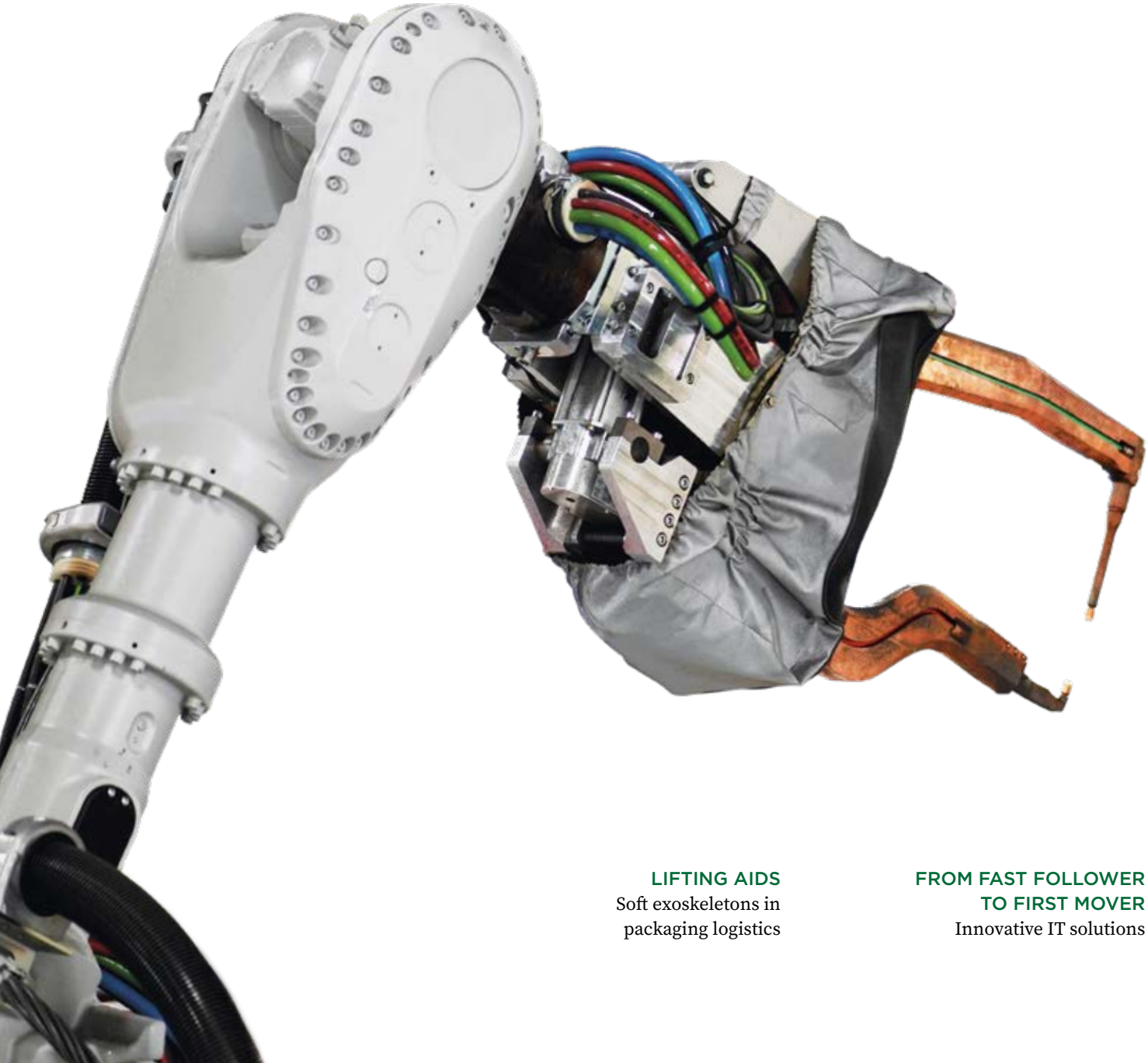
SCHNELLECKE

Insights into the Schnellecke Group **2022.1**

BALLET OF THE WHITE GIANTS

KWD starts up automated welding line for the ID. Buzz



LIFTING AIDS
Soft exoskeletons in packaging logistics

FROM FAST FOLLOWER TO FIRST MOVER
Innovative IT solutions

The coonskin cap is a cap made of the fur and tail of a raccoon (hence the name coonskin cap). Originally worn by Native Americans, it became known as the headgear of white trappers and later of the Boy Scouts. It was made world famous by Huey, Dewey, and Louie, Donald Duck's nephews, who wear it as a sign of their affiliation with the Junior Woodchucks.

Source: Wikipedia, German edition

The Schnellecke employee app helps all scouts who discover waste or unnecessary environmental pollution in the company or have ideas for more sustainability. With a photo and a quick message to the Sustainability Department, the issue is recorded and a solution is found as quickly as possible.

SCHNELLECKE LOGISTICS

FOLLOW US

LINKEDIN FACEBOOK INSTAGRAM XING

Dear readers,

in times of crisis, it pays when companies shape their future in good time. We are now seeing this at Schnellecke as well. In the third consecutive year of crisis, we have succeeded in stabilising our sales and winning important new orders. A significant role in this was played by the fact that we increased our competitiveness, especially through savings in the administrative area, and successfully concluded our new financing at the end of 2021.

In order to continue on this path in the future, it will be necessary to continuously make our processes more efficient and to further increase our already high quality. A few years ago, for example, we started investing in our Digital Control Tower (DCT) to make all processes in the value chain transparent at all times. What was still a pipe dream at the time has been rolled out at our sites worldwide since the beginning of the year. That is why the DCT and the overarching Schnellecke Mission Control framework are also a main topic of this issue.

We are particularly pleased that KWD Automotive AG & Co. KG has just received a significant order from Volkswagen for the ID.Buzz at its headquarters here in Wolfsburg. You can read more about this and about the state-of-the-art robotic welding line installed for this purpose in this issue.

The well-being of our employees has always been an important concern for us as a family business. This applies not only to the remuneration of our employees, but also to the working conditions they find with us. For example, we want to reduce the strain on our employees by purchasing exoskeletons for lifting heavy loads. You can also find more details about this on the following pages.

I hope you enjoy reading this issue.

Best regards,

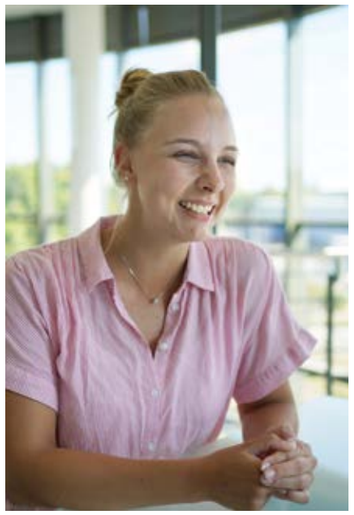
Nikolaus Külps
CEO Schnellecke Logistics SE

COVER STORY: KWD ID. BUZZ

▲ PAGE 8

“WE HAVE RISEN TO BECOME ONE OF THE TOP SUPPLIERS”

KWD Wolfsburg fully automatically welds longitudinal beams for the new ID. Buzz from VW



▲ PAGE 22

“WE LOOK MORE CONSCIOUSLY AT OUR WORKING ENVIRONMENT”

At Schnellecke, apprentices become HSE scouts and have to work out a project

PAGE 52

“EVERYONE NOTICES IMMEDIATELY THAT IT'S EASIER”

Schnellecke tests soft exoskeletons in packaging logistics

▲ PAGE 26

“IN CHINA, A LOT IS ABOUT RELATIONSHIP NETWORKS”

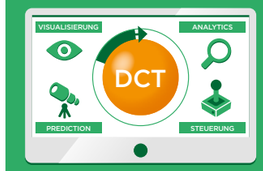
Schnellecke in Dalian

FOCUS TOPIC: IT & DIGITALISATION PAGE 36

▲ PAGE 38

FIRST MOVER INSTEAD OF FAST FOLLOWER

With the roll-out of the "Digital Control Tower", Schnellecke is getting closer to its goal of intelligent, data-driven logistics



▲ PAGE 42

“PROCESS DEVIATIONS ARE DETECTED IMMEDIATELY”

Digital Control Tower: process management, fault management and shift logging on one platform

PAGE 48

EVERY SMALL SENSOR IS A POTENTIAL GATEWAY

Information security and thus also IT security is a topic that is increasingly coming into focus at Schnellecke

PAGE 50

“WE ALWAYS HAVE TO GET BACK TO IT”

Data integration brings many challenges

“WE HAVE NOW ADVANCED TO BE-COME ONE OF THE TOP SUPPLIERS”

KWD WOLFSBURG WELDS SIDE MEMBERS FULLY AUTOMATICALLY FOR VW’S NEW ID. BUZZ

BALLET OF THE WHITE GIANTS

SCHNELLECKE 2022.1

Long before its first day on sale, Volkswagen's ID. Buzz was making big waves, and not just among die-hard fans of the VW Bus. As the first fully electric bus from Volkswagen, the ID. Buzz's elegant curves echo the design of the classic Bus and redefine the design for a new era. KWD AG is also on board.

Four years ago, we visited the Vogelsang industrial estate, located east of Wolfsburg, a few minutes' drive from the city center. The occasion back then was the takeover of a production facility from VW by KWD AG on May 1, 2018. A lot has happened in the meantime. Various welded assemblies are still produced for the VW models Golf, Touran and Tiguan, among others – but now also for the new ID. Buzz.

Jalal Boulaghmal, Vice President of Sales & Business Development, welcomes us at the entrance and leads us into the approximately 17,000 square meter hall. We walk along the impressive facility, which consists of more than 50 robots. The white giants rise almost four meters into the air like a mechanical ballet moving to an inaudible melody. The production line is S-shaped for space reasons, and every square meter has been optimally utilized. At one point, you can walk under the fully glass-enclosed facility. It is a strange feeling to look up and see a robot doing its work above you.

Around ten million euros were invested here. "The side members for the ID. Buzz are far more complex than those for other models," explains Boulaghmal, who has a degree in mechanical engineering. "Around 1,500 spot welds are required for one beam in addition to the complex MAG welding and bonding."

Simultaneous plant upgrading and production

However, the production process is not fully automated – and there are good reasons for that. A side member consists of more than fifty individual parts and sub-welding groups, and to manufacture them on the

SCHNELLECKE 2022.1

line would significantly slow down the entire process. “We didn’t want to delay the whole line with the little things, so we took those out,” Boulaghmal explains. As a result, sub-welding groups are still fed in manually at some points, and some of the components are manufactured at a separate, semi-automated workstation.

The entire line is currently in the start-up phase, but Volkswagen is already producing the ID. Buzz. “What that means for us is that plant upgrades and production are running in parallel, because the number of units is already increasing,” says Boulaghmal. “Currently, VW is producing about 120 vehicles a day; by the end of the year, more than 200 a day are planned.”

Parallel plants in Wolfsburg and Radeberg

Incidentally, the pressed parts needed for the side member, with the exception of one hot-formed part, all come from KWD AG in Radeberg. Around eight million euros have been invested in the tools there.

A signal sounds – lunch break. The employees head off to the break room, and the white robot giants also finish their work one after the other. They are already working in two shifts here, and a third shift will be added after the summer.

We use the break to take a look at the other production areas in the building. B-pillars for the VW Golf are produced on two lines side by side,

The side members for the ID. Buzz are far more complex than those for other models

Jalal Boulaghmal

SCHNELLECKE 2022.1

one for the North American market and one for the rest of the world. “By the way, this was the first new project won after we took over the plant in 2018,” notes Boulaghmal, who has worked for KWD AG since 2016.

At a new facility next to it, floors are produced for the VW Tiguan, Audi Q4, and SEAT Ateca plug-in hybrid variants. This highly complex welding group with over 50 individual parts is now also part of the standard portfolio of KWD Wolfsburg. This contributed to KWD Radeberg receiving an order for a new facility, and they are now supplying the Audi site in Györ with a product of this type for the first time.

Customer service facility in Sandkamp

Our next stop is an old acquaintance. During our last visit (Schnellecke Magazine 2/2018), we reported in detail on the production of front flaps for the VW Tiguan and Touran models. KWD AG has also received the order for the new models, combined with a challenge, as Boulaghmal reports: “The facility here has to be modified for the new models. However, front flaps will still be needed as spare parts for the old models for many years to come. That’s why VW has asked us to build our own customer service facility at our Sandkamp site, which can then produce as needed.”

The Sandkamp site is also experiencing growth in other respects. There are additional welding groups, such as wheel arches and sills for the VW ID.4 and ID.5 for the VW Emden site. New facilities have also been built for this. Other products for Emden, such as the ID.7, will follow gradually over the next few years.

Our last stop is the large measuring room at the edge of the hall, where even larger parts can be tested for precision. Next to it, construction work is underway – here, an automated transport system is being built across the aisle to the main facilities so that parts can be fed in more quickly.

Our impression at the end of the tour: There is a lot going on here. Not only literally in the plant, but also in the development of KWD AG as a whole. “We have now advanced to become one of VW’s top suppliers,” Boulaghmal emphasizes, not without pride. “We are already considering space expansions for new models such as Trinity. For the future, we are very well-positioned technologically and logistically, together with Schnellecke as the parent company, as an important on-site partner.”

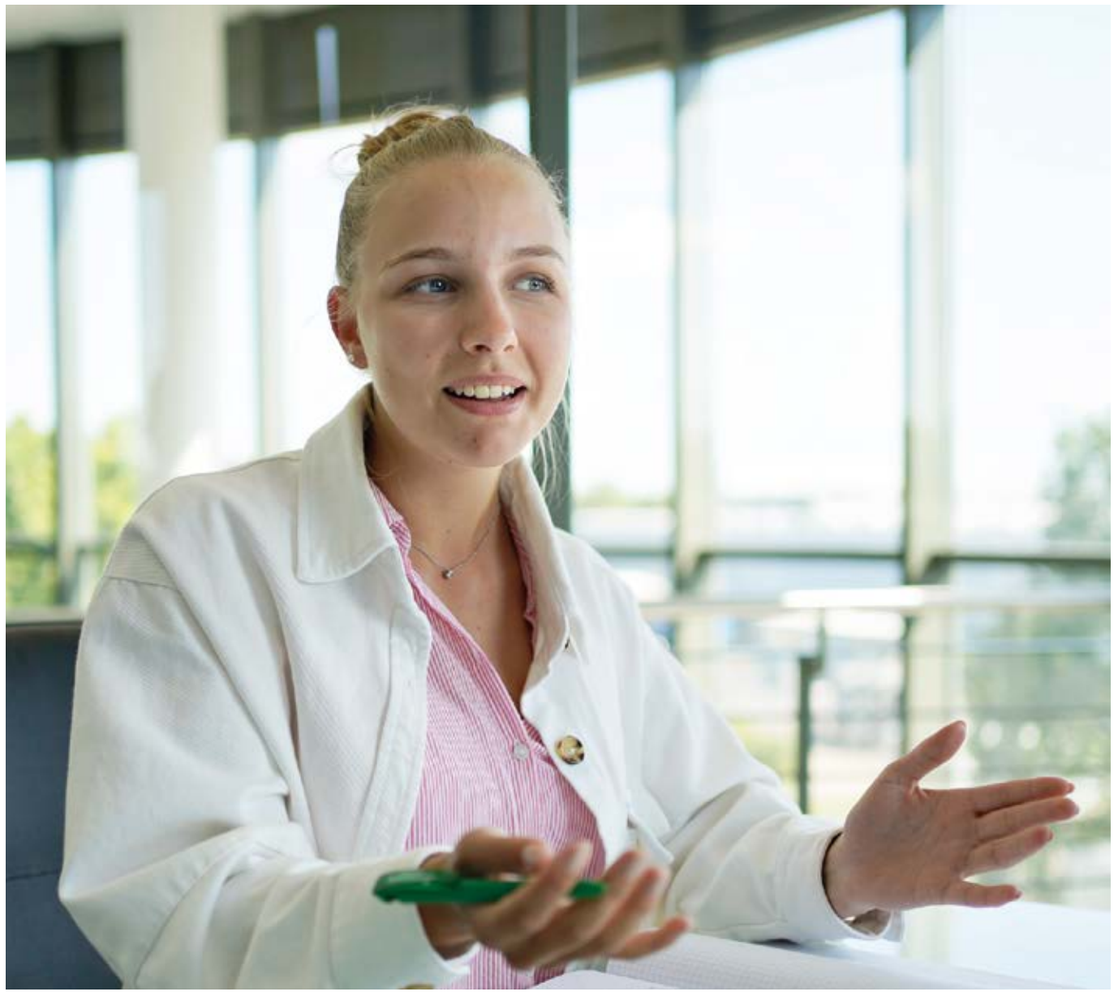
“WE ARE LOOKING MORE CONSCIOUSLY INTO OUR WORK ENVIRONMENT”

AT SCHNELLECKE, TRAINEES BECOME HSE SCOUTS AND HAVE TO WORK OUT A PROJECT

SCHNELLECKE 2022.1

When hearing the term “scout”, older people involuntarily think of the Wild West novels they devoured in their childhood. Younger people are more familiar with the term from the world of professional sports, where the term “talent scout” is used more frequently. The “Boy Scouts,” a youth organization in the USA, is also well-known. The HSE scouts at Schnellecke have little—and yet a lot—in common with them.

Lisa Heimlich



At our company, all trainees in Wolfsburg are trained to become HSE scouts in the middle of their second year of training,” Lisa Heimlich, Environmental and Sustainability Specialist at Schnellecke Logistics SE, who herself was among the first class of scouts in 2019, tells us.

However, no coonskin caps are being put on. The matter is far more serious: The trainees have to select a project from the Health and Safety, Sustainability and Energy, or Quality Management and Lean Management departments, implement it, and then document it.

To start with, there were introductory training sessions in each of the subject areas, including a project management workshop, before the trainees could select their kaizen project and get down to implementing it in small groups.

Pallets, paper and health

Lisa chose an environmental project with her group. “You see this huge container of pallets every day, it’s picked up twice a week, and you know they’re just going to be pressed together and burned,” she recalls. “That’s when we looked for a company nearby that would reprocess the pallets – and would even pay for them. It saves resources and is economically beneficial.”

Noah Gomolla, who now works in Quality Assurance, took on the topic of health with his team. They organized a health day for their site, where not only the usual tips on ergonomics and nutrition are given, but where employees can directly experience how older colleagues feel at work, for example, with an age simulation suit.

Anne Fröhling, now an employee in the Communications department, was concerned with the issue of paper consumption. “A colleague of mine works in Accounting. There, paper is often only printed on one side and also only halfway, scanned and then ends up in the trash.” So she and her team collected energy data and costs and developed suggestions, such as digitizing orders for forklift drivers instead of printing them out on paper that is subsequently thrown away.

The HSE scouts devote two hours of their working time per week to their project, which lasts three months.

What has become of our interviewees’ projects?

In Noah’s case, it was first the Corona pandemic that got in the way of realizing the health day, then the Ukraine war: “We had short-time work, so we have postponed the day until the end of 2022.”

Anne’s group was not previously aware of the many processes in which paper plays a role: “It would have taken not one, but many measures. We tried to push through optimizations, but didn’t get that far. That’s because a lot of things often have to be done on paper because our customers insist on it.”

Lisa and her team, on the other hand, look forward to implementing their pallet proposal. However, for all three of them, the HSE projects have been successful, as they emphasize. “We have been sustainably made more aware of the issues involved,” Anne emphasizes. “Turning off the screen at the end of work, turning off the light, other little things – we’ve been paying much more attention to that since then. And through our project work in the workplace we have also made our colleagues more aware of this.”

Lisa will take the lead on future HSE projects. “We want to raise awareness of these issues and for trainees to question how things are done here at the company. So that everyone integrates the idea of sustainability into their everyday work and also their private lives.”

And what do the HSE Scouts have in common with their namesakes? With the Boy Scouts certainly the ethical approach, with the scouts in the Wild West the conservation of natural resources, and with the talent scouts the sharp eye that identifies potential. In any case, they give the term a new and forward-looking meaning.

“IN CHINA, IT’S ALL ABOUT RELATIONSHIP NETWORKS”

Schnellecke has been operating in China for more than 20 years. Over the years, three companies with different focuses have developed and are currently operating at six sites. They have had an extremely successful year so far, as several new customers have been acquired.

An open, white, horse-drawn carriage with a sunroof and a coachman in tails and top hat in front of a green park landscape – this is a sight you might expect to see in Vienna. But we are not in Austria, we are in China. More precisely: in Dalian, China’s “Romance Capital”.

And the name was not given to Wolfsburg’s twin city for nothing. More than forty percent of the port city of over six million inhabitants consists of green spaces. In addition, the climate is mild, making Dalian a popular vacation spot. In summer, it is the sun, sand and sea that attract tourists; in winter, it is the mild temperatures and variety of cultural activities.

The city consists of 260 islands and has China’s northernmost ice-free seaport. And it is a free trade zone, which has led to the settlement of numerous companies from all over the world. Among them is Schnellecke. In 2002, Dalian Schnellecke Logistics Co. Ltd. (DSL) was founded, a joint venture between Schnellecke and the Chinese company Dalian Innovation Parts Manufacturing Company.

KWD AG, a member of the Schnellecke Group, founded the joint venture Dalian KWD Innovation Automotive Parts Ltd. (DKIA) with the Chinese company Dalian Innovation in December 2004. The company has two production priorities. The first is classic engine parts, the second automotive parts.

The third company in the group is CDC Schnellecke Logistics Company, Ltd. (CSL) based in Shanghai, a joint venture between CDC International Logistics Company, a company of the Changjiu Logistics Group, and Schnellecke. Founded in 2017, the company provides logistics services specifically for the automotive industry in the People’s Republic of China.

Production supply of solar modules in Qidong

“Initially, business here in China was a bit tough,” recalls Sven Virgens, Vice President of the Asia Region at Schnellecke Logistics. “In China, it’s all about relationship networks: Who do you know? Who do you trust? And building these up takes time.”

In the meantime, some of the initial hurdles have been overcome and the two logistics companies CSL and DSL are doing well. Three examples will be presented in more detail here.

Since December 2021, around 90 employees of Dalian Schnellecke Logis-

One of over 260 islands around
the seaport in Dalian

Dalian, China's "capital
of Romanticism"

"Initially, business here in China was a bit tough"
Sven Virgens

tics have been supplying a Hanwha Q Cells China solar module production plant. The plant is located in Qidong, a two-hour drive from Shanghai.

The Korean company Hanwha Q Cells is one of the world's largest manufacturers of solar equipment, with a production capacity of over 8 GW. "We had previously worked for another photovoltaic manufacturer in China for two years," Virgens recalls. "We ended the business because it was not profitable for us. However, because of the customer references, contacts, and industry-specific expertise we had gained, we were able to win a contract from Hanwha Q Cells."

Services for Hanwha Q Cells include receiving, storage, stock management and inventory control, picking and delivery of raw materials, purchased parts, as well as finished packaging. Inter-plant transports between the packaging material warehouse and production are also the responsibility of Schnellecke.

"The customer chose us because they want continuous improvements from their partners," Virgens says. In China, he explains, price is still the primary deciding factor. "But you have to be technically persuasive. And we were able to score points with our lean management as well as with shopfloor management, quality management, and our continuous improvement process."

Shopfloor management in particular used to be virtually non-existent and was implemented by Schnellecke. Now, the workforce receives up-to-date information about achieved goals and defect numbers, and employee participation in defect resolution has been introduced.

Transports for electric vehicles

In China, 3.3 million new energy vehicles (NEVs) – battery-powered vehicles and plug-in hybrids – were sold last year. While the market share of NEV passenger cars was only 6% in 2020, it increased to just under 16% in China last year, and the trend is still rising.

Since January 2022, CDC Schnellecke Logistics has been carrying out milkrun transports from a total of 49 suppliers to the Shanghai plant for one of the world's leading manufacturers of NEVs. The scope includes not only full and partial loads of purchased parts, but also the return transport of empty containers to the suppliers. Thirty-five CSL employees work in two shifts seven days a week to manage 70,000 shipments a year, resulting in a total volume of more than one million cubic meters.

Problems caused by COVID-19

The picture is tarnished only by the pandemic, to which the Chinese government is responding with tough lockdowns. "As of mid-May, the status is that we're seeing production drops of up to fifty percent for some of our OEM customers because many automotive suppliers are based in the Shanghai area and can't deliver now," Virgens reports. "The entire team at our headquarters has also been stuck at home for about fifty days."

Overall, however, Virgens is optimistic about the future. "We have now finally established ourselves as a competent supplier in China and the feedback from our customers is very positive. The foundations have been laid – now it's up to us to build on them."

Aerial view of Dalian

IT & DIGITALIZATION AT SCHNELLECKE LOGISTICS

The covid pandemic has put even more pressure on companies to digitalize their processes. This applies to logistics in particular.

In recent years, Schnellecke has repeatedly made a name for itself with innovative IT solutions, whether by using Google Glass in order picking, implementing an Internet of Things solution for container handling, or the Digital Control Tower.

These individual solutions are now part of an overarching concept called Schnellecke Mission Control (SMC), which provides the framework for further development.

In a detailed interview, Schnellecke Vice President of Corporate IT & Digitalization Karsten Keil explains the background and objectives of Schnellecke Mission Control. In a further article, we will present the central component, the Digital Control Tower, which is currently being rolled out worldwide.

Seamless integration of the most diverse systems and data sources is essential for SMC to work. For this purpose, there is a dedicated Competence Center that deals exclusively with data integration, which we will also present.

Another building block of crucial importance is IT security, because protecting our data, systems, and IT infrastructures is a top priority. This is also the focus of a special Competence Center at Schnellecke, whose work we will also highlight.

In the next issue of our magazine, we will present the remaining Competence Centers and their contributions to the further digitalization of all processes.

SCHNELLECKE 2022.1

THE ROLLOUT OF THE “DIGITAL CONTROL TOWER” BRINGS SCHNELLECKE CLOSER TO ITS GOAL OF INTELLIGENT, DATA-DRIVEN LOGISTICS

A FIRST MOVER INSTEAD OF A FAST FOLLOWER

The worldwide rollout of the Digital Control Tower (DCT) represents a milestone in the development of Schnellecke as a digital pacesetter in logistics. This was also confirmed in June 2022 by the presentation of the renowned SAP Innovation Award.

SAP Innovation Awards 2022

“It has been a long and exhausting journey, and it is not over yet,” states Karsten Keil, Vice President of Corporate IT & Digitalization. “With the Digital Control Tower, we are taking a big step forward, especially in terms of the constant transparency of the value chain. But there is also still a lot of work ahead of us, because we not only want to create transparency in the processes, but by anticipating early detection of events in the processes, we will also continuously lead them to a dynamic optimum.”

Let’s look back a few years. Like every logistics company, Schnellecke had its IT department, outsourced to a separate company called Logis GmbH. Their task: to support workflows with tools available on the market. “Even back then, we developed our own solutions, for example our inhouse Schnellecke Warehouse Management System PROLOGIS or the SJS – Schnellecke JIT System, but the focus was on quickly making innovative products usable for our purposes,” recalls Keil.

One example of this was the use of a wearable – Google Glass – for guiding order pickers in the sequencing process. Not an inhouse development, but with customized software for use in order picking. With this, Schnellecke earned a reputation as a “fast follower” and caused a stir in the industry. The adoption of a new corporate strategy with a focus on digitalization then initiated the transition.

Successful only with digitalization

"It has been clear to us for a while now that we will not be successful in the market in the long term without comprehensive digitalization," says Keil. "On the one hand, there is the pressure from OEMs to buy logistics services as cheaply as possible and to achieve cost savings through digitalization and automation. And on the other hand, we have a labor market in which it is becoming increasingly difficult to find sufficiently qualified personnel. Only digitalization offers a way out of this predicament."

As a result, the "Schnellecke Mission Control" project was launched a few years ago. Keil: "This is our overarching framework that brings together all components of our digitalization strategy. It a nutshell, it is the digital twin of the value chain, which we are tackling with the Digital Control Tower; the algorithms and modules that derive predictions for the future from this and implement them automatically; the autonomous control of machines such as AGVs and robots; and finally, the Internet of Things, e.g., the tracking of containers using cybersensor technology, as we have already successfully implemented in various pilot projects."

Three development stages

The DCT represents the backbone of data-driven logistics, so to speak. Three development stages have been defined:

Stage 1:
Complete transparency across the entire value chain in real time through the integration of data from all subsystems.

Stage 2:
Intelligent algorithms that derive predictions and proposals for measures from this, providing those involved on the ground with a sound basis for decision-making.

Stage 3:
The implementation of measures by the algorithms themselves.

"This is not necessarily proceeding one after the other," Keil emphasizes. "Just as on the spine, one element can be docked at the pelvis and another at the neck without everything in between already being filled in, we've already developed a module that meets the criteria for Stage 3."

This is a project called MiSeq, which is currently being piloted at the Glauchau site. MiSeq dynamizes employee control while sequencing according to their skills and according to the customer's call-off prioritization of JIS jobs, as Keil explains.

Automated employee control

"Currently, it's still the case that employees are manually assigned in the picking zone and permanently assigned to a sequence family," Keil explains. "For example, one employee picks tires, the other steering wheels, and do so for the entire shift. The consequences are not only monotony and one-sided stress, but also an imbalance in the distribution of work. If one sequence is running at full speed, the employees in that sequence are really under pressure, while another sequence may be idle and the employees have nothing to do."

MiSeq dynamizes employee control while sequencing call-off prioritization of JIS jobs

MiSeq provides a remedy for this. The system determines in advance which sequences the employees are qualified for. Based on this and the current situation in the picking zone, MiSeq then decides which employees are assigned to which sequences – in real time. For example, if a sequence is understaffed, employees are assigned to it from another sequence that is less busy at the moment. This balances the workload and avoids monotonous work.

Openness to other systems

When the pilot phase is complete, MiSeq will be docked onto the DCT as another module. "This openness to other systems and different data sources is one of the outstanding features of the DCT," Keil emphasizes. To actually capture all processes in real time, integration of information from a wide variety of data sources is indispensable.

However, not all OEMs are willing to allow a logistics partner to connect directly to their system. In this case, the solution is called RPA – Robotic Process Automation. Here, data provided by a customer, for example in the form of an Excel spreadsheet, is automatically converted and read into the DCT. Schnellecke has its own Competence Center for RPA, where the necessary "bots" are programmed.

"The SAP Innovation Award is the latest proof that we have gone from a fast follower to a first mover."

"We were already making things partially transparent before the DCT," says Keil. "Now it's holistic across the entire value chain. We can immediately see where there is a problem in the chain. And what's more: For example, not only is 'material missing from picking' displayed, but also the reason for this. Is it missing in replenishment, for example, or in goods receipt, or has it not been scheduled? With the DCT, we know immediately and can react in a targeted manner."

Schnellecke Mission Control: complete ecosystem

For Keil, rolling out the DCT is a decisive step on the way to Schnellecke Mission Control. "Schnellecke Mission Control is a complete ecosystem, and the DCT is a central element in it. Many smaller subsystems then revolve around it – AGVs, robots, software subsystems, sensor technology and so on. They are all controlled by the DCT or control themselves and are monitored, and all these processes are continuously being optimized by intelligent algorithms."

Schnellecke Mission Control is more than a "digital twin". It is a framework for digitalization and at the same time a philosophy to develop an integrated solution instead of many separate tools.

"When I look at the market environment today, I think we are pretty far ahead with this," says Keil. "I would already call the DCT a leading edge. Many companies talk about it, but there is a lack of practical implementation. It is now paying off for us that we embarked on this path many years ago. OEMs are also taking notice. And the SAP Innovation Award is the latest proof that we have gone from a fast follower to a first mover."

SCHNELLECKE 2022.1

“PROCESS DEVIATIONS ARE DETECTED IMMEDIATELY”

DIGITAL CONTROL TOWER: PROCESS MANAGEMENT, INCIDENT MANAGEMENT AND SHIFT LOG ON A SINGLE PLATFORM

For many years, Schnellecke has been working towards the goal of obtaining a real-time overview of the entire value creation flow on the shopfloor and beyond. With the Digital Control Tower (DCT), this goal has now become a reality. The worldwide system rollout has been going on since the beginning of the year.

“Currently, the DCT consists of three functional applications: a module for process monitoring, a module for Incident Management, and a shift log,” Denis Wirries, who is in charge of the project led by Jan Tereszczuk, tells us. “Other modules are being planned and will be added incrementally.”

Before the DCT, the raw data for daily reporting had to be exported from the customer’s SAP system. It was then transferred to various Microsoft Excel spreadsheets that allowed the data to be processed, analyzed and evaluated. The results, in turn, had to be copied into a Microsoft PowerPoint presentation for visualization. “This process took up to two hours a day and involved 15 to 20 manual steps,” Wirries says. “Process deviations were discovered very late or not at all, so finding the cause, defining countermeasures, and checking the effectiveness of the measures took up to three weeks.”

By using an RPA bot, external data from the customer’s SAP system can now be transferred to the DCT in short intervals. Current data can be viewed at a glance thanks to the process monitor or the finished report. Data acquisition, processing, analysis, evaluation and visualization are all done with a single tool. “Process deviations can now be detected immediately and even prevented in advance through proactive action and quick countermeasures,” explains Tereszczuk. “The effectiveness of countermeasures can be directly tracked and verified. Manual time, effort and errors are virtually eliminated, as Excel spreadsheets and PowerPoint presentations are no longer needed.”

Runs on all devices

There are similar time savings in Incident Management. “One strength of the DCT is that it runs on all devices. This means that the employees themselves, whether they are plant workers, team leaders or forklift drivers, can also use it on their tablets or smartphones,” Wirries emphasizes. The message monitor for malfunctions is based on this capability.

In the past, an employee would call the control center to report a malfunction, such as a

GLOSSAR

AGV	Automated Guided Vehicle
DCT	Digital Control Tower
HR	Human Resources
IOT	Internet of Things
QUENTIC	Software for sustainability reporting
RPA	Robotic Process Automation: automation of PC routines using a software bott
SMC	Schnellecke Mission Control

technical problem with a forklift, or incorrect deliveries or storage locations. According to Tereszczuk, "If there was damage, the employee often also had to go to the office, get a camera, take a picture of the damage, go back to the office, and load it into the computer there and fill out the respective damage report. Needless to say, that was extremely time-consuming." In addition, a problem was often fixed without any feedback to the employee. "With Incident Management, the employee now simply takes a photo of the issue with his smartphone or tablet, along with a brief description, and that's it."

The incident report is automatically documented in the system, as is the initiated response, for which the notifier receives feedback. This not only speeds up the entire process, the documented errors can also be evaluated in a prompt manner to see where any weak points in the process flow are.

Built-in sustainability

"The DCT also automatically transfers damage data to our SAP system," Wirries points out. "For example, if we have any damage that involves a claim from the customer, it has to be taken into account in the forecast. Therefore, the corresponding messages are automatically transferred to SAP."

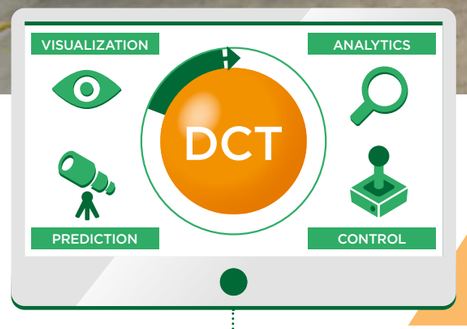
Documentation for the sustainability report is also simplified by the DCT. For this, Schnellecke uses Quentic, in which all environmental damage, accidents, or near-accidents are recorded. Previously, this was done via Excel spreadsheets or separate reporting forms; now the data is automatically transferred from the DCT to the Quentic system.

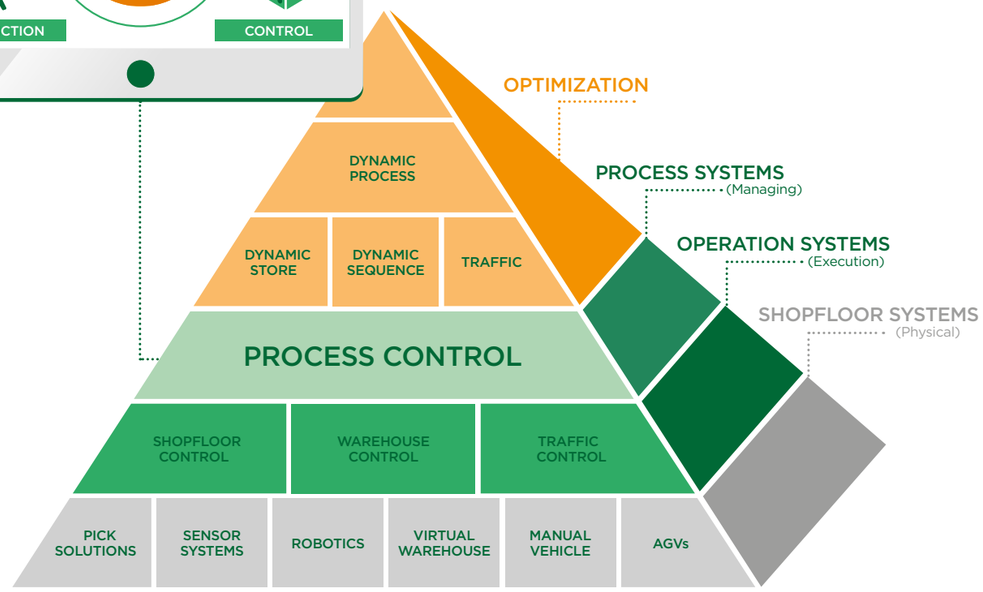
Only in the case of the shift log is some data still entered manually – for good reason. "Unfortunately, not all data is available as precisely as the site requires," explains Tereszczuk. "Employees, for example, are managed administratively through only one cost center, but are functionally deployed to different teams. To automate this, you would have to make too many manual adjustments to the data. So at the moment, it is more effective to enter the data directly into the DCT on site. This offers the possibility of merging it with incident reports and automatically running and visualizing evaluations. Nevertheless, we are continuing to work on finding a solution to also capture this data as automatically as possible."

Different levels of complexity

The DCT is not an immutable system, but can take on very different forms. "The data collected per site varies widely," says Wirries. "Therefore, the level of complexity can also vary greatly by site, depending on the performance indicators and processes used there." The goal is to achieve standardization worldwide here as well, something for which the DCT provides an excellent foundation.

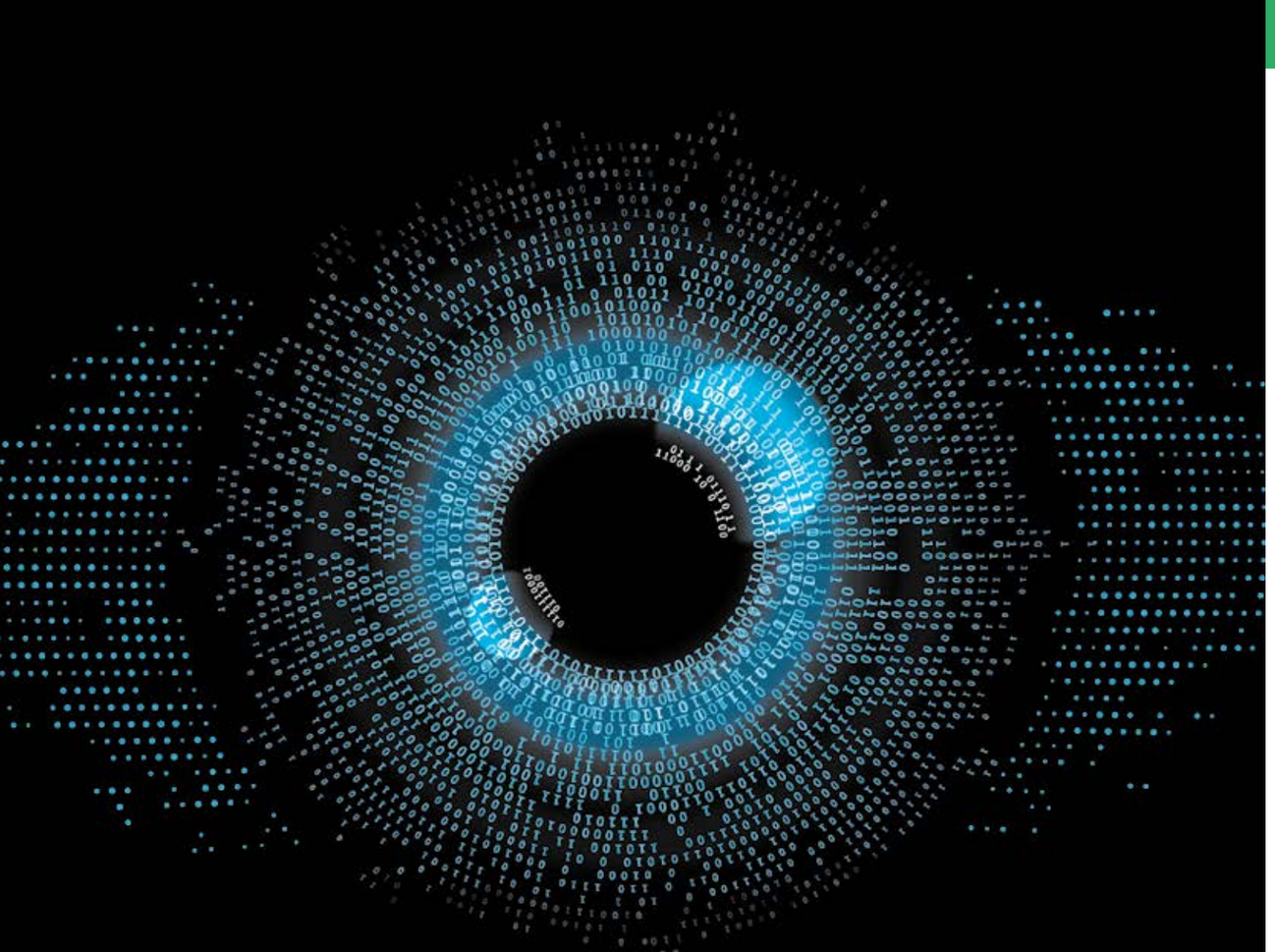
Overall, the feedback so far has been very positive. With the exception of China and South Africa, the DCT is scheduled to be rolled out at all Schnellecke sites worldwide by the end of 2022. Meanwhile, details continue to be worked on and, of course, the next step is already being prepared: forecasts using artificial intelligence.





Denis Wirries

Jan Tereszczuk



EVERY LITTLE SENSOR IS A POTENTIAL GATEWAY

INFORMATION SECURITY AND THUS ALSO IT SECURITY IS A TOPIC THAT IS INCREASINGLY ATTRACTING ATTENTION AT SCHNELLECKE

Unnoticed by most employees, companies are continuously under attack. This refers to hackers who try to penetrate corporate networks using various methods with the goal of tapping, manipulating or deleting data, or destroying information systems altogether. At Schnellecke, preventing this is the job of Erika Gerber and the IT Security department.

"We are no longer talking about individual perpetrators, but rather about groups that conduct cybercrime as a business model," says Gerber. Hacker attacks are therefore rightly considered one of the highest business risks.

"When we talk about IT security, it's not just about technical measures, but also about raising employee awareness," says Gerber, Head of the Corporate IT Infrastructure & Security Competence Center at Schnellecke. "On the technical side, you can do almost everything to protect against attacks, but if our employees don't get on board, it's all of little use."

As is the case in many companies, employees are often reluctant to accept changes. Examples include regular password changes and securing access, which some people fail to understand the importance of. "IT security is not always pleasant," Gerber knows. "However, if employees realize that they are putting the company itself, and thus their own jobs, at risk by acting carelessly, then they are more willing to accept minor inconveniences."

To achieve this, a lot has already been invested in (automated) system security, but also in raising employee awareness. At the same time, alternative authentication options are being evaluated to meet the users' desire for simple access options without compromising IT security.

Certifications and audits

With increasing digitalization, the topic of IT security is also moving more and more into the focus of company management. Especially since customers are increasingly demanding the appropriate proof. "So we're working closely with the Information Security Officer to have more sites and companies certified according to TISAX." TISAX (Trusted Information Security Assessment Exchange) is a testing and exchange mechanism of test results published by the German Association of the Automotive Industry (VDA). The standard addresses the secure processing of business partner information in transactions between automakers and their service providers or suppliers.

There has also been extensive investment in state-of-the-art systems and protection mechanisms. "We have now had two years of changes which we had to react to quickly. In particular, the coronavirus with its accompanying mandatory remote work and, finally, the war in Ukraine created an increased threat situation," says Gerber.

Paid hackers

"We regularly conduct internal vulnerability scans," Gerber said. In recent months, "penetration tests" have also been conducted with changing scopes. This involves hiring experienced hackers to discover potential vulnerabilities in Schnellecke's defense system. "This gives us insights into our current IT security situation in the various divisions and allows us to develop measures to close any security gaps that are detected."

"We regularly record third-party login attempts to our external services as well as unauthenticated access attempts to our firewalls," says Gerber. There's no room for complacency. "The number of hacker attacks has increased massively in recent years, and they are becoming more and more sophisticated. Basically, it's just a matter of time before we see a widespread attack. That's why we need to continuously improve IT security and ensure the appropriate awareness to be able to react properly in the case of an emergency."

DATENINTEGRATION BRINGT VIELE HERAUS-FORDERUNGEN MIT SICH

“WE ALWAYS HAVE TO DEAL WITH IT ALL OVER AGAIN”

Every PC user knows the problem of incompatible data. You receive an e-mail with a text attachment that can’t be opened. Or an audio file simply won’t play. The reason: a variety of programs or systems whose formats cannot be read directly by each other.

Tobias Streich

“We have the same problem when exchanging data with our business partners, only in completely different dimensions than with private users,” says Tobias Streich, Head of the Corporate Data Integration Competence Center at Schnellecke. “And not only in data communication to the outside world, but also internally in communication between our IT systems.”

He cites the various internal HR systems worldwide as one example. “We are currently supporting a project of the Corporate Human Resources & Communications division with our team to harmonize the master data there, in order to then make it uniformly usable.

SAP plays a major role in the company. “SAP has its own data exchange format. But we use our inhouse products such as SILENA (Schnellecke Integrated Logistics Enterprise Application) or third-party products such as WinSped,” says Streich. “Their data then often has to flow into SAP for further processing. We have quite a bit of conversion work to do there as well.”

Data flow from different sources

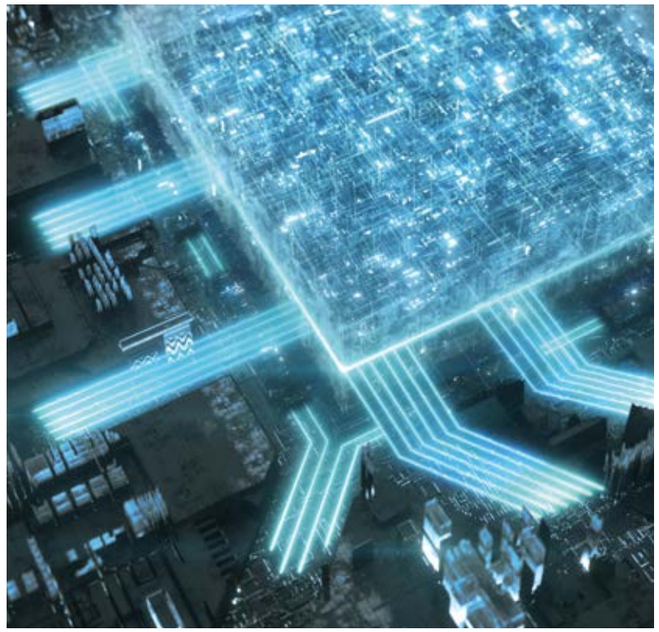
Many of Schnellecke’s services for the automotive industry are extremely time-sensitive. Parts and assemblies must be delivered to the point of assembly with pinpoint accuracy to avoid line stoppages. This requires a fast and reliable flow of data in real time. This is also guaranteed by Streich’s team. For this, the call-up data is not converted, but received as a so-called “data pump” from the OEM and forwarded to the system to be processed.

“For these requirements, we need powerful software,” explains Streich. “We use a universal converter called Lobster_data. This platform solution links internal systems, external systems, cloud systems, Internet of Things (IoT) and machines, as it can handle an extensive range of well-known EDI formats and also comes with numerous interfaces to industrial software.

Complicating matters further is the fact that different systems are in use even within the same OEM. “Ford in South Africa has completely different software than Ford in Europe, and Volkswagen also has major differences between Europe and the USA,” Streich explains. “So it’s not the case that when we work at one site for an OEM, we find the same conditions at other sites. We always have to deal with it all over again.”

Agreement on uniform data format

Although German OEMs have agreed on a uniform data format (e.g. VDA 4984), there are also company-specific deviations. There can be no talk of complete standardization yet. For this reason, Streich and his department are always on board at the start of a new project. After all, a smooth flow of data must be ensured.



SCHNELLECKE TESTS SOFT EXOSKELETONS IN PACKAGING LOGISTICS

“EVERYONE NOTICES RIGHT AWAY THAT IT’S EASIER”

When hearing the word “exoskeleton”, some people will first think of science fiction. However, we are not talking about motor-driven fighting machines here, but about ergonomics – a topic that has been a top priority at Schnellecke for many years.

So it is no wonder that Schnellecke tested the first soft exoskeletons in the field many years ago. “Those were models with steel springs,” recalls Ralph Tschischke, trainer and occupational safety specialist at Schnellecke Packaging Logistics in Soltau. “They weren’t really mature yet and the springs often broke, so we decided against using them permanently.”

In 2018, exoskeletons with motors were used for the first time at Schnellecke in China. They were used for lifting very heavy loads. That is not the case at Schnellecke Packaging Logistics, which is why two different models of soft exoskeletons were tested here for about a year, a process that was completed in early summer of 2022.

“With exoskeletons, you have to decide between two fundamentally different variants,” explains Tschischke. “On the one hand, there are the rigid exoskeletons with servo motors. They do most of the lifting for the user. And then there are the soft exoskeletons, like the ones we use. They provide postural support.”

The aim is not to lift forty kilograms instead of twenty. Rather, the goal is to promote employee health and prevent postural damage and injury.

Put on in just a few minutes

Everyone knows the crucial mistake people make when lifting loads: You bend over, arch your back and lift up the load using your back muscles. This is often combined with a lateral twisting movement. An optimal exoskeleton prevents this with a back splint and two side supports. “They are not rigid, but they sensitize the user not to bend the back and turn at the same time,” Tschischke says. At the same time, the leg muscles are supported by elastic straps, making it easier to straighten up from a squatting position.

We watch an employee putting on the exoskeleton. First, the arms are put through two loops, not unlike a backpack. Then the lumbar strap is closed, followed by the elastic bands above and below the knee. This is all done quite easily with the help of hook-and-loop fasteners. In a few minutes, everything is in place. The employee walks to his workplace without his movements being restricted. Only then does he tighten the whole thing with two movements.

“This easy closing and loosening is very important,” emphasizes Tschischke. “For example, for employees who also drive a forklift. When they go on break, they can release the exoskeleton with a few quick movements and move around unhindered.”

Up to 20 percent reduction in strain

Even though soft exoskeletons “only” provide support, thanks to the elastic straps they can relieve the strain of lifting loads by up to twenty percent. The prerequisite for this is that they are properly fitted. That’s why they are individually adjusted to the employees’ body size and girth. “We go over that with the employee the

In early summer 2022, the exoskeletons were also tested in other Schnellecke divisions; they are now in the evaluation phase at Schnellecke South Africa.

first time," Tschischke says. "The initial time they wear it is also only two hours at first, because the employees have to get used to it. Then, from day to day, the wearing time is extended by one hour."

In a preliminary phase, two suppliers were selected whose products were then put to the test. The exoskeletons were not limited to one site, but were circulated through all Schnellecke Packaging Logistics sites. They each remained at one site for three weeks. The employees tested both models one after the other so that they had a comparison.

Afterwards, they gave their evaluation. The analysis of the evaluation forms showed that the model with back support was clearly preferred. Surprisingly, it is mainly younger employees who accept the exoskeleton without reservation. "The older ones are sometimes a bit skeptical," explains Tschischke. "That's where the familiar argument comes in: we've never done it that way. The younger ones, on the other hand, are more open to innovation."

Direct comparison

But even the more skeptical employees were convinced by a direct comparison. First, they lifted a load with relaxed elastic bands, then the same load with tension, and then lifted again without tension. "Everyone noticed right away: it's much easier with the exoskeleton."

Since the exoskeletons weigh just over a kilogram, there were no problems with the extra weight. The heat was a different story. Many employees in Soltau said they sweated more. The pads actually rest directly on the body, Tschischke said, but, "We got the exoskeletons in high summer, when people sweat anyway, with or without the exoskeleton. We studied that and came to the conclusion that it's purely a subjective perception." Any pinching or tugging that is criticized is also not a characteristic of the exoskeleton, but an adjustment problem that can be easily remedied.

IMPRINT

Schnellecke 2022.1
Insights into the Schnellecke Group

Published by:
Schnellecke Logistics SE
Stellfelder Straße 39, 38442 Wolfsburg
www.schnellecke.com

Editorial:
Cersten Hellmich (V.i.S.d.P.),
Gerd Ruebenstrunk

Texts:
Gerd Ruebenstrunk, Schnellecke

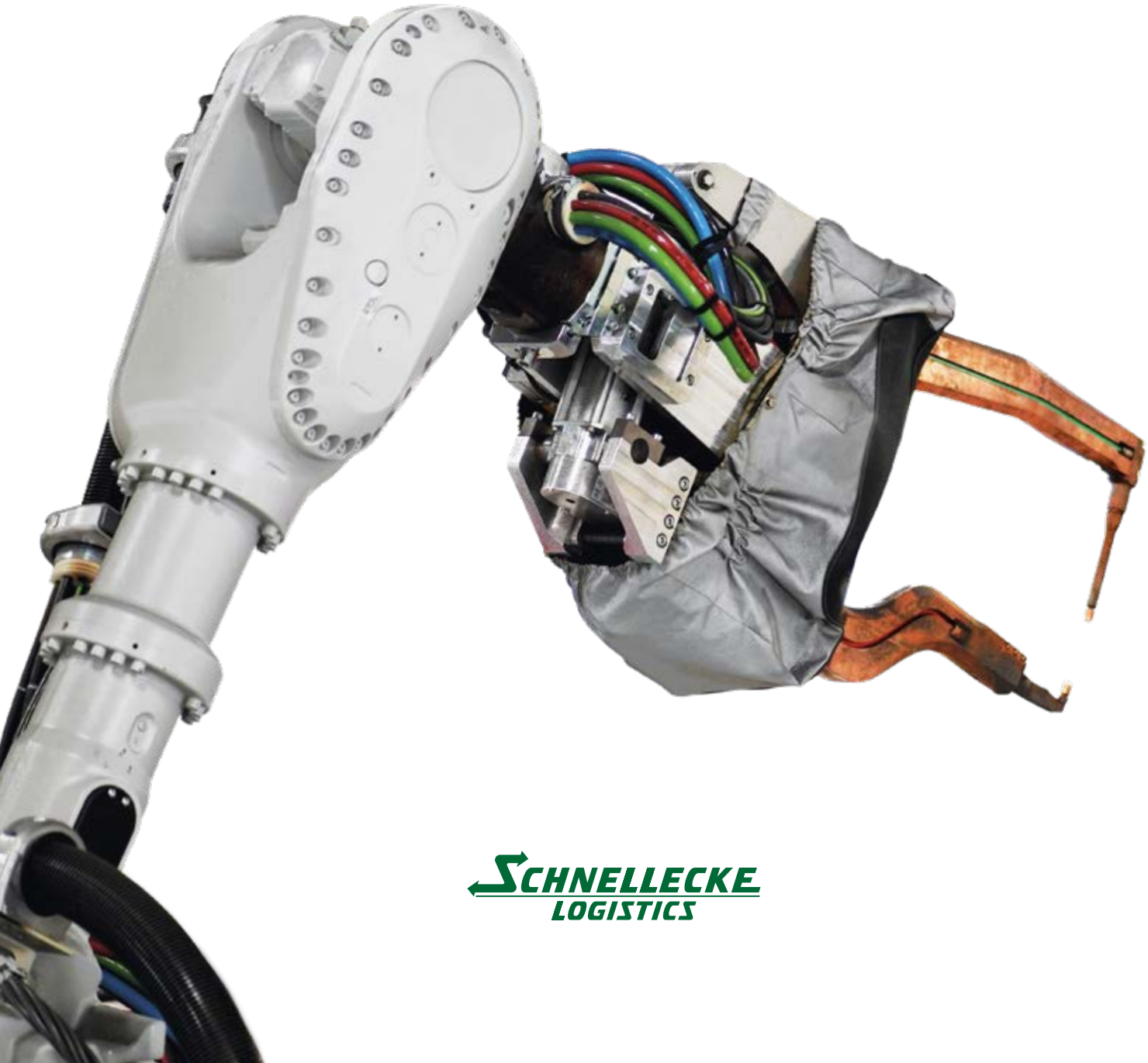
Art Direction:
Pascal Frank

Print:
wir-machen-druck.de

Photos:
Adobe Stock 2tun (2), Govan (34), Oleksii (49); Unsplash Mael Balland (25), Wang JiPeng (29); Volkswagen (14); IStock China5000-culture (27), gionnixxx (31,33), Vector Tradition (48), JaniecBros (51); Hunic (54), Schnellecke

Contact:
cersten.hellmich@schnellecke.com

SCHNELLECKE 2022.1



SCHNELLECKE
LOGISTICS