

»That is true, GPS-based tracking systems do not operate reliably when close to large buildings. Quite often the radio connection is lost completely. This is why the Smart Dolly also uses local detection technology that determines the position by measuring the field strength. The location coordinates can therefore be reliably recorded at all times, even if the dolly is close to or actually inside an enclosed building. Then there is the energy-saving LoRa wireless technology from the internet of things, which has a large operating range and can guarantee long-term data transfer to the control centre in real-time. «



EUROPÄISCHE UNION  
**EFRE**  
Europäischer Fonds für  
regionale Entwicklung



*Can you tell us in quite specific terms what benefits the Smart Dolly can offer airport operators and service providers?*

»The intelligent tracking system allows an airport's logistical processes to take place in a much more structured way than before. And that is hugely important in today's world of increasing air traffic. If you cannot build new airport terminals, or new runways for take-off and landing, then you have to use the existing infrastructure as efficiently as possible. Smart Dollies can help out here. Even the maintenance and repair schedules benefit from the smart factor built into the trailers. Operating profiles are drawn up on the basis of the submitted data and these establish the individual workloads and calculate the next maintenance appointment for each dolly. Such a targeted servicing routine safeguards the long-term reliability and functionality of the equipment and helps save on resources.«

*Can intelligent tracking technology be transferred to other sectors?*

»Absolutely. At the moment we are helping a company to develop intelligent plastic pallets. By tagging the reusable pallet units it will be possible to achieve seamless goods tracing from the production line to the warehouse and on to the customer. Empties management can also be optimised with the help of tracking and tracing technology. Stable plastic pallets eventually find their way into open pallet pools.«



**Hon.-Prof. Dr.-Ing. Klaus Richter**  
Head of the competence team for materials handling engineering and systems at the Fraunhofer Institute for Factory Operation and Automation (IFF), Head of the Department of Materials Handling Engineering at the University of Magdeburg.



The current **SOLUTIONS** magazine is also available digitally – with additional information, links and videos.



A man wearing a VR headset is smiling and holding a tablet. The tablet displays the 'SOLUTIONS' logo in a blue speech bubble, with the subtitle 'The company magazine of the Blumenbecker Group' below it. The background is a blurred blue and white environment.

# SOLUTIONS

*The company magazine of the Blumenbecker Group*

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