railways

THE DB SCHENKER RAIL CUSTOMER MAGAZINE

DB SCHENKER

NO. 04 | 14

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Quieter by rail

DB Schenker Rail is halving its transport noise by 2020. How technical innovations are making rail more sustainable.

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“Reliability is extremely important with just-in-time transport operations involving biomass. We are currently recording a 99-per-cent reliability rate for our services thanks to the daily performance management system we have introduced.”

ROGER NEARY, HEAD OF COAL AND BIOMASS AT DB SCHENKER RAIL UK

Fire, water, air – and biomass

Wind comes from the air, sunlight from the skies and water flows downhill – but where does the biomass for the power stations that provide renewable energy come from? In the United Kingdom at least, from DB Schenker Rail UK.

The rail freight operator is responsible for ensuring that a (biomass-fired) power station at Drax does not go out. It is here that energy producer Drax Power generates around seven per cent of Britain’s total electricity supply and is currently converting parts of the coal-fired power plant to renewable generation. The British rail freight operator has just reached an impressive milestone, having conveyed the millionth tonne of biomass for Drax Power since July of last year. “Reliability is extremely important with just-in-time transport operations involving biomass. We are currently recording a 99-per-cent reliability rate for our services thanks to the daily performance management system we have introduced,” says Roger Neary, Head of Coal and Biomass at DB Schenker Rail UK. At present, DBSR UK operates 39 of these trains on average per week from the ports of Hull and Immingham to Drax. From November, this figure is set to rise to over 50. Drax Power intends to convert another two generating units to biomass in the near future. *an*

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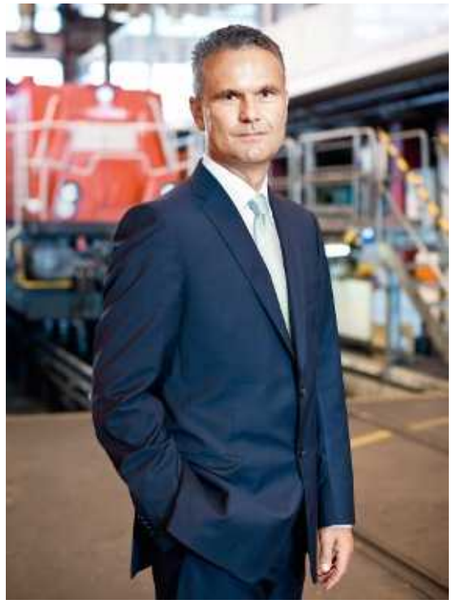
Here’s to a good year in 2015!



Planning is far from easy in these times. The dynamics of the market and European conflicts affect our business. Costs and risks are more difficult to gauge, customer requirements and logistics chains are changing ever faster – miscalculate now and the market will punish you!

As a European rail freight operator, we had many imponderables to contend with over the past year, 2014. In many industries, the markets are becoming more volatile, and at the end of the year, the railways suffered bitter industrial action, including strikes. Let me take this opportunity to express my heartfelt thanks to you for standing by us over the past year!

As we continue to build the rail freight operator of the future, an international, customer-focused service provider capable of far more than just driving locomotives around, we are reassured that this is the right path by two important things: the confidence you place in us and the team spirit we share as partners. You can read about some of what we have achieved with you in recent months in this magazine.

I trust that we will be able to continue our successful collaboration in the coming year and wish you a good New Year in 2015!

Axel Marschall

Member of the Management Board
DB Schenker Rail

Cover: Chantal Maquet **Photos:** ddp images; DB Schenker Rail UK; Oliver Tjaden

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08 Focus: Quieter by rail

By the end of the year, DB Schenker Rail will have fitted more than 14,000 freight wagons with whisper brakes, as they are known, which halve traffic noise. The rail operator is placing even greater emphasis on sustainability.

Markets & Innovations

Customers & Projects

Final Call

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Illustration: Chantal Maquet **Photo:** Michael Neuhaus

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DAVENTRY/UNITED KINGDOM

THREE-YEAR CONTRACT FOR MALCOLM LOGISTICS

DB Schenker Rail UK has concluded a major new contract with the logistics service provider Malcolm Logistics. The British rail freight company will operate intermodal freight trains between the Daventry International Rail Freight Terminal (DIRFT) in the East Midlands and the Mossend Euroterminal in Glasgow. The goods are destined for large supermarket chains, including Asda, the second-largest supermarket chain in England and a subsidiary of Walmart. DB Schenker Rail UK's success in obtaining the contract was due to an innovative concept, which requires only one set of wagons and one locomotive for the entire transport system. "It was essential for Malcolm Logistics that time-sensitive, perishable goods arrive in the distribution centres on time. We were able to guarantee this with our cost-effective solution," says David Munt, Commercial Manager, Rail Development at DBSR UK. Another requirement was to get the new service up and running within four weeks. *an*

FRANKFURT A.M./GERMANY

DB SCHENKER AWARD GOES TO SCIENTIST

Dr Oluseye Richard Oloruntoba from the University of Newcastle in Australia was presented with the DB Schenker Award 2013 for his doctoral thesis on the subject of the use of logistical process models for disaster relief. The DB Schenker Award is one of the most coveted science prizes in the European logistics industry.
The award was presented at the first DB Schenker Science Day in Frankfurt. The event, which took "digitisation and networking" as its theme, was an all-inclusive forum held with the objective of promoting innovative solutions for digitisation in transport and logistics. DB Schenker sees itself as playing a leading role in this field. *an*

WARSAW/POLAND

POLAND'S LONGEST RAILS

In May, DB Schenker Rail Polska SA started transporting 120-metre-long rails for ArcelorMittal Poland. The first consignments went to the stations in Sieraków Śląski and Kalety and the Krakow freight station. The rails are the longest ever to have been produced in Poland. "The new service is an opportunity for us to improve the rail infrastructure in Poland. The rails are transported directly to the recipients, who are responsible for he recommissioning and modernisation of the rail infrastructure," said Paweł Pucek, Sales Director of DB Schenker Rail Polska. The transport operations will be carried out using platform wagons combined into nine-wagon sets. Each of them can convey about 300 tonnes of rails. Nine wagon modules could be combined to form one and marshalled to form two or three trains. *mh*

BERLIN/GERMANY

HONOUR WITHOUT BORDERS

DB Schenker Rail was honoured in the autumn with the Golden Chariot Award. The prize is bestowed by a jury of representatives of international railway organisations, and recognises special achievements in the field of transport. Thomas Hesse, Head of Finance & Controlling Region East, accepted the award on behalf of DB Schenker Rail at the Innotrans trade fair in Berlin in September. In its citation, the jury singled out the German rail freight operator's achievement in the introduction of the common CIM/SMGS consignment note. This note speeds up the customs clearance process for goods on the border with Belarus. Rail operations there are separated not only by different gauges but also by different systems of transport law: Europe is covered by CIM, while SMGS applies to the CIS states. DB Schenker Rail has been using the common CIM/SMGS consignment note since its introduction in 2006, and since 2012 ialso for trains in operation between Europe and Asia. *an*

Photos: PR [4]; dpa picture-alliance

GERMANY/HAMBURG

ELEGANT DETOUR

Hamburg is turning into a major building site: the A7 is being widened to eight lanes and fitted with the "Hamburg lid", which is intended to protect residents from motorway noise. In addition to this, the Langenfeld bridge, which takes the A7 over the Hamburg-Stellingen railway facility, is to be dismantled and then rebuilt during normal operation, leaving only two lanes open in each direction. These roadworks, which are scheduled to last until 2022, are therefore expected to result in traffic jams kilometres long at the Hamburg-Eidelstedt motorway intersection. The situation is aggravated by lorries transporting hazardous goods from the Brunsbüttel industrial estate along the designated hazardous goods routes through Hamburg city centre. This will not only result in considerable delays and thus additional costs, but also significant safety risks. Rail offers an alternative: a daily shuttle connecting the Brunsbüttel industrial estate with the Hamburg-Billwerder container terminal, where the tank containers can be transhipped directly onto trucks or the wagons individually combined with other trains for transport across the whole of Europe. With this option, DB Schenker BTT offers an optimised solution to the problems caused by the "Hamburg lid". *mh*

FOCUS

Quieter by rail

DB Schenker Rail is making a change: by the end of the year, a total of more than 14,000 freight wagons will have “whisper brakes”, as they are known, which reduce the noise as they pass by ten decibels. New composite brake blocks are making this possible.

Not for a long time had the Gremberg marshalling yard seen so many representatives of the press all at once. Around two dozen journalists and several camera crews from various TV stations converged on the south of Cologne on 16 July to witness, live and in colour, the departure of the first block train composed entirely of converted, quiet freight wagons. This first DB Schenker Rail “whisper train” was on its way to Amsterdam.

The high level of interest in this topic did not come about by accident. As freight transport increases, it is not only the utilisation level of the lines that grows. Freight trains frequently run at night, when there are no passenger trains on the go, but this also often means more noise nuisance for people living nearby. Deutsche Bahn has accepted the challenge and set itself this target: to halve rail noise by 2020 compared with the level in 2000.

These measures are part of Deutsche Bahn’s DB2020 sustainability strategy, which aims to cut CO_2 emissions worldwide by 20 per cent by 2020, compared with 2006 levels, and to achieve the additional goal of completely CO_2-free rail transport in Germany by 2050. It also provides for a significant improvement in materials and resource efficiency.

Noise-control technology

The most important solution for noise control answers to the technical name “LL block” and was on show in Cologne’s Gremberg district. The braking system was changed on the actual spot – in this case, a bulk freight wagon – before the eyes of the waiting press. A mechanic climbed into the workshop pit under the wagon and removed the old cast-iron blocks from the brakes. Then the new LL blocks were fitted. This process was then repeated on the other wheels. ▶

RETROFIT: A mechanic replaces the old cast-iron brake block with the newly-developed LL block.

Illustration: Chantal Maquet

After all eight brakes had been changed, a new sign was affixed to the outside of the bulk freight wagon. The double "L" with a circle denotes wagons that have been fitted with what are known as LL whisper brakes.

The whisper brake, or LL block, is a decisive innovation for noise control. The abbreviation, "LL block", stands for "low noise, low friction". Like the composite (K) block, which was approved back in 2003 and is built into new freight wagons, the LL block is made of composites. The idea behind the new composite brakes is a smooth wheel on a smooth track because the main source of noise in rail transport is the rolling noise made when wheels and tracks come into contact. In braking with traditional cast-iron brake blocks (GG blocks), the wheel tread is roughened, and this results in an increase in rolling noise.

The new blocks, on the other hand, keep the wheel tread smooth, reducing rolling the noise of a passing wagon by about ten decibels in comparison with systems that have the traditional GG blocks. The human ear perceives this as a halving of the noise level. Converting old wagons to K blocks, however, is complex and expensive, because the whole braking system has to be replaced. Whereas the average cost of converting to the K block is put at €5,000–6,000 per wagon, the costs of using the new LL technology amount to around €1,700 per wagon. At the same time, though, the conversion costs are accompanied by much higher operating costs. For instance, the brakes and wheel sets have to be inspected at more frequent intervals, the wheel sets need to be turned more often, and the LL blocks are much more expensive than the current cast-iron brake blocks. The visitors to Gremberg were able not just to see the LL block, but also to touch it. The exhibition at the marshalling yard, which comes from the "Infomobil Lärmschutz" ("Noise-control Infomobile"), also provided an impressive demonstration of how various noise-control measures work.

"Noise control is a central issue for DB Schenker Rail because it is only by becoming quieter that we shall be able to gain acceptance in the future for environmentally friendly rail freight transport," Dr Alexander Hedderich, CEO of DB Schenker Rail, said in Gremberg. However, a reduction in noise will be noticeable only when 80 to 90 per cent of a train's wagons have been converted to whisper brakes. For this reason, DB Schenker Rail has organised its retrofit plans so that quiet block trains can be assembled at the earliest possible stage. This means that those who are affected by rail transport noise will notice a difference more quickly. The plan is to have 200 quiet block trains on the go each day throughout Germany as early as the end of 2014.

DB Schenker Rail is actually ahead of schedule, as far as conversion is concerned. The target was to convert a total of 5,000 freight wagons to quiet tech-

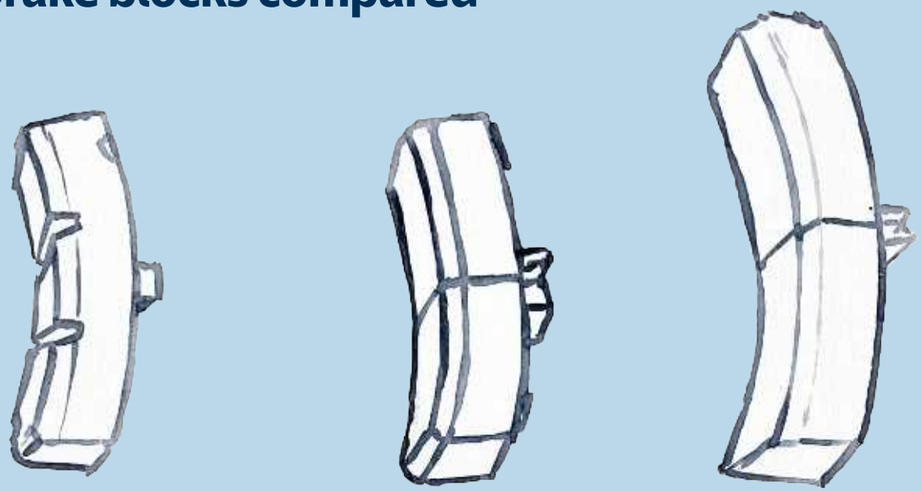
For the public

A touring infomobile spreads the word about noise-control measures

Deutsche Bahn is using the noise-control infomobile (Infomobil Lärmschutz) to show exactly how it intends to achieve its ambitious target to halve rail transport noise by 2020 compared with the 2000 level. The infomobile is being deployed at public information events throughout Germany and uses audiovisual media to illustrate noise-control measures.

The infomobile delivers unprecedented quality in respect of the scenarios that it can present. The development of the audiovisual presentation was based on original recordings made along the route using high-tech equipment. Experts at DB Systemtechnik worked closely on this with the Fraunhofer Heinrich Hertz Institute in Berlin. The interactive application now makes it possible to compare different train types and noise-control measures with a realistic soundscape in each case played to the user through headphones. Displays, videos and other exhibits are also used to provide a full range of information. *mh*

Brake blocks compared



GG BLOCK

Length: 250 mm
Width: 80 mm
Weight: 7.96 kg
The traditional brake block is made of cast iron, an alloy of iron and graphite with especially high wear resistance. When freight wagons brake using cast-iron blocks, the wheel tread is roughened, and this results in rolling noise.

LL BLOCK

Length: 250 mm
Width: 80 mm
Weight: 2.86 kg
The abbreviation stands for "low noise, low friction". One distinguishing feature of this light composite brake block is that it can replace a GG block without any further conversion work. As a result, the average conversion cost per freight wagon drops to about €1,700.

K BLOCK

Length: 320 mm
Width: 80 mm
Weight: 4.26 kg
This composite block has been approved for use since 2003. Since its provisional approval in 2001, all DB Schenker Rail's new wagons have been fitted with this low-noise block. However, it is much more complex to convert existing wagons to this block than to the LL block because the whole braking system has to be replaced. Conversion costs per freight wagon: approx. €5,000.

Illustration: Chantal Maquet

nology during 2014. As of mid-July, 3,000 had already been converted to LL blocks. Taken together with new wagons and the Leiser Rhein (Quiet Rhine) programme, this means that DB Schenker Rail already had more than 11,700 quiet freight wagons in total by the middle of the year. Around another 3,000 will be added before the end of this year, and the total is expected to rise to over 20,000 by the end of next year.

European solution

Reducing the noise generated by rail freight transport is not something that can be done by individual countries acting in isolation. Most wagons routinely cross international borders. The LL block is seen as a cost-effective solution for the 350,000 or so freight wagons in the existing European fleet that it makes economic sense to convert because the brake blocks can be installed without changes to the braking system and, thus, without a fresh approval process. Extensive investigations and trials were necessary before the LL block was approved. To this end, the EuropeTrain, as it is known, was launched in December 2010 for tes purposes. To carry out the tests, the brakes of 30 wagons of different types were fitted with the new LL blocks and sent out to cover more than 200,000 kilometres. The train was monitored by engineers and technicians, who examined the impact of the LL block on wheel wear and on the freight wagons' general performance. The tests were also designed to include Scandinavian winter and hot Italian summer conditions, as well as topographical peculiarities. The tests were conducted under the auspices of the International Union of Railways (UIC), and around two dozen European rail operators and several partners from industry took part.

In Germany, a further 120,000 freight wagons owned by other domestic and foreign rail operators and wagon-rental firms need to be retrofitted, in addition to the 60,000 belonging to DB Schenker Rail. The cost of the technical conversion of these 180,000 wagons alone will come to around €300 million. The German Ministry of Transport is providing some €150 million towards converting the existing freight wagons operating in Germany. In addition, as an incentive to convert wagons to quiet brakes, DB Netz has brought in the noise-differentiated track access charge system (LaTPS). Since June 2013, rail transport companies (RTCs) have had to pay a supplementary track access charge for noisy freight trains, which is used to finance a bonus pot, from which the RTCs receive a rebate for using converted quiet wagons. However, no help yet exists for the additional costs related to everyday operations. For the 180,000 or so freight wagons awaiting conversion in Germany, i.e. the whole sector, these amount to €700-800 million. DB Schenker Rail alone is expecting additional costs

"Conversion of freight wagons will be the most important tool"

An interview with Ines Jahnel, DB AG's noise-control officer, about reducing transport noise and the positive response of local residents to noise-control measures.

Ms Jahnel, you travel around the country a lot and talk to people living near railways. How constructive is the dialogue between the rail company and the public?
Our dialogue with external stakeholders, such as associations and action groups, is very constructive as a rule. Whenever we can, we also reach out proactively to people who are affected, and are not afraid of attending events, where we are likely to meet with strong opposition. Experience shows that it is only through constant dialogue that we can create understanding on both sides.

How do you go about seeking contact with the public?
We seek dialogue in a wide variety of ways. First, direct dialogue through planned events or meetings is the most important. This brings us regular, direct dialogue with representatives of action groups, for example. We have also developed a communication toolkit. It includes traditional tools, such as brochures, an extensive Internet presence, and innovative measures such as the Infomobil Lärmschutz (noise-control infomobile), which goes out and about in particularly affected regions.

Photo: DB AG

What does the noise-control infomobile do?
Infoterminals, where people can experience noise-control measures first hand are at the heart of this information service. Here, people can learn about the impact of noise-control measures such as whisper brakes or noise barriers in a realistic way, by hearing and seeing. For instance, just recently the noise-control infomobile spent four days touring the Middle Rhine Valley, a region particularly affected by railway noise.

Other modes of transport are loud, too. Why are so many protests directed specifically at rail transport noise?
In my experience, this is not an isolated problem. General perception of traffic noise has changed dramatically in the past ten years. This is not limited to the railways: it affects aircraft noise and road traffic noise, as well as noise emissions from trains. Those who are affected by noise are more aware of it and, on the whole, people are more prepared to take action against sources of noise these days. In addition, the Internet has made it easier for action groups, say, to join forces. They are able to communicate their concerns professionally – and by using the media.

Do the public actually accept the need for rail freight transport?
Our assumption – and we hear this from most action groups – is that rail freight transport, as a relatively environmentally friendly transport mode, generally enjoys a high level of acceptance despite the noise problem. Everybody wants transport to be switched from the roads to rail. However, it is also clear that we need to become much quieter within a clear time frame.

Is noise an issue that crosses regional boundaries, or are there hotspots?
Rail transport noise is, above all, a regional issue. This is also evident from the fact that the federal government has classified around 3,700 out of some 34,000 kilometres of track as noise-stressed. Also, of course, even these 3,700 kilometres need to be viewed in a nuanced way. The Middle Rhine Valley is certainly one of the most affected sections, because we have a particular topographical situation there, as well as high train numbers. However, other regions, such as the Elbe Valley or the Upper Rhine – the main freight transport routes – also have a noise issue.

More than one-third of all lines have already undergone noise-reduction efforts. Do you have the impression that noise-control measures on the railways are working?
The response of people living close to sections where noise-reduction work has taken place is overwhelmingly positive. Of course, there are also areas – such as the Middle Rhine Valley – where local residents are demanding that far more be done. We will continue to pursue our noise-reduction programme consistently over the coming years. The German government has also announced an increase in funding. What's more, by 2020 we will have retrofitted our entire fleet of freight wagons with whisper brakes. In the coming years, this conversion to the new technology will be the most important tool in helping us to become quieter.

Interview: Mirko Heinemann

of €230 million between now and 2020. Assistance with these costs would certainly speed the pace of the conversion process.

DB Schenker Rail is making good progress towards its target of converting its entire existing wagon fleet to LL blocks by 2020. The operational conversion processes have been established, and there is no doubt that DB Schenker Rail will achieve its goal. *mh*

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MANAGEMENT SUMMARY

Noise control is a central issue for DB Schenker Rail. In order to ensure continued acceptance in the future for environmentally-friendly rail freight transport, Europe's biggest rail freight operator is going to convert its entire fleet of freight wagons to run on what are known as whisper brakes by 2020. The new composite brake blocks reduce the noise level of passing trains by around ten decibels, which is equivalent to a halving of the perceived amount of traffic noise. DB Schenker Rail is well on schedule: by the end of this year, a total of more than 14,000 new and existing freight wagons will already have been fitted with whisper brakes.

Illustration: Chantal Maquet

Double protection works better

Several measures help to reduce railway noise

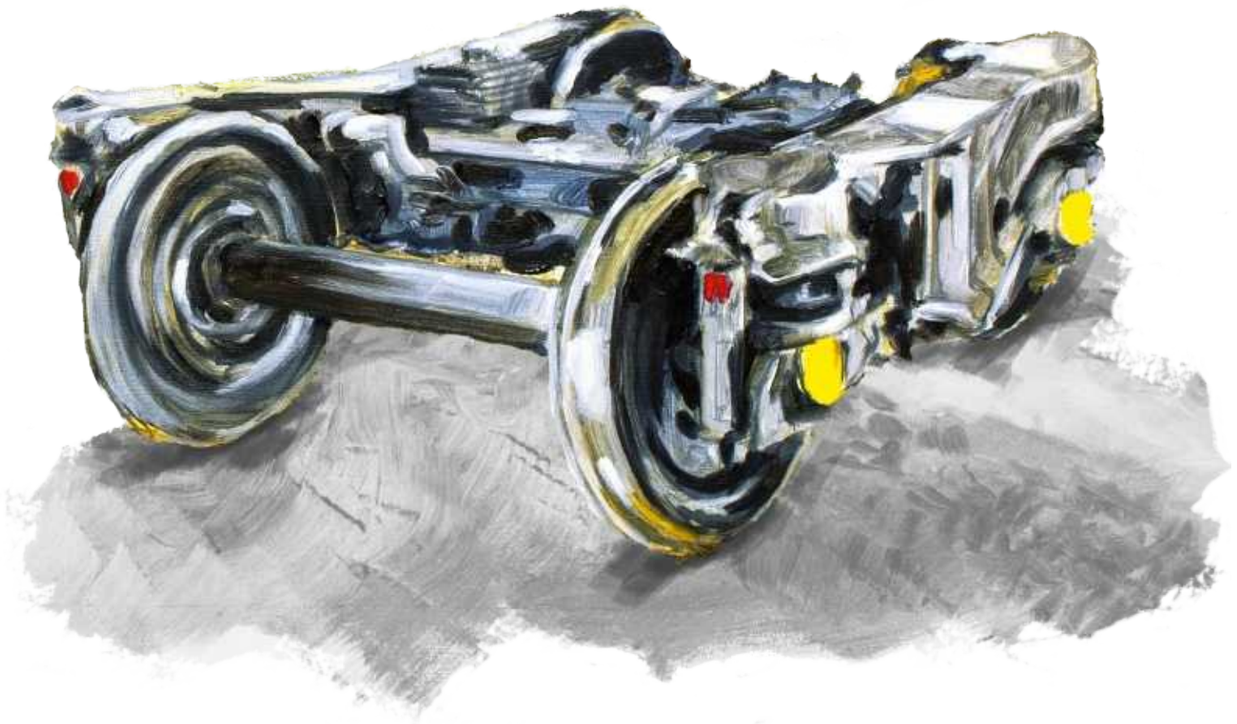
The German federal government established its noise-reduction programme for noise control on the railways in 1999, when a comprehensive concept was drawn up for the purpose in collaboration with Deutsche Bahn AG. Around 3,700 kilometres of track were then classified as in need of improvement in terms of noise reduction. The overall cost was projected at around €2.5 billion.

That sum could be used for the construction of active sound-control measures, such as sound-control walls or barriers. Such barriers are frequently used because in many places they have the greatest noise-reducing impact. In addition to traditional walls, in exceptional circumstances and depending on the location, it is also possible to employ innovative technologies, such as low protective barriers or rail dampers, immediately next to the track. Noise-reduction measures are also used along railway lines – for example, sound deadening on bridges, reducing the level of squeaking on tight bends, and grinding rails to improve acoustics.

It is also possible to finance passive measures, such as soundproof windows, fans and – in special cases – insulation of external walls and roofs. These measures are usually taken as a supplementary solution in places where noise-pollution limits are not achieved by active measures or where other measures are not possible because of urban planning or topographical considerations.

By the end of 2013, more than 1,300 kilometres of affected sections of track had undergone noise-reduction work funded by the noise-reduction programme. That is about 35 per cent of the lines classified as in need of improvement. Up to 2005, the annual amount available for this was €50 million, and in 2006 it was €76 million. The budget of the Federal Ministry of Transport and Digital Infrastructure has had €100 million set aside each year for noise reduction on the railways since 2007, and from 2014 an amount of up to €120 million is being allocated. *mh*

PROTECTING RESIDENTS: Noise-control walls, protective barriers and rail dampers are all part of active sound control.



Better quieter bogie

DB Schenker Rail UK freight wagons fitted with low-noise bogies are already in use in the British town of Mountsorrel.

As part of the drive to modernise 20 bulk wagons belonging to DB Schenker Rail UK, the wagons were fitted with Axiom Rail's newly developed LN25 bogies to reduce their noise level. Axiom Rail has been involved in the development of modern bogie designs for more than 20 years. Not only innovative components that reduce wear and maintenance costs, but noise reduction, too, played a significant role in driving the design and development of the new bogie.

Axiom Rail drew on the successful TF25 bogie in its development of the low-noise LN25 technology. Tests conducted on the LN25 bogies have shown that they are 50 per cent quieter than other bogies. In addition, they cut CO_2 emissions for every freight wagon by 6,200 kilograms per year. The service life of the wheel set is also extended, which in turn cuts maintenance costs. To gain a better understanding of the impact of vehicle design on noise level, Axiom Rail works closely with the Institute of Sound and Vibration Research (ISVR) based in Southampton.

The first modernised wagons belonging to DB Schenker Rail UK can carry up to 75 tonnes of freight and have been in operation since the end of June 2014. Six wagons are already conveying dry bulk materials in Mountsorrel for Lafarge Tarmac. *mh*

Great at environmental protection

Sustainability is a top priority for DB Schenker Rail. With green electricity, efficient technologies and CO_2-free offerings, Europe's rail freight operator is a pioneer in green logistics.

Sustainable freight transport

The environmental performance of rail freight transport is unbeatable. Across Europe, around 85 per cent of DB Schenker Rail's rail freight transport volume is carried by climate-friendly electric traction. Day in, day out, DB Schenker's 5,000-odd freight trains ease the burden on Europe's roads, sparing the environment 17,000 tonnes of CO_2 every day. DB Schenker Rail uses traction current for around 90 per cent of its transport operations in Germany. DB is also producing ever-increasing amounts of traction current from renewable sources. The proportion of its power that comes from renewable sources currently stands at 25 per cent. Deutsche Bahn is seeking to achieve CO_2-free rail transport in Germany by 2050.

Energy efficiency

Like today's hybrid cars, DB's new electric traction vehicles use the train's kinetic energy during braking to generate electricity – and they have been doing so since the late 1980s. Locomotives are fitted with three-phase AC technology, which converts the train's kinetic energy during braking into electricity and feeds it back into the overhead contact line. In 2013, the feeding back of the energy converted during braking enabled about 140 gigawatt hours to be saved on German transport operations. This was equivalent to 5.6 per cent of the electricity procured by DB Schenker Rail Germany.

In rail transport, the purchase of new vehicles is influenced to a substantial degree by environmental aspects, such as energy efficiency. Deutsche Bahn has agreed an extensive framework contract with Bombardier Transportation for the delivery of up to 450 electric locomotives. The high energy efficiency and low life-cycle costs of the locomotives that were ordered were crucial in the decision to award the contract. Energy savings are achieved by factors that include the improved efficiency of the transformers. DB Schenker Rail made its first call on this framework contract, for 110 locomotives, in June 2013. The first vehicles are due to be delivered in April 2015.

The modernisation of vehicle fleets enables other potential to be exploited. In 2012, Mitteldeutsche Eisenbahn GmbH (MEG), a subsidiary of DB Schenker Rail AG, put four new Alstom hybrid shunting locomotives into operation. MEG is now the first company in Europe to have a fleet of hybrid vehicles for its rail freight transport operations. The locomotives reduce the emissions caused by shunting operations by 60 per cent, as well as making much less noise and saving up to 40 per cent of the fuel consumed.

Delivery of the new Series 261 and 265 (Gravita) shunting locomotives has also been concluded successfully. As a result, 130 of these low-emission locomotives with additional soot particle filters have already been deployed since April 2014 in DB Schenker Rail's shunting operations – for example, at the Halle (Saale), Hamburg, Frankfurt, Hanover and Duisburg Production Centres.

In addition, all DB's engine and lorry drivers receive training in energy-saving driving. Having reached its target maximum speed, a train can cruise for a long distance without losing more than a small amount of speed. By comparison with the traditional driving style, this means that electric locomotives can save five per cent – and the diesel variety four per cent – of their energy and reduce CO_2 emissions by the same proportion. These and many other principles are passed on to staff members in regular training sessions, and they are taught how to put them into practice.

Training sessions, as well as management and motivation programmes, have been used for many years to ensure that DB Schenker Rail's engine drivers con-

Electricity saved through recovery of braking energy at DB Schenker Rail Germany, in per cent

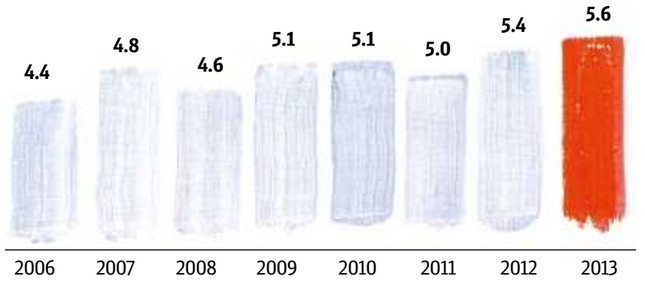
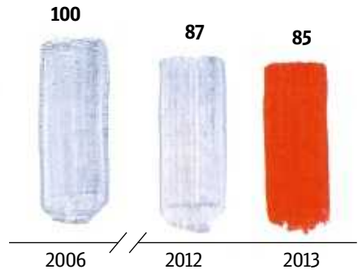


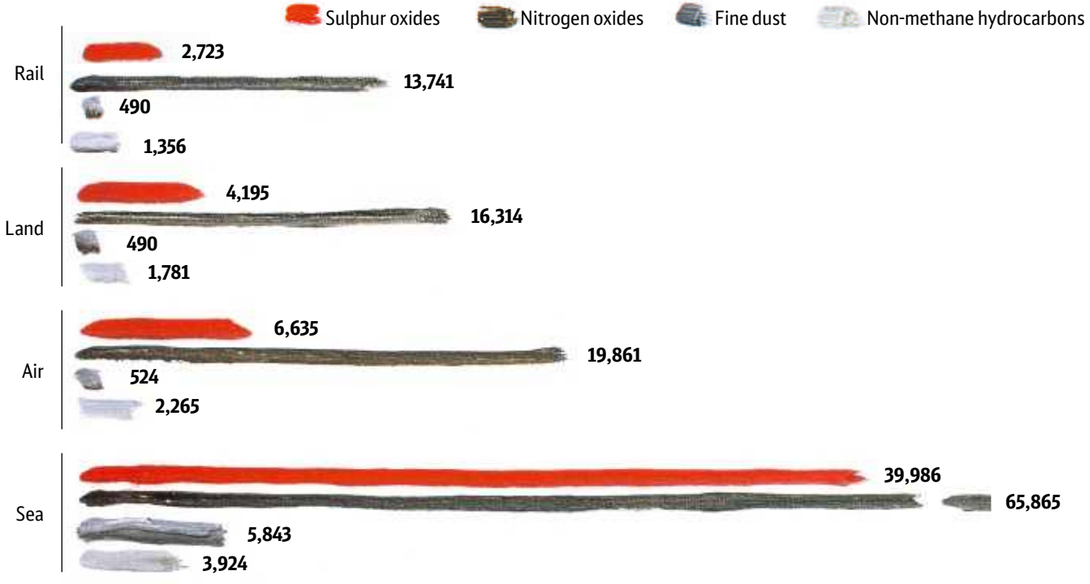
Illustration: Chantal Maquet

Traction current make-up at DB Schenker Rail Germany in 2013, in per cent (without Eco Plus)

Specific final energy consumption at DB Schenker Rail, in per cent (2006 = 100%, indexed)*

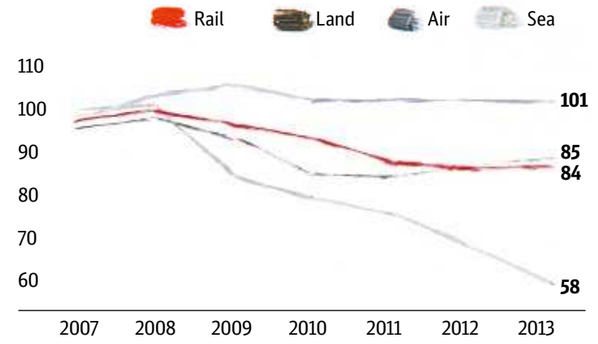


Air pollutant emissions in 2013, in tonnes (WTW)



Including upstream and downstream sections, based on EcoTransIT World averages

Reduction in specific CO_2 emissions by mode of transport, in per cent (2006 = 100%, indexed)



tribute through an energy-saving driving style to reducing the amounts consumed by rail freight transport. A crucial factor for success here is cooperation with DB Netz because, ultimately, it is by enabling trains to run on time and without disruption that the greatest energy savings can be made. With this in mind, greater emphasis is again being placed on improving corporate communications. In addition to repeated efforts to raise awareness among engine drivers – for example, through simulator training – measures are also being taken to increase understanding among dispatchers of their scope for influencing the energy consumed during rail journeys.

CO2-free offerings

DB offers its customers completely CO2-free freight transport under the name of Eco Plus. DB Energie buys the required electricity specially from renewable sources in advance and feeds it into the traction current network. In addition, ten per cent of the additional revenue from these CO2-free offerings is put towards building new facilities for generating renewable energy. The first project to be supported in this way is a hybrid power plant in Prenzlau belonging to the Enertrag company, where surplus wind power is converted into hydrogen and can be used to generate electricity when there is little wind.

Hazardous-freight transport

Parliament has taken account of the advantage that rail has over roads in relation to safety. Ever since 1970, especially hazardous freight of a certain volume has, as a matter of course, been transported by rail or inland waterways because of the increased risk of accidents in road transport.
More than 50 million tonnes of hazardous freight are transported via DB AG's rail network every year. Measured on that basis, the accident rate is very low. Official statistics for accidents in the transport of water-polluting substances emphasise the railways' high safety standards: they show that, in the past 15 years, rail transport was, on average, involved in only two per cent of accidents, while road transport accounted for 90 per cent of accidents. *mh*

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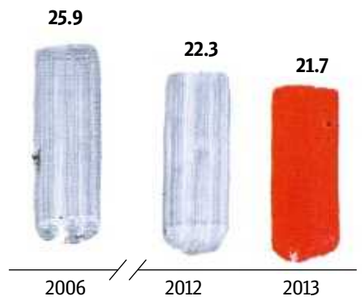
Illustration: Chantal Maquet

DB Schenker Rail specific CO_2 emissions, in g/tkm (WTW)*



“We are addressing this issue”

Dr Alexander Hedderich, CEO of DB Schenker Rail, explains in this interview the challenges facing the rail freight operator in environmental protection and noise control, and how they are being tackled.

Dr Hedderich, how is Germany’s switch to renewables being expressed at DB Schenker Rail?
DB Schenker Rail uses traction current to carry out 90 per cent of its transport operations in Germany. DB is also producing more and more traction current from renewable energies. The proportion of electricity that we obtain from renewable sources is already more than 25 per cent, and our aim is to get 100 per cent of our energy from renewable sources by 2050. A switch to renewable energy in Germany will be impossible without a similar switch in the transport sector. We are the people who will guarantee that such transport operations can be carried out in an increasingly environmentally friendly manner.

Noise control has become an increasingly important issue at DB Schenker Rail in recent years. How has this come about?
First, noise protection is a central component in our environmental protection targets. Furthermore, traffic noise has increasingly become an important social-policy issue. There are a lot of regional groups opposed to traffic noise – which applies, incidentally, not only to rail but also to road and air traffic. The federal government has set a target of halving rail traffic noise in Germany by 2020. Deutsche Bahn has made this target its own, and DB Schenker Rail will be making a key contribution to achieving quiet railways.

How is noise control being put into practice?
Rail noise control is based on two foundations. The first is infrastructure. The federal government’s noise-reduction programme is being implemented on the loudest stretches. With a budget of €100 million per year, rising to €120 million from 2014, to date 1,300 kilometres of our lines have already benefited from fixed noise-control measures, primarily the construction of noise protection walls and we will continue to implement this programme over the next few years. The other foundation consists of measures taken by DB Schenker Rail to tackle noise at source.

Are you alluding to the conversion of freight wagons to use whisper brakes?
That’s right. We will convert our entire fleet of freight wagons to low-noise brake blocks by 2020. That will mean a total of 60,000 freight wagons. Fitting freight wagons with new brake blocks results in a reduction in wear to wheels and rails, and it reduces the sound level produced when the wagon passes by ten decibels. To the human ear, this is equivalent to a halving of the noise level. Also, since 2001, all the new wagons that we have acquired have been fitted with such whisper brakes.

Why are you only now starting to convert freight wagons to whisper brakes?
Since 2001, we have acquired nearly 8,000 new freight wagons with quiet braking technology, i.e. fitted with K blocks. However, retrofitting freight wagons to K block technology requires a comprehensive rebuild of the entire brake unit and re-approval of the brake system. The cost of retrofitting a wagon with K block technology is around €5,000 - 6,000, which is not economically viable and would also potentially lead to timing risks. Only in summer 2013, with the approval of the LL block, did it become technologically possible for us to convert our wagons, on a one-to-one basis, from the old cast-iron blocks to the LL block. The advantage is that we no longer have to convert the wagons’ entire braking system, reducing the conversion costs to around €1,700 per wagon.

What challenges does large-scale conversion entail?
The LL block is a new type of brake block that only received approval one year ago. While suppliers have a certain volume of capacity, it is only enough to cover initial demand. Capacity will need to be increased in the medium term. Even conversion represents a significant technical and operational challenge with 60,000 wagons. The conversion work has to be planned and scheduled for each different wagon type, and all depots have to have the necessary block technology. Additionally, as well as pure block replacement, the wheel sets may also require turning or replacement. Not all freight wagons can be converted simply by replacing the blocks. And, on top of all that, we have to keep the impact of the work on our transport business as low as possible. This is a complex task. And, if you look at the more than 5,000 conversions in 2014 so far, it is something that we are doing successfully.

The first quiet block train set off from Cologne-Gremberg for Rotterdam in mid-July. Was that an exception?
Certainly not. As we want to achieve a noise-reducing effect as early as possible, we have concentrated our conversion efforts in the initial phase on wagons that are most likely to be put together to form trains with other wagons of the same type. This applies mainly to Fal wagons, or bulk freight wagons, which are used to transport ore and coal and often run together in block trains. When we have converted whole fleets there, we shall almost automatically have especially quiet block trains, without needing to have a particular plan for it. What this means in practice is that dozens of quiet trains are already on the go every day, and by the end of the year we expect to have around 200 block trains per day running on a low-noise basis.

What economic consequences will the conversion process have for DB Schenker Rail?
In order to accelerate the conversion of the freight wagons two service-performance related incentive systems have been launched. First, the federal transport ministry pays a subsidy of a maximum of €211 per axle. Second, DB Netz has introduced a noise-related differentiated track access charge system which also provides a ‘subsidy’ of €211 per axle. This bonus is financed by a surcharge on the regular track charge, although this is not a true subsidy or cost saving as the bonus has to be funded by the rail companies. We welcome this system, but conversion still remains a substantial economic challenge. Quite apart from the conversion cost, the use of converted wagons also means higher maintenance costs, for instance due to more frequent inspections, more frequent removal of wheel sets which leads to faster wear, and significantly more expensive brake blocks. The total burden, including conversion costs, noise surcharges, higher operational costs, management costs minus the bonuses, will cost DB Schenker Rail €230 million between now and 2020. In light of these figures, it is no wonder that many in the industry are still hesitant about conversion. However, for comprehensive noise reduction it is essential that all wagon owners pull together. Domestic and foreign wagon rental enterprises and railway companies represent around 120,000 wagons that need to be converted. For this reason we are working with other wagon owners to reduce the financial burden, particularly by negotiating an additional, pro-rata public subsidy for the extra operating expenses, and thus are ultimately also helping to accelerate the conversion process.

Interview: Mirko Heinemann

QUIET RAILWAYS: By the end of the year, 200 block trains per day should be running on a low-noise basis.

Illustration: Chantal Maquet **Photo:** DB AG

FOCUS

Southbound and ecofriendly

DB Schenker Rail is carrying BMW vendor parts from North Rhine-Westphalia to Bavaria, saving nearly 2,000 tonnes of carbon dioxide emissions per year.

Since 1 March 2014, DB Schenker Rail has been transporting vehicle components from Wuppertal to Regensburg and Landshut on behalf of the BMW logistics service provider Duvenbeck, and avoiding emissions of CO_2, the greenhouse gas, in the process. With a large number of sites in eight European countries and its own fleet of more than 1,450 lorries, Duvenbeck is a market leader, and not only in the automotive supply industry. DB Schenker Rail is thus operating an extra route for the automotive sector with this strong partner, by using the Eco Plus transport offering, under which the traction current comes from renewable sources. The BMW Group switched to this CO_2-free Eco Plus transport option between Frankfurt and Bavaria back in August 2013.

"With Eco Plus, DB Schenker Rail has successfully placed a pioneering offering on the market. It is important to us that we are making an active contribution to protecting the environment by using this innovative product, instead of cancelling out our volumes of CO_2 emissions through offset projects," says Axel Marschall, Head of Sales at DB Schenker Rail.

Every day, a 700-metre-long freight train loaded with production parts covers the 650-kilometre route from Wuppertal to and from the BMW plants in Regensburg and Landshut. By switching its transport operations to Eco Plus, the automotive group is able to cut its annual CO_2 emissions by almost 2,000 tonnes, compared with regular rail freight transport.

Eco Plus – now also in Austria

It has been possible to book DB Schenker Rail's Eco Plus offering on all German routes on payment of an additional charge since 2010. The energy procured from renewable sources is verified and certified in Germany by TÜV SÜD. These CO_2-free transport operations offered by DB Schenker Rail are also used by customers such as Audi, Mondelēz International, Lanxess and Vinnolit, who receive a certificate every year recording the volume of CO_2 emissions saved. Since summer 2014, it has also been possible to use Eco Plus on the Austrian network. A further international expansion is also already at the planning stage. Even now, customers can use the Eco Neutral product option to offset CO_2 emissions generated on route sections outside Germany and Austria.

DB Schenker has made protecting the environment a core part of its DB2020 sustainability strategy and is not merely offering environmentally friendly solutions to its customers but also constantly working to reduce its own carbon footprint. It has also set itself an ambitious target: to reduce its specific CO_2 emissions by 20 per cent by 2020, compared with the 2006 level. The logistics service provider Duvenbeck is likewise placing increased emphasis on this environmentally friendly, CO_2-free solution. The family firm is planning to carry out more rail transport operations for more customers on a CO_2-free basis in the future, in close cooperation with DB Schenker Rail. *mb*

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EMISSION-FREE: Eco Plus offers 100-per-cent CO_2-free rail freight transport on all German routes, irrespective of the type and volume of freight transported.

Illustration: Chantal Maquet

MORE SPEED:
A lorry is placed onto the new DB pocket wagons. This is how DB Schenker Rail is speeding up transport operations between Turkey and Central Europe.

To the Orient by train

DB Schenker Rail is expanding transport links to the high-growth nation of Turkey, easing the strain on the roads.

DB Schenker Rail has been offering a new transport connection between Germany and Turkey since summer this year. The trains are setting off from Cologne, with two round trips each week. It is planned to expand the service further by the end of the year. These trains, which are fitted with special double-pocket wagons for transporting semi-trailers, take five to six days to make the journey to Cerkezköy, near Istanbul. "With this new connection, DB Schenker Rail is offering the first rail product on this route that is capable of travelling with semi-trailers all the way to the destination, 40 kilometres short of Istanbul. Previously, the only way to do this by rail was with containers," says Andreas Schulz, Head of the Intermodal Division at DB Schenker Rail.

Logistics on the Bosporus

The Turkish logistics sector has an estimated market volume of $6.5 billion and employs around 400,000 people, according to Germany Trade & Invest, the Federal Republic of Germany's foreign trade and inward investment agency. According to the Investment Support and Promotion Agency of Turkey (ISPAT), the government plans a rapid expansion of the country's transport infrastructure in order to support the sector's growth prospects. By 2023, it intends to build an additional 15,000 kilometres of highways and motorways, 9,000 kilometres of additional high-speed rail lines, new airports with a total annual capacity of 400 million passengers, and three large ports in each of the seas surrounding Turkey. The aim here is to boost the proportion of sea freight in the modal split to 15 per cent in container transport, and the share of rail in freight transport likewise to 15 per cent. *an*

Turkey's outstanding economic prospects form the background to this new service, which is especially attractive to German, Belgian and British customers, who are keen to send their goods to the Turkish market. Until now, the main exports to Turkey have been industrial and other goods, while textiles have been Turkey's principal exports to the European market.

Good economic prospects

Turkey's expanding foreign trade and its favourable geographical location make it an attractive business destination. The Turkish government is currently putting a lot of money into boosting rail's share of freight transport. DB Schenker Rail's transport services could make a significant contribution here.

The new operations are being conducted on behalf of the Turkish freight-forwarding company Ulusoy Logistics. They involve consignments that were previously transported between Western Europe and Turkey by ferry and lorry and have now been switched to rail. With this service, DB Schenker Rail is now offering two solutions for rail transport to Turkey: one via the Port of Trieste, which involves a transfer, and the new, direct, overland connection.

DB Schenker Rail organises these transport operations itself, using its national subsidiaries in Germany, Hungary, Romania and Bulgaria. "Through our own national subsidiaries, we already have a strong DB Schenker Rail presence in South-eastern Europe. As far as the Turkish growth market is concerned, this is an advantage we intend to continue exploiting in the future," says Hans-Georg Werner, Head of Region East on the DB Schenker Rail Management Board. In addition to handling rail transport operations, DB Schenker offers terminal and agency services in Germany and Turkey. A simplified customs procedure significantly reduces waiting times at the Turkish border. *an*

Photo: PR

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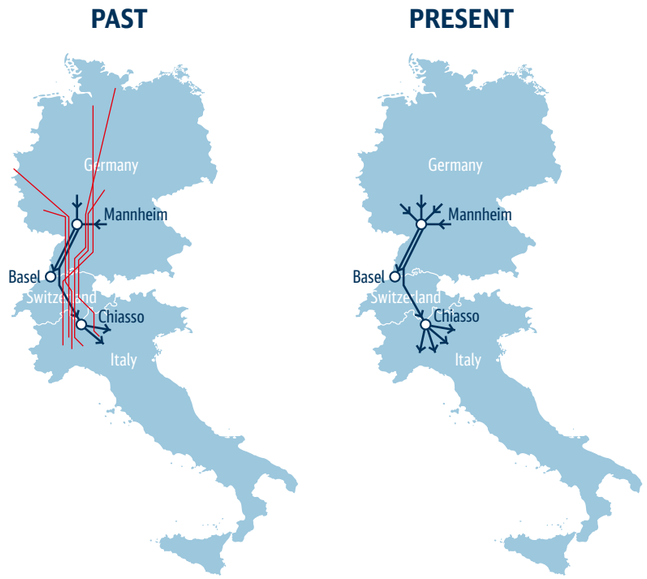
Integrated planning of Swiss Alps transit

The Netzwerkbahn business model has every chance of success. The best example is the optimisation of rail freight transit services through Switzerland thanks to a new corridor concept.

"We are constantly faced with intense competition on the Germany–Italy axis," observes Walter Herrmann-Schramm from traffic management at DB Schenker. That is why the railway experts keep developing new concepts aimed at taking the company and its customers forward. One example of this involves transport in individual wagons. In order to improve its service through the Swiss Alps, the planners at DB Schenker Rail have revamped existing structures. DB Schenker Rail now operates a new corridor concept on the route between Mannheim and Chiasso.

Conditions on the route were ideal for the new blocking concept. The customer European Cargo Logistics (ECL) required a timely and reliable transport solution for its paper shipments from Lübeck to Italy. The exclusive trains previously envisaged for use en route from Lübeck to Chiasso were no longer viable owing to the fluctuating volume of traffic. "The blocking principle ideally meets such customer requirements," comments Bastian Muth, Head of Netzwerkbahn Planning. Under the new concept, the customer is offered a departure on up to six days per week for consistent quantities. The wagons are grouped for this purpose into their own block and then transported with existing trains belonging to the individual-wagon network from Lübeck to Mannheim and then from Mannheim to Chiasso. Thanks to an especially quick and pre-planned transfer at the Mannheim marshalling yard, the total transit time to the destinations in Italy changes only slightly. A blocking concept to the Desio Railport has been implemented for the Thyssen company. Wagon groups weighing some 900 tonnes operate five times per week via Mannheim and Chiasso to their destination.

CAPACITIES:
Through the intelligent interlinking of block trains, wagon groups and individual wagons, DB Schenker Rail can deploy its fleet of rolling stock more effectively.



These concepts have not only fulfilled customer requirements, but also strengthened DB Schenker Rail's individual-wagon network. This is a genuine win-win situation that has won over other customers in addition to ECL.

Customers embrace the concept

Naturally, the customers were involved in the planning at an early stage because the resulting changes to transport operations can also have an impact on internal logistics processes. "The customers – from the paper, steel, chemical and automotive industries – were sceptical initially, but are now very pleased – mainly because they have the opportunity to ship their freight with greater flexibility (in terms of timing) and more frequently," notes Muth.

Kersten Tiedeken, responsible for paper logistics at ECL, confirms this. "The changes have brought us a number of advantages: more flexible transport handling, quicker ordering, the staggering of transport volumes over the space of a week and a more even distribution of work at the port. Altogether this means faster services for the customer."

Many customers have indeed expressed great satisfaction with the changes. "DB Schenker Rail took over the Desio service again from 1 January 2014 – after some initial difficulties, we are very happy with the execution and the pro rata shipping from all TKSE sites (thanks to individual wagons) – this gives us great flexibility with our Desio deliveries. We hope that DB Schenker Rail will introduce this blocking system on other international rail routes as well, thus making cross-border rail services more reliable and predictable for the customer," says Bert Kloppert, Head of Transport/Logistics 1 at ThyssenKrupp Steel Europe AG, full of praise.

Photos: PR; JET-Foto Kranert/DB AG

"We can very clearly see how our offering is finding a ready market from the increase in traffic volume: contrary to the general trend, we are growing on the Mannheim–Chiasso–Italy corridor in the north-south direction by 15 per cent and in the opposite direction by 10 per cent," says Herrmann-Schramm. "With four pairs of trains running between Mannheim and Chiasso per week, we offer a flexible range of services that match our customers' individual transport needs and have even gained us some new customers!"

Nominated for the DB Award

The overall concept is now set to be rolled out on other similar corridors, for example, the route through the Austrian Alps. The project is a prime example of co-operation at DB Schenker Rail – internally, externally, internationally and, of course, with the customer. For a whole year – from October 2013 – 25 employees from planning and sales refined the concept and its implementation with many other colleagues from the areas of capacity management, scheduling and execution. In the process, colleagues from DB Schenker Rail also collaborated with the foreign partner SBB Cargo and the DB subsidiary Nordcargo in Italy.

To reward their efforts Deutsche Bahn AG nominated the project for the DB Award, an in-house prize, in the growth and economic efficiency category. Among more than 1,600 entries, the network planners of the Mannheim–Chiasso route made it to the last 15 and finished in the top three in their category! *an*

AWARD-WINNING TEAM:
Deutsche Bahn has rewarded the replanning of Alpine transit services with an internal prize: several of the many employees behind the new concept attended the award ceremony.

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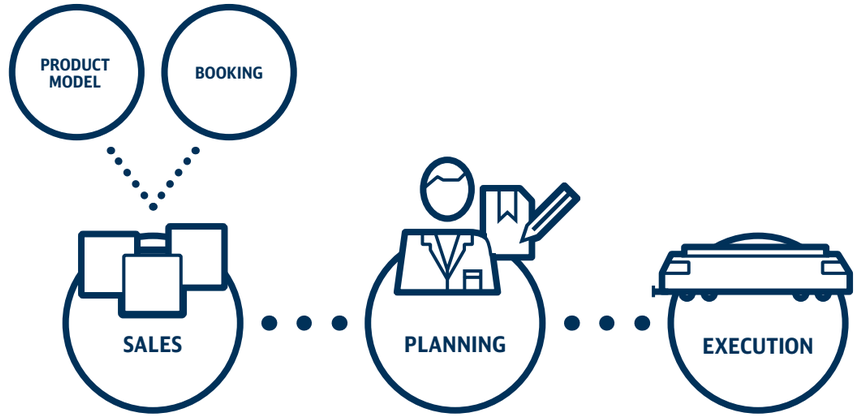
Data for the network

DB Schenker Rail is improving the quality of its transport offering and providing a detailed insight into its range of services. With the Netzwerkbahn business model, the company is striving to put rail freight transport on a new footing across Germany and Europe.

Photo: Dennis Williamson



THE NETZWERKBAHN PRINCIPLE

The Netzwerkbahn model is no longer a pipe dream: over the past two years more and more customers from all sectors have been placing their orders according to the logic of the Netzwerkbahn principle. In addition, DB Schenker Rail has implemented almost 100 blocking concepts, as they are known – like the one deployed on the Mannheim-Chiasso route (see page 26). These combinations of individual wagons and block trains operate with high levels of reliability and punctuality.

DB Schenker Rail is now seeking to further improve and stabilise the predictability of its network: from January of next year, all customers will indicate the provisioning time for dispatch. This information – previously the time of dispatch – refers to the time when the customer has his wagons ready on the transfer track. This time is determined by DB Schenker Rail for all customers and their routes on an individual basis and then stated by the customer at every booking. "This improves the quality of service at the customer's siding and increases dispatch reliability," says Gönke Kraft, Head of Network Planning at DB Schenker Rail.

This service predictability is all-important in advanced rail freight transport. After all, the transfer of 4,000 customers and 60,000 individual routes to DB Schenker Rail's capacity-checked network is at stake here. At the same time, the planning and booking of transport operations will increasingly go hand in hand in the era of digitisation. This is a venture no other railway company in Europe has attempted to date due to its complexity: integrated planning gives rise to a network plan that defines the dimensions of transport operations. On this basis, DB Schenker Rail plans and manages rolling stock capacity, i.e. locomotives and wagons of all classes, rail trackage and personnel. In future, the customers will book transport services electronically prior to the relevant operation in the pre-planned network. The booking system will in turn check network capacity automatically when the booking is made and, if sufficient capacity is available, work out a transport plan containing the date of receipt. The transport operation will then be executed as planned. Clear decisions will be made if deviations arise: as soon as deviations from the original transport plan arise, the customer will receive the relevant information on the new time of receipt in the target status of the capacity-checked network.

To ensure that the business model is successful in the market, DB Schenker Rail is also further developing its sales offering. "We are focusing on two aspects at present: transferring our customers to the new capacity-checked network as well as developing our market offering further," says Hendric Fiege, Head of Marketing at DB Schenker Rail.

A basic step has already been taken: the introduction of a list of services from 1 January 2015 that will form the basis for DB Schenker Rail and its customers for all individual transport offerings and their contractual agreement. "Our services will become more transparent for everyone – after all, DB Schenker Rail's range of additional services in this form is unique," says Fiege. "This transparency not only facilitates the planning and reliable execution of transport services, but also offers customers greater transparency relating to the complex logistics processes involved." *an*

You will find the list of services at:
www.dbschenker.com/leistungskatalog

Reliability and stability

ArcelorMittal Bremen GmbH has become one of the first pilot customers to take part in the Netzwerkbahn business model. The steel manufacturer's IT systems are currently being aligned with those of DB Schenker Rail.

Early adopter ArcelorMittal Bremen is benefiting from the advantages offered by the new Netzwerkbahn business model – transparent, efficient and reliable transport operations in a capacity-checked individual-wagon network.

"This is important for ArcelorMittal in Bremen," says Elke Buschermöhle, Key Account Manager in DB Schenker Rail's Coal and Steel Division. "The company is fully involved and well advanced in the introduction of innovative IT approaches and processes." ArcelorMittal Bremen is achieving one more milestone through the present alignment of its EDI (Electronic Data Interchange) with the new system requirements for ordering individual-wagon transport operations from DB Schenker Rail. "All this has not happened overnight. We hope we will be ready to go from 1 April 2015," Buschermöhle says. For its part, ArcelorMittal, the world's biggest steel manufacturer, plans to use the experience gained in Bremen at its other German plants in Eisenhüttenstadt, Hamburg and Duisburg – these plants regularly exchange ideas.

Individual adjustments in IT

This complex process requires the EDIs of ArcelorMittal Bremen and DB Schenker Rail to be aligned with each other. With everyday production and logistics operations carrying on at the same time, there is no room for error. The different IT systems in place at the steel manufacturer need to work absolutely in synch in order to generate a transport order at the right time. From 2016, customer s will dispatch advance bookings no later than by 12 noon on the day before transport. is required and then receive an indication from DB Schenker Rail of the available capacity, after which a binding booking can be made. "The biggest challenge was implementation in the initial phase. Operating processes had to be changed significantly before the first capacity-checked wagons were able to set off," says Buschermöhle.

Buschermöhle, her team and the staff of ArcelorMittal Bremen have spent more than three years planning the transition to the new Netzwerkbahn logic. Specialists from various of the customer's and the rail operator's departments hold fixed monthly face-to-face meetings to discuss and deal with any potential obstacles.

The service that DB Schenker Rail provides for its steel customers is impressive: the rail operator delivers essential raw materials from two locations to Bremen and transports steel from Bremen to customers throughout Europe. By bringing steel customers into the Netzwerkbahn business model, DB Schenker Rail aims to provide greater reliability and stability in the handling of their transport operations. "This will enablecustomers to move a greater volume by rail, especially for time-sensitive consignments," Buschermöhle hopes.

The steel manufacturer's transport operations have now been gradually integrated into the new Netzwerkbahn logic. "We have transferred almost all domestic transport operations and some foreign routes," Buschermöhle says. However, international transport is still limited to those operations that are carried out through Xrail, the European alliance for individual-wagon transport. *an*

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GIANT ON THE WESER: The ArcelorMittal plant in Bremen. The company is benefiting from the efficiency of Netzwerkbahn.

Horizontal or vertical?

SBO's new special-purpose vehicle makes container transport possible for customers with particular needs.

A new special-purpose vehicle is now in use for transporting containers from the port of Riesa to customers in the region. The tri-axle trailer has a hydraulic pump system and a cable-guided dumping mechanism, known as a tipping chassis.

"In principle, this chassis can be used anywhere where a 20-foot standard container needs to be deposited on the ground," explains Stephan Weikert, Team Leader Planning/Office Service at Sächsische Binnenhäfen Oberelbe GmbH (SBO). "This is attractive, in particular, to customers who do not have a loading ramp or in places where loading by ramp is not possible," adds Alfred Raithel, Head of Operations Regional at TFG Transfracht. SBO has been transporting containers from the port of Riesa with its own vehicles to customers in the region on behalf of TFG Transfracht for a year now.

The tipping chassis can be used to transport 20-foot standard containers weighing up to 30 tonnes. The chassis is operated by remote control, with the possibility of either positioning the container vertically or depositing it horizontally on the ground. The maximum tilt angle is 92 degrees. "This is advantageous for loading bulk freight, such as scrap metal or chemical products, in containers," Weikert says. "To do this, the container is positioned vertically and loaded from above through the open container doors." The load can also be tipped directly out of the container with the help of the tipping chassis at the final destination, without the use of any extra equipment.

"The tipping chassis enables us to expand our container-related services even further," explains SBO Head of Sales Frank Thiele. "Demand from the chemical industry and the recycling sector for this special-purpose equipment shows that we have made the right investment." In the future, the plan is to use the chassis not only at the Riesa site but also on the Czech market and, on request, on other routes in the AlbatrosExpress network. The SBO container terminal at the port of Riesa was been integrated into TFG Transfracht's AlbatrosExpress network in 2005. *mb*

FLEXIBLE: The container can also be loaded from above – for instance, with bulk freight.

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New cross-connection

TFG Transfracht boosts its AlbatrosExpress train network

The AlbatrosExpress train network is being expanded with an extra connection. Since 1 August 2014, TFG Transfracht has been offering an extension through to Ulm, on top of its existing connection which serves the Dortmund–Regensburg route twice weekly. With this additional cross-country transport link, the logistics operator is providing its customers with more import capacity for Dortmund, as well as further scope for positioning empty containers for southern Germany. The move also creates greater export capacity for the Ulm AlbatrosExpress. The new Dortmund–Ulm connection is initially operating once a week.

AlbatrosExpress is the tightest train network in European seaport-hinterland transport. Around 12,000 connections are handled every year through 22 terminals. Transport capacity of 4,000 TEU is made available daily. As Europe's market leader in containerised seaport-hinterland transport, TFG Transfracht operates from Germany's seaports to locations in Germany, Austria, Switzerland and the Czech Republic. Its customers are international shipping companies and freight forwarders. *mb*

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Photos: dpa picture-alliance; PR

MARKETS & INNOVATIONS

More planning for more reliability

At the Coal and Steel Conference in Frankfurt, DB Schenker Rail discusses with its customers the coal and steel sector's transport and logistics requirements – and what solutions the rail freight operator has to offer.

The Coal and Steel Conference in Frankfurt: some 50 top customers from the steel and scrap sectors and also from the energy industry got together in the House of Logistics & Mobility in Frankfurt am Main with DB Schenker Rail managers to debate the future challenges facing the coal and steel sector. "The aim of this event is to facilitate a constructive exchange of views and ideas among the participants," stated Dr Jörg Hilker, Head of DB Schenker Rail's Coal and Steel Division, welcoming the guests.

A major topic was the current economic situation and its consequences for the sector. At the start, Michael Anslinger, Chairman of the Management Board of DB Schenker Rail Deutschland AG, Member of the Management Board for Region Central/Germany, presented the measures and activities being pursued across the company with which the rail freight operator seeks to achieve its ambitious targets by 2016. The strained relationship at present between high rises in factor costs, stagnating transport volumes and intensifying competition is having an adverse impact on the company's results. Work is therefore in progress on a large number of measures aimed at generating sustained earnings growth. DB Schenker Rail must be able to remain a competitive market player in the long term and generate the investment required for this from its own resources.

A key issue in this context is the individual-wagon transport system. "We want to express a clear commitment to individual-wagon transport services," noted Anslinger. However, there are some 25 per cent fewer wagons operating in this system than forecast. "We therefore need to further develop our infrastructure in a market-oriented way and ask ourselves in which sectors we can grow. This calls for an intensive exchange of views and ideas between production and sales. In utilisation-oriented sales, we are already working on ways of boosting train capacity utilisation chiefly in individual-wagon transport through targeted marketing.

The aim is also to improve the predictability of transport operations: "As a production company, we need a certain degree of forward planning," said Anslinger, asking for understanding. "We are a large operation with many sites and some 3,500 trains operating daily across Germany – all of this requires thorough planning."

Division head Hilker then described the current market conditions. DB Schenker Rail had recorded solid performance in terms of freight revenues for steel and scrap, but a slight downward trend for coal. In view of the weakening economic situation, he expected transport orders to fall. On the topic of availability, he also made the case for early planning: "Our business is subject to strong fluctuations – and for that reason we endeavour to plan as far ahead as possible in consultation with you."

To cushion the impact of this greatly fluctuating demand, turnaround cycles need to be increased – more than a quarter of a wagon's turnaround time is still spent on loading and unloading, he added. Hilker then outlined how the rail freight operator is seeking to support the improvement of delivery services for European steel producers with its own concepts.

Thorsten Dieter, Head of Supply Planning and European Service Design at DB Schenker Rail, set out in a talk titled, "Traffic profile smoothing at DB Schenker Rail", how the rail freight operator optimises high-volume transport operations. The background here is DB Schenker Rail's aim of avoiding peaks and distributing the utilisation of scarce resources more evenly through improved forward planning.

Photos: Michael Neuhaus

INDUSTRY GATHERING: Some 50 top customers from the coal and steel sector got together with DB Schenker managers at HOLM (the House of Logistics and Mobility). In Mainz, just a few kilometres away, representatives of the chemical industry met their rail freight counterparts.

Additional solutions for customers

The rail company is currently devising its own industry product for steel customers: SteelSolution is set to offer advantages in efficiency, reliability and predictability, targeting in particular common ground between the networks of the coal and steel sector and automotive industry. “We believe that there is some overlap here, enabling a joint offering,” says Dr Jörg Hilker, Head of the Coal and Steel Division. To remain competitive, the coal and steel sector is focusing increasingly on its logistics processes. DB Schenker Rail offers a whole range of additional services aimed at supporting customers from the coal and steel sector.

Requirement: Many goods cannot be delivered in one go to the customer.
Solution: DB Schenker Rail offers special Railports and logistics centres for temporary warehousing. In Hagen, for instance, the rail company has its own storage facility for coils.

Requirement: A lack of sidings and system failures abroad.
Solution: Here too, the rail freight operator offers multimodal transport solutions and storage concepts.

Requirement: Secure and monitored transport operations.
Solution: DB Schenker Rail is responding to its customers’ growing security and information needs with a number of changes to the existing fleet and through innovations, such as equipping wagons with GPS transmitters and sensors.

Requirement: Cost optimisation in rail logistics.
Solution: In this area as well DB Schenker Rail acts as a partner– at joint workshops with the customer, for example – in an effort to improve system costs and logistics processes.

Requirement: International transport chains.
Solution: DB Schenker Rail offers a range of solutions designed to tackle increasing containerisation among its customers. These include improved access to ports and intelligent concepts for combined transport.

NETWORK: The international aspects of individual-wagon transport caught the listeners’ attention .

Central control and information

How DB Schenker Rail manages its Europe-wide transport operations was explained by Gijsbert Spirinckx, Head of Production and Transport Management for Coal and Steel, Chemicals/Mineral Oil/Fertilisers, Building Materials/Industrial and Consumer Goods at DB Schenker Rail’s European Operations Centre (EOC). In his presentation “How the EOC works – current status and further developments”, he went into the underlying framework for rail freight transport in Europe: four track gauges, five different power supply systems – yet 5,000 trains operate throughout Europe daily, transporting 390 million tonnes in 2013.

Spirinckx elaborated on DB Schenker Rail’s European organisation and set-up and explained the tasks of the EOC: apart from being responsible for a train schedule and route from start to finish, the EOC supplies the customer directly with running information, arrival estimates and measures in the event of a breakdown. “Our customers don’t want to know how late our services are running, but when the train will arrive on their premises,” Spirinckx stresses. “High reliability with Europe-wide transport operations – that is our unique selling point.” *an* ■

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What’s next?

Customers are curious: DB Schenker Rail took the opportunity at its conference for the chemical, coal and steel sectors to report on the rail company’s two key future topics: digitisation and Netzwerkbahn.

“Rail freight transport of the future: intelligent, quiet, sustainable!”

How will the rail freight operator of the future look? This topic was tackled by Steffen Bobsien and Dr Miroslav Obrenovic from the European Asset Management & Technology unit. Alongside the areas of “energy efficiency” and “longer trains”, which contribute to environmental targets and particularly to improved cost structures and productivity, there are two particularly pioneering strategic focuses.
Firstly, the digitisation and automation of DB Schenker Rail’s rolling stock: this is not some far-off vision but – at DB Schenker Rail – a reality. The intelligent engine is already operating right across central Europe and by 2020 up to 2,000 railway traction vehicles will have been digitised and thus made “intelligent”. This means that locomotives transmit hundreds of operation-related data in real time for central evaluation. With the locomotive able to diagnose its own status and pass on the relevant data, “condition-based maintenance” becomes possible. Components are no longer replaced at fixed intervals, but only when actually necessary. Moreover, the European Asset Control Tower, as it is called, will in future be able to directly access locomotives and wagons online and in real time from any location and work out at which nearby depot any damage detected can be quickly rectified. In addition to locomotives, DB Schenker Rail currently has more than 1,000 intelligent freight wagons with tracking sensors in operation.
Secondly, the environmental and ergonomic advancement of the existing wagon fleet is a key focus: since 70 per cent of today’s freight wagons will still form the backbone of the fleet in 2030, the rail operator must continue to invest in existing rolling stock, with the emphasis on noise control. A chief element is the retrofitting of wagons with “whisper brakes”. However, to bring about a tangible reduction in noise, retrofitting is also an imperative for the 120,000 fleet wagons owned by other operators, the speakers stressed. Further investment in the fleet is directed at safety and ergonomic issues: for example, larger shunter’s steps on flat wagons and modernisation of freight wagons with steel telescopic hoods or staunchions on roller bearings.

“The Netzwerkbahn business model – coming to you soon!”

A report on the current big topic – the transformation of the business model to Netzwerkbahn – was delivered by Gönke Kraft, Head of Network Planning, and Sven Budde, Head of Product Management in the Chemicals, Mineral Oil and Fertilisers Division. Customers from all sectors are now implementing national and international blocking concepts – see also page 28 of this issue.
DB Schenker Rail is currently arranging for the transfer of more customers to the new system. In the coming weeks DB Schenker Rail’s key account managers will be approaching customers and making preparations jointly with them for the transfer to a completely capacity-checked network.

Photo: Manfred Schwellies

MARKETS & INNOVATIONS

Being better tomorrow than today

Opportunities in the sectors of the Chemicals, Mineral Oil, and Fertilisers Division

A unique industry-wide exchange of views, interesting talks and stimulating discussions – all this is made possible by the annual gathering of major clients at the Industry Conference, which was held in 2014 for the sixth year in succession. Some 100 managers from the European chemicals, mineral oil and fertilisers industries accepted the invitation from their division at DB Schenker Rail to the company's headquarters in Mainz.

The event focused on the following market trends: consolidation of the European chemicals market, the shift in the international flow of goods and the changed legal framework, as well as containerisation and the related strong growth in combined transport. The division presents its strategic positioning as its response to these market trends, offering a platform for an intensive debate on the future challenges facing DB and the division's sectors.

Dr. Carsten Hinne, Head of the Chemicals, Mineral Oil and Fertilisers Division and Managing Director of DB Schenker BTT GmbH, opened the conference with a clear message: "Only together can we prepare the sector for the challenges ahead. Let us use this day for open and constructive discussion, because through the continuous exchange of ideas we achieve comprehensive growth!"

Head of Sales Axel Marschall outlined the market and competitive conditions facing DB Schenker Rail in Europe. Despite the increasing volatility of demand volumes, the rail freight transport market looks set for long-term growth. In order to do justice to DB SR's guiding principle, "We want to be your first choice on Europe's railways", there are three main pillars to the company's growth strategy: the right set-up in the combined transport segment, for example by expanding the existing terminal network; the inclusion of new markets in the country network, and the expansion of the European individual-wagon transport network.

OPEN EXCHANGE: DB Schenker Rail staff seek dialogue with their customers.

Photos: Andreas Reeg

Efficient EU network management

Marschall went on to explain how the new European Operations Centre (EOC) in Frankfurt efficiently manages the entire EU network, centrally coordinating more than 5,000 trains a day.

Germany plus action plan

To keep pace with market growth, DB Schenker Rail's ability to generate the required investment must be guaranteed, stressed Marschall. A step in that direction is the Germany plus action plan, which is currently being implemented across all departments with the following focus: optimisation of infrastructure, network utilisation and efficiency, as well as the Group's integrated positioning.

Dr. Carsten Hinne's presentation to the 2014 Industry Conference was devoted to the following ambition: "DB Schenker Rail 2.0 – Being better tomorrow than today". With regard to the Chemicals, Mineral Oil and Fertilisers Division, he noted that sales were currently increasing in line with European chemicals production even if the development of the individual sectors was mixed. To hold its own in an increasingly competitive environment, DB Schenker was seeking

ENQUIRIES:
Listeners in the audience discuss prospects for the chemical industry – and the conclusions that DB Schenker Rail is drawing from them.

to make the transition from a conventional carrier to a lead logistics provider (LLP), Dr. Hinne added. He spoke in this context of logistics solutions being developed for chemicals that may be rail-based but ultimately extend far beyond the rail network.

A key role is being played in this regard by the freight-forwarding subsidiary DB Schenker BTT GmbH, which celebrates its 25th anniversary this year. The close cooperation between DB Schenker BTT, DB Schenker Rail and DB Schenker Logistics makes it possible to offer intermodal transport concepts to the chemicals industry under the DB Schenker Chemicals flag. The international network with its closely integrated national subsidiaries provides the scope for both Europe-wide and worldwide industry solutions – from Bulgaria to Spain, and from Italy to China.

"Our current focus goes hand in hand with the DB 2020 strategy," explained Dr. Hinne. One of the emphases was on interlinking production and processing sites on international routes through the ChemSolution and ChemSolution Combined Transport products. The expansion of the terminal network will be supported in the Chemicals Division by the operation of the Burghausen combined transport terminal aimed at improving links between industry sites across Europe. Moreover, through strategic collaboration with specialised logistics companies, DB Schenker Chemicals has actively contributed to the improved performance and productivity of its customers, he went on.

The bar has been raised for the future: Being better tomorrow than today – this is DBSchenker Chemicals' ambition right across the board and in every single one of its projects. Ranging from Netzwerkbahn and the IT master plan to integrated sales and logistics solutions, noise emissions and LLP expertise. These topics then formed the basis for discussion in the Q&A sessions and individual meetings with customers that followed.

Dr Jürgen Müller of the McKinsey & Co. consultancy ventured a glimpse into the economic future. The transport sector is ranked sixth among 91 branches of industry in terms of its importance to the German economy. At the same time, the segment comes in last place but one for profit margins when compared internationally. Business would not be getting any easier, Müller noted: "Transport will continue to be a tough industry. The outlook for growth in European rail freight transport remains laden with uncertainty, dependent as it is on legislation, energy cost developments, technological advances and the general economic trend. "Depending on the scenario, the business consultant sees scope for growth of up to 28 per cent by 2030 – or a fall in sales by almost half that rate.

In the afternoon, a panel discussion was held at the Industry Conference. One of the participants was Dr. Alexander Hedderich, Chief Executive Officer of DB Schenker Rail.

He focused on digitisation as a key aspect, and reported that under the IT Master Plan around €200 million will be invested in IT systems over a period of ten years. "We want to build a modern IT environment that is ready for the 21st century." The first fruits of this plan are impressive: DB Schenker Rail ran a one-year trial of "intelligent" locomotives which can transmit their current system status and are capable of reporting faults to the maintenance depot. This trial has now been completed and rollout has commenced; by the end of 2014 the intelligent fleet will number 30 locomotives.

The noise reduction measures implemented by DB are unrivalled on the market. More than 14,000 quiet wagons will be in operation and around 200 trains will be travelling silently through Germany every day by the end of 2014.

Together with Mr Gerd Deimel, Spokesman of the VCI Infrastructure Initiative and Vice-President of Lanxess Deutschland GmbH, Hedderich also touched on Germany's infrastructure. VCI is calling for Germany's transport infrastructure to be maintained, bridge renovation to be accelerated and additional multimodal hubs to be created to eliminate bottlenecks. Hedderich promised the VCI Initiative DB Schenker Rail's full support and reported on the talks currently being conducted at political level with the aim of advancing the relevant projects.

Positive feedback

To mark the company's anniversary, Wolfgang Rogall, the former managing director of DB Schenker BTT GmbH, offered a personal retrospective on his last 25 years with the company. Alongside his memories of 1989, when the company was founded, he provided an overview of sales development, the various managing directors and the establishment of the current BTT sites in Germany. With highlights from various projects and collaborations he said farewell once more with renewed thanks for a successful and memorable time with BTT.

Dr Carsten Hinne closed the one-day conference, which attracted positive feedback, by again calling for as much openness and transparency as possible. "Let us assume joint responsibility for speed and efficiency so as to guarantee our sector's future viability. Let us have the courage to strike out in new directions and to grow together sustainably." *mb*

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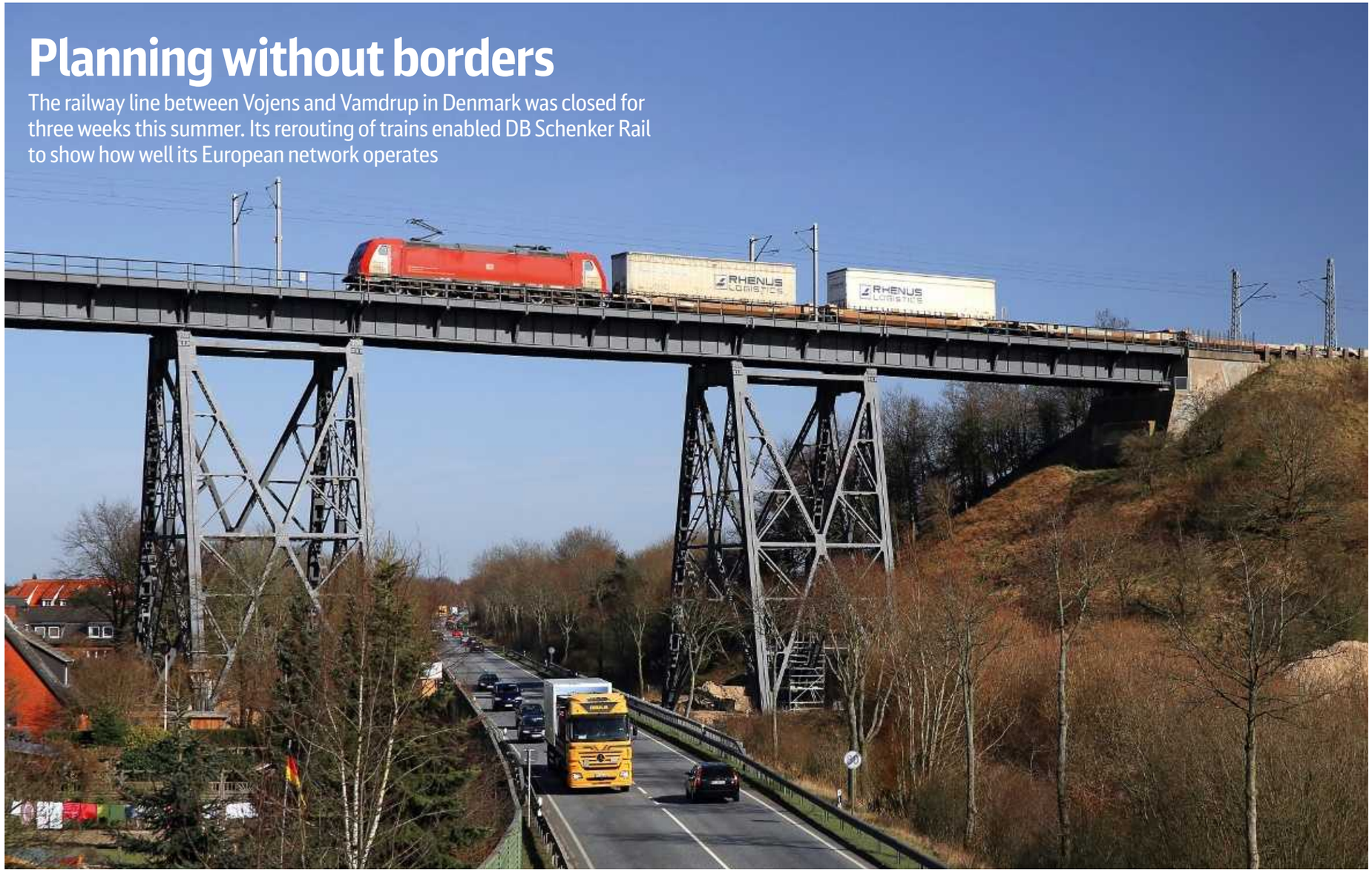
DISCUSSIONS:
The talks also focused on the state of the infrastructure in Germany. Overall, the customer feedback was positive.

Planning without borders

The railway line between Vojens and Vamdrup in Denmark was closed for three weeks this summer. Its rerouting of trains enabled DB Schenker Rail to show how well its European network operates



The line from Flensburg to Kolding in Denmark is part of the important North-South corridor, which connects Scandinavia by rail with the rest of Europe. This line is currently being renovated and strengthened to enable it to carry express traffic, and a second line is due to be laid in the next three years. Disruptions are commonplace – this summer, too, the line had to be closed completely for three weeks. This presented no small challenge for DB Schenker Rail: back-up plans had to be worked out long before the closure so that freight could continue to be transported reliably. Many of DB Schenker Rail's units had to put their heads together: DB Schenker Rail Scandinavia, the Production Centres in Hamburg and Hanover and, of course, the European Operations Centre (EOC) in Frankfurt amMain. Planning began months before the closure. "We had to rely on the motivation of our workers to make the project a success," said Gottfried Eymer, CEO of DB Schenker Rail Scandinavia. A comprehensive plan of action based on clear and simple principles soon emerged. These covered cooperation, use of resources and priorities for the two companies, DB Schenker Rail Germany and DB Schenker Rail Scandinavia. This enabled them to cope with 411 trains in 205 shifts per week with a high degree of reliability.

"Particular mention should be made of the exemplary efforts of our engine drivers, who drove the big Class 232/233 diesel locomotive in sauna-like conditions, with outside temperatures of up to 30 degrees, and worked flexibly to put in all the necessary overtime," Frank Erschkat, Head of the Hamburg Production Centre, said afterwards, singing their praises. Dispatchers, too, worked around the clock to keep locomotives available. Three daily telephone conferences among those involved helped to ensure that the full range of transport operations was kept under control. "What our customers found out during this period was that we can not only move freight from A to B but also offer flexible solutions," said Gottfried Eymer. This flexibility will also be needed next year, when the line is due to be closed again for four weeks. *an*

Photos: DB AG; Imago

Eye of the storm

Laws, strikes and competition from the roads are not the only things that hamper rail freight transport. Nature, too, sometimes obstructs the system. In particular during bad storms and floods, it becomes hard to keep rail transport running and to get it going again afterwards. This is the task of the European Operations Centre (EOC). In normal conditions, around 200 dispatchers work 24 hours a day, seven days a week, to make sure that 5,000 trains reach their destinations in Europe as punctually as possible. In crises, however, the EOC's dispatchers meet representatives of all affected departments and divisions on the seventh floor of the DB Schenker tower building in Frankfurt/Main to monitor the situation and to consult and act. Supervisors lead the meetings and take decisions on the deployment of people and equipment.
This is how it was possible to limit the damage caused by Storm Ela, for example, relatively quickly. In North Rhine-Westphalia, 1,500 kilometres of track were closed and 2,200 kilometres of overhead contact lines destroyed. Around 2,000 scheduled trains were cancelled, as were special and short-term transport operations. "It could all have been much worse if our colleagues locally and at headquarters had not brought the crisis under control as well as they did, thanks to their professional efforts and high level of motivation," said Michael Anslinger, Head of DB Schenker Rail Germany, full of praise. Later on, even Dutch engine drivers helped out by driving the backlog of trains that had built up. *an*

Pioneering Hanseatic spirit

A new logistics centre has been set up in Maschen, thanks to teamwork and commitment. Its first achievement is a 30-per-cent increase in the Unilever transport operations handled there.

Sometimes, all it takes to make logistics processes more efficient, intelligent and customer-friendly is a good idea, well-oiled communications and commitment from the workers. This is what has happened at Maschen. The train-formation facility there contains a building that was used until recently as a warehouse. An intermodal logistics centre was set up there at the start of this year. Suddenly, this opens up completely new possibilities.

Regional Sales Hamburg has managed to offer longstanding customerUnilever a logistics service that speeds up their deliveries significantly. "The new scope for transhipment from truck to rail not only saves time in serving short-haul destinations, but also reduces the amount of time taken up throughout the transport chain," says Horst Heydasch, Head of Regional Sales Hamburg and Hanover at DB Schenker Rail.

"We wanted to make these transport operations faster. Time is of the essence, especially for moving goods from the warehouse to retail outlets," Heydasch notes. Food and personal care is a high-value segment in logistics. You have to be fast in order to keep up. For instance, when shops order food products, the goods have to be on the shelves within 48 hours. This is running like clockwork in Unilever's case.

GOOD IDEA: Once a signalling warehouse, now an intermodal logistics centre.

Photos: PR; Dennis Williamson

Here is how it works in practice. Goods that shops need are ordered from Unilever's German central warehouse in Heilbronn by 12 noon. They are picked from the warehouse during the afternoon, and then, at 6 pm, loaded onto a freight wagon in Heilbronn. The wagon is taken to northern Germany overnight and arrives in Maschen the following morning. The goods are then transferred to lorries and delivered to the shops. Soon after that, the freight wagon is loaded up again. "The wagon stands empty for just one hour and then sets off again in the evening," says Horst Heydasch, Head of Regional Sales Hamburg and Hanover at DB Schenker Rail. In the past, the wagons had to be coupled to another train in Maschen and went first to Hamburg-Harburg before the goods set off. That step has now been eliminated. This has boosted transport volumes for Unilever by 30 per cent.

ADVANTAGE: More transport operations by rail reduces the CO_2 footprint.

"The new logistics centre makes it possible for us to handle food transport operations," adds Georg Aipperspach, Head of Supply Planning and Resource Management at the Hamburg Production Centre (PC). The idea was put into effect as a joint service by Regional Sales Hamburg and Hanover and the Hamburg Production Centre. The two logistics experts had already been thinking about the idea for some time. "We exchange views regularly," explains Aipperspach. "It was important to the PC that we should become more resource-efficient." "And that we should give our customer an advantage," adds Heydasch. "This is because it leads to more traffic being switched to rail, which reduces the CO2 footprint." The idea was turned into reality on the spot by colleagues led by Jörn Kallas, Team Leader General Operations in Maschen, who "are delivering some extremely committed work," as Heydasch puts it.

Pioneering Hanseatic spirit has created an intermodal hub at the Maschen train-formation facility that strengthens rail transport operations considerably and shows the potential of the "food and personal care" segment. "In the past, DB Schenker Rail had only a very small market share in this attractive segment," says Aipperspach. This is likely to change soon. The members of Unilever's management who visited the Maschen logistics centre in mid-June were impressed. The company is in favour of sustainable transport operations by rail and has signalled further support. Additional routes are also planned for the future. This would be an opportunity to win more transport operations and thus to strengthen the individual-wagon system. The direction has been set, and we are now clear to proceed. *mh*

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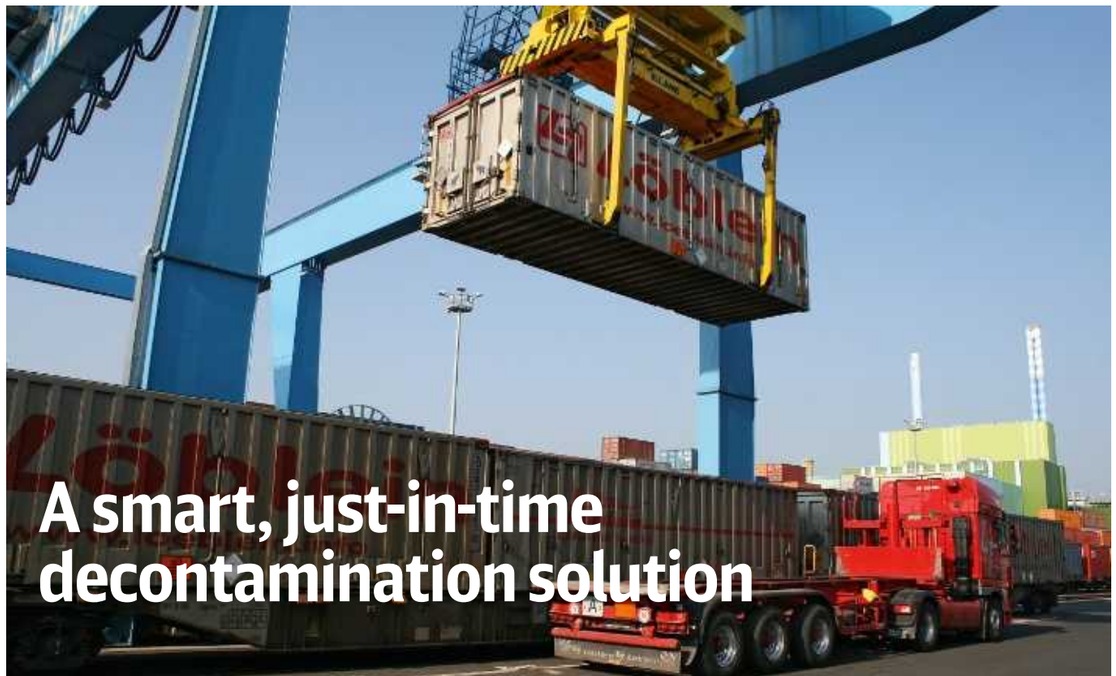

A smart, just-in-time decontamination solution

Logistics solutions from a single source, even in such a sensitive area as the decontamination of old landfill sites: DB Schenker Rail has turned in a convincing performance for the Boehringer Ingelheim pharmaceutical company and the TERRA/Züblin joint venture, which was responsible for the decontamination work there. The rail logistics operator removed around 37,000 tonnes of polluted soil for disposal taking strict safety precautions and without even a minor incident.

Boehringer Ingelheim is one of the major companies that established the German pharmaceutical industry's global reputation more than a hundred years ago. This family firm, with its headquarters in Ingelheim, is one of the twenty biggest research-based pharmaceutical companies in the world. Protection of the environment is an integral part of Boehringer Ingelheim's corporate culture. For this reason, the company has set itself the goal of investigating and decontaminating areas of soil pollution at its Ingelheim base, where pharmaceutical agents and medicines have been produced for more than 125 years.

In the past, activities were often governed by standards and regulations now outdated by comparison with today's environmental-protection requirements. As part of a sustainable environmental-protection policy, Boehringer Ingelheim has in recent years investigated the old landfill sites at its Ingelheim headquarters. When they examined the soil in a number of plots, experts found residues from the development and production of pesticides which had been carried out in the past at facilities on the site.

The "Hinter der Griesmühle" soil-decontamination project

Examinations of the soil revealed residues from past pesticide production in places outside the company's Ingelheim site.

Boehringer Ingelheim commissioned the TERRA/Züblin joint venture to carry out the decontamination of about 70,000 tonnes of polluted soil.

To avoid dust and odour emissions, the TERRA/Züblin joint venture enclosed the area designated for decontamination within a 4,000-square-metre hall and fitted the entrances and exits with sluice gates. Items of equipment, such as diggers, were also kept inside this closed system, accessed via docking stations and provided with their own breathing-air supply. For safety reasons, the excavation hall underneath which the soil was dug out could be entered only by people wearing special protective clothing. The polluted soil was transported away from the hall by means of a system of sluices, so as to ensure that no harmful substances escaped.

Solution from a single source

The contract for transporting some of the excavated soil, including providing the transport equipment and managing the transport operation, was awarded to DB Schenker Rail. "We were able to win the customer over with our single-source, full-load solution and thus prove that our rail company is a reliable partner for decontamination projects such as this," says Frank Wolter, Key Account Manager in DB Schenker's Building Materials, Industrial and Consumer Goods Division. In addition, DB Schenker Rail worked closely with the Löblein company to obtain the necessary containers and to manage the upstream and downstream activities.

From the end of January 2014, the polluted soil was dug out and loaded up inside the hall. "What was unusual about this construction site was that there was nowhere to store the soil temporarily," Wolter explains. "This means we had to shift the masses on a just-in-time basis, at intervals of only 20 minutes! Nevertheless, this was a challenge that we managed to meet without any difficulty." The whole road-rail-road transport chain was managed by the DB Schenker Rail control tower. According to the schedule, at peak times around 580 tonnes of excavated soil a day still had to be transported away by rail. The bulk of that – around 31,000 tonnes – came within a period of twelve weeks.

After being filled in the hall's loading area, the containers were securely sealed with a tarpaulin cover, cleaned externally and then driven by lorry to the transhipment terminals. From the terminal of the Frankenbach company in the Port of Mainz, the containers then entered the DB Schenker Rail individual-wagon network, while others joined the European combined-transport (CT) network through the Ludwigshafen CT terminal. In this way, depending on the degree of contamination, the soil reached Eemshaven, Deutzen and Hamburg. There, the soil underwent thermal treatment at specialised facilities, enabling the harmful substances that it contained to be removed.

"DB Schenker Rail devised an intelligent complete solution for this project and made a good job of putting it into effect with its cooperation partners. Strict observance of environmental and safety standards was also very important to us. DB Schenker Rail managed to convince us in these areas, too," says Andreas Geers, Dep. Utilities and Services Germany at Boehringer Ingelheim.

After the work was completed, the hall was cleaned, the excavation pit refilled with clean soil and the hall removed. This will be followed by recultivation of the other areas. "The decontamination business in Germany and Europe is a very promising growth market for us," says Marc van der Las, Head of the Waste Logistics and Projects Team. "DB Schenker Rail brings a great deal of expertise and an effective network of partners to projects such as these." *an*

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Photos: PR

SINGLE SOURCE: With help from its partners, DB Schenker Rail made sure the decontamination at Boehringer Ingelheim was completed without incident.

WELL-CONNECTED: A large proportion of its mineral oil products leave the refinery by rail.

Partners for half a century

The refinery in Ingolstadt marked its 50th anniversary this year. It has been working with Deutsche Bahn over that entire period.

It is fifty years since Deutsche Bahn and Ingolstadt refinery started working together. In the spring of this year, the refinery celebrated its 50th anniversary with a ceremony in Ingolstadt. DB Schenker was among the guests.

The good rail link via Ingolstadt's Nordbahnhof was a crucial factor in the choice of the refinery's location. To this day, DB Schenker Rail transports a large proportion of the refined petroleum products from the site to various tank stores in Germany, Switzerland, Austria and the Czech Republic. Three to four tank-wagon trains laden with petrol, diesel or heating oil depart daily by DB Schenker Rail from the refinery in Ingolstadt. Liquefied gas is also shipped in smaller batches in individual-wagon transport operations from Ingolstadt. The products are then conveyed from the tank stores by road tankers to the petrol stations or private end consumers.

The refinery has a production volume of over four million tonnes per year, half of which is transported by train and the other half by road tanker. The refinery was first owned by Esso and then taken over by Petroplus. Since 2012, the Ingolstadt refinery's products have been distributed by Gunvor Deutschland GmbH, trading officially under the name Gunvor Raffinerie Ingolstadt GmbH.

On 9 May, a reception was held on the company's premises for its business partners, together with a guided bus tour through the Ingolstadt refinery. During this event Dr Carsten Hinne, Head of the Chemicals/Mineral Oil/Fertilisers unit and Managing Director of DB Schenker BTT GmbH, together with Katharina Brönstrup, Key Account Manager for Gunvor at DB Schenker Rail, presented a birthday cake, which was accepted by Henry Joachim, Logistics and Exchanges Manager at Gunvor Deutschland GmbH.

The actual ceremony to mark the refinery's 50th anniversary was held in the evening at Ingolstadt Theatre, to which some 200 guests were invited, including representatives from the political arena, the business community and trade associations. The ceremony was opened with a speech from Refinery Manager Gerhard Fischer. This was followed by an official address from the Bavarian Premier, Horst Seehofer, who was himself born in Ingolstadt. The supporting programme included a contribution from the Ingolstadt University of Applied Sciences. Its students presented three concepts for the refinery of the future, the best of which was then selected by a jury. *mh*

CONGRATULATIONS! Dr Carsten Hinne and Katharina Brönstrup give Henry Joachim of Gunvor Deutschland GmbH (centre) a birthday cake.

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Engineers on track

When railway lines in Poland need to be recommissioned or upgraded, a subsidiary of DB Schenker Rail Polska is in ever greater demand: Infra Silesia.

The upgrading of the railway line between Ostrzeszów and Antonin is to be completed on schedule by this December. This is down to the infrastructure company Infra Silesia SA, which, together with its parent company, DB Schenker Rail Polska, secured the tender for repairs. The work was put out to tender by PKP PLK SA, which manages most of the Polish rail network. The contract, worth just under 20 million Polish zloties, covered the project management of the renewal of eleven kilometres of the existing railway line, including repairs to the track bed, their drainage and the replacement of signalling equipment and platforms.

The work is to be carried out by December 2014. Infra Silesia beat all of the eight major companies operating in the sector, including Strabag Rail Polska, Polska Eiffage Koleje, PORR Polska and Polska Rubau, to the contract and thus once again demonstrated its efficiency and that it is possible to compete even with the biggest companies in the market.

This is not the first success for DB Schenker Rail Polska's infrastructure subsidiary. Infra Silesia has just successfully concluded two major contracts along with Leonhard Weiss GmbH and Unitor B for construction work at Kliniska railway station and the project management of track refurbishment on the rail link between Szczecin and Świnoujście. Several hundred kilometres of track were upgraded on two parts of the line in this case. The second, successfully completed, contract is the recommissioning of railway line No. 132 between Paczyna Toszek and Błotnica Strzelecka.

As already reported in railways 02/14, Infra Silesia also secured the contract for the recommissioning of the line between Przybyłówek and Jasło and carried out bridge refurbishment work on the railway line from Rzeszów to Jaslo. This work was completed in September.

Additionally, Infra Silesia has signed an agreement with the LW Bogdanka SA coal mine for the repair of a rail siding. The initial work has already started. This is a key strategic project for the mine, being the only connection between the shunting siding and the PKP PLK railway line and thus crucial to the efficient organisation of coal transport operations. The work is scheduled for completion by the end of 2015. *mh*

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PRECISION IS EVERYTHING: Infra Silesia engineers monitoring the work on the track bed

Photos: PR

Mediterranean kitchens bound for the UK

DB Schenker Rail UK recently celebrated the delivery of the 1,000th container of kitchen units from Italian manufacturers to Howdens Joinery in the UK.

The British DB Schenker Rail subsidiary manages the whole supply chain from the unit makers in Italy to Howdens Joinery's distribution centres in the UK. This door-to-door concept intelligently interlinks rail, road and other modes of transport where necessary. "We are very happy to be marking the success of our first year's collaboration with Howdens Joinery," comments Jonathan Bailey, Head of Rail Industry Services with the UK rail freight operator. Howdens Joinery is the UK's leading manufacturer and supplier of kitchens and joinery products. The company's logistics experts are based at the company's headquarters in Howden, East Yorkshire. They ensure that more than 350,000 kitchens are shipped from over 560 depots to contractors across the UK every year.

"We are very satisfied with the service being provided by DB Schenker Rail UK, which manages the transport operation along the whole route," says Simon Wheeler, Operations Manager Inbound at Howdens Joinery. "As a result, we have already avoided hundreds of tonnes of CO_2 emissions in the first year because the Italian components are transported by rail, not by road."

DB Schenker Rail UK has been operating these transport services for Howdens Joinery since the start of 2013.

The kitchen units are collected from seven different Italian suppliers and conveyed by lorry to Padua close to Venice, where transhipment onto the railway system begins. The containers are loaded onto shuttle trains that operate twice a week and then taken to Domodossola not far from Milan. From there, they are conveyed through the international rail transport network via Switzerland and France and through the Channel Tunnel to Hams Hall in Birmingham. There they are transferred onto lorries again for the final leg to the Howdens sites in Northampton and Howden, a service that is again organised by DB Schenker Rail UK. The containers are transported from Milan five times a week, with the rail journey from Italy to the UK lasting a mere 88 hours. *an*

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CEREMONY: To mark the thousandth container, Jonathan Bailey (Head of Rail Industry Services, DB Schenker Rail UK) presents a model engine to Steve Kinder (Logistics Planner, Howdens, left), Simon Wheeler (Operations Manager Inbound Supply, Howdens, 2nd from left) and Simon Roberts (Supply Chain Development Manager, Howdens, right).

Daily to the heart of England

DB Schenker Rail UK is expanding its services at London Gateway

The UK's leading rail freight operator is expanding its services at the UK's newest container port. DB Schenker Rail UK recently increased its services from London Gateway to Manchester, Daventry, and South Wales, with more new services planned for early 2015.

London Gateway – the UK's most efficient freight transport terminal and Europe's biggest logistics park – went into operation last year. Located some 40 kilometres east of London on the Thames estuary, the port offers the most efficient connection between deep-sea vessels and customers across the UK. Since extra berths were put into service, more and more ships have been including the port in their international routes, with inland transport volumes rising accordingly. "Because we work closely with the port, we can offer intermodal customers smooth, fast and efficient services," says Steve Pryce, Head of Marketing and Wagon Management at DB Schenker Rail UK. "The new transport services offer customers a range of fast, shore-to-door transport operations."

DB Schenker Rail UK has been active as a rail freight operator at the terminal from the outset and since then has demonstrated its ability to provide its customers with a whole range of outstanding services. The company maintains the entire rail infrastructure at the open access terminal and also operates train services for British and international customers. In addition, the rail freight operator boasts the most up-to-date and efficient IT system on the market. Its DB Schenker software, called Anubis, offers tracking along the whole supply chain – across all modes of transport.

DB Schenker Rail UK was the first rail freight operator to run a train service from London Gateway: on 24 September 2013 with containers from the ZIM Rotterdam. The company was also the first rail operator to offer railway services from the new port. In addition, DB Schenker Rail UK has become the first service provider to link its booking management system to the port's IT systems – enabling it to offer its customers smooth services: the punctuality of shore-to-door transport operations for customers is as high as 99.7 per cent. This drive and innovation has won over many new customers at the new port, including major shipping lines. These customers are delighted with DB Schenker Rail UK and now use its services on other routes as well, contributing to 20% year-on-year revenue growth in the first half of 2014. *an*

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CENTRAL LOCATION: London Gateway is just a few kilometres outside the British capital. More and more shipping companies are including it in their international routes.

Photos: Howdens Joinery; PR

GO FIGURE!

30

old locomotives have now been hauled into the future by DB Schenker Rail – or, to be precise, fitted with state-of-the-art sensors. Now these locomotives can report any technical problems themselves, which avoids stoppages and the wrong maintenance intervals. DB Schenker Rail is investing €200 million over 10 years in equipment and IT for the digital age.

IN DEMAND

Anna Förster on sustainability

Ms Förster, from Leipzig, is in charge of planning packaging for BMW at Schenker Deutschland AG's packaging centre

Ms Förster, you develop packaging for automotive components that are transported to BMW's plants in South Africa and China. Does it constantly have to be reinvented?
We are kept fairly busy. Our 1,200 workers here at the packaging centre in Leipzig have to hand over 11,000 different components for the plants in South Africa and China. The parts destined for Africa go by air, while those for the plant in Shenyang are carried by train. But every day we have to develop up to 30 new types of packaging.

Why?
There are frequent changes in components, in the condition in which parts are delivered and in logistics at the overseas plants. We have to work very closely with BMW and so every day we get to know what is going on at the individual plants. Whenever there are new processes, rack dimensions or delivery times, we have to react immediately. What we do really is a bit like a balancing act between the requirements of our customer BMW, where they plan their logistical processes on the assembly line, and our workers' practical know-how. However, we have gained a lot of experience over time: what type of foam will rub, which structure will be suitable, and how the components will be affected by movement during transport.

How did you get into this line of work?
By chance, really. I heard about it through friends, and then I studied it at Leipzig University of Applied Sciences. I wanted to do something practical. Later I worked in Hamburg, and then I for a maker of biodegradable plastics in Jena. I have been with DB Schenker since 2011.

Is there still more that you can do today for sustainability?
I am a great fan of sustainable products. In my line, however, you also have to understand that many sustainable types of packaging are much more expensive. We are doing quite a lot at DB Schenker. The most important tool is paper-free working: we no longer print out all the packaging instructions, for example.

PERFORMANCE:
Anna Förster at DB Schenker's logistics centre for supplying foreign plants. With her team, she ensures that BMW's components survive intercontinental transport intact.

Photos: DB Schenker; DB Museum Nürnberg

Save the Date

Forthcoming trade fairs and industry events that DB Schenker Rail will be attending. Seize the opportunity for a face-to-face meeting!

03-04 FEBRUARY

In Leipzig (Germany)
DB Schenker Rail will again be represented at the BVL Automotive Logistics Forum.
www.bvl.de

PRECISION COUNTS:
Model makers recorded technological progress more than a century ago.

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SIGN OF THE TIMES

Toying with model railways

Goethe had one, as did the son of the French emperor Napoleon III – and there will also be one this year under many Christmas trees all over Europe. We are talking about model or toy railways. However, the two have little in common. This is because, historically, toy versions are much more recent than their "serious" counterparts, which were born at almost the same time as the railways themselves. The venerable privy councillor Goethe probably received his replica of the British *Rocket* from friends in the same year that the engine itself was built: 1829. Prior to that, small, tin, steam-driven model railways and vehicles had already been in circulation for thirty years, either for testing or as a demonstration of technical achievement – and for a long time, this formed a clear dividing line between them and toy railways. The toy variety had to do without such attention to technical detail in order to "playable".

Toy railways became popular in Central and Western Europe from the middle of the 19th century. Basset-Lowke, Bing and Märklin were the pioneers. In 1891, Märklin presented the first electric railway, and soon, as with full-size railways, standards were developed for electric propulsion, transformers and gauges. To mark the centenary of the Deutsche Reichsbahn (German Imperial Railways) in 1935, Märklin brought out the Trix model railway that could let two trains run on one track at the same time! Railways shrank after the war: in 1950, the Swedish toy maker Brio brought a wooden railway of the same name onto the market, and the Danish Lego railway followed 12 years later. Today, there is hardly any distinction between model and toy railways. Quite the reverse: the great attention to detail of modern toys would have brought at least as much delight to the British engineers of the early railways as bags of toys do to children at Christmas. *an* ■

The *railways* editorial team wish you all a Merry Christmas and a Happy New Year!

Issue 01|2015 of *railways* will appear in March.

INVESTING IN SUSTAINABILITY

Rail is the most environmentally friendly mode of freight transport. A freight train uses two-thirds less energy and emits three-quarters less carbon dioxide than a lorry. Deutsche Bahn is a pioneer in climate protection. Since 1990, it has reduced specific CO_2 emissions in rail transport in Germany by more than 45 per cent, and by 2020 it plans to cut them on all modes of transport by a further 20 per cent compared with the 2006 level. One way of doing this is by using new, climate-friendly engines in its diesel locomotives. In recent years, DB Schenker Rail has invested around €500 million in replacing three out of every four engines. *an*

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