

trans-o-flex

magazine

Digital push for the last mile

*Efficiency, transparency and quality increased,
new services for consignors and consignees possible*



Awards and honours

trans-o-flex "Logistics Rising Star of the Year" and "Diversity Leader"

Sustainability

Reusable concept for expert retailers successfully implemented

Tips for consignees

User feedback helps to enhance trans-o-flex insight app

++ 80,000 EMPLOYEES SURVEYED ++

trans-o-flex recognised as diversity leader

What happens when a leading British business newspaper and a major German opinion research institute launch the first ever survey of which European companies perform best in terms of diversity and equality in the workplace? One result: trans-o-flex is one of the 700 diversity leaders in Europe and even one of the top 20 within the transport and logistics sector.

Diversity leaders were identified as those companies that received the highest scores in the survey for diversity and equality in the workplace. 80,000 employees from 10,000 private companies with at least 250 employees based in Bel-

gium, Germany, France, Great Britain, Italy, Luxembourg, the Netherlands, Austria, Sweden and Switzerland were surveyed. Participants were systematically asked how their employer would support diversity within the company in terms of gender, age, ethnicity, disability and sexual orientation. From now on, the survey is to be conducted annually.



For further information, see:
<https://on.ft.com/39BgCqf>



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Errors and omissions excepted. The details given in this magazine do not, in any circumstances, replace the General Terms and Conditions of Business of the trans-o-flex companies. For ease of reference, in German the masculine form is used to designate persons (e.g. the customer). Such terms should be understood to apply to both sexes.



Dear Readers,

Did you play Chinese whispers as a child? The game where one person whispers a sentence in the ear of the next and the last person to go has to say what they understood? And the funniest thing was when something completely different came out at the end than the sentence the first person had thought up.

It's been a long time since I played Chinese whispers. But sometimes the logistics business greatly reminds me of it. Especially when logistics do not work. If what is entered at the beginning is received quite differently at the end.

To ensure that this does not happen at trans-o-flex, we have already come up with a number of ideas. Hardly a stone has been left unturned in recent years as we strive to deliver maximum quality with maximum efficiency. So that everything arrives safely and quickly in the same condition as you hand it over to us. A lot of things are already very good now. I get to hear this again and again in conversations with you. On this note, thank you for your feedback!

But we are not resting on our laurels, we are also prepared to restructure even established core processes such as the last mile. The new digitisation push for the last mile, the lead article of this magazine, is a good example of how we also question fundamental processes and are prepared to change them.

What we cannot change is the middle position in which we are in as logistics specialists. But we don't want that either! As a logistics company, we want to be and will always be the interface between those sending on the one hand and those receiving on the other. For us at trans-o-flex, this function is the cornerstone of our business and the basis for further growth.

And this is where successful logistics differs fundamentally from the game of Chinese whispers mentioned at the beginning. Logistics is not a one-way street. For us, logistics means listening to exactly what the customers want and translating this into services. This is how we focus on our customers. For us, logistics is also about listening to the wishes and needs of the other side, namely the consignees.

With this consignee orientation we have found that the wishes are often not the same as those of the sender. For example, there is the request for notified delivery at 8 a.m., but also for delivery of special items in advance or for delivery specifically not on the next day, but always on Wednesday at 2 p.m. We see our task as the link between the sender and the consignee in devising tailor-made solutions for just such or similar consignee requirements. Sometimes these can even be free services such as delivery agreements, which trans-o-flex consignees will soon be able to issue via the app if the consignor has given their prior consent (see page 17). In other cases, consignees will have to pay for special services whose costs are not covered by the consignor.

We are convinced that with the new consignee services, the overall quality will again increase significantly and, accordingly, the satisfaction with our logistics chain – on both the consignee and the consignor side. I am looking forward to this and send you my

best regards from the middle

*Wolfgang P. Albeck
Chief Executive Officer*

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++ BIODIVERSITY ++

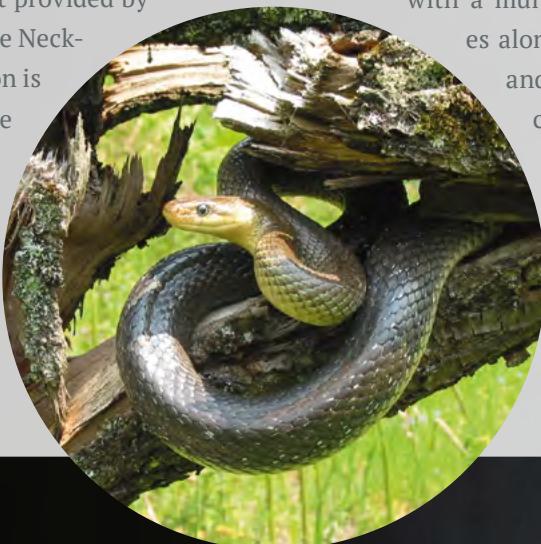
Aesculapian snakes protected

For a good ten years now, trans-o-flex has been supporting a nature conservation project that aims to protect the habitat of the Aesculapian snake and thus preserve this highly endangered species. The responsible forestry commission office has now taken stock. The result: The support provided by trans-o-flex has secured the population in the Neckar Valley near Hirschhorn in Hesse. The region is one of only four isolated areas where the snake can still be found in Germany.

The staff of Aesculapius – a staff around which the Aesculapian snake winds itself – has served as a symbol for healing professions since ancient times. Due to this relationship with its largest customer group,

trans-o-flex supports the project, in which the habitat of the snake is maintained by grazing with goats in such a way that the preferred nesting and resting places of the non-venomous snake are preserved.

The Aesculapian snake is one of the largest European snake species. Males native to us can reach a length of up to 180 cm. Females are usually at least 40 cm shorter. Adults have a yellow-brown to grey-black body colouring with a multitude of white spotted edges along the flanks and back scales and a uniformly white to yellow coloured belly.



Non-venomous, threatened symbol for healing professions. The number of Aesculapian snakes has increased significantly in a sustainability project supported by trans-o-flex.

++ 900,000 INTERVIEWS ++

Customer recommendations: trans-o-flex Logistics Rising Star of the Year

Which companies in Germany are most frequently recommended by customers? Because the recommendation of a friend is often a decisive factor when making a purchase, a leading German business newspaper published a customer recommendation ranking for the first time last year. Awards were given to those brands that had achieved the sharpest increase in customer recommendations over the last twelve months. trans-o-flex came first in the Parcel Service & Logistics category!

The ranking is based on the brand index of a market and opinion research institute, which is one of the ten largest market research networks worldwide. For the customer recommendation ranking, the company conducted more than 900,000 interviews that are representative for Germany between

1 July 2018 and 30 June 2019. For the Parcel Service & Logistics sector, the results of twelve service providers were evaluated and trans-o-flex was declared the rising star of 2019.

“This is a tremendous success”, says a delighted Wolfgang P. Albeck, CEO of trans-o-flex. “Because the fact that more and more customers are recommending us shows how good our performance and quality is also from a customer perspective. And the fact that this has been attested to us by an independent study makes this assessment all the more valuable.”



The article (in German only) about the ranking is available to read online at: <https://bit.ly/2OMfhol>

++ SUSTAINABILITY REPORT ++

Number of Euro 6 vehicles more than doubled

The trans-o-flex Group has again both reduced the absolute amount of climate-damaging emissions and further improved its CO₂ efficiency. This is highlighted in the latest sustainability report, which is available for download on the web site (in German only). The report for the year 2018 also makes the development of individual pollutant groups transparent. For example, emissions of particulate matter (PM10) have been reduced by around 1,000 tonnes, and those of nitrogen oxide (NOx) by as much as 44,000 tonnes. And around 6,000 tonnes less CO₂ emissions were produced. CO₂ efficiency,

which is the CO₂ emission per kg of weight transported, is now 17.7 % better than in the base year 2007, when trans-o-flex began its sustainability reporting.

These improvements were made possible, among other things, by the systematic renewal of the vehicle fleet. For example, the number of Euro 6 vehicles more than doubled compared to the previous year.

The number of vehicles with the Euro 5 standard has halved. Vehicles in the Euro 0, 1 and 2 emission classes were no longer used.

The Climate & Environment section is one of five parts of the 42-page report. Other sections are Organisation & Strategy, Values & Guidelines, Employees & Workplace and Society & Community. "For trans-o-flex, acting sustainably means making the company permanently successful with solutions that are viable in the long term," says trans-o-flex CEO Wolfgang P. Albeck. "I am delighted that the sustainability report has once again highlighted how we have made progress on this path."



++ TEST SUCCESSFULLY COMPLETED ++

Ciblex is new EURODIS partner in France

After several months of very successful testing, all trans-o-flex consignments to France are now delivered by Ciblex. Ciblex became a member of the international EURODIS network for France, which trans-o-flex uses to ship to 35 European countries. The Ciblex organisation in Belgium has been a EURODIS partner since 2015.

Ciblex is a former Geodis subsidiary that was integrated into the French European Healthcare Distribution Holding (EHDH) in 2014. EHDH is also a partner in the EUROTEMP network for international temperature-controlled shipment of pharmaceuticals, employs 2,900 people and generated around 650 million euros in 2019. In France, Ciblex is number three in the national market for express services and focuses in particular on the health, optics, electronics, automotive and spare parts sectors.



++ NEW CUSTOMER SURVEY ++

Important improvements in quality and innovation



2019 saw trans-o-flex conducting its representative customer survey for the first time more than once in a year. Since the autumn there has been a new quarterly survey instead – with very encouraging results.

“Customer ratings have improved almost across the board in 2019, not only from quarter to quarter, but also when we take the two quarterly surveys together and compare them with previous years,” says Lutz Blankenfeldt. As Head of Strategy, Commercial and Marketing, he is responsible for customer surveys at trans-o-flex. When asked how trans-o-flex differs from other service providers, the record number of 84 % of all respondents in Q4, for example, said that trans-o-flex works “more safely and securely”. A large majority of customers also describe trans-o-flex as “faster” (78 %), “easier” (69), “more reliable” (68), “more flexible” (67), “more innovative” (58) and rate all trans-o-flex organisations overall as offering “higher quality” (78 %). On the price side alone, no majority of respondents perceive trans-o-flex as “cheaper”. “This was to be expected, however, because the quality perceived as best has its price,” says Blankenfeldt.

In addition to quality, customers are also noticing significant changes in the trans-o-flex product range, which has mainly been expanded by several new express options. In

2019, for example, only seven per cent of all respondents said that the product range was a reason to use other service providers besides trans-o-flex. Two years ago, this figure was still at ten per cent. This trend is also confirmed by the record figure of 15 % of all customers who stated in Q4 2019 that they work exclusively with trans-o-flex. In previous years, there was not a single respondent who did without the complex multi-service provider strategy in shipping.

“So that the new frequency does not have to be a nuisance to anyone, we have slimmed down the survey itself and also ensure that each customer is surveyed at most twice a year and with a minimum interval of six months,” Blankenfeldt continues. Whereas previously 36 questions were asked in each annual survey of around 1,400 customers, these are now smaller customer groups on a quarterly basis, but still representative of the overall customer base. They receive a survey with only 21 questions. “We've gone through the questionnaire thoroughly and found 15 questions we can omit.” The lower number of questions has another major advantage: The evaluation is much easier and faster and improvements from the results can be implemented earlier. The quarterly survey also allows seasonal fluctuations in the rating to be identified and a faster response to them.

++ TAPA CERTIFICATION ++

High security standard confirmed

For its facility in the town of Hürth near Cologne, trans-o-flex has received certification from the Transported Asset Protection Association (TAPA). trans-o-flex had itself tested according to the TAPA FSR-C standard in accordance with the specifications of the globally recognised security organisation specialising in transport and logistics and received confirmation at the first attempt.

The abbreviation FSR-C stands for Facility Security Requirement Category C. "This standard is more demanding than anything there is in ISO quality management in terms of security requirements and is the ideal basis for the further development of our security processes and technology," explains Wolfgang P. Albeck, CEO of trans-o-flex. He wants to make Hürth a model facility for further TAPA certifications. "It is the template by which we will gradually certify the other sites."

In Albeck's view, the certification is a further step "to increasing the safety and security of all our processes and facilities in accordance with the most demanding standards. On the other hand, we can use it to demonstrate the high level of security we have already achieved." For certification, all security-relevant processes must be described and audited annually. Firmly defined technical safety devices are required, which are also audited annually. Lastly, all persons involved in transport and handling must regularly undertake security training. TAPA, founded by discerning shippers, also has very specific structural requirements, such as fences or access regulations or video controls. In the run-up to certification, the Hürth facility was also equipped with a new video management system, which, for example, enables a targeted and rapid search for individual missing packages. In terms of yard management, the system also records every vehicle license

plate number on site and simultaneously directs the trucks to the correct loading gate.



The trans-o-flex TAPA certificate applies to all processes at the Hürth facility. It is valid for three years provided that it is reviewed annually.

++ INDUSTRY GET-TOGETHER ++

Next Pharma Logistics Day

This year, trans-o-flex is sending out invitations to what will be the twelfth Pharma Logistics Day. For everyone who wants to make a note of the date for the industry get-together – the date will be 23 September 2020. A separate invitation will follow shortly. During the day, experts will be presenting new trends in the pharmaceutical industry, trans-o-flex will be showcasing projects and logistics industry solutions, and during the breaks and on the fringe of the conference there will be extensive networking and contact opportunities.





COVER STORY

How digitisation is optimising the last mile

trans-o-flex develops digital route scheduling that enables efficiency and quality improvements as well as new services for consignors and consignees

“Definitely no!” Stefan Thömmes’ answer is unmistakable. “Leaving the entire scheduling to a mechanical algorithm alone leads to solutions that are just as suboptimal as does purely manual scheduling. Parameters such as parcel size, weight, heterogeneity in the consignment data, variances in the drop durations and many other factors, which have to be stored in an algorithm, change daily.” Nevertheless, the head of trans-o-flex IT-Service GmbH and Operational Development is gearing the next major digitisation steps precisely to the last mile. “We are planning several revolutionary changes that will have three main effects: firstly, they will relieve the burden on drivers, secondly, more consignments will be delivered the next day, and thirdly, they will further increase transparency for consignors and consignees and lay the foundations for new services.” **>>**





Maximum dynamisation and quality at the same time

On the one hand, the last mile is the natural starting point for further process optimisation. This is because it is the most expensive part of the entire logistics chain. On the other hand, the complexity of the processes, the multitude of restrictions and the change in variables here is so high that Thömmes and his team were initially sceptical as to whether the algorithms offered by numerous software companies could actually achieve in practice the savings of generally 20 to 25 % promised in theory. "We asked ourselves: Can there even be standardised, optimal solutions when the requirements are so extremely complex and sometimes change during the process? Is the data transmitted by consignors sufficient? Can standard software even guarantee 100 % quality and 100 % dynamic processes at the same time?" To clear up two key

answers that were found after extensive analysis: No, standard software cannot meet trans-o-flex's demand to always deliver 100 % quality. "But we have found the key to achieving maximum dynamism and quality together." For this magazine, Thömmes spoke publicly for the first time about how these solutions from trans-o-flex look and when they will be launched.

"In the first half of 2020, we will begin to convert the classic postcode-based and predominantly manual route scheduling in delivery to a digitised, so-called bubble scheduling system." The pilot site will be trans-o-flex's new logistics centre in Hamm-Rhynern (see page 20). Further sites will then be gradually converted.

According to Thömmes, the following insights are to be found behind the bubble scheduling: "We have identified consignee addresses we regularly deliver to for each delivery area. They can be clearly determined graphically in a geo grid system. The consignments to be delivered to these consignees form a base quantity for which outline routes are formed automati-

cally." On average, the base quantity accounts for about two thirds of the items in a delivery round. "The remaining quantity is also allocated automatically but dynamically." One and the same address can then be delivered to on a Monday by route 1 and on Tuesday by route 2, for example.

Thömmes' team has also simulated a complete dynamisation, in which not only the remaining quantity but each address is approached on different days by different routes. "However, automatic route planning purely by means of an algorithm has led to planning that is far removed from practice. For example, if there were a relatively large number of consignees with small-volume consignments, the vehicle capacity was not fully utilised; if there were a relatively large number of consignees with large-volume consignments, vehicles would have been overloaded."

The two-stage bubble scheduling, on the other hand, combines the fixed framework necessary for reliable sorting and delivery with flexible optimisation of delivery routes. "But what sounds

so relatively simple is linked to considerable technical and practical process changes on site. Because we had to find completely new ways in which we could eliminate several bottleneck factors."

but nevertheless a 100 % correct localisation in the geo grid system, which is a prerequisite for optimal dispatching, is not possible for all items due to the data situation."

Missing address data or poor address quality prevent optimisation

First, there is the quality of the consignee addresses. "Unfortunately, still not 100 % of all consignors send us the delivery addresses electronically in advance or the addresses contain errors." One problem, for example, is different spellings of consignee names. Erwin Meier is sometimes referred to as Meyer, Maier or even Mair. "Our address checks now correct most of the errors,

On the other hand, the legally prescribed working time of drivers is the decisive bottleneck factor for further optimisation of delivery routes. "Since the working time cannot be extended, the drivers are to be relieved as much as possible in future from all tasks that previously had to be performed in addition to delivery." This applies in particular to the pre-sorting of the consignments of a route. This will be done by sorting staff in the future. They scan the consignments intended for a vehicle and are then shown a specific sector in front of a loading gate on their hand-

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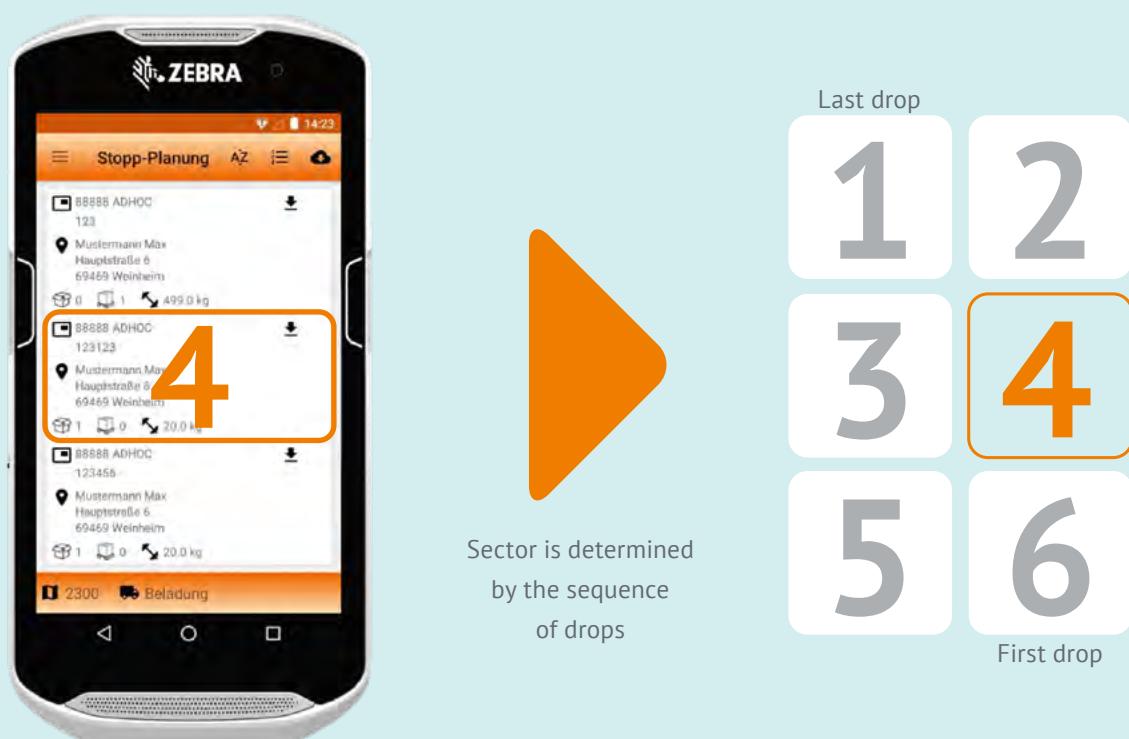


held device, to which they have to assign the package. The respective sector in the warehouse corresponds to the area in the vehicle into which the driver then only has to sort the respective package later. The sector is automatically determined from the sequence of drops calculated by the system.

If all the consignment data is clear, the drivers will be able to complete the dispatch themselves and drive off. This means that they either have all the data required for consignment documentation on their handheld device or receive it in paper form automatically from a printer in the warehouse (e.g. for hazardous goods consignments). In any case, the handheld device guides each driver through the individual process

steps as soon as they have registered with their name, vehicle and route number. Thömmes: "All this will give the drivers an extra hour or two for the actual delivery."

In the old system, they often could not use this newly available time at all, because they had already delivered all consignments before the end of their working hours. "For such cases, we have incorporated an additional level of flexibility in the delivery organisation," reveals Thömmes. In future there will be vehicles with a new function. These shuttles will exchange consignments with delivery vehicles that are already on route. On the one hand, the shuttles supply the delivery vehicles with consignments for additional drops, but



they can also take back consignments to the logistics centre that the drivers have already collected from consignors or were unable to deliver. "This has three advantages: 1. A delivery driver can leave on time even if not all consignments for his route have arrived at the transhipment centre due to a disruption in regular service. 2. Not all delivery vehicles have to return to the depot in the evening. 3. Optimum use is made of the drivers' working time."

Pre-sorting relieves drivers

The future pre-sorting of consignments for the delivery vehicles at the trans-o-flex transhipment centres is digitally controlled. The loading space of each vehicle is divided into sectors based on the sequence of drops. In the example on the left, the last consignments to be delivered are in sector 1, the consignments for the first drops in sector 6. The Zebra handheld device shows the pre-sorters in which sector they have to place a package.



Additional security and transparency

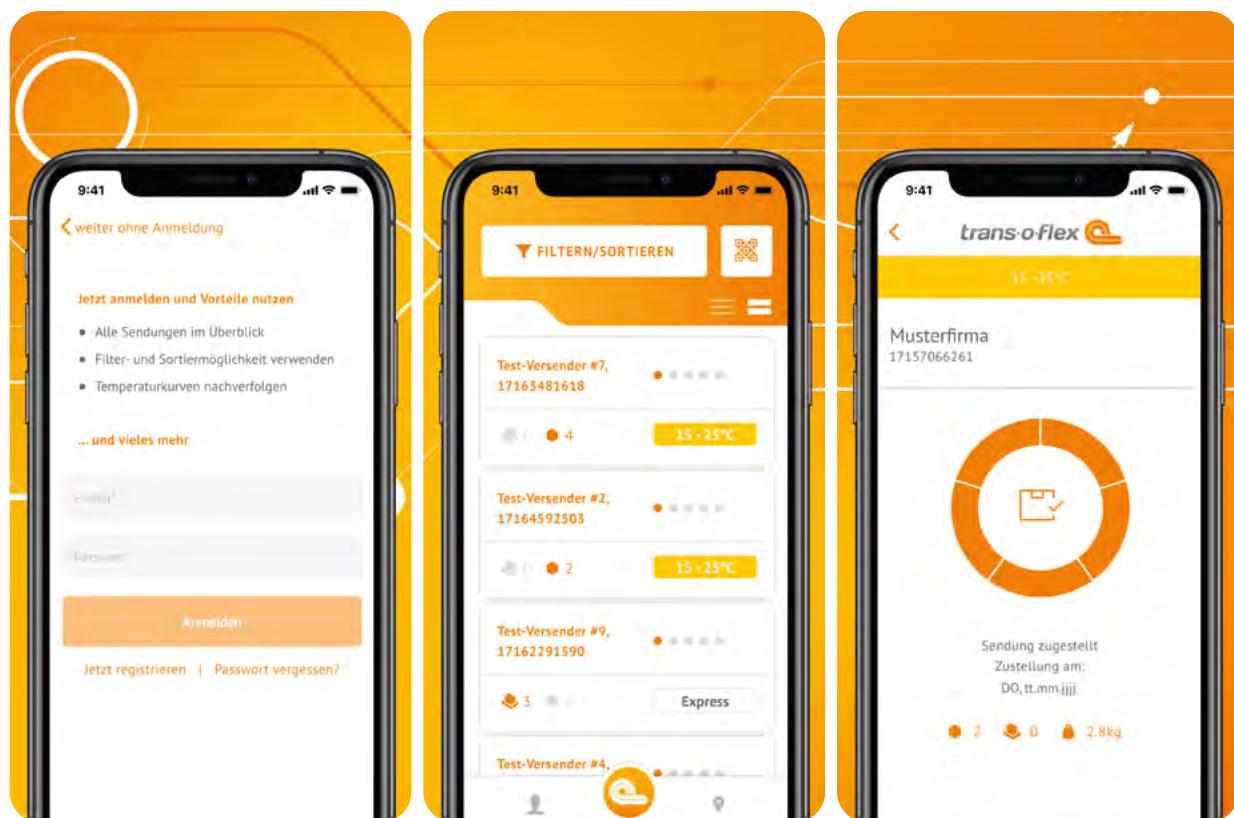
By digitally assigning each consignment to a geographical location, drivers will in future be automatically guided from drop to drop by a navigation system in their handheld device. At the same time, this system prevents a consignment from not being delivered to the intended location. "The driver can only activate a drop if he is within a certain radius of the exact consignee address."

The drop sequence specified by the system allows the driver's arrival time to be predicted with an accuracy of up to 15 minutes, not least on the day of delivery. "If required, we can also make this information available to consignors or consignees." And because it is a self-learning system, data such as delivery time and delivery location can also be linked for future deliveries. "The aim is to be able to make a prediction as early as when a consignment is dispatched as to the timeslot in which a driver will be at a particular address." ■

CONSIGNEES GIVE TIPS

trans-o-flex insight significantly improved

App now runs on all end devices – easier access – additional service for consignors: consignee-specific deep links



Since February, the trans-o-flex insight receiver app not only features a new design that makes it easier to use, but also offers numerous improvements. This was triggered by feedback from users that trans-o-flex had not even considered when developing the app.

There was little feedback from the originally intended target group of business consignees, who regularly receive a large number of consignments via trans-o-flex. Numerous private con-

signees, on the other hand, who wanted to use the app primarily for tracking and tracing, have provided valuable information that trans-o-flex has used to improve the service. As a result, the number of app users quadrupled in the first four weeks after the switch.

“In fact, the registration was previously too complex,” says Tatjana Schröder, Manager for Artificial Intelligence at trans-o-flex. Those who wanted to become users had to scan a trans-o-flex

package and activate the tracking service in order to then activate the service. Packages, which were delivered with ThermoMed, had to be activated separately. These scans had to be repeated about every three months for both networks. “This is very secure, but was too complicated for many consignees.”

The trans-o-flex-IT has therefore developed a new registration process. Users now neither have to activate the tracking service nor scan a package. In-

stead, they can register by entering their address and verifying the address online with a number (TAN), which they receive in a letter sent by post to that address.

After the one-time registration, users can log in with their e-mail address and a personal password to use all services of the app. The app then informs a consignee not only that a consignment is on its way to them, but also how many packages it contains, who they come from, whether they contain dangerous goods packages or actively temperature-controlled packages.

However, as many consignees seem to only want to know when they will receive a certain delivery, trans-o-flex has also released a light version of the app. "If, for example, someone receives consignments from trans-o-flex only sporadically and does not want to use the consignment tracking on the homepage, they can now download the app and use it simply for tracking consignments, even without registering," says Schröder.

Registered consignees can now also see the temperature history of an ambient or refrigerated package immediately. Up to now, the QR code of the package had to be scanned. The originally separate versions of the app – one for smartphone or tablet and one for PC – have now been merged into one version and can be used on all end devices.

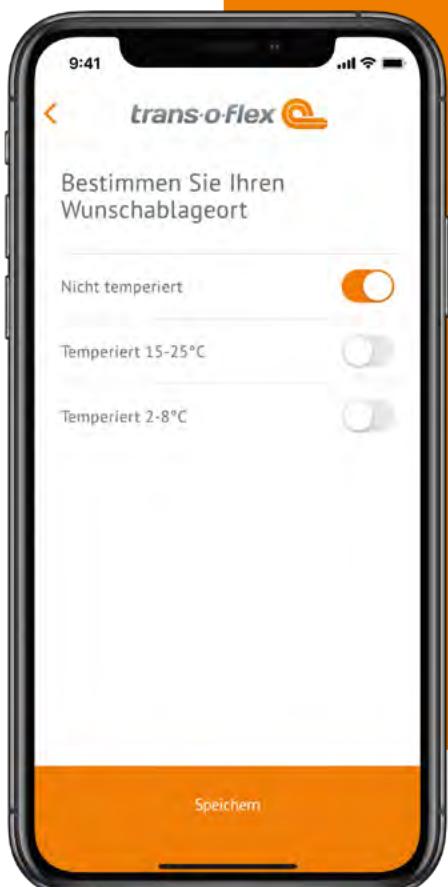
Even now, the changes have not only made it easier to use the app, but have also created completely new ways of using it. For example, consignors can send their consignees a PIN (personal identification number) via the app, which they can use to receive a trans-o-flex consignment in the Ident Service.

Finally, trans-o-flex provides consignors with an additional service via the app: consignee-specific deep links. These are links that lead a consignee directly to the consignment tracking in the app. ■

Set up delivery arrangements easily via app

A completely new feature planned for the consignee app trans-o-flex insight (still in progress at the time of going to press) will allow delivery arrangements to be issued digitally via the app. This enables a consignee to determine online for which product specifications (non-temperature-controlled, 15–25 °C or 2–8 °C) and from which consignors goods can be dropped off at a pre-arranged location. The system automatically shows the consignee whether a consignor allows delivery arrangements. When delivering, the trans-o-flex system detects whether an existing delivery arrangement can also be used for consignments from other consignors.

If a delivery agreement is in place, consignments can be delivered even if a consignee is not at home. However, this acceleration and simplification of delivery is subject to the explicit, prior consent of the consignors. A form for this will be automatically sent to all customers shortly with the relevant information. It will later be available for download on the trans-o-flex homepage. Anyone wishing to offer their consignees the delivery arrangement service should complete the delivery arrangement form as quickly as possible and return it to trans-o-flex.



**ARCHIVE-PROOF PDF FILES**

How quickly will the age of the paper invoice come to an end?

Electronic invoices are sustainable and make life easier for consignees because they are easier, safer and faster to process and archive

Every second trans-o-flex customer already uses the advantages of electronic invoicing. With its own digitisation project, the Finance division has ensured that the choice for customers and thus the advantages of electronic invoicing have now be-

come even greater. "We assume that, in the medium term, no customer will want to have a paper invoice anymore," says Jürgen Reul, head of the customer billing department at trans-o-flex.

Although 50 % of all customers now only want electronic invoices, the logistics service provider currently still sends 15,000 invoices including enclosures on paper every month. This requires an average of 100,000 A4 sheets to be printed on both sides. "This is not only several thousand euros in printing and postage costs every month, but it is also a disaster from an environmental point of view," says Reul. "And what's more, an electronic invoice is also much easier and cheaper to process and archive for the recipient."

For Reul, it is obvious that electronic invoices can be processed much faster and forwarded more securely by the recipient with less effort. "No envelope has to be slit open anymore, no messenger has to carry paper through the office, no coffee cup that is knocked over makes an invoice unreadable. Documents simply fly from one electronic mailbox to another in seconds."

Archiving electronic files is also easier and more secure today than paper. "Like paper invoices, electronic invoices must be stored for ten years as proof," explains Reul. "But while archiving paper takes up a lot of space and there is no longer any evidence in the event of a fire, today even huge amounts of data fit onto small hard disks, which are also usually mirrored at another location and whose contents are therefore also available after a fire or other disaster."

With trans-o-flex, customers can choose the format in which they would like to receive the electronic invoice in line with their IT systems. "There is still the well-known PDF file, which virtually takes a picture of a page," says Reul. This is considered to be completely tamper-proof, because the data cannot simply be read in and changed automatically. "However, these files can also be read in by machine using OCR software, i.e. automatic text recognition."

Automatic recognition without OCR software

However, this is easier for files in the newer PDF/A format. On the one hand, the A stands for automatic recognition, which also works without OCR software. In addition, the A stands for archive. This is because PDF/A is a format that was developed specifically for the long-term archiving of digital documents and has proven itself over the past 15 years. The format is based on the ISO 19005 standard from 2005. Reul: "Thanks to our digitisation project, our systems can now offer all popular PDF formats."

And the project has produced another advantage: Up to now, the attachments to the invoices, which, for example, show exactly how many parcels were transported with what weight, could only be sent in csv format. "However, this exportable Excel format is prone

to errors. We have therefore decided to also offer the attachments in XML format." XML has established itself as the new standard for writing, storing and exchanging data online. The text-based format can be read by humans and machines and is compatible with all common devices and operating systems.

"As a customer, if you would like to change over, you basically only have to do one thing," says Reul. "You have to give your consent in writing to electronic invoicing." To make this as easy as possible for customers, trans-o-flex has set up the e-mail address abrechnung@tof.de. "If you e-mail this address and simply enter the keyword "e-invoicing" as the subject, you will promptly receive a form with which you can consent to the switch to electronic invoices and select the format in which you wish to receive the invoices." ■

OPERATIONS START ON SCHEDULE

New site in Hamm-Rhynern: In two minutes to the finished logistics centre

From the installation of the first precast concrete elements to the finished outdoor facilities and car parks, it actually takes only two minutes. The entire new trans-o-flex logistics centre is then standing in Hamm-Rhynern, Westphalia. The trick is that it only goes that fast in the video. It consists of several thousand pictures, which were taken by a construction site camera always from the same perspective and are played back in fast motion. They document the construction progress like in grandpa's good old flip book. The observer sees how the entire logistics centre is being built at a rapid pace. The pictures shown on this page are from the construction site camera. If you want to watch the whole time lapse, you have two options: either scan the QR Code shown on this page with a smartphone or enter the following short link into an internet browser: <https://bit.ly/2uVgEdI>. In both cases the film will then be shown automatically.

Operations at the new site are expected to start at the end of April this year. "We are right on schedule," says trans-o-flex CEO Wolfgang P. Albeck. "The plans for the move from the current site in Dortmund to Hamm-Rhynern are also already in place."

Start 00:00

July 2019



00:10



September 2019

00:35



The whole video:
<https://bit.ly/2uVgEdI>



1:05

November 2019



1:37

Hamm-Rhynern at a glance

Here are the key data of the logistics centre with which trans-o-flex will increase quality, capacity and productivity and reduce its carbon footprint:

Size:

- 33,000 square metres of land
- 8,000 square metres transhipment building

Synergies:

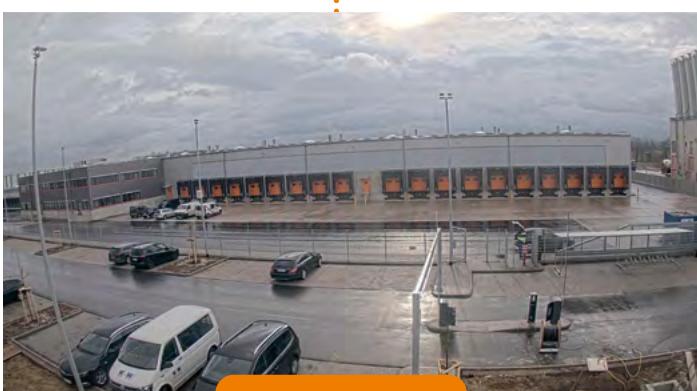
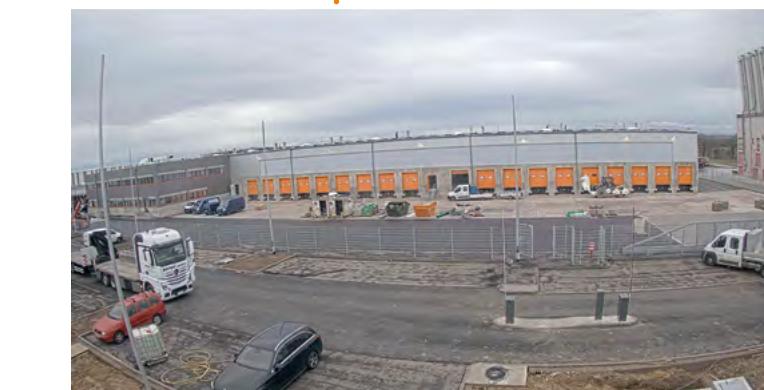
- One facility for two networks and temperature ranges (2–8 °C and 15–25 °C)

Sustainability:

- Building roof with photovoltaic system for power generation
- High thermal insulation
- LED lighting technology
- Special rainwater retention
- Minimised land use thanks to Y-architecture (more loading and unloading gates for the same building area)

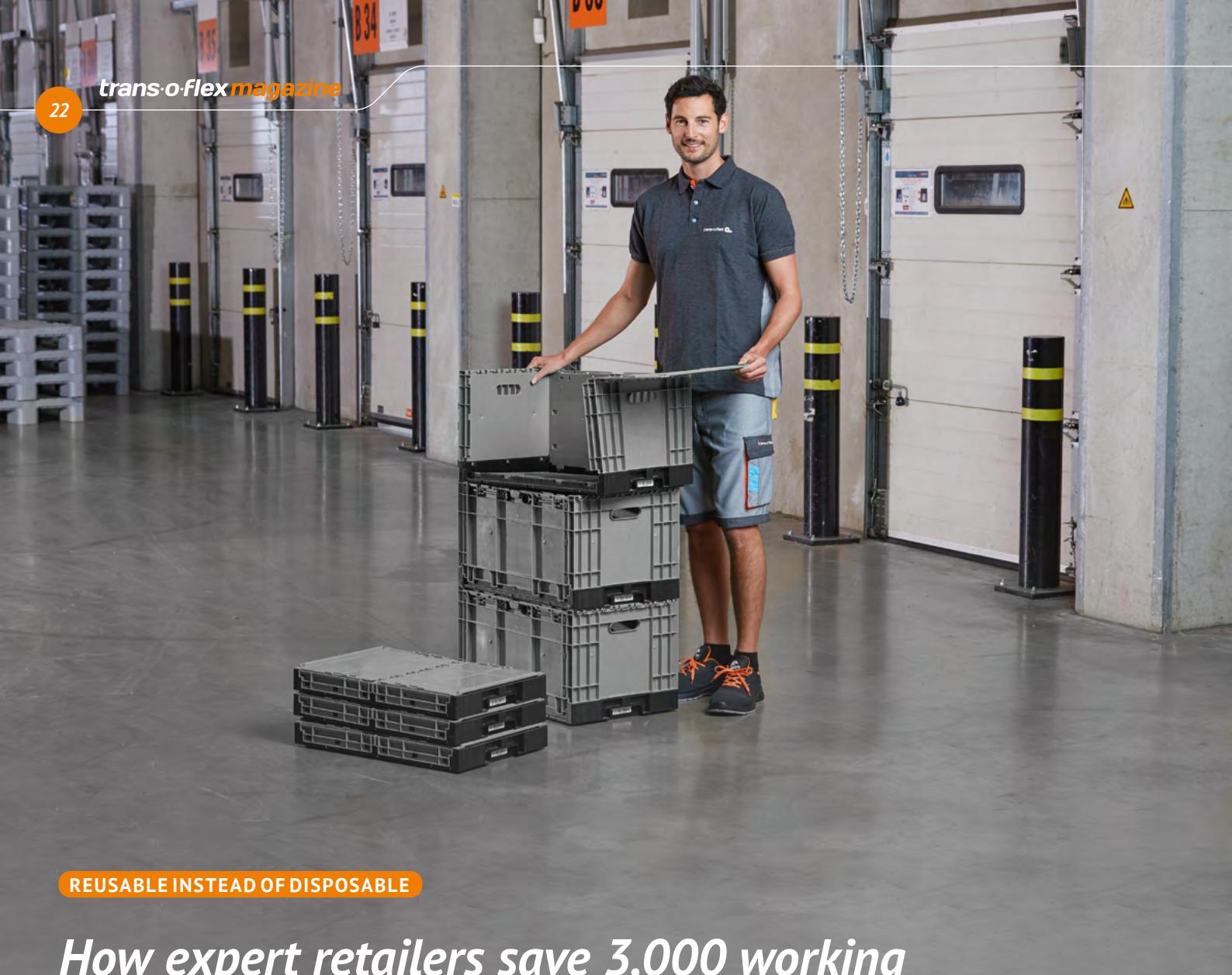
Investment:

- 17 million euros



February 2020

End 2:00

**REUSABLE INSTEAD OF DISPOSABLE**

How expert retailers save 3,000 working days every year with trans-o-flex

700,000 fewer shipping cartons per year: Switching to newly developed reusable containers protects the environment, reduces damage to goods and speeds up goods delivery – logistics solution available exclusively for trans-o-flex customers

After an eight-month pilot project, in which 22,000 containers with OEM goods were delivered to 38 specialist stores across Germany, the decision was made quickly and decisively: The electronics retail group expert is abandoning shipping cartons and switching to the reusable shipping solution that was developed and tested together with trans-o-flex's Expressdienst delivery service (see customer magazine spring 2019). Since the beginning of this year, no more goods have been packed in disposable cartons at the expert central warehouse in Langenhagen. Instead, the company only uses reusable containers for shipping to the 410 retail outlets and specialist stores throughout Germany.

“The changeover is part of our logistics sustainability strategy and a further step towards environmentally friendly delivery to our sites,” says Edwin ten Voorde, Logistics Director at expert. “In addition, we can significantly reduce damage and losses in the transport of goods as well as speed up and simplify the receipt of goods at our specialist retailers.” By switching to reusable containers, expert will no longer be sending around 700,000 parcels a year in disposable cartons. Cardboard packaging is only used for shipping if it is an original box suitable for shipping, such as televisions or automatic coffee machines, which do not need to be repackaged in this way.

How the system works

The employees in the expert central warehouse pack goods for the specialist stores exclusively in two reusable transport containers of different sizes. One measures 60 x 40 x 40 cm and weighs 4.1 kg, the other measures 30 x 40 x 25 cm and weighs 1.67 kg. Double strapped and sealed, trans-o-flex delivers the containers exclusively to the retailers. For the return journey the containers are folded down. They are then only 7.5 or 6.5 cm high. Folded down and set up, the containers form fixed stacks, with two small containers each fitting exactly onto one large one. For return shipment, 100 large containers or 200 small containers fit on one Euro pallet. trans-o-flex drivers take empty containers with them every time they deliver to an expert store and confirm the number and size electronically on their handheld device. In general, trans-o-flex scans every liability transfer of a container. In this way it is recorded exactly how long and where how many boxes are located and the costs can be allocated according to the responsible party.



What happens if the orders in the central warehouse are no longer delivered to the stores in shipping cartons but in two reusable containers of different sizes? This was the key question of the pilot test, in which almost ten percent of all German expert warehouses took part. The result of the subsequent survey of the participating stores: The overall concept, practicability, quality and handling were all rated "very good". In addition to the environmental friendliness of the new solution, the main reason for switching to reusable containers was the increased quality of the delivery.

Compared to shipping in cardboard packaging, expert was able to demonstrate during the test phase that the number of goods damaged decreased by 74.2 %, based on the reusable containers in use. Over the entire analysis period there were only 14 damaged items in the reusable containers. expert also determined that each branch saves significantly on working time by switching to the reusable containers. The reason for this is that taking delivery, the preparation for selling as well

as the disposal of the cardboard packaging is quicker or no longer necessary. Every year, expert saves almost 3,000 working days – based on an 8-hour day.

Reusable containers are marketed exclusively by trans-o-flex

"trans-o-flex will be offering the reusable solution exclusively in the coming years", explains company boss Wolfgang P. Albeck. "We believe that we can convince other companies with this, too." expert uses two different sizes of reusable containers (see box). They were developed by the Schoeller Group, one of the shareholders of trans-o-flex, to cater specifically to the needs of shipping sensitive and high-quality items. Albeck: "Other container sizes are also possible, depending on requirements." ■

RETURNABLE TRANSPORT PACKAGING

Schoeller: Lower process costs and better carbon footprint

From this year, the electronics retail group expert has been packaging orders from its retailers at its central warehouse exclusively in foldable reusable transport containers. The new system for shipping to specialist stores was jointly developed last year by trans-o-flex and the Schoeller Group, one of the shareholders of trans-o-flex. In an interview, Christoph Schoeller, Managing Director of the Schoeller Group explains why the system is particularly suitable for trans-o-flex customers and what effects it has on the carbon footprint and process costs.

Can we talk about a trend towards reusable transport containers in logistics?

Absolutely! The trend towards reusable packaging – especially in the system sector – is picking up pace. Among other things, this is due to the intense public debate on climate change and the increasingly common packaging waste generated by one-way shipping solutions for consumers.

But is the carbon footprint of your reusable transport containers really better compared to disposable boxes?

There are countless studies on the subject of life cycle assessment, and we ourselves have already initiated a number of them because we wanted to have our systems examined by a neutral party. The results were always similar. Reusable packaging in

an efficient exchange pool is far superior to disposable packaging in terms of the carbon footprint. What a lot of people don't know: cardboard boxes in particular use up vast amounts of water. And in the case of disposable packaging, you also have to consider the route from the felled tree to the paper mill with all the intermediate trips before ending up as cardboard waste and finally again the entire collection logistics through to the recycling factory.

In a recent study, Fraunhofer scientists compared the carbon footprint of disposable transport packaging made of cardboard with foldable reusable plastic containers at Aldi Süd for 2017. The result was that the use of reusable transport packaging for fruit and vegetables not only saved a good 30,000 tonnes of cardboard packaging in one year,



but also more than 24,000 tonnes of CO₂ equivalents in total. Editor's note: Information on the study (in German only) is available at <https://bit.ly/2OQFpOL>.

Is it enough that the carbon footprint of the reusable system is better than that of disposable cardboard packaging, or do such systems need to provide other benefits for shippers to switch?

It doesn't all have to be down to the carbon footprint. The fact is that our reusable containers have simply been waste-free packaging for years. And even after that we can make granules out of them again and in turn make new containers out of these.

In addition, reusable packaging also offers relevant cost savings if the entire process costs are included. It is easy for logisticians to intuitively understand that a technically clearly defined, modular stackable reusable packaging system provides higher product protection, a lower theft rate, higher automation, lower shelf storage costs or even cheaper outer packaging.

In the fruit and vegetable sector, the food retail trade, which calculates to tenths of a cent, has improved product protection worldwide and reduced logistics costs thanks to the IFCO folding system. Currently, IFCO crates replace 1.4 billion one-way packages per year, and the system is growing worldwide with 100 million additional round trips per year.

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For Christoph Schoeller, trans-o-flex offers ideal conditions for high circulation rates, an excellent carbon footprint and low process costs of reusable transport containers. The reason: "trans-o-flex Express delivers 97 % of its consignments to addresses that receive deliveries at least once a week."

For which companies among trans-o-flex's customers are the reusable containers suitable?

Particularly with trans-o-flex, a reusable system is efficient for a large proportion of customers. This is because the problem in the parcel business is usually that it is not possible to return reusable crates by truck as in the beverage industry, but only individual crates per delivery location. However, trans-o-flex delivers 97 % of its consignments to delivery addresses that are visited at least once a week. This is the prerequisite for a high circulation of reusable crates. This in turn is the prerequisite for low costs and a good carbon footprint.

Do you expect more customers to take advantage of this offer?

There is at least a keen interest amongst trans-o-flex customers in the system we use at expert. We cannot influence how quickly these customers are prepared to adapt their systems to waste-free reusable packaging.

Are there countries where such systems are more widespread than in Germany?

Yes, in Switzerland, for example, almost 100 % of goods in the fruit and vegetable sector are transported in reusable containers. In Denmark, supermarkets have a whole system of over a dozen

different crates with which they pack, store and move their goods. This is designed as an end-to-end system between suppliers, central warehouses and branches.

Where do you see particular potential in Germany?

The pharmaceutical wholesale trade uses its own reusable systems. If a cross-industry system can be established, then the commercial benefit for all system participants will be greatest. Because then there are high circulation figures, advantages from standardisation, automation possibilities, simplification of return etc.

In addition to the reusable containers, trans-o-flex now uses plastic pallets from your company in long-distance transport, which have replaced wooden Euro pallets. Are there any further plans to optimise logistics processes with environmentally friendly transport systems?

Yes. In logistics, reusable systems can perform additional physical functions such as stabilisation, load transfer and other tasks. Among other things, this can further improve the utilisation of the shipping capacities between the depots. ■



++ COOLING QUIETLY AND CLEANLY ++

Cool trailers get electricity almost directly from the sun

This example should serve as a benchmark! To ensure that trailers waiting for a temperature-controlled load no longer consume diesel and cool more quietly, the trailers of trans-o-flex customer Loxxess Pharma are now temperature-controlled with solar power. The electricity comes directly from the solar system on the roof of the depot.

Background: Every day, six trailers are parked at Loxxess Pharma to take pharmaceuticals. Before the goods can be loaded into the trailers, the loading space of the trailer must have a temperature within the specified range of 15 to 25 degrees (Ambient Express) or 2 to 8 degrees Celsius (Thermo Express). Especially in winter and summer, the trailer units often run at full power to raise or lower the temperature. However, if the trailers are pre-cooled with electricity, the refrigeration units operate much more quietly. In addition, it saves diesel and reduces pollutant emissions.

Thanks to the photovoltaic system on the roof of the logistics centre, the solution was quickly found: in consultation with Loxxess Pharma, trans-o-flex procured the 380-volt cables required to supply the thermoelectric generators,



Key Account Manager Hans-Peter Wortmann hands over special cables to Loxxess Pharma Managing Director Helmut Müller-Neumayr, with which waiting trailers can be connected to the solar system on the roof.

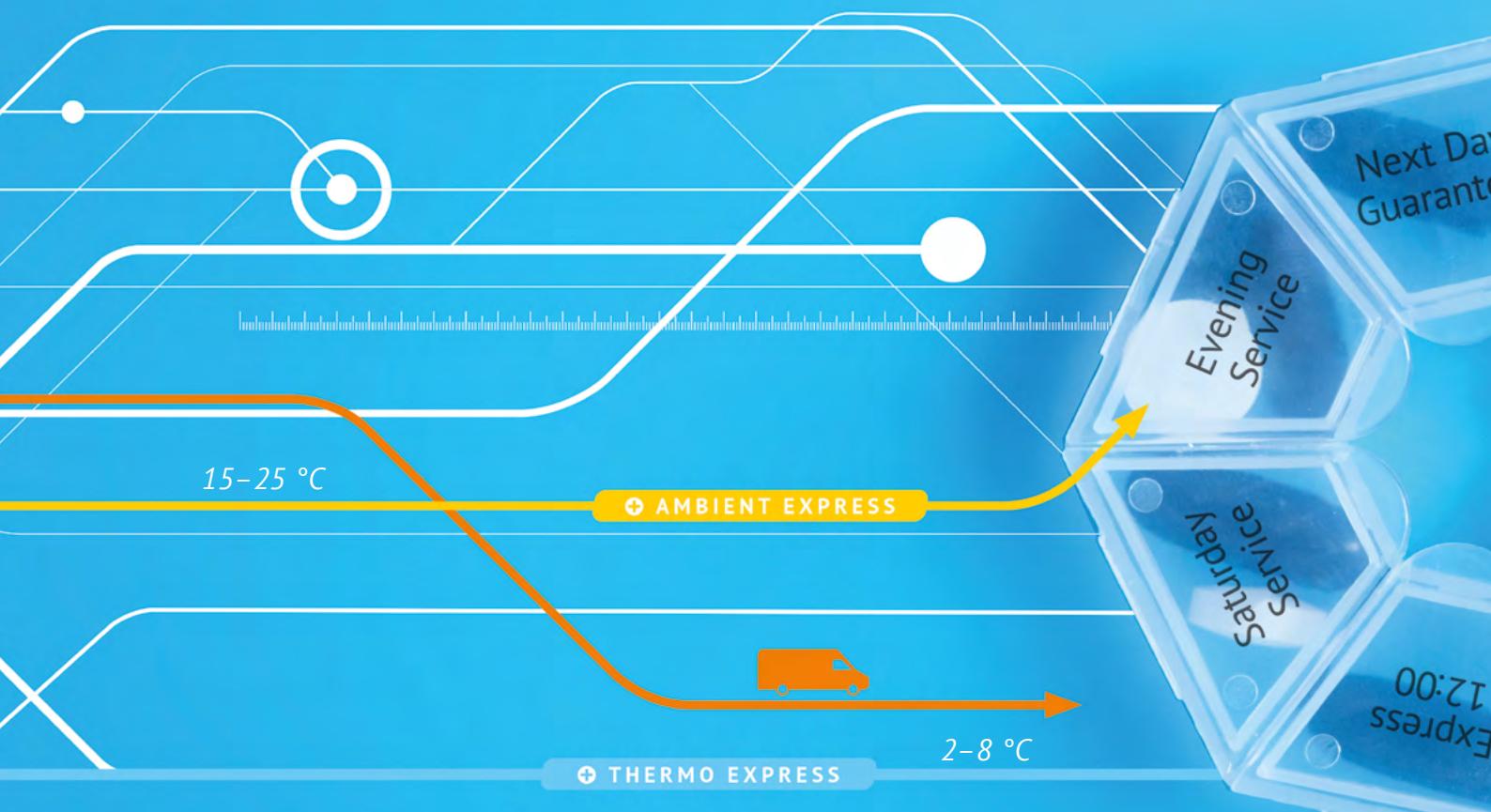
which allow the trailers at Loxxess Pharma to be temperature-controlled using the electricity from the photovoltaic system. At both Loxxess Pharma sites, in Geretsried and Neutraubling, the waiting trailers have now been almost directly connected to the sun since November 2019.

Customers who have similar options are welcome to get in touch with their contact person at trans-o-flex.



Six trans-o-flex trailers are loaded every day at Loxxess Pharma. Now they are pre-cooled with green electricity. The diesel generator stays off, makes no noise and produces no exhaust gases.

The right service for all requirements



With our 10 express services we offer a wide range of solutions for time-critical deliveries. This way you can ensure that your delivery is guaranteed to arrive the next day – even by a specific time (8:00, 9:00, 10:00 or 12:00). Our express services can be combined with numerous other services – such as temperature-controlled shipments for temperature-sensitive goods in the range 2 °C to 8 °C and 15 °C to 25 °C.