

Freight Connections



THE CUSTOMER MAGAZINE OF DHL FREIGHT

FRUIT IMPORT
A mature process

MARKET RESEARCH
DHL is leading in logistics

DRIVETRAIN TECHNOLOGY
Are e-trucks the future?



ALPINE TRANSIT **KEEPING THEM ROLLING**

Changes logistics specialists will have to expect

ISSUE 2/2018

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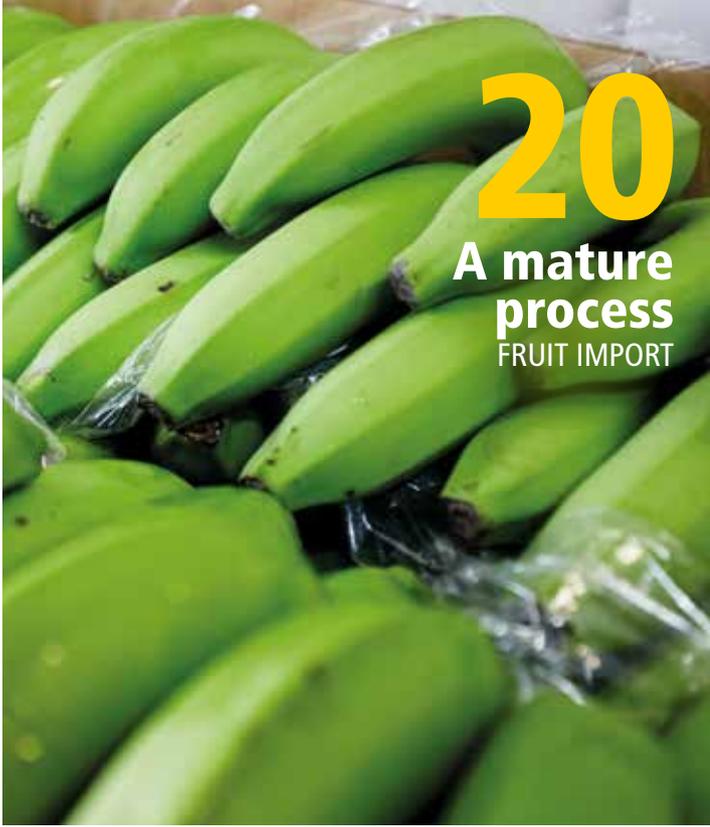
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IMPRINT

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A mature process
FRUIT IMPORT



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MANAGEMENT MESSAGE



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Leading in logistics
MARKET RESEARCH



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Logistics knowledge
THE BEST UNIVERSITIES



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Are e-trucks the future?
ALTERNATIVE DRIVETRAINS

STRONG NETWORK

Continually increasing freight volumes are a challenge for logistic experts in Europe. DHL Freight is already setting the operational switches to meet the challenges of tomorrow in terms of organization, infrastructure, and personnel.

The economy in Europe is growing and continuing to generate an increasing number of orders and transport volumes for road freight companies. That, of course, is good news but a real challenge from the operational point of view. Because we want to offer you, our customers, the highest quality now and in the future. That is why we are working hard to ensure that our network and our products are fit for the future in all crucial areas. This starts with building activities to expand capacity, continues with product development and adaptation, and of course also includes digitization.

NEW HUBS

Vienna into service, strengthening our European network of strategic hubs. In Hanover, for example, our employees will in future be handling shipments from our Euroconnect and Eurapid services on 8,300 square meters of floor space. Here, in the "Terminal of the future," we are also testing innovative solutions and technologies such as intelligent forklift trucks and a central control center. The place of location also plays an important role in DHL Freight's Euronet full load service.

In Fischamend, the DHL Campus Vienna Airport is being built in the immediate vicinity of Vienna International Airport. The joint cargo hub of DHL Global Forwarding and DHL Freight optimizes the transition between air, sea, and land freight and also strengthens the connection to Eastern Europe. In addition to these flagship projects, we are constantly examining at which hubs of our network we have to respond to future needs by means of construction measures. Furthermore, our current terminal certification program helps to identify further standardization potentials to increase the capabilities of our network. The best terminals will receive bronze, silver, and gold plaques at the end of the year.

Investments in our network will ensure the highest service quality for you in the years to come. This is how we will keep our promises in the future, as we have already done with the relaunch of Eurapid. The resumption of our premium groupage service started with the goal of delivering 95 percent of all shipments to their destination on time. And we will meet this quota. For the near future, we plan to add something similar to our Euroconnect groupage network with the introduction of a Requested Delivery Day. You will then be able to prearrange in advance certain days in which your freight has to arrive at its destination. We guarantee this target dates through appropriate processes and the necessary IT support.

WELL PREPARED

Changes in the political landscape are one of the constant factors influencing the logistics business. In this respect, the upcoming Brexit may bring substantial changes in European road freight transport, but with good preparation it's absolutely manageable. In proven cooperation with Gerlach Customs Services, we'll assist you through help and advice with all queries regarding cross-border traffic. In order to give our back office as well as your employees more time to address these more fundamental issues, we are working even harder on the automation of order processing. Thus, with the widespread introduction of e-billing, we are taking a major step towards paperless logistics. This way we can devote ourselves to our actual core business in the future: efficient and customer-oriented logistics and transport solutions for your freight.

Sincerely,
Dr. Thomas Vogel,
Chief Operations Officer (COO) DHL Freight



STATISTIC OF THE MONTH

BRAND-NEW FOR THE ROAD

HGVs of 6 tons vehicle gross weight and above sold in 2017:

3

3 MIL.

ALPINE TRANSIT **KEEPING THEM ROLLING**

The Alps are the most accessible high mountain range worldwide. Nevertheless, there is a persistent risk of a gridlock.



The future of Alpine transit is still under discussion. One thing is certain: There will be fewer heavy goods vehicles on the road. This is the major planning criteria of logistics experts. "We support a stronger linkage of truck and rail traffic, especially on highly frequented and thus overloaded routes," says Robert Ziegler, COO Non-Terminal Based Operations & Value Added Services DHL Freight. "We are also looking at new transport options and trying to integrate them into our offering in a timely manner."

Using Switzerland as an example, the important contribution made by the transition from road to rail with regard to a better distribution of heavy goods traffic becomes evident. Since 2010, road transit there has dropped by 21 percent. The rail transport quota, on the other hand, has risen to more than 71 percent. This is made possible, among other things, by new large railway tunnels instigated by Switzerland, some already operational, some still under construction. At the Austrian-Italian Brenner on the other hand, the rail transport quota is still at 29 percent. But a railway tunnel is under construction at this important mountain pass as well. The Brenner Base Tunnel is expected to finish in 2026.

CONTENTIOUS TRAFFIC PLANNING

Construction activities are a step forward, but that alone will not be enough to reduce the problems caused by the heavy Alpine transit traffic. For future-proof transport planning, neighboring countries as well as many citizens' action committees have been discussing for years now provisions that are primarily aimed at controlling and reducing road traffic. The envisaged reductions are drastic at times: For example, Tirol is considering halving transit through the Brenner Pass by 2030, with a limit of one million trucks per year. For comparison: In 2017, the counting station in Schönberg registered 2.25 million trucks, an increase of eight percent over the previous year.

Since many concepts take time due to the need for international agreements, regions are also resorting to emergency measures that have immediate effects. This includes, for example, convoy controls – a controversial remedy with side effects. At the end of 2017, there were long traffic jams on Bavaria's highways when only 300 trucks per hour were allowed to cross the German-Austrian border on the A 93 outside Kufstein. In addition,

convoy controls are contrary to the EU principle of the free movement of goods. Starting in July 2018, the next stage of the sectoral driving ban for the Inn Valley motorway will also come into force. Then Euro 6 category trucks with certain goods such as waste, stone, earth, ores, or motor vehicles will no longer be permitted to travel through Tyrol. Until now, Euro 6 trucks were excluded from the driving ban.

HEAVY TRUCK TRAFFIC – A PROBLEM FOR THE ALPS

- Valleys and towns are turning into traffic routes
- Serious environmental pollution affects the population, fauna, and flora through noise and exhaust fumes, resulting in health risks and environmental damage
- Impervious surface coverage increases the occurrence of mudslides, avalanches, and floods
- Kilometers of tailbacks in case of closures or convoy controls
- Damage to economic sectors such as tourism or agriculture

Even with the toll and road tax disc system, experts on traffic want to have even tools to steer the transport volume. In order to avoid a higher toll in one country from shifting traffic to the others, the idea of a corridor toll has arisen. This is a uniform toll for a transit route. In early 2018, the regions of Tyrol, South Tyrol, and Trentino already professed to coordinated tolls between Munich and Verona. As an instrument for shifting transports away from the roads, policies for stricter heavy traffic controls are also under consideration. Control criteria may be mass, weight, driving and rest periods, and vehicle condition. Likewise, a strictly enforced night driving ban may also act as a lever to reduce traffic.

INDISPENSABLE STANDARDS

While emergency measures, tolls, and controls pose many conflicts, the benefits of standards are hardly disputed. For example, experts expect more efficiency from a standardization of the technical systems for piggyback transport, i.e. the transport of trucks by rail. In addition, standardized container traffic render the need for truck drivers to travel on the train obsolete – which at the moment is →

ADDITIONAL

Switzerland Federal
Statistical Office,
Transalpine goods
transport



still necessary in the case of the “Rolling Highway (RoLa)”. The outlook towards more efficiency is also linked to the major tunnel projects. For example, the New Railway Link through the Alps (NRLA) in Switzerland includes the Ceneri Base Tunnel – expected to open in 2020 – as well as the base tunnels on the Gotthard and Lötschberg. Austria and Italy are building the Brenner Base Tunnel. However: The European cross-linking of these projects is currently far from optimal. For example, the building of access routes often gets stuck. In the Bavarian Inn Valley, among others, the exploration drillings for the northern access of the Brenner Base Tunnel have just begun. Critics expect that these routes won’t be available before 2040. In the Gotthard Base Tunnel, which is already in operation, productivity is not in line with expectations. The reasons include the route planning, which is coordinated very sluggish on the international level and the tedious linking of the railway systems. In addition, it is not possible for trains to operate with their most economical train length in all of the neighboring countries.

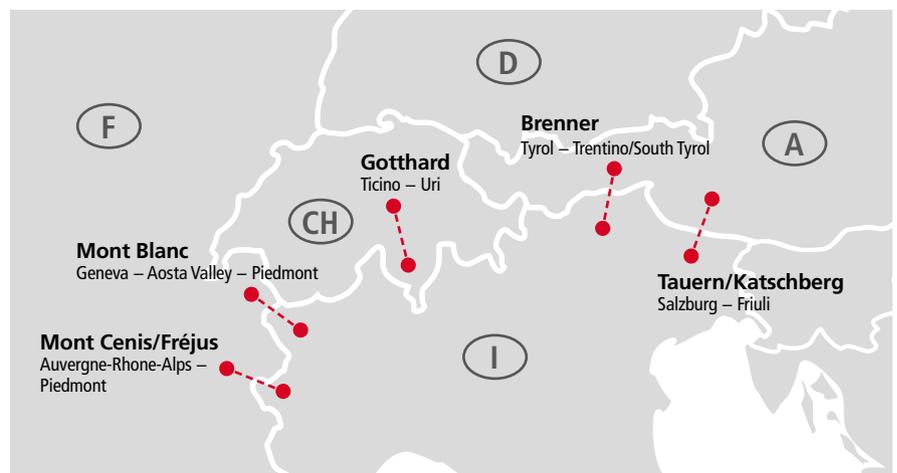
REGULATION VIA INTERNET

A completely new approach is the concept of an Alpine Crossing Exchange. It treats road transport of goods as a limited resource and sets a quantitative limit – for example, one million transits per year. The idea is to use the Internet to trade transit permits. Only with one of these it will then be possible to use a defined Alpine crossing. Therefore, the interaction of demand and supply dictates pricing. The upper price cap will presumably be set by the cost of transport by train. As EU politics are showing a cautious interest in an Alpine Crossing Exchange, including Switzerland, a corresponding adaptation of EU laws is to be expected.

Conclusion: The future of Alpine transit consists of a balancing act between the free movement of goods and environmental considerations. The truck as a means of transportation is clearly on the defensive and will be more heavily regulated.

JÜRGEN ESCHMEIER

MAJOR TRANSIT ROUTES THROUGH THE ALPS





LISTS OF THE BEST: LOGISTICS KNOWLEDGE

These universities with programs of study in logistics are the best worldwide.

Which universities have the cutting edge in conveying logistics know-how? For clarity, a look at the “Academic Ranking of World Universities” is sufficient: The Delft University of Technology, Netherlands, comes out right on top.

SONJA TERBRÜGGEN

TOPS WORLDWIDE

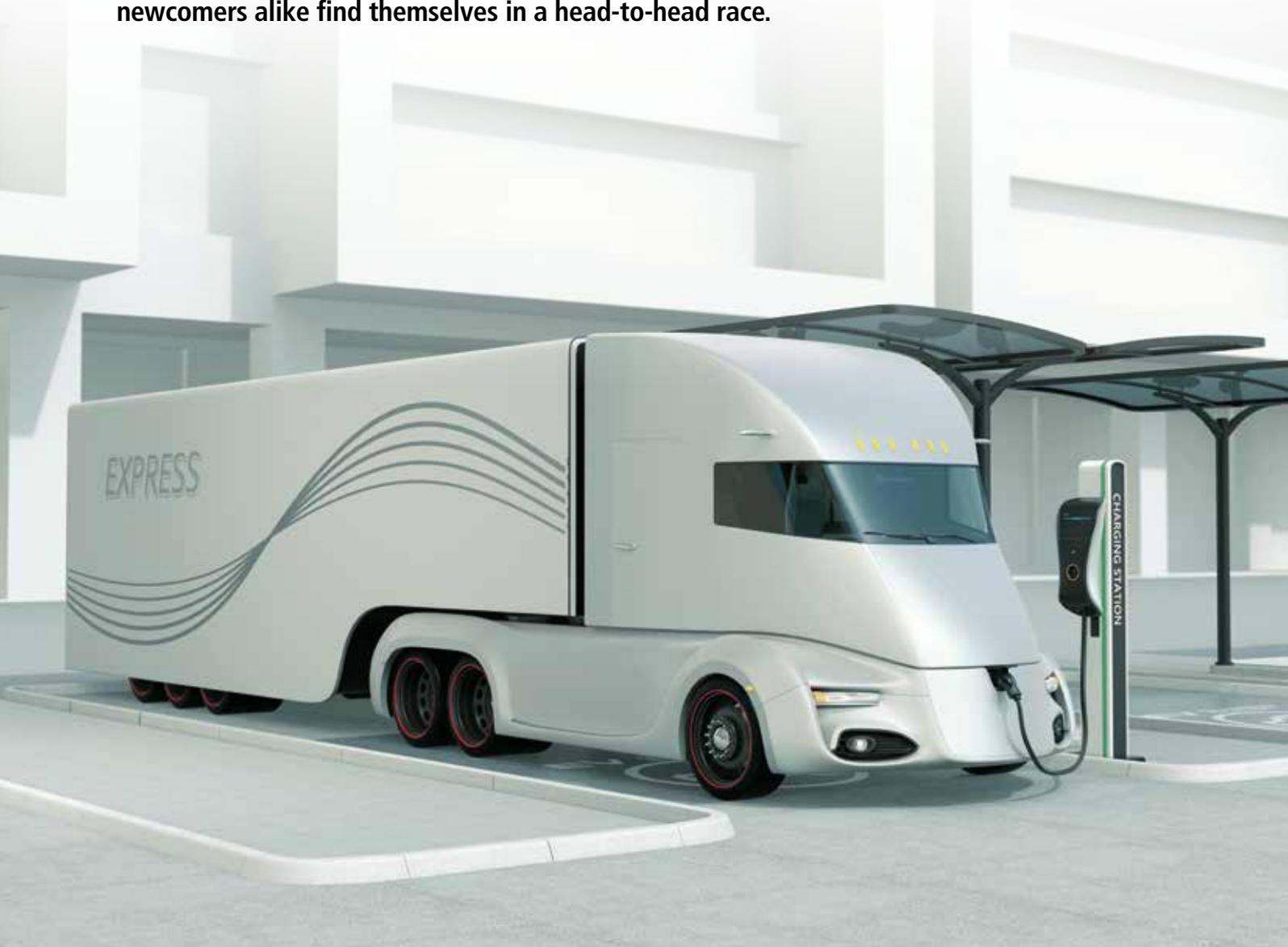
1. Delft University of Technology	Netherlands	(274.9)
2. Beijing Jiaotong University	China	(267.5)
3. University of California, Berkeley	USA	(265.5)
4. University of Leeds	United Kingdom	(245.6)
5. National University of Singapore	Singapore	(241.8)
6. The Hong Kong University of Science and Technology	China-Hong Kong	(237.4)
7. University of Sydney	Australia	(236.7)
8. The Hong Kong Polytechnic University	China-Hong Kong	(234.7)
9. The University of Texas at Austin	USA	(230.9)
10. MIT – Massachusetts Institute of Technology	USA	(228.7)

Source: Shanghai Jiao Tong University, “Academic Ranking of World Universities”, March 2018; total score in brackets

ALTERNATIVE DRIVETRAINS

ARE E-TRUCKS THE FUTURE?

More and more truck manufacturers are focusing on E-Drives. Established brands and newcomers alike find themselves in a head-to-head race.



At least since the diesel scandal, alternative drivetrains have been a major topic in the commercial vehicle sector as well as in the private sector. In addition to natural gas technologies and hydrogen drives, pure electric vehicles are now moving more into focus. Manufacturers are working under high pressure on the technology and efficiency of the solutions.

Daimler is currently working on several projects. The **FUSO eCanter** is the company's fully-electric lightweight. Since July 2017, the 7.5-ton vehicle has been produced in small series in Portugal and Japan. Daimler is planning a major rollout for 2019. DHL Freight took over two vehicles in mid-December and is now testing them for 24 months in and around Berlin. The focus: delivery to business and private customers in the city center.

The larger brother of the eCanter has a permissible gross vehicle weight of 23 tons. Starting in 2021, the **E-Fuso Vision One** will go into production in Japan, Europe, and the United States.

Third in the league is the **eActros**. The 26-ton vehicle is currently undergoing live testing in Germany and Switzerland. Ten customers are using the vehicles in real operations for twelve months, then the trucks will go to a second group of customers for another year. The goal: series production readiness by 2021.

EYE-CATCHER AND POWERHOUSES

The US company **Tesla** has already attracted an extensive amount of media attention with the **Semi**. The truck can transport around 36 tons of goods – the maximum for semi-trailers in the USA – up to 800 kilometers. DHL Supply Chain just ordered the E-Trucks for shuttle operations and for customer deliveries in major US cities. Delivery is scheduled for 2020.

The **MAN eTruck** is the logical evolution of the MAN Metropolis hybrid vehicle. In 2016, the company presented

its first fully electric semitrailer tractor, which is suitable, for example, for operations in urban nighttime delivery. This was followed by other E-Concept vehicles in the 18 to 26 tons' weight classes. In 2018, the MAN eTruck will undergo practical testing at nine partner companies.

In May 2018, **Volvo Trucks** for the first time presented an E-Truck for regional and city traffic at IFAT, the world's leading trade fair for water, sewage, waste, and raw materials management. It is expected to go on sale in Europe starting in 2019.

In 2019, **Renault Trucks** is also planning to start with the series production of purely electric-powered commercial vehicles. Over the past nine years, the company has tried out several test vehicles and prototypes in the 9 to 12-ton weight range under real-world conditions, gaining important insights into the battery technology, charging infrastructure, service, and maintenance needed for E-Trucks..

NEWCOMER WITH POTENTIAL

The US startup **Thor Trucks** presented an electric truck with the **ET1**. The semi-trailer transports around 36 tons of goods with a range of about 480 kilometers. The aim as start of sales is 2019.

The Swiss conversion company **E-Force One** is currently testing its first heavy electric truck together with a customer, the 44-ton **E44**, which is based on the **Iveco Stralis**. The truck is expected to achieve a range between 200 and 300 kilometers. The first interim results of the year-long practical test are promising, the company said.

ACCEPTANCE IS THE KEY

It's still unclear how quickly pure electric drives will be able to gain acceptance in the sector of medium and heavy trucks and which manufacturers will take the lead in the race for profitability. What is already clear: It's going to be exciting.

SONJA TERBRÜGGEN



NEW REGULATION

GDPR: IT'S NEVER TOO LATE

The European Union's new General Data Protection Regulation (GDPR) came into force on May 25, 2018. But this does not mean that all companies have already implemented the necessary adjustments. It is high time to take a closer look.

It's been known for two years that the EU's new data protection rules would be taking effect this May. Nevertheless, a survey by the industry association Bitkom one week before May 25, 2018 delivered surprising results: only about a quarter of German companies said they were fully prepared for the new regulations. In theory, they are now risking fines of up to 20 million euros or 4% of annual revenues for each violation of the new regulations, plus the administrative costs for preliminary warnings. That's why it's time to act quickly. For larger companies, it makes sense to set up a working group with representatives from all directly affected areas, i.e. data protection, IT, HR, security and risk management, and legal department, but sales and customer service are also affected. The following checklist can provide this working group or smaller companies as a whole an initial guide for further action.

✓ DATA PROTECTION OFFICER

A data protection officer is required as soon as any personal data is processed automatically. As a rule, this is the case if customer or employee data is stored on a computer. Companies which have less than ten people processing personal data are exempt from the obligation. Caution: this includes anyone who ever accesses the data, even just once. Companies with particularly sensitive data such as biometric, health, or similar data cannot avoid having a data protection officer under any circumstances. DPOs need to have demonstrated qualifications obtained through appropriate training.

✓ UPDATING DOCUMENTS

All general terms and conditions, privacy policies, data protection guidelines, and standard contracts need to be checked for GDPR compliance and adjusted accordingly. Many associations are providing appropriate information and samples as well as additional advice.

✓ RECORDS OF DATA PROCESSING

Art. 30 GDPR calls for records of data processing activities, which must show how, where, and for what purpose data is collected and stored. A simple spreadsheet listing IT systems handling your data is sufficient, but behind this a lot of hard work occurs that first needs to be done. The following information about each IT system should be included:

- Corporate process owners
- Purpose of the collection
- Whose data is being collected?
- What information is being stored?
- Deadlines for deletion
- How can you ensure the consent of the data subject?

✓ RECORD PROCESSES IN WRITING

What happens to the data once collected, who has access to it, who is responsible for processing deletion requests, and what happens in the event of a data leak? All these things should be laid down in a manual in order to give all employees clear guidelines for the handling of data. In addition to describing the data's path from collection to storage, the use and eventual deletion, the process descriptions should also define responsibilities. Who will inform customers and employees? Who will make sure that notice of data leaks are made within the prescribed 72-hour period?

✓ PRIVACY IMPACT ASSESSMENT

For particularly sensitive data, GDPR requires a privacy impact assessment. It must state very clearly why the information is necessary and how it is being protected. Data protection authorities will eventually publish a list of all transactions affected by this special regulation, but it does not exist yet.

✓ DOCUMENTATION

Especially important: all efforts to comply with GDPR must be verifiable. Training of management and data protection officers, agreements and contracts with service providers, and IT security measures such as the installation of new firewalls or similar adjustments all need to be documented in detail. This way, in any case of doubt, the company will be able to prove that they made every effort to comply with the new legislation.

KAI ORTMANN

ADDITIONAL

BDI and Linklaters Guide for Corporate
GDPR Compliance (German)



Deutsche Post DHL Group:
Provisions for GDPR-Compliance





TREND REPORT **SUPPLY CHAIN SAVVY**

Artificial Intelligence in Logistics: With their new report on artificial intelligence, DHL and IBM demonstrate how the industry can leverage the opportunities and benefits of the future technology.

The **digital revolution** is redefining our modern life – and Artificial Intelligence (AI), which is already more widespread than many may realize, plays a key role in it. Technological advances in big data, algorithm development, connectivity, Cloud computing, and faster data processing are opening AI to more and more industries and areas of life. **The logistics industry is also undergoing major changes:** AI is bringing forth a new generation of intelligent logistics systems as well

as operational innovations. This is stated by DHL and IBM in the current “Artificial Intelligence in Logistics” report. Today, AI systems are more powerful, more accessible, and less expensive than ever. In their paper, DHL and IBM show how supply chain experts can take advantage of the benefits and opportunities of artificial intelligence. “As the technological progress in the field of AI is proceeding at great pace, we see it as our duty to explore, **together with our customers and employees,**

how AI will shape the logistics industry's future," says Matthias Heutger, Senior Vice President and Business Development Global Head of Innovation at DHL. And Keith Dierkx, IBM's Global Industry Leader for Freight, Logistics, and Rail, explains, "By leveraging AI into core processes, companies can **invest more in strategic growth imperatives** to modernize or eliminate legacy application systems. This can make existing assets and infrastructure more efficient, while providing the workforce with time to enhance their skills and capabilities."

- New **value creation models** through increased use of artificial intelligence in combination with physical and digital logistics networks
- Support through self-learning systems that use big data to generate new insights and **cut down on routine tasks**
- **Back office** automation, **forecasting**, and **intelligent logistics**

Complexity and competition continue to increase and companies with global supply chains are under pressure: As service demands increase, prices remain the same or even decline. At the same time, companies are burdened internally with time-consuming, repetitive tasks in accounting, HR, IT, and legal departments. AI offers the opportunity to save time and money while increasing precision and productivity.

PREDICTIVE LOGISTICS

The business world is uncertain and volatile – AI can help the logistics industry fundamentally change their business: from reactive actions based on predictions to proactive operations with predictive intelligence. This applies to global forecasts at the network level as well as process-specific possibilities of prediction.

Even given the physical requirements, artificial intelligence can be of great benefit to the industry. The usage of AI-capable robotics, autonomous vehicles, or machine vision and object recognition greatly expand the possibilities of modern logistics.

The dynamics between logistics providers and customers is changing. For most consumers, contact with logistics

companies begins at the online merchant's checkout process and ends with the successful delivery of the product – or the return shipment. For companies, contacts with the logistics providers are characterized by long-term contracts, service agreements, and the operation of complex, global supply chains. AI can help to personalize customer contacts, increasing customer retention and loyalty.

AI is applicable across the supply chain, enabling a whole new level of operational efficiency, time and cost savings, and increased customer retention. However, it is not easy to transform existing logistical operation models into proactive, personalized, autonomous, and proactive processes. This transformation will take years and requires effective leadership, a good understanding of the industry's value drivers, AI skills and talent in the business, and a culture that supports the ongoing evolution of an AI-driven business.

PROACTIVE INSTEAD OF REACTIVE

With the help of artificial intelligence, the logistics industry will renew its operating model: moving away from reactive behavior, towards a proactive and forward-looking approach. This will have a positive impact on various activities and sectors, such as the back office, operations, and customer contact activities. For example, AI technologies leverage state-of-the-art image recognition to track the status of shipments and equipment to enable fully autonomous transportation or predict fluctuations in global shipments in advance.

Artificial intelligence extends human skills and reduces repetitive tasks. This shifts the focus of logistics employees to more demanding tasks.

CHRISTINA GRUBER

ADDITIONAL

"Artificial Intelligence in Logistics"
trend report





NEW INDEX

LEAD INDICATOR FOR GLOBAL TRADE

DHL is using artificial intelligence for trade forecasting. This gives companies an additional source of information for their business decisions.

The DHL Global Trade Barometer feels the pulse of global trade. The new index developed by DHL in cooperation with Accenture is based on the analysis of large volumes of logistics data using artificial intelligence. DHL customers are thus able to optimize their logistics processes. For example, the index provides valuable information for decisions about investments or supply chains. Also DHL will use it to optimize their resource planning.

The benefits of the DHL Global Trade Barometer go even further: Because world trade is an engine for macroeconomic development, the forecasts also provide

valuable information on the trend of the global economy. Thanks to the high data quality, it is possible to integrate the index as an indicator into the existing forecasting tools of banks, associations, and economic research institutes. "As the world's leading logistics provider, DHL has both a deep understanding of the driving forces behind global trade volumes and the industry expertise to analyze and interpret market data. Our network, knowledge, and experience uniquely position us to understand global supply chains in order to derive a global trade outlook," said Tim Scharwath, CEO of DHL Global Forwarding, Freight. "The DHL Global Trade Barometer shows

DHL GLOBAL TRADE BAROMETER
 A NEW AND UNIQUE LEADING INDICATOR FOR THE WORLD ECONOMY
 BASED ON TRADE OF INTERMEDIATES AND EARLY-CYCLE GOODS

 **IMPORT AND EXPORT DATA FROM 7 COUNTRIES**

 **240 MILLION VARIABLES EVALUATED**

 **REPRESENTING 75% OF GLOBAL TRADE**

 **3-MONTH OUTLOOK FOR GLOBAL TRADE**

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impressively how digitalization – with the use of Big Data and Predictive Analytics – opens up entirely new opportunities that we can use for the benefit of our customers.”

HOW IT WORKS

The data framework is based on import and export data for intermediate products and early cyclical goods, which serve as a basis for further industrial value creation. Included are, for example, textile labels for clothing, bumpers for cars, or touch screens for mobile devices. The Index reflects aggregated market data from air and container ocean freight from China, Germany, the United Kingdom, India, Japan, South Korea, and the United States – countries that account for more than 75 percent of global trade. The data is condensed into an index value and also calculated individually for each of the seven

countries. The index is the weighted average of the current and next two months. An index value above 50 indicates positive development, a value below 50 indicates a decrease in global trade. Tests have shown that predictions can be made for a period of three months. According to this DHL publishes the Barometer quarterly.

KIM LIESSFELD

ADDITIONAL

Deutsche Post DHL Group special report on the Global Trade Barometer



FRUIT IMPORT A MATURE PROCESS

Due to their high sensitivity, the transportation of bananas is one of the major challenges in food logistics. DHL FoodLogistics has found the best way of transporting this popular fruit.

13.3 degrees Celsius – that’s the magic number when it comes to transporting bananas. If the air temperature exceeds this value during the transport, the fruit begins to mature and arrives at the consumer brown and mushy. More than one degree cooler, and the bananas suffer from cold damage. This makes them grey and inedible. For this reason, the aim of all those involved in the transportation of bananas is a consistent cold chain, from the moment of harvesting to the actual desired start of the ripening process before delivery to the end user.

DHL FoodLogistics, a business unit of DHL Freight, is a specialist in food transportation. Frank Terpoorten, branch manager in Duisburg, has developed his own process to

avoid delays when working with Biotropic, an importer of bananas from sustainable cultivation. “In addition to the temperature, it is also important to keep an eye on the overall transport time,” says the experienced logistics expert. If it takes more than 21 days, there is a risk that the fruit will tip over and won’t ripen in a controlled manner.

NATIONAL CUSTOMS CLEARANCE

instead of having a third-party supplier to unload the bananas in Rotterdam, store them and prepare them for customs clearance, they continue their journey in the refrigerated container all the way to Duisburg without reloading. Inspection and customs clearance takes place once they arrive. The containers remain sealed at all times

Left: Frank Terpoorten, branch head DHL FoodLogistics Duisburg, checking the temperature of imported bananas.



with special hologram stickers. The customer was initially sceptical about whether this solution could be reconciled with customs regulations, as no other importer offered this option.

But Frank Terpoorten played on his 20 years of experience and his detailed knowledge of legal provisions. "Here we had to be creative. We made use of all the options in the customs procedure and applied for Biotropic's approval as a 'Licensed Weigher' and 'Authorised Consignee'. This meant that we were able to deliver the goods directly to the customer, without having to stop at customs or rely on customs office opening hours during unloading", says the branch manager.

THINKING OUTSIDE THE BOX

With the above permits, DHL FoodLogistics is able to operate a so-called storage warehouse where customs clearance can take place. There, Biotropic employees who have been tested and registered by the customs authorities as licensed weighers, check the weight of 13 boxes per batch. From this, they then calculate the duties due. Thanks to this process, the bananas can be taken straight from the refrigerated container into the ripening room. No unnecessary time is lost, and the retailer is guaranteed to receive the quality of goods they expect.

Initially, both the customer and the authorities were sceptical, but this procedure has now been running smoothly for several years. It has helped to minimise shrinkage loss due to spoiled fruit on the journey from the

ADDITIONAL

DHL FoodLogistics (contact sheet)



A SMALL SNAPSHOT OF THE BANANA

Bananas grow in humid areas. These days they are usually grown as crops on plantations. Using banana knives, the unripe green fruit is harvested in large bunches from trees that are up to nine metres tall. These bunches are then cut into smaller bunches known as hands. Standardised banana boxes and refrigerated containers are usually used for their transport. When they arrive at their destination, the imported bananas are placed in ripening chambers. They are fumigated with ethylene which, combined with the right temperature conditions, artificially triggers the ripening process. The bananas remain in the chamber until they reach the colour preferred for selling. In 2015 alone, Germany imported 1.35 million tons of bananas.

plantation to the shop floor. Frank Terpoorten and his team of seven fellow employees are ready to come up with unusual solutions, and to convince everyone else involved, if necessary. "It is important to us to find new solutions of doing business and think outside the box!"

KAI ORTMANN

DEGREES OF RIPENESS OF BANANAS



Color stage 1
Dark Green:
The banana is
harvested.



Color stage 2
Light green:
The ripening pro-
cess has begun.



Color stage 3
More green than
yellow:
Delivery to retailers
at higher ambient
temperatures.



Color stage 4
More yellow than
green:
Usual time of deli-
very to retailers.



Color stage 5
Yellow with
green tips:
Best ripening stage
for sale to
consumers.



Color stage 6
Full yellow:
Ideal flavor for
consumption.



Color stage 7
Full yellow
with flecking:
Immediate con-
sumption recom-
mended.

COUNTRY REPORT

ON THE ROAD FOR AUTOMOTIVE

DHL Freight Czech Republic benefits from the favorable geographic position in Central Europe. Exports to Germany and supplying the automotive industry are the focus of their business activities.

DHL FREIGHT CZECH REPUBLIC BY THE NUMBERS (2017)

- Employees: 932
- Terminals: 6
- Warehouse area: > 50,000 m²
- Subcontractor vehicles: > 7,500
- LTL transports: 297,434
- FTL transports: 186,630

The Czech Republic is still producing: The industrial share of the gross domestic product of the country at more than 37 percent is among the higher in the European Union. A significant part of this is made up by the automotive industry and its suppliers. Accordingly, the customer structure of DHL Freight Czech Republic is clearly focused on the supply chains of car manufacturers. More than 900 employees at six terminal locations and in four customer service centers ensure the highest quality of service. The broad range of services for main automotive customers covers everything, starting with warehousing during and after the production run, including in-house transport, or material collection at over one hundred suppliers and



subsequent transport to European countries. Last but not least a short sea concept with unaccompanied trailers, for example to Sunderland in England, has been realized.

GREAT DEAL OF EXPERIENCE

“We have been active in the Czech market since 1992 and are therefore well connected in the country and its markets. Our customers have access to a broad portfolio of transport solutions. Thanks to the close cooperation with other divisions of DHL, we can also offer tailor-made solutions for complex problems,” says Vít Návrát, Managing Director DHL Freight Central Eastern Europe. It does not matter whether customs services, warehouse logistics, or complete end-to-end processes are required.

GOOD FIGURES

In addition to the automotive industry as a focus industry, exporting to Germany is another strong pillar of the Czech economy. Almost a third of the foreign trade volume is generated with this neighboring country. DHL Freight also benefits from this: Sales increased to EUR 182.8 million in 2017, an increase of 5.1 percent over 2016. For Vít Návrát, however, this is also a success for the employees: “In the customer satisfaction survey, we have constantly occupied the top places in the past three years. Many customers across different industries completely rely on us in logistics. That is a sign of our competence.”

ADDITIONAL

DHL Freight Czech Republic



PROBLEMATIC SKILLS SHORTAGE

DHL Freight Czech Republic sees challenges for the coming years above all in terms of capacities. “The shortage of drivers is worrying us. We are trying to counter this with very active advertising, long-term contracts for our subcontractors, and the purchase of additional cargo space,” explains Vít Návrát. In addition to the still unclear effects of the EU mobility packages, a general improvement of the road infrastructure in the country – especially more parking spaces along the main roads – is important for the future.



Vít Návrát, Managing Director
DHL Freight Central Eastern Europe

KAI ORTMANN





AUGMENTED REALITY **A CLEAR VIEW**

Data glasses are the new industry trend in order picking.

They show step by step work instructions and information, show the employees where the article is currently located, and where to position it on the cart. Vision Picking via Smart Glasses is a new trend in logistics. DHL Supply Chain now offers the use of the data glasses in their warehouses worldwide by default. Thus equipped, written instructions on paper are a thing of the past for the warehouse workers. Instead, the Smart Glasses show the wearer all the necessary information on the glasses display. The order picker has both hands free and can work better. The result: Productivity can be increased by up to 15 percent through the use of glasses, while at the same time reducing the error rate. This has been demonstrated by international test runs in the USA, Europe, and Great Britain.

DHL AS A PIONEER

“As one of the first logistics companies to use this technology, we are setting new standards in order picking,” says Markus Voss, Chief Information Officer & Chief Operating Officer at DHL Supply Chain. “Our customers are excited about the productivity improvements and the use of innovative technology in their warehouses.” Employees are also satisfied with the Smart Glasses: the eyewear is very light and intuitive to use. As a result, the time required for familiarization and training has been halved.

ADDITIONAL

DHL Supply Chain



DHL product video Vision Picking



Three partners supported DHL Supply Chain in this process: Ubimax, which contributed their xPick software; Google and Vuzix, which provided the Glass Enterprise M100 and M300 eyewear models. Currently, further feasibility tests are being conducted with other suppliers in Australia and Asia. Again, promising results can be expected. According to this the number of data glasses in use will increase continuously.

DHL is currently examining other areas of application for AR technologies. This may include, for example, training, maintenance, or the calculation of consignment dimensions.

KIM LIESSFELD

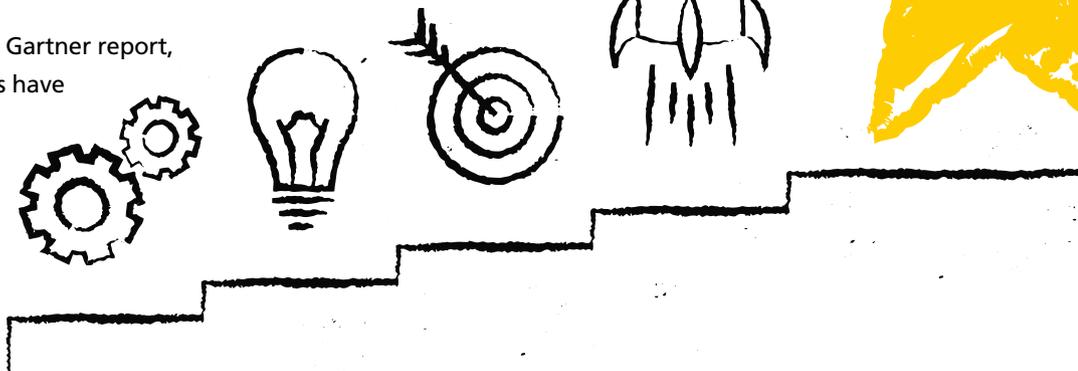
MARKET RESEARCH LEADING IN LOGISTICS

Gartner's „Magic Quadrant for Third-Party-Logistics Worldwide“ designated DHL as a Leader and positioned the world's leading logistics service provider the furthest for vision and execution within the Leaders quadrant.

Gartner, Inc., the world's leading information technology research and advisory company, has evaluated 15 Third-Party Logistics Providers (3PL) with regard to their ability to execute their missions and their completeness of vision of customer needs and industry trends. These two touchstones constituted the axes of Gartner's Magic Quadrant, along which every competitor has been positioned.

DHL, the world's leading logistics service provider, has not only been designated as a Leader in the report of May 2018, but also been positioned furthest in the Leader's quadrant for vision and execution. "At DHL we are able to accommodate a wide range of needs, from general logistics services to highly specialized vertical industry capabilities," says Katja Busch, Chief Commercial Officer DHL and Head of DHL Customer Solutions & Innovation. "We are particularly proud of the recognition of our trend research and innovation efforts. We are, for example, actively investing in the future of the Supply Chain 4.0 in order to drive this development forward. With our structured research approach, we are constantly working to identify areas of application for new technologies, where we can create real added value for our customers."

According to the Gartner report, leading providers have extensive service offerings and infrastructure and make



MAGIC QUADRANT

The Gartner Magic Quadrant research methodology provides a graphical competitive positioning, based on clearly defined touchstones, of four types of technology providers in fast-growing markets: Leaders, Visionaries, Niche Players and Challengers. As companion research, Gartner Critical Capabilities notes provide deeper insight into the capability and suitability of providers products and services based on specific or customized use cases.

them available across an expansive global footprint. Market trends and customer needs are flawlessly translated into service offerings specialized for a number of different industries. They are formidable at logistics execution across the service lines and run highly professional, very comprehensive logistics businesses. Well structured strategies and business models contribute to their ability to expand capabilities, regional coverage and industry specializations on a continuous base. Backed by this performance record, they are trusted and relied on by many of the largest global corporations to help execute their worldwide supply chains. "We believe being positioned the furthest in the Leaders quadrant of this recognized research is a great accomplishment and feel it highlights our extensive service and product portfolio," adds Katja Busch. "We feel our placement in Gartner's Magic Quadrant makes the success of our approach even more visible to existing and new customers."

TORSTEN ARNOLD



ADDITIONAL

Lead time information:
the DHL Freight LeadTime Calculator



NETWORK IMPROVEMENTS

UPDATE ON DHL FREIGHT NETWORK

UPDATES	ROUTE	DESCRIPTION
New Euroconnect service	Western and Central Europe to the Republic of Cyprus	With immediate effect DHL Freight's network has been extended by a new standard service into the Republic of Cyprus. With a road-/sea-freight combination the lead time for our customers could be reduced by 30-50% in comparison to pure ocean-freight solutions from Western & Central Europe.
New direct connection	Benelux to Hungary	A new daily direct line has been implemented from Belgium and Netherlands to Hungary to allow for a sustainable 48h service from the main industrial areas into Budapest area and 72h for the rest of Hungary.
Service improvement	Central Spain to Germany and v.v.	With a new roundtrip from Madrid to Freiburg and v.v. the service level for our customers could be improved by 1 day, allowing now for a 48h service from / to the main industrial areas of both countries for all pick up days.
Service improvement	Sweden to the Baltics	A new HUB-solution from Sweden to the Baltics has been introduced to ensure a harmonized and reliable 72h service door-to-door from Sweden to all main industrial areas in Lithuania, Latvia and Estonia.
Service improvement	Northern Germany to Benelux	The network setup between Northern Germany and Benelux has been optimized to ensure now a reliable 24h door-to-door service for our customers from Hannover area to Belgium and from Neumuenster area to Belgium & Netherlands. This has been realized with the integration of 3 additional roundtrip connections between Herbolzheim – Torino, Neu-Ulm - Verona and Munich – Milano.
Service improvement	Belgium to Switzerland	The connection between Belgium and Switzerland has been improved to allow now for a daily 48h service from pick-up to delivery.
Service improvement	Belgium to Switzerland	The connection between Belgium and Switzerland has been improved to allow now for a daily 48h service from pick-up to delivery.



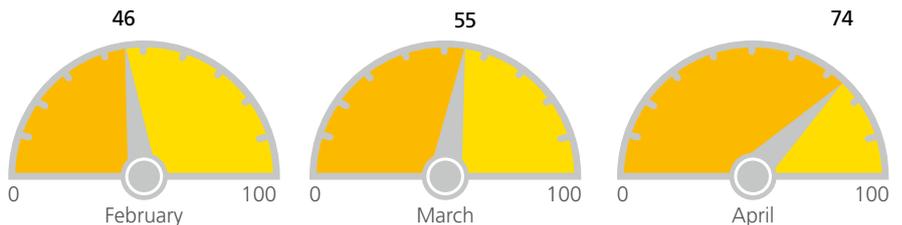
LOAD FACTOR SOLID UPWARD TENDENCY

Commentary on the current situation in the European logistics industry and the load factor during the first quarter of 2018 from Martin Veen, Head of M&A & Strategic Projects, DHL Freight.

The macroeconomic conditions for European road freight transport are still favorable. The growth forecast of the European GDP has been corrected upwards from two to 2.4 percent. However, the overall sentiment is a bit more cautious, not the least because of the unstable conditions of global politics and a slight decline of certain indicators, such as the German business climate index. This in particular took a small hit at the end of the first quarter and currently resides at 2017 average levels. Likewise, the European Purchasing

CURRENTLY FREIGHT CAPACITY UTILISATION

Share of freight* (in %)



Freight Storage space

*Share of freight capacities compared to all capacities traded at the transport platform TimoCom (the sum of freight and vehicle capacity)

Source: TimoCom Transportbarometer: www.portatio.com/Transportbarometer, June 2018

Managers Index (PMI) by HIS Markit shed a little value, but at 56.6 still resides on a high level and implicates a further rise in production output.

INDUSTRY SPECIFIC FACTORS

After shippers had more capacities at their disposal at the beginning of the year than at the end of 2017, this trend got reversed already in March. In contrast, Transporeons Transport Market Radar fixed the Transport Pricing Index at a value of 6.9 points above the comparative value of the first quarter 2017. This is an indicator that the market is still lacking enough cargo space and that this factor is gradually getting worse.

This perception is supported by TimoComs figures for their European Transport Barometer, which calculated a ratio between demand and supply of 74:26. This shortfall is last but not least caused by a blatant shortage of qualified personnel throughout the industry, especially a

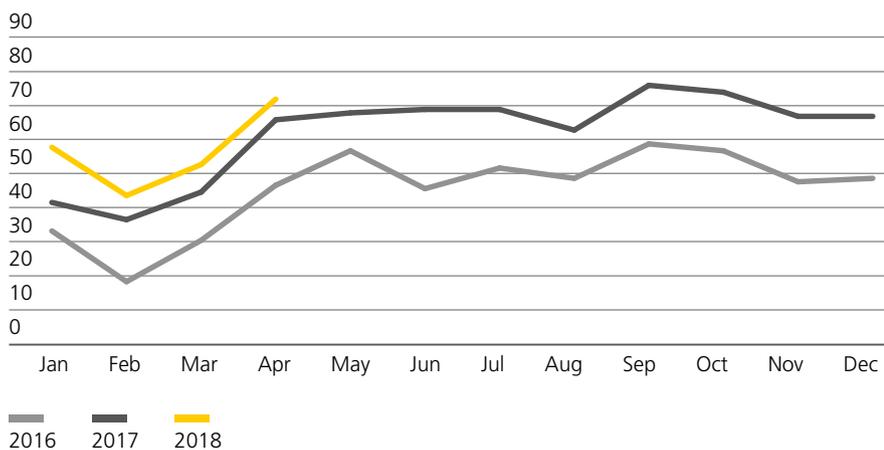
lack of drivers. Consequential, rising wages are conceivable which, combined with the comparatively higher diesel prices to 2017, will push the overall costs in the transport industry further upward. In the long run these factors could put a dent in the economic growth altogether. First indications for a lower capacity utilization due to supply chain constraints are visible. *astung durch stockende Lieferketten sind vorhanden.*

OUTLOOK

Despite a seasonally induced decline at the year's beginning, freight volumes in road freight traffic are still firmly on a high level. Both in the field of Terminal Based Operations (TBO) and in Non Terminal Based Operations (NTBO), gains have been registered in comparison to the respective timeframe of last year. According to the European Road Freight Forwarding Index of Danske Bank, this will last a while. The index forecasts a continuously rising demand for transport.

YEARLY COMPARISON OF FREIGHT CAPACITY UTILISATION

Share of freight* (in %)



On the political side of things, the longest formation phase for a government in German history has come to a close. Albeit, the adjustments of political priorities as regards to road freight transport will last well into the summer months. In view of this fact, the influence of further political decisions on the overall market are impossible to prescind.

MARTIN VEEN

*Share of freight capacities compared to all capacities traded at the transport platform TimoCom (the sum of freight and vehicle capacity)

Source: Tranportbarometer app, <http://www.timocom.co.uk/TimoCom/TimoCom-mobile>, June 2018



YOUR OPINION

ARTIFICIAL INTELLIGENCE MIGHT FORCE A REVOLUTION IN THE BACK OFFICE

Results of the Freight Connections survey on Artificial Intelligence.

Artificial Intelligence (AI) is among the foremost fields in scientific research. But are there any fields within the logistics industry where AI might become a real factor in the future? The result of our survey to this topic in detail.

A heartfelt thank you to all participants! The winners of the Formula-E tickets have been informed by email.

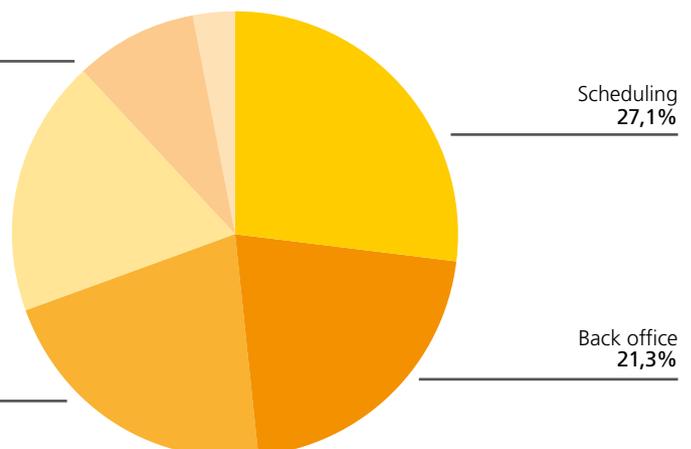
WHAT ARE THE TOPICS WHERE SINGLE TASKS COULD BE EXECUTED BY AI-CAPABLE COMPUTERS IN THE FUTURE?

AI will not play a significant role
2,9 %

Contract management
9,0%

Accounting/Auditing
18,4%

Customs management
21,3%



NEW HEAVY TRUCK REGISTRATION UPHILL TREND

New heavy truck registrations within the European market

Looking at the period of January through March as a whole, new HGV-registrations rise by 2.9 percent compared to the same period of the preceding year within the EU. Thereby the number of new commercial vehicles of 16 tons and above scaled to 77.952 units. The largest growth within the major markets were observed in:

- Poland (+15.5 percent)
- France (+12.1 percent)
- Italy (+10.5 percent)

Demand dwindled considerably in:

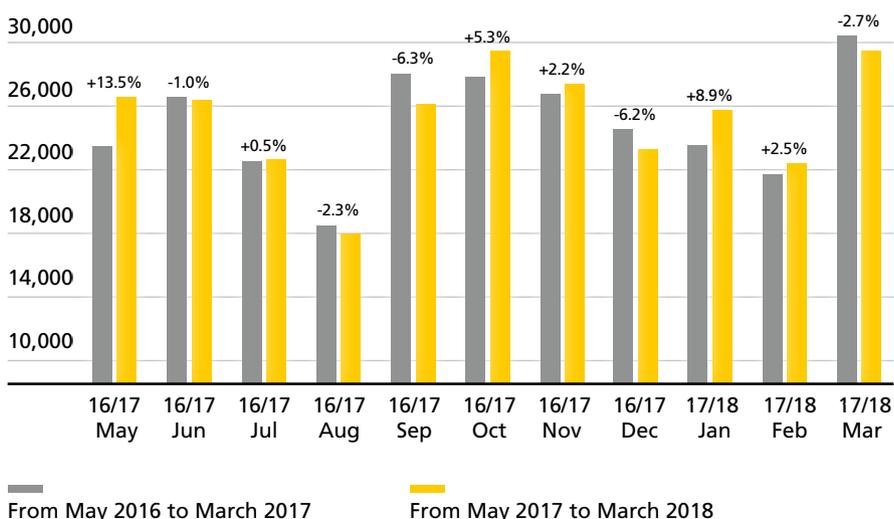
- United Kingdom (-7.8 percent)
- Germany (-6.4 percent)

NEW HEAVY TRUCK REGISTRATIONS* IN DETAIL



Source: European Automobile Manufacturers Association (ACEA), April 2018 * over 16 tons, EU-wide

REGISTRATIONS OVER A PERIOD OF A YEAR*



Source: European Automobile Manufacturers Association (ACEA), April 2018 * over 16 tons, EU-wide



DIESEL PRICES COMMENT

PRICE RISE WON'T LAST LONG

by Eugen Weinberg, Head of Commodity Analysis at Commerzbank

In addition to the rise in oil prices, the weakness of the euro has partly been responsible for the increase in diesel prices. Devaluation against the US dollar tends to increase the price of the mostly imported crude oil, as energy sources are traditionally traded in US dollars.

The primary factor, however, is the price of oil. In the second quarter, prices temporarily rose to over \$80 per barrel due to constantly strong demand and significant production losses, particularly in Venezuela. OPEC's highly regulated production also contributed to this. The majority of OPEC countries adhered to the agreement on the

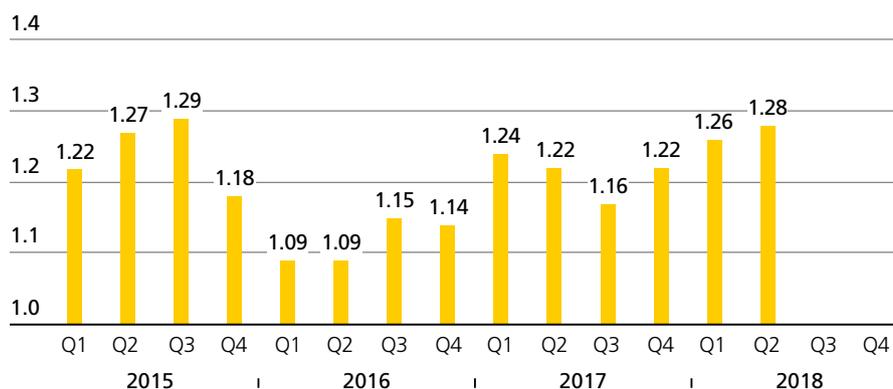
voluntary reduction of production, in some cases even exceeding the stipulated target figures.

EASING IN SIGHT

However, the situation is likely to change again in the second half of the year. On the one hand, an increase in the oil supply is to be expected. The two largest oil exporters, Russia and Saudi Arabia, both have sufficient free capacity and have promised to increase their production volumes. In addition, due to the high prices oil production in the US is expanding further.

FUEL PRICES – DIESEL 2015 TO 2018

Prices quoted per litre (in EUR)



As of June 4, 2018: 1.37 Euro

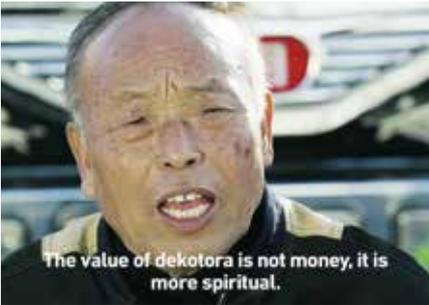
Source: Eurostat, Weekly Oil Bulletin, June 2018

On the other hand, demand is likely to react to the higher fuel prices by cooling off somewhat. On the currency side, the euro is not expected to weaken further, as a change in interest rates is projected for 2019. Furthermore, the risk of major geopolitical upheaval seems small. Car and truck drivers can therefore expect a little relief in the second half of the year and count on a drop in the price of diesel.

VIDEO OF THE MONTH **ROLLING ARTWORK**



„Dekotora“ – this is what the Japanese call the art of morphing trucks into canvases on wheels. A lot of passion and commitment get’s color to the streets, quite literally, as you can see for yourself.



PLAY VIDEO

Source: Youtube, Junkin Media, RM Videos



OUT OF THE BOX



**Horse? A real
prince
is riding a truck!**



#DHLFREIGHT #SIMPLYDELIVERED

DHL FREIGHT AT A GLANCE



More than
208
terminals

Specialist expertise in
8
sectors

More than
40
countries

44 mio.
tons
transported
per year

Automotive | Chemicals
Consumer | Energy | E&M
LS&H | Retail | Technology



Excellent groupage
NETWORK with
more than

2.200
linehauls



43 mio.
shipments per year

12.500
employees



DHL Freight – Excellence. Simply delivered.



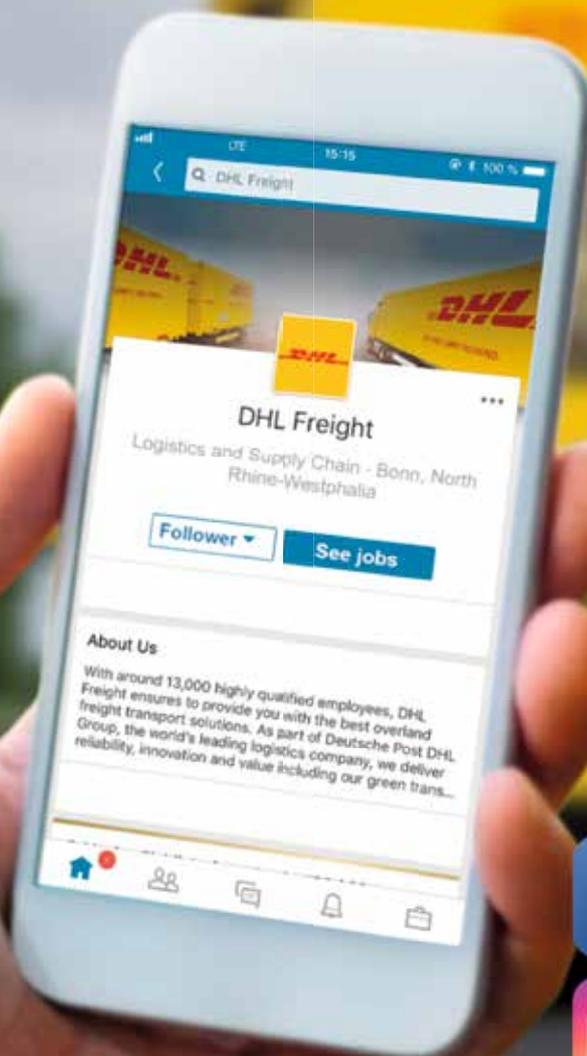


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