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RAILWAY SIDINGS

KEY TO THE TRAFFIC TURNAROUND

+++ Anniversaries: 175 years of Siemens +++ 100 years of ÖBB +++ Country portrait Europe- Luxembourg +++ Port of Hamburg and COSCO +++ FOCUS II: Autonomous driving +++ Events: transport logistic, BIG DATA IN RAIL+++ Andreas Mandl WKÖ +++ Interviews: Deputy Prime Minister François Bausch Luxembourg, Müslüm Yakisan Alstom, Dr. Roland Busch Siemens AG, Andreas Matthä ÖBB, Joachim Berends VDV, Dr. Bashar Khalid Al Malik, Chief Executive Officer Saudi Arabia Railways, Michail Stahlhut HUPAC, Andrzej Bittel Vice Minister for Infrastructure Poland +++

#2/2022–1/2023

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EDITORIAL



Credits: HNV

Dear readers!



Credits: 1922 Goldwyn/PD

In the cinema, **broken chains** have a high symbolic power. In 1922, a movie poster for the Goldwyn film of the same name showed an anxious-looking woman in hand chains. Who wouldn't want to help her out of her predicament! In 1963, the Mirisch film "The Great Escape" hit the cinemas. The German title read: "Gesprengte Ketten", Busted Chains. Based on a true story, the film was about a mass escape from a German POW camp during World War II. The symbolism was clear – prisoners break their chains and thus gain freedom.

In the transport and logistics industry, the term has a completely different meaning. **Broken supply chains** due to the pandemic and political turmoil are putting the industry under great pressure. This is the theme of the leading trade fair **transport logistic** in Munich. We provide examples of how key players are coping and will continue to address this question in the future.

In the European Union, the direction is clear: freight transport must be diverted **from road to rail** in order to achieve the goals of climate policy. In order for this to succeed, as many factory premises, transshipment points and terminals as possible must have **sidings**. That is the focus of this issue.

A second focus is on aspects of automated and autonomous driving. The motto here is: There's already a lot, but now it's really getting started!

The transport industry works globally. We are therefore pleased to have **top-class interview partners** again – among them the CEOs of the Saudi Arabian Railways, Siemens, Alstom, HUPAC and also the Vice President of the Government of Luxembourg. With the last-mentioned interview, we are also starting a series that will appear periodically in the future under the heading "**Country Portrait Europe**".

We wish you stimulating reading!

Hermann Schmidtendorf, Editor-in-Chief and Publisher

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Credits: Hermann Schmidtendorf

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Credits: Pedro Albino Agency

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About the cover photo:
In recent decades, more and more sidings have been separated from the railway network. But there are signs of their revival.

Credits: Hermann Schmidtendorf

NEWS

KNORR-BREMSE

The Munich-based global group Knorr-Bremse AG started with good business figures for the first quarter of 2023. Order intake is EUR 2.2 billion. The order backlog increased by 18.6% to a record level of EUR 7.1 billion. Group revenues increased significantly worldwide by 14.3% to EUR 1.9 billion.

The Rail Vehicle Systems (RVS) division received a “high-quality new order in Italy, one of the most important and promising rail markets for Knorr-Bremse in Europe: The multi-system order concluded with Hitachi Rail comprises the comprehensive equipment of a new generation of metro trains in the Milan region.”The Commercial Vehicle Systems (CVS) division continued to record high demand in the European and North American markets:“Incoming orders in the first three months of 2023 totaled EUR 1,176 million, 14.2% above the corresponding prior-year figure.” kb-h

CARGO-PARTNER / NX GROUP

The Austrian logistics company Cargo-Partner is being sold to the listed “Nippon Express Holdings” (NX Group) for the unconfirmed sum of around EUR 900 million. The contract is to come into force after the usual regulatory work has been completed.

The seller is Stefan Krauter, son of Franz Krauter, CEO of LKW Walter for many years. Since 1983, he has developed the company into a full-service provider in the field of logistics, offering warehousing services in addition to air, sea and land transport. In 2022, Cargo-Partner generated sales of 2.06 billion EUR. The company employs more than 4,000 people at 160 locations in 40 countries. The Japanese logistics group



Credits: Miran Kambič

based in Tokyo generated sales of around 17 billion EUR in 2022 and employs around 73,500 people worldwide. c-h

A.P. MØLLER-MÆRSK

On May 4, 2023, the Danish shipping company Maersk reported a 26 percent drop in sales in the first quarter to around 12.8 billion EUR. Before interest and taxes, the profit (EBIT) of the world’s second largest container shipping company shrank by more than two-thirds to \$2.3 billion. Capacity was tight during the pandemic. This is why the prices for sea transport rose sharply after many years of crisis with price wars, overcapacities and red numbers. Now, in addition to normalisation, there is a decrease in demand for sea transport. Maersk



Credits: ChrisPoi

CEO Vincent Clerc announced a “proactive cost management”.

Hamburg-based Maersk competitor Hapag-Lloyd also announced in early May that profits in 2023 would be less than a quarter of the record profits of 2022. Reasons are similar to Maersk. The world’s largest container shipping company is the Mediterranean Shipping Company MSC, based in Geneva. MSC is also in the cruise business. Maersk is trying to diversify its activities as a complex logistics company that can offer all services along the entire supply chain from a single source. ma-s

MAN-DUVENBECK-VOLKSWAGEN

The logistics service provider Duenbeck has signed a letter of intent with MAN Truck & Bus for the use of 120 MAN eTrucks by 2026. The transport company based in Bocholt, Germany, will be one of the first customers to get the new MAN electric truck from 2024. The Ultra semitrailer tractors with a low coupling height (Lowliner) allow an interior height of three metres in the trailer. The fully electric 40-ton trucks will also be the first electric trucks that will be driving for Volkswagen Group logistics from 2024. The VW Group wants to use this to advance its strategy of decarbonising logistics.

The MAN eTrucks can initially be charged with a maximum of 375 kW (CCS 2 charging standard). In the future, MAN will rely on what is known as megawatt charging, which will enable charging capacities of up to one megawatt. The permanently excited synchronous motor, which delivers an output of 330 kW, is responsible for quiet and powerful feed. A four-speed central motor and gearbox combination transmits the power to the drive axle. MA-nb-hf



Credits: MAN Truck & Bus

DB Schenker / Arriva:

INSTEAD OF SELLING OUT AT DEUTSCHE BAHN, THINK ABOUT INDUSTRIAL AND PENSION POLICY TOGETHER

On December 15, 2022, the supervisory board of Deutsche Bahn commissioned the DB board to “review and prepare” the sale of its logistics subsidiary DB Schenker. The German federal government wants to fully invest the estimated achievable income of 12 to 20 billion euros in the rail system. A possible direct sale or an IPO is being considered.

Nice for the rail? Not necessarily. Deutsche Bahn would lose 30 percent of group sales and stable profits in one fell swoop, which in 2022 would even bring the weakening balance sheet of the state-owned company back into the black. While the rail freight division DB Cargo continues to report losses of around half a billion euros a year despite great efforts to improve, the Essen-based logistics service provider DB Schenker recently shone with an adjusted EBIT of around 1.2 billion euros.

So the sale of DB Schenker would be a political decision, not an economic one. The governing parties FDP and Greens exceptionally agree on this. The FDP because they basically want to see as little government as possible in the economy, the Greens because they think a railway company should only run trains.

DB SCHENKER should go – ARRIVA is already being dismembered

But is the sale of the DB silverware also a sensible step? Hardly noticed by the public and by no means widely communicated by Deutsche Bahn, the can-



nibalisation of the DB foreign subsidiary for regional passenger transport ARRIVA has already begun. On September 27, 2022, DB sold the Arriva subsidiary in Denmark with the assets “bus, water bus and train business, the franchise in the car sharing company SHARE NOW and UCplus, a nationwide education center,” said a statement issued in English and Danish.

At the same time, the Serbian Arriva subsidiary – the second largest private bus operator in Serbia – was also sold, as well as the bus division of Arriva Poland, which generates stable profits through city public transport contracts in Warsaw and regional services in the Kujawsko-Pomorskie and Pomorskie regions. The buyer is the investment fund Mutares SE & Co. KGaA in Munich. In July 2022, DB had already sold Arriva’s rail and bus business in Sweden to the Finnish VR Group. And on December 15, 2022, the sale of Arriva’s Portuguese bus business to Dan Group, the second largest transport company in Israel, was completed. Transportes Sul do Tejo’ (TST) has been part of the Arriva group for around 20 years and “has a remarkable track record of providing quality transport services in the city of Lisbon,” says Arriva’s London headquarters. Here, too, political wishes of the federal government apparently drove the deal forward, not economic necessities. ►



Already sold: an ARRIVA train in Denmark.

Credits: Hermann Schmidtendorf

This corresponds to the report by the Bloomberg news service of January 17, 2023. According to this, Deutsche Bahn AG is “again considering the sale of its Arriva transport division, as it wants to concentrate on its core business in Germany as part of a comprehensive realignment.” Advisors are already informally reviewing “the interest of potential buyers, including investment funds and competing carriers,” it said. The DB hope for a proceeds of one to two billion euros.

Arriva’s activities are currently divided into four business areas: UK Bus, UK Trains, The Netherlands and Mainland Europe. The head office is in Great Britain. There are (still) branches in the Czech Republic, Croatia, Hungary, Italy, the Netherlands, Poland, Slovakia, Slovenia and Spain. In 2019, Deutsche Bahn had given the entire Arriva Group a book value of around four billion euros. This is said to have been offset by debts of over one billion euros and pension obligations.

In the German B2B magazine *bahn* manager, Eurailpress editor-in-chief Georg Kern describes why this is all going in the wrong direction: “Politicians have started to rethink. Railway policy is now taken much more seriously. And now, of all times, does the federal government want to implement the year-old idea of selling Schenker? With this step, it would counteract its own new course in terms of rail policy. The loss of Cash Cow Schenker would be a financial setback that the parent company could hardly cope with.” We agree.

Our proposal: combine national industrial policy and pension provision

In order to avert potential damage to national wealth, we propose that Germany should follow the example of the rigor with which national industrial policy is being pushed in France – and even agree with matters of pension provision. Also in France the state owned railway SNCF had to sell subsidiaries. However, the Canadian pension fund Caisse de dépôt et placement du Québec (CDPQ) appeared there as a buyer for the freight wagon rental company ERMEWA and the locomotive leasing company AKIEM. The fund already holds shares in France’s industrial flagship ALSTOM, comes from the French-speaking part of Canada and has long been part of France’s industrial railway family.

Germany’s Federal Finance Minister Christian Lindner also wants to stabilise statutory pension insurance with a share pension and create a new mega-fund for private provision. Even financing via new debt does not seem out of the question. What is desired is the “entry into a capital cover in the pension system”. So wouldn’t it make sense to link national transport interests with the issue of pensions?

It could go like this. All Arriva and DB Schenker sales will be halted until the national pension fund is established. Then, if a sell-off at DB is still politically desired, the latter buys shares in the corresponding assets from DB. FDP and Greens are beaming – the DB is being streamlined. The FDP is beaming twice – ►



Will they be sold soon? An ARRIVA bus in Trieste, Italy (left), a DB SCHENKER truck being loaded (right).

it has its pension fund. And should gas storage facilities or high-tech companies come up for sale again in the future, the pension fund would have the right of first refusal by law. Sorry, dear friends in Russia or China, self-interest comes before foreign funding.

The hoped-for synergies between rail transport from DB and Schenker would be easier to implement, as would the climate protection goals – that should make it easier for the Greens to agree. Perhaps these two coalition partners could then even agree on accelerating rail projects? And above all is enthroned

SPD Chancellor Olaf Scholz, who would calmly announce in due course: We will not let ourselves be carried away, but we have persistently worked behind the scenes on precisely this concept, which is now proving the progressive clout of the SPD-led federal government!

Everyone talks about win-win. Wouldn't that be a better solution?

Hermann Schmidtendorf, Editor-in-Chief



The historian and Slavist (Westfälische Wilhelms-Universität Münster) Hermann Schmidtendorf worked primarily for the Münstersche Zeitung, dpa, Deutsche Welle, Deutschlandfunk, rbb, from 1997 to 2000 as the Poland correspondent for DIE WELT. Since 1987 he has worked as a railway consultant and in trading in railway material and workshop services. 2006 – 2010 Assistant to the Executive Technical Support Europe at the British ARRIVA International Trains Leasing Ltd. Responsible for the coordination between Denmark, Germany, the Czech Republic and Poland and the development of Arriva train services in Poland. Working for the B2B magazine bahn manager since 2016, 2019 and 2020 as editor-in-chief. Editor-in-chief of the B2B blogs and magazines CARGO FREIGHT JOURNAL and rail & mobility since 2022.

Watercolor drawing – self-portrait Hermann Schmidtendorf from 1966 on the school theme “My career aspirations”. The hat on the head is supposed to be a railwayman’s hat and the trowel a platform trowel for train dispatching...

NEWS

SUCCESS FOR FREIGHT TRAIN WITH DIGITAL AUTOMATIC COUPLING

A digital freight train completed its test runs in Europe “with flying colours”, the organizers of these runs reported on May 3, 2023 to Members of the European Parliament. In about a year and a half, the test train covered a total of 10,000 kilometers in seven European countries. It was equipped with various prototypes of the digital automatic coupling DAC. 25 different marshalling yards were approached. Operation was tested in the lowlands, in the Alps and under extreme weather conditions from minus 25 to plus 40 degrees. The aim of the test drives was to check the functionality of the DAC in different situations and different conditions and to identify possible weak points. The result: the DAC has proven its practical suitability.

The German Federal Ministry for Digital and Transport (BMDV) has now made an additional seven million euros available for a

further test phase. The funding for the extension of the DAC project makes it possible for the test train, which consists of 18 cars and 40 DAC prototypes, to be used in other European countries. These trips will provide new test results, with which the various manufacturers of the clutches can complete their ongoing development work and present solutions ready for series production.

The new standard for freight trains in Europe should be ready for series production over the next few months. The organizer of the DAC4EU project is a consortium that includes the Swiss and Austrian freight railways SBB Cargo and Rail Cargo Austria, Deutsche Bahn and its subsidiary DB Cargo, and the wagon keepers Ermewa, GATX Rail Europe and VTG. hfs



The DAC train shunting.

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Cosco containers are always at the start... Here on a trade fair diorama of the company CR Intermodal.

Credits: Hermann Schmidtendorf

Port of Hamburg and COSCO:

DEVELOPING THE LOCATION TOGETHER

The Chinese company **COSCO Shipping Port Limited (CSPL)** can take over a minority stake in the operating company **HHLA Container Terminal Tollerort GmbH (CTT)**. This was finally decided by the German federal government on May 10, 2023. After initially aiming for a 35% stake in the terminal company, a **24.9% stake** is now to be taken over. Our opinion: Good! Any other decision would have been disproportionate and might have damaged Hamburg as a business location and Germany's trustworthiness.

Why is it about? The Chinese shipping company COSCO has been a major customer in the port of Hamburg for years and accounts for around 30% of turnover. The wish, which was contractually fixed for the first time in September 2021, that COSCO also buys into the Hamburg terminal company, is therefore understandable and also common internation-

ally. The company can thus handle its flow of goods even more effectively, invests in the location and thus helps with its expansion. This is already the case in many ports around the world and also in the European Union – see our table.

From the outset it was only about a modest share of the economic structure in the port of Hamburg. The weekly newspaper "Die Zeit" described it like this: "Four berths for freighters, five railway tracks, 14 bridges for loading containers: the terminal named Tollerort is the smallest of the transshipment points in the Port of Hamburg." The terminal operator hopes through modernisation to contribute a quarter to the throughput figures in the Port of Hamburg. But that is still a goal for the future.

If you buy a minority share in the terminal company, you will not have any access to the port's IT ►

technology. This is managed centrally by the parent company HHLA, Hamburger Hafen und Logistik AG. In 2018, HHLA was registered as an operator of critical infrastructure in accordance with German regulations. In 2022, after the regulations were revised, the Tollerort terminal also fell under this category. But that's not a problem for HHLA, the company explains: "The classification is primarily followed by increased obligations in relation to IT security, which the HHLA Group has been fully complying with and documenting since 2018."

Therefore, the German government's final approval of the deal was logical. Politics and business in Hamburg, but also the Federation of German Industries (BDI) welcomed the decision. Until recently, there had been criticism of the planned deal with COSCO. The news program "Tagesschau" quoted sources in the US Department of Defense who "apparently consider Chinese technology at ports, such as cranes and their computer systems, to be a potential security risk". The Foreign Ministry in Beijing dismissed such concerns as "overly paranoid." Can you blame the state officials there?

Leading German conservative politicians from the CDU and CSU, of all people, also criticised the planned deal. We had the impression that exaggerated shouts of Cassandra in the present were intended to distract from own failures in the past. Ultimately, the decisions were made under the CDU/CSU governments to choke off the German solar industry by reducing financial support too quickly, or to make deals with the Russian state-owned company Gazprom, which have since been recognised as wrong. The sale of the majority stake in the Greek port company in the **port of Piraeus** was also supported at the time by the CDU/CSU-led German government.

The privatisation was the result of bailouts imposed on the Greek governments by the **European Commission, the European Central Bank and the International Monetary Fund (the so-called "troika")**. But who was the only company in the world willing to buy these shares from the Greek state during its economic crisis? The Chinese company COSCO! At that time 67% of a complete port company was sold, in Hamburg it is only about 24.9% of a single terminal company. So where is the proportionality in the criticism? Chinese foreign ministry spokesman Wang Wenbin in Beijing therefore rightly called

for an "objective, rational consideration of our practical cooperation": "We hope that the German side will refrain from politicizing commercial cooperation and making it into something about ideology or security."

On October 21, 2022, the economist Jens Bastian praised the Chinese deal in Piraeus on "Deutschlandfunk Kultur": "The Chinese have expanded this port, further modernisation projects are being considered with a view to additional Terminals or also hotels. That's why I would say it's less about the critical infrastructure. It's about the performance of a port that no European has been interested in for decades in Greece." There were problems in the early days, but these concerned the treatment of trade union rights, social and environmental issues. We reported on this in the specialist book "bahnland europa" (see separate article).

However, COSCO apparently acted within the framework of Greek law and simply exercised its employer rights on a massive scale, following the best American example. But the social criticism in Greece of some problems did not go unnoticed. In 2021 there was an agreement with the unions in the port of Piraeus. And in April 2023, the Chairman of Piraeus Port Authority PPA S.A. Zenggang Yu, appointed by COSCO, presented himself at the 8th Delphi Economic Forum exemplary in every respect.

The port company is generating profits again after the pandemic, Yu explained, and two port terminals are being expanded to accommodate "the largest cruise ships of all". As part of "social responsibility", land would be donated and "a playground prepared at our's own expense". And: "The company respects Europe's environmental regulations and tries to reduce carbon dioxide emissions by using LNG and clean fuels such as electricity."

Non-discriminatory access to the port for all ships, transparency in planning, video surveillance only in consultation with HHLA and in accordance with German data protection rules, compliance with environmental protection and observance of trade union rights – all of this can of course be laid down in the port's "House Rules", when the HHLA-COSCO deal is completed. However, this order must then apply to all stakeholders who work in the port. According to the unions, HHLA could also make some improvements – for example in relation to the so-called "lashers".

Hermann Schmidtendorf, Editor-in-Chief

Port of Piraeus:

BOOST THANKS TO COSCO, UNIONS ASK FOR IMPROVEMENTS

PIRAEUS is the historical port of the Greek capital Athens, the train distance is ten kilometres. In 2021, according to Eurostat, Piraeus was **14th in the ranking of European container ports**. Annual turnover in thousand tons was 46,951. Rotterdam took the top spot in the ranking (434.846), followed by Antwerp (215.852) and Hamburg (111.156).

The port of Piraeus has been booming since it was partially taken over by the Chinese Cosco Group. First, in 2009, a lease for Terminal 2 for 35 years and the construction of Terminal 3 was decided. In 2016 and 2021, the stake in the port administration OLP increased to final so far 67 percent with the obligation to make further investments.

In the standard work "bahnland europa" (railway country Europe) Hermann Schmidtendorf, then editor-in-chief of the B2B magazine bahn manager and current CARGO FREIGHT JOURNAL editor-in-chief, wrote in 2020 about the situation in Piraeus:



The undisputed ruler of the container port of Piraeus is the Chinese company COSCO Shipping. Greece's politicians and the economy are satisfied.

Credits: COSCO Shipping Lines

In December 2015, Cosco merged with China Shipping Group to become the world's fourth largest container shipping company. But the methods of the Chinese are not without controversy.

"Cosco's plants are notorious for their exploitative working conditions," reported Anastasia Frantzeskaki, board member of the dockers' union OMYLE, at a union meeting in Berlin. "Accidents at work are an everyday phenomenon. The majority of employees work part-time and on call. Subcontractors get their share of their already low wages." Those in the know suspect that the Chinese port management looks the other way when ships with imitation Western consumer branded goods are landed from China.

For some observers, the announcement by the deputy chief of the Russian State Railways РЖД / RŽD Alexander Misharin sounds like another threat. In September 2016, he said in Thessaloniki: "We are ready to get involved in projects to modernize Greek railways and then also to manage their infrastructure." So far, Greece has resisted privatising the country's railway infrastructure, the core of the remaining OSE group. Now Misharin emphasised that his company wanted to "buy the Greek railways and the port of Thessaloniki in one package."



Greece as a political-economic toy for the Chinese and Russians?

Hermann Schmidtendorf, cooperation: Nikolaos Sbarounis, Graduate engineer, Athens, In: Dennis Peizert, Hermann Schmidtendorf (ed.), bahnland europa, Lüneburg 2020. 376 pages Hardcover, 39,50 €, ISBN: 978-3-96892-083-2 Obtainable via: <https://www.dvmedia-shop.de/buecher-reports/rail/1044/bahnland-europa>

PARTICIPATION OF COSCO SHIPPING PORTS IN SELECTED PORT TERMINALS OUTSIDE OF CHINA

(Sources: CFJ/COSCO/statista/business insider). As of May 2023; Graphics: © Britta Ruge / CARGO FREIGHT JOURNAL

Ranking of Cosco participation in an EU port/ Terminal % shares COSCO

1.	Zeebrugge CSP Terminal, Belgium	85,45 % ^{*1)}
2.	Piraeus Terminal 2 + 3, Greece	67 % ^{*2)}
3.	Valencia CSP Iberia Terminal, Spain	51 % ^{*3)}
4.	Vado Reefer/Container Terminal, Italy	40 %
5.	Rotterdam Euromax Terminal, Netherlands	35 % ^{*4)}
6.	Hamburg Terminal Tollerort, Germany	24,9 % ^{*5)}
7.	Antwerpen, Belgium	20 %

Outside of EU

1.	Cosco SPA Terminal Singapur	49 %
2.	Suez Canal Container Terminal, Egypt	20 %
3.	Seattle USA	13,33 %

*1) 2022 License extention up to 2055

*2) Terminals 2 + 3 were leased by COSCO for 35 years in 2009, so some sources write that COSCO has 100% control of these terminals in Piraeus port. However, this only affects the real power of disposal over the two terminals, not the capital share in the port company, which is only 67%.

*3) In April 2022, Cosco also bought 51% of the shares in the public-private railway company Logitren Ferroviaria, making Cosco the only Spanish port operator able to offer its own intermodal services by rail.

*4) According to the latest reports from the maritime service Dynamar, after entering Hamburg-Tollerort, Cosco intends to sell its shares in the Rotterdam port terminal to Linghang Holdings, a 51:49 joint venture between the stevedore and the investor Silk Road Fund.

*5) Approved by the German Federal Government, not yet implemented.

ÖBB: From “Pflatsch” to the word mark

Portrait of
Andreas Matthä.



Credits: Hermann Schmidendorf

? **CARGO FREIGHT JOURNAL:** Dear Mr. Matthä, congratulations on 100 years of Austrian Federal Railways! Your company has experienced eventful decades. It initially operated under a different name because the abbreviation ÖBB was already “occupied” by a small Swiss railway company?

Andreas Matthä: Thank you for your congratulations. I myself have been able to accompany ÖBB almost “half its life” – I started here in the technical department more than 40 years ago – and I can say: A lot has happened and we are well on our way towards the future.

Like many other things in the history of ÖBB, the trademark dispute you mention is historically very exciting: We were already known as the “Austrian Federal Railways” in 1921, but at that time we were still under the authority of the Ministry of Trade and Transport. However, “ÖBB” was also the abbreviation for the Swiss private Oensingen-Balsthal-Bahn, so the Austrian rolling stock had to be labeled with the abbreviation “BBÖ”. Incidentally, the ÖBB then started operations as its “own economic entity” in 1923, which is why we are celebrating our 100th anniversary this year, in 2023.

? From 1974 to 2004, ÖBB had a trademark, a logo consisting of two curved lines. Certainly a dynamic, pretty and also bold emblem, because it did not remind of the name of the company and not necessarily of railways. What is your experience with this trademark?

You are talking about the so-called “Pflatsch”, our old logo. It was developed in cooperation with a graphics university and has replaced the previously

used impeller logo. Visually, the “Pflatsch” was certainly a strong and unique logo. In advertising, however, we have recognised that the use of Pflatsch in combination with the ÖBB lettering ensures a higher recognition value.

? So now you are trading with a logo that consists of an ÖBB abbreviation but has a dash over the letter O instead of a colon. This is also dynamic and modern. Has this increased the recognition value of the brand? ►



Credits: Hermann Schmidendorf

ANNIVERSARY I: LAND TRANSPORT

The high recognition value is important because we want to show that ÖBB is an attractive service provider, economic engine and employer for Austria. A strong brand also helps us in recruiting and employer branding.

? In your statement “Today. For tomorrow. For us” you refer to a sense of community and to the future. What does that mean for you and how does this statement promote the positive impact of the ÖBB brand?

With the current claim “Today. For tomorrow. For us”, being one of the largest climate protection companies in Austria, we want to put our meaningful and sustainable importance on the mobility and logistics market in the foreground. There is so much in our claim: climate protection, generational change and responsibility. We can do something today, for tomorrow and for all of us. Everyone can make a contribution – with every single train journey.

Our goal is for the train and bus to become the favorite means of transport for Austrians. I am convinced that sustainability begins in the mind, but the enthusiasm for it comes from the heart.

? Ultimately, a brand can only be as good as the entrepreneurial practice behind it. You can be commended – the punctuality of the trains is very good, thanks to the purchase of reliable trains there seem to be few technical failures, and the Austrian federal government has approved gratifyingly high budgets for investments in the railway infrastructure in recent years. Where do you see the areas in which progress should be made today and tomorrow in order to further boost the use of ÖBB’s environmentally friendly offers?

Innovation is firmly anchored in our DNA. Already 100 years ago we focused on innovation and switched our traffic from coal to electric operation. That was the first great railway revolution! 100 years later we are on the threshold of the digital future. With digital technology, we can significantly increase passenger and freight transport capacities by rail. State-of-the-art technology helps us to be on the road at even shorter intervals while increasing safety at the same time.

Our goal is clear: We ensure a faster, more comfortable, even more punctual rail system of tomorrow. And to make that possible, we are already digitising rail operations and the infrastructure. Our goal is to double the capacity of the rail system by 2040 – and that will also be necessary to achieve the urgently needed climate targets.

? Do you want to celebrate your anniversary with various events this year, but also use the opportunity to recruit young people? ►

App, app, hooray!
ÖBB is also modern in its advertising at Vienna Central Station.

We are facing the biggest generation change in the history of ÖBB and are therefore looking for around 3,000 new colleagues every year. That's why we use our anniversary in particular to find new talents who want to start a career with ÖBB. ÖBB stands for meaningful jobs in a future-oriented industry. We are taking our anniversary as an opportunity to show that ÖBB has a long tradition and, at the same time, a bright future.

This is also reflected in the variety of jobs. With us you can work in 130 different job profiles. As different as the many professions are, they have one thing in common: Every job at ÖBB is secure, crisis-proof and good for the climate.

! Thank you very much for the conversation!

Das Gespräch führte Hermann Schmidtendorf.

ÖBB: 100 YEARS OLD AND ALWAYS MODERN

The **Austrian Federal Railways ÖBB** are celebrating their 100th birthday this year with numerous special events. Because on October 1, 1923, the company was founded as an **"independent economic entity"**. The Federal Railways Act of the Austrian National Council of July 19, 1923 created the state railways for the first time as a legal entity under public law and no longer as part of a ministerial state structure.

The brand has changed over the decades. For a while there was a graphic symbol made up of two arc parts leading towards each other. The nickname of this emblem, "Pflatsch", is hardly understandable for rail enthusiasts outside of the southern German-Austrian language regions. The word is supposed to mean an onomatopoeic clapping, possibly referring to water, splashing or paddling, a wet puddle or, derived from the Indo-European "plat" also meaning flat, possibly also being associated with the "thrown down" legacies of a bird...



Credits: GT 1976 Creative Commons Attribution-Share Alike 4.0 International / 2 x Logo ÖBB / Collage: Britta Ruge

hfs

LTG Cargo Polska:

LTG CARGO POLSKA CONNECTS POLAND'S EUROTHERMINAL SŁAWKÓW WITH KAUNAS



LTG Cargo Polska, the Polish subsidiary of the Lithuanian state rail freight carrier **LTG Cargo**, has recently started offering a regular connection with two pairs of trains per week between Poland and Lithuania. On February 16, 2023, the first train left Euroterminal **Sławków** bound for Intermodal Terminal in **Kaunas**.

The train transports 20, 30, 40 and 45 foot containers as well as tank containers. The new service quickly became popular among customers who need to transport various categories of goods between Poland and the Baltic States from sectors such as chemical, food and machine industries.

Why these start and end points? Maciej Cetnerowski, Director of Intermodal Development at LTG

Cargo Polska, comments: "We decided to connect to Euroterminal Sławków because of access to a broad-gauge track. This gives the possibility of transporting goods such as grain, fuel, methanol to and from Ukraine. The terminal in Kaunas, on the other hand, has regular connections with the port of Klaipeda and other places in the Baltic States. The Amber Train connects Kaunas with the Muuga terminal in Estonia and will also be included in the network of international intermodal services."

The distance between the direct end points of the rail connection is 740 kilometers. Cetnerowski is certain that the train connection will contribute to shifting road freight to rail: "The economy, the inhabitants of the cities located on this route and the natural environment will benefit from it."

In recent months, LTG Cargo has expanded its network of international intermodal connections via Poland to various terminals in the European Union. The logistician is diversifying its activities after the introduction of EU sanctions reduced the movement of goods between Lithuania and Russia. There is a subsidiary in the Ukraine, and train services to Trieste have also been launched.

At the transport logistic from May 9-12, 2023 in Munich, the parent company LTG Cargo will be represented at booth **B6.225**. **Contact: sales@ltgcargo.lt**
<https://ltgcargo.eu/> ltgcargo.pl *hfs*



EVENT
Interview



Event: transport logistic MUNICH 2023

? **CARGO FREIGHT JOURNAL:** First Corona, now war in Ukraine – the transport and logistics industry continues to experience challenging times. At the transport logistic from May 9th, will you also address the consequences of the global situation for the supply chains with special congress topics?

Dr. Robert Schönberger: Yes, we do, and quite consciously. Our conference program is intended to offer assistance – on long-term topics, but also on short-term and hands-on. Which challenges affect me directly, which solutions are there and what can I implement in the company tomorrow?

In order to be close to the industry and the prevailing issues there, we are also designing the program for this

year's transport logistic with our specialist sponsors, who will suggest the topics. The result is a wide-ranging supporting program with over 50 sessions. There really is something for everyone here every day.

? Your survey barometer showed at the beginning of the year that the industry is pleasantly flexible and adapting to the current situation?

Yes, it really is a unique feature of the industry. No matter what challenges have appeared and still appear on the radar in recent years or currently: The industry has faced them in an extremely flexible and solution-oriented manner. Without a doubt, the statement "There are no problems, only challenges" fits here. ►

EVENT



Credits: Messe München

Dr Robert Schönberger (studies and doctorate at the Technical University of Darmstadt, study visits to Buenos Aires and Atlanta) is Head of transport logistic exhibitions at Messe München GmbH.

? It seems that in turbulent times the need for face-to-face meetings is particularly great – is your trade fair experiencing a very large rush again?

In fact, you can feel the anticipation on all channels. And we are pleased that transport logistic is once again so well received as the industry's platform. Of course, it is counted at the end. But we are absolutely convinced that our exhibitors and visitors will be satisfied in the end.

? There are also special events to look for new staff?

Yes, we will also address this topic at transport logistic. That's why we have Career Friday with a program for young professionals as well as pupils and students. Otherwise, transport logistic offers an interesting and comprehensive insight into logistics every day. People

who only know the industry from hearsay are always surprised when they see what's going on in Munich, how diverse the industry is and how varied the job and career opportunities in this area are.

? Which elements of the overall program should also be highlighted?

There are so many, it's honestly hard to choose. But a highlight is undoubtedly the opening with the Federal Minister Dr. Volker Wissing. Other highlights are offered by the forums or simply communication at the stand, drinks after the end of the fair in the beer garden, in the restaurant or at a stand party. After four years, logistics really has every reason to celebrate.

! Many thanks for this information!

Hermann Schmidtendorf asked the questions.

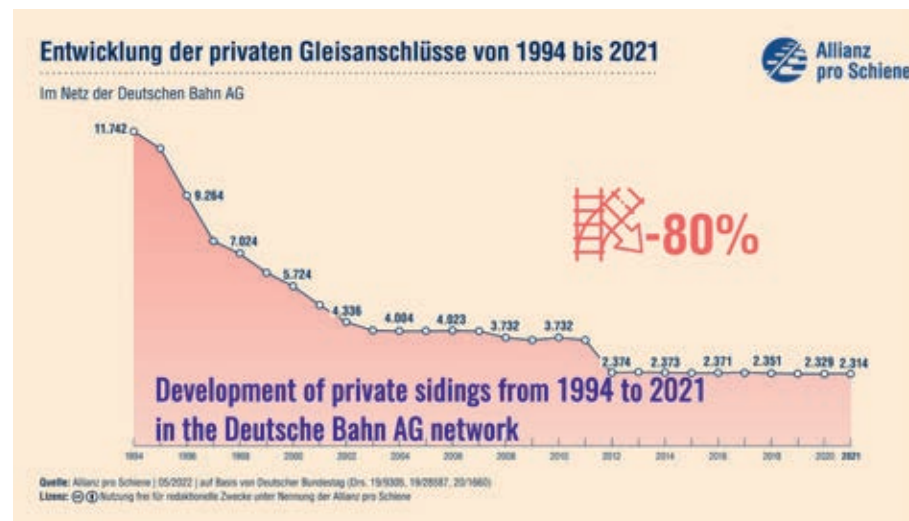
Railway sidings in Germany:

NEGATIVE TREND MUST BE REVERSED

In the 1960s, the West German state railway, the Deutsche Bundesbahn, created a powerful slogan: Von Haus zu Haus – From house to house. This inscription was also on the specially designed so-called large container wagons or **container wagons** (Behälter-Tragwagen, BT wagons). After the French abbreviation for **porteur aménagé** – mounted container, fitted carrier – **pa containers** were also spoken of.

This term arose as a result of the creation of the **UIC leaflet 590** after an international railway conference in Zurich in 1951. A European standardisation of container traffic was initiated there. The web service sebtus.de writes: "The pa system was massively expanded by DB and reached its peak in the mid-1960s with around 25,000 pa containers, 5,700 carrier wagons and a few hundred delivery vehicles. In 1960 alone, the DB transported 695,000 pa containers with over 3 million tons of freight. The use of the containers was free of charge for customers, only the transported weight was billed."

This early form of combined freight transport had a clear goal: as many goods as possible were to be transported by rail over the longest possible routes. At that time, many smaller, medium-sized companies still had their own railway connection. Those who did



not have such a connection were visited by a special Deutsche Bundesbahn truck. The standardised containers were quickly either loaded directly onto the railway wagons or the truck took them to the nearest freight depot, where the reloading took place.

ISO container: More road traffic, fewer sidings

But the railway operation with the pa contain- ►

Idyllic times: So-called pa containers are loaded „from house to house“ from the road truck to a railway wagon. Our photo shows a diorama in the Deutsches Technikmuseum Berlin.



Credits: Hermann Schmidendorf

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IM WANDEL DER ZEIT:
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IDEELLES
GOLD DER
UNTERNEHMEN**

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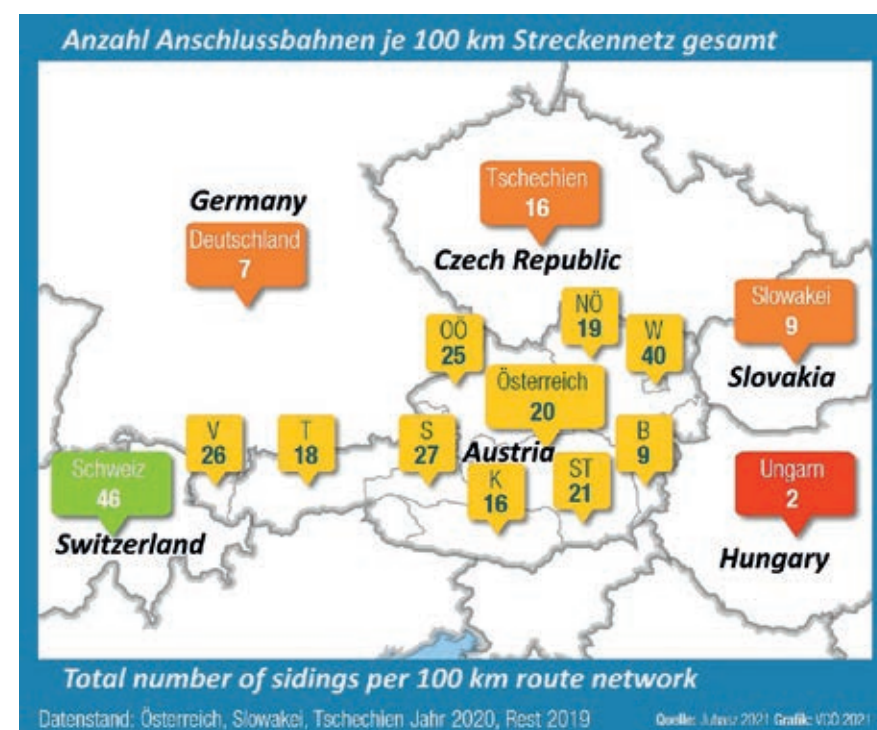
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www.rail-mobility.eu * editeur@rail-mobility.eu

ers required a lot of shunting. The shipping of smaller consignments of goods was offered more cheaply and flexibly by road freight transport. In addition, **ISO containers** were used in Europe from 1966 for the transport of larger loading units. These could also be easily transported on the road. At the same time, the politicians responsible for West German railways lost their ambition to adapt the existing sidings to the new world of transport.

By 1994 at the latest, with the merger of the East German and West German railways to form the **Deutsche Bahn DB**, road freight transport was politically preferred. Large numbers of private sidings from factories and commercial areas were dismantled or at least taken off the grid.

The result: In 1994 there were still 11,742 railway sidings in Germany. In 2021 there were only 2,314. The plan to privatise Deutsche Bahn on the stock exchange was abandoned in 2008. However, between 2010 and 2012 there was another noticeable drop in sidings from 3,732 to 2,374. A comparison with neighbouring countries shows that Germany is at the bottom of European statistics. It's not enough to say: Yes, Switzerland and Austria... The railways are particularly important to them anyway. The Czech Republic also currently has 16 sidings per 100 kilometres of route network. In Germany there are only seven such connections.



The logical rule then applies: Goods that are once on a truck are difficult to get onto the rails in the further supply chain. However, this means that the achievement of environmental policy goals is a long way off.

And that's not all. On September 6, 2022, the German Bundestag spent an hour and a half discussing the federal government's draft budget for 2023. During the debate, SPD member of the Bundestag Metin Hakvedi complained that around **70,000 points are missing in the German rail network alone**. In the past, these had been dismantled for reasons of cost because of "privatisation fantasies". As a result, passenger and freight trains could not be diverted: "Without points, the trains stand still." Missing sidings, missing points – both are defects in the rail infrastructure that significantly impede the expansion of rail freight traffic.

Rail connection charter calls for improvements

For this reason, the **Federal Association of Materials Management, Purchasing and Logistics (BME) and the Association of German Transport Companies (VDV)** together with another 47 associations from industry, trade, logistics, waste disposal and public institutions published a so-called **siding connection charter in 2019**. A revised version is scheduled for release in summer 2023. The current federal government and its predecessor have taken up several of the associations' demands. The possibility of reactivating closed sidings and building new ones has been simplified. State funding increased from 6.8 million euros (2019) to 9.2 million euros (2020) and to an incredible 34 million euros in 2021. But for 2022 the budget for funding was already degraded to 24 million euros – under pressure from associations. Because the Federal Ministry of Transport actually only wanted to set aside 18 million euros for it.

The managing director of the non-profit **Allianz pro Schiene, Dirk Flege**, therefore criticised: "The basic evil is that the state of course pays road connections ►

to commercial areas entirely with taxpayers' money, but not the connections to the rail network. With every siding, companies have to contribute private money and go through a bureaucratic application process. As long as this unequal treatment of truck and rail transport remains, nothing will come of the transfer of transport to the rail." **Peter Westenberg, Managing Director of GÜTERBAHNEN**, sees it the same way: "Logistics structures are cast in asphalt and the climate-friendly rail system is weakened."

Flege sees another omission: "The coalition agreement provides for a **mandatory order to examine the possibility of a rail connection for new commercial and industrial areas**. However, no one has received this review order – even though time is short and the transport sector is getting more and more out of control in terms of climate policy from year to year."

According to the Pro-Rail Alliance, responsibility ultimately lies with the Federal Building Ministry. This

ministry could have included a mandatory review order of sidings for new commercial and industrial areas in the Regional Planning Act. So far, however, the Ministry of Transport has apparently not done enough "persuasion" to cast the general decision of the governing coalition into law.

So it is not surprising that the goal of halving the planning times for such projects, according to **VDV Vice-President Joachim Berends**, has so far hardly seemed achievable. Berends: "Firstly, there is a lack of adequate consideration of the rail connection in commercial and industrial areas and their prioritisation as a central linking factor, secondly, there are time-consuming double checks in the preparation of documents and the environmental impact, and thirdly, the authorities lack the authority to initiate the spatial impact assessment as an independent procedure."

So there is still a lot to do for the rail lobbyists. *Hermann Schmidtendorf, Editor-in-Chief*

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VDV: Make sidings in commercial areas mandatory

A CARGO FREIGHT JOURNAL interview with the Vice President of the Association of German Transport Companies, Verbands Deutscher Verkehrsunternehmen VDV and Chairman of the Board of Directors for Rail Freight Transport. Berends (VWA diploma, business administration and transport specialist IHK, IHK Osnabrück-Emsland-Grafschaft Bentheim) has been a member of the board of Bentheimer Eisenbahn AG since 2009 and is also active in a variety of other functions for the sector.



Joachim Berends

Credits: Hermann Schmidtendorf

? **CARGO FREIGHT JOURNAL:** Mr. Berends, so that as much traffic as possible can get onto the tracks, it would of course be ideal if as many companies or hubs as possible already had a siding. However, many of these have been shut down or dismantled nationwide in Germany in the last few decades. Your association VDV has drawn up a charter with the sector with requirements for sidings. From the point of view of this charter, what do we need to make progress?

Joachim Berends: Together with many associations and companies, we have created a fairly successful siding charter. This is reflected in the fact that we now have oversubscribed the title for sidings funding in the Federal Ministry of Transport. This also has something to do with the fact that the renovation of existing sidings can now also be funded. But it is at least as important that we also take care of the ex-

isting stock and not that we continue to reduce the stock and ultimately only finance the new building.

What has to happen? Local authorities should provide railway sidings in the commercial areas within the scope of their spatial planning and spatial planning possibilities. We always say: a reversal of the burden of proof is necessary. The municipalities have to prove that a siding is not possible in this area for reasons A, B, C and D. If this is not proven, such an area can basically only be developed with a siding.

Second: We need more companies and also infrastructure operators who work together and build hubs as railports, because you cannot connect every company with a siding. So we really need these networking initiatives in Germany, too, which build such facilities together at interesting locations. ►

There is funding for that too. We just have to specifically address these people through the Chamber of Industry and Commerce or through the local business development agencies so that we tend in this direction.

Then we will also get further growth in single wagon traffic, in wagon group traffic, but also block train traffic for the rails, because we network more closely, but also the possibility of using climate-neutral mobility for first and last mile traffic in the truck sector. This is also provided by such a Germany-wide conception of multifunctional or new CT terminals or the expansion of existing CT terminals. It's very important that this gets started.

? Where these sidings meet the federal infrastructure, which is managed by Deutsche Bahn AG, the question is, do they want sidings there, or are they considered as a disorder because the

main track there has just been upgraded as a high-speed line? And what about the turnout costs?

The legislature has already found an answer to this. A grid connection must be guaranteed, and the two infrastructure operators will share the costs of the connection switch in the future. We are now well on the way to being able to upgrade or build sidings, and ultimately the large siding operator also has to allow a switch to be installed there and the costs then shared.

? But that doesn't remove the obligation to guarantee a certain minimum number of transports?

No. If I have a railway siding subsidised, I have ►

The 16th BME/VDV Rail Freight Transport Forum in early February 2023, again, proved to be the most important meeting of the year for the entire industry.



Credits: Hermann Schmidtendorf

Zentrale Forderungen der Charta

- Bürokratie abbauen und Regularien vereinfachen
- Gleisanschlussförderung verbessern
- Kostenbelastung für den Anschluss an das öffentliche Netz senken
- Vorgelagerte Infrastrukturen sichern und leistungsfähiger machen
- Bedienung von Gleisanschlüssen und kundennahen Zugangsstellen sicherstellen
- Öffentliche Ladestellen ausbauen und sichern
- Gewerbeflächen an Schiene anbinden und Flächen sichern
- Trimodale/Multimodale Knoten stärken
- Multimodalität fördern
- Neue Transportkonzepte unter Einbindung von Gleisanschlüssen schaffen
- Innovationen auf „erster/letzter Meile“ voranbringen (Digitalisierung, Automatisierung, moderne Lokomotiven)
- Interesse am eigenen Gleisanschluss steigern

Essential requirements of the VDV track connection charter – the entire document can be downloaded under the link:
<https://www.vdv.de/gleisanschluss-charta-downloads.aspx>

to deliver the corresponding transport quantities that I have specified over a period of ten years. But I can pick out the five best years as evidence. And I would always say that you have to show courage at the point where, as a company or siding connector, you ultimately believe in an increase in transport. Otherwise it makes no sense.

? You want to decide on a renewal, an update of the charter. What will change?

On the one hand, the question is how do we get this topic slimmed down? Many companies are currently oppressed by the obligation to accept high federal repayment options if companies do not deliver the transport volumes. This has to be mitigated by the federal government so that you have better planning security as a siding connector. We need to talk about accelerating the planning approval process and building sidings. We want to include more partners in the siding charter. That too will happen. We have to keep checking back every two or three years, does it fit the market, or do we have to adjust the nuances? And this is what we are up to do with the federal government.

? The BME/VDV Rail Freight Transport Forum is a large forum at which the Rail Commissioner of the German Federal Government and State Secretary Michael Theurer was present in 2022, at least via video link, and who also held extensive discussions. Unfortunately, at the forum at the beginning of February 2023, the ministry was not even there via video. That's not nice?

No. We were a bit disappointed there too. I would also have liked someone to connect at least via video, because with the rail freight forum we offer the most important auditorium of the year for a federal transport minister. The entire range of the industry is represented here, where I can send my political message to industry and railway companies. I therefore appeal to the Ministry to firmly anchor this event in its own calendar.

! Mr. Berends, thank you for the interview!

The interview was conducted by Hermann Schmidten-dorf.

lead conference on May 31th and June 1st, 2023 in Cologne

IOT AND BIG DATA IN RAIL

The global market for predictive maintenance, including IoT-based remote monitoring of trains and tracks, is still evolving. It has an expected annual growth rate of 21 percent over the next three years. The Internet of Things (IoT) is redefining the rail industry – with significant benefits.

Railroads are beginning to realise that the rail sector is no exception when it comes to the potential value-added opportunities enabled through the use of IoT technologies. Meanwhile, industry stakeholders are exploring digitalisation as a mechanism to create entirely new and optimised web maintenance systems with predictive qualities. The global market for predictive maintenance, including IoT-based remote monitoring of trains and tracks, is still evolving. It has an expected annual growth rate of 21 percent over the next three years. With the proliferation of IoT and digital technologies, railway operators and infrastructure managers are able to use intelligent data to improve grid availability, extend asset life, increase capacity and reduce maintenance downtime and costs.

Although railways are optimising the data gained from the IoT, one of their main challenges is to stay up to date with the latest innovative technologies available in order to continue to benefit from these continuous advances. Perhaps some of the greatest opportunities for the rail sector lie in logistics. The impact of the IoT on the logistics sector is already showing the possibilities for huge improvements

in end-to-end visibility benefiting the end user. The way we transport people and goods by rail is becoming unrecognisable. As industry leverages the very best industrial IoT and the most advanced big data analytics solutions, the physical and digital worlds can finally come together. This will make the industry's shared goal of modal shift from road to rail an achievable reality.

Now is the time for the entire rail industry not only to keep up, but to overtake other transport providers by fully embracing the digital world. The congress "The Rise of IoT & Big Data in Rail" returns to the conference calendar for the fifth year in a row. It has firmly established itself not only as the rail industry's leading event to get a clear and pragmatic picture of the digital challenge, but also as a recognised event, a meeting place trusted by leaders in the rail industry. This exclusive niche event will explore the vast breadth of predictive maintenance and big data applications for asset optimisation. It will enable infrastructure managers and railway operating companies to understand how they can benefit from setting up the intelligent data collection tools used by the Internet of Things to achieve their goals of increasing capacity, improving reliability, minimising downtime and reducing maintenance costs.

Visit www.iotandbigdatainrail.com to find out more, see the impressive program and register to take part. The event will take place in Cologne, Germany on May 31 & June 1, 2023. *Ben Holliday*

THE RISE OF
IoT & BIG DATA
IN RAIL
BY ROTAIA MEDIA



Trained as a media producer (University of Lincoln), Ben Holliday was Head of Sales for the specialist publication Global Railway Review from 2005 to 2017. Since then he has been the founder and managing director of the event company ROTAIA.



A nocturnal ÖBB marshalling yard: Leader in Austrian freight transport ist the Rail Cargo Group, member of ÖBB.

Credits: Philipp Horak

Austria:

RAIL FREIGHT TRAFFIC IS GROWING DESPITE THE DECLINE IN SIDINGS

A total of 56 rail transport companies (EVU) are active in freight transport in Austria, twelve of them also in passenger transport. In the meantime, sales and transport volumes are growing again. However, the decommissioning of sidings continues. Since 2008, around 44 percent of the siding railway loading points have been closed. As of 2021, only 536 sidings remain in the network.

Connecting railways are mostly private railways that a company operates mainly for its own purposes. They bridge the traffic from the company to the public main and branch lines. The most important sidings are voestalpine (Linz and Donawitz), Ennshafen, Linz Service GmbH and Sappi Austria due to the large number of wagons provided. The outbreak of the 'pandemic' in 2020 brought a dramatic slump to the European rail freight market: according to the IRG Rail market report, train kilometers fell by seven percent, net tonne kilometers by six percent and thus revenue by eight percent.

Where are we today? The slump in 2020 due to lockdowns and short-time work etc. put the international logistics chains under a lot of pressure. The volume of freight traffic is now above the 2019 level and the growth in freight traffic in Austria will continue. In 2021, freight transport performance totaled 23.5 billion net tonne-kilometres. This even exceeded the pre-crisis level of 2019. The Rail Cargo Group (RCG) is

a leader in freight transport performance. Regional events such as the re-opened **Karawanken Tunnel** (part of the freight corridor from the Adriatic ports to Germany), which was closed for renovation, further influenced rail freight activity in Austria.

The new bottleneck is a shortage of skilled workers, scarcity of resources in infrastructure and roll- ▶

Andreas Mandl (training in entrepreneurship at the FH Wien der WKW) has been CEO of LTE Logistics & Transports Europe (www.LTE-group.eu) since 2007. He is chairman of the freight transport committee in the Railways Association of the Austrian Economic Chamber WKO (www.schienenbahnen.at).



Credits: AMWKO

Goods traffic of all modes of transport in Austria 2021

Mode of transport	K ton	K tonne-kilometres inland
Road	609 480	56 846 395
Rail	102 233	21 780 869
Danube	8 271	1 505 865
Pipelines	64 635	16 100 964
Air	221	

Q: STATISTIK AUSTRIA, Verkehrsstatistik; Eurostat (Tabelle D3.1 und D5); ASFINAG. Created on 10/13/2022. Rounding differences possible. Tonne-kilometres not available for air transport.

ing stock. Since last year, the explosion in traction current prices has grown into an existential problem, especially for railways that buy their electricity on the spot market.

Private freight transport was able to increase its market share in traffic volume (tonnes) in 2021 from 36.7 to 39.6 percent, and its share of transport performance (net tonne-kilometres) increased from 33.1 to 36.6 percent. The **recovery was also noticeable in the goods sector**, where the indicators for 2021 showed positive developments, primarily due to the easing of the economic environment. Both the **volume** (transported net tons) and the **traffic performance** (net tonne-kilometres, gross tonne-kilometres) have **grown in the upper single-digit percentage range**. Even the **level of 2019 was exceeded**.

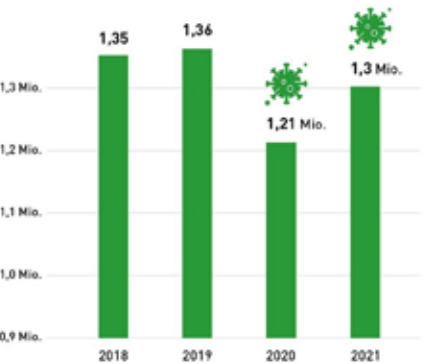
According to route categories of the ÖBB network and measured in terms of gross tonne-kilometres, the **market shares of the competitors increased everywhere in 2021**. The **competition is most pronounced on the Brenner and West axes**. Here, the companies outside the ÖBB Group accounted for 56 or 52 percent of the total transport performance. With more than 40 active companies each, the western route and the other international axes (e.g. Tauern and Semmering routes) were the network sections used by most companies in freight traffic. Essentially, all transit freight traffic takes place on the three sections mentioned.

57% of the transport volume via connecting railways

For a long time, Austria has brought enough ▶

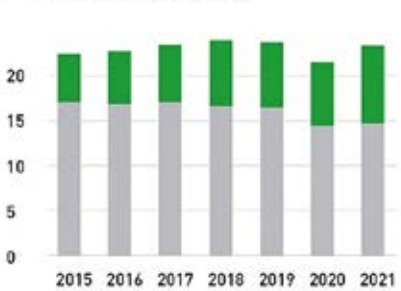
Total volume (provided freight wagons) in the Austrian sidings 2018-2021:

Source: WKÖ/FV Schienenbahnen



Development: Freight transport performance in net tonne-kilometres

Private
RCA (Rail Cargo Austria)

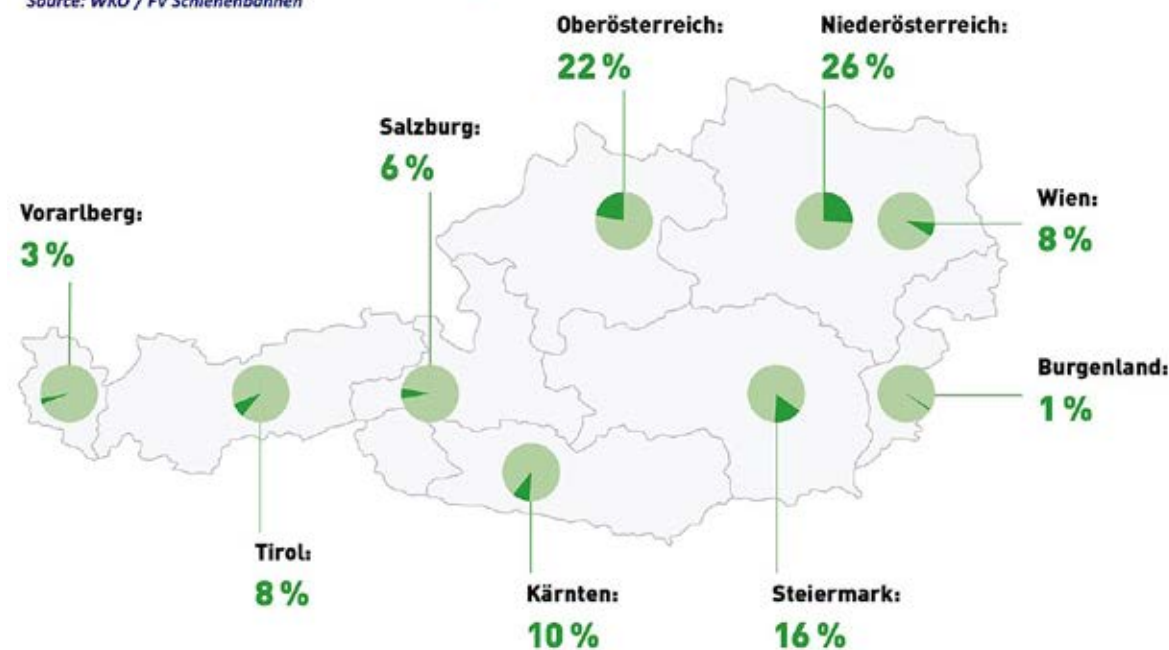


Quelle: Jahresbericht 2021 Schienen Control GmbH

Foto: Hermann Schmidendorf

Verteilung der Anschlussbahnen nach Bundesländern 2020: Distribution of sidings in the Austrian federal states in 2020:

Source: WKO / FV Schienenbahnen



goods onto the rails with single wagon traffic. This also seems to be dawning on politicians, because a generous siding subsidy (existing and new construction) did a lot to make the railway more attractive. In 2021 in Austria, the volume on sidings was: 1.30 million wagons provided (all EIU), 64.1 million of 112.5 million net tons ran via sidings. That means: 57 percent of the total transport volume on the rails is handled via sidings. They are crucial to the growth of rail freight and need further support.

Rail freight transport is the guarantor for achieving the climate protection goals. According to the political target, the share of rail freight transport in total freight transport is to increase from the current 31 percent to 40 percent by 2025.

For the necessary turnaround in transport, we need honest cost truth in the transport sector. In Austria alone, the external costs (including noise, congestion and accident costs) are three times higher for trucks than for trains. However, these costs are not borne by those who cause them, but by the taxpayers. Something urgently needs to change here, there needs to be more fairness and honesty in politics.

The modal split shows growth in rail. However, compared to the increases in volume on the street,

the picture is far removed from the noble political targets.

It's not just enough to set out fantastic goals – the railway system in particular requires a high level of “networking of many variables” in order to be successful. Starting with the infrastructure to the real desire of the loading industry to also handle their logistics on the railway.

Andreas Mandl

SOURCES AND ADDITIONAL INFORMATION

Graphics:

<https://www.wko.at/branchen/transport-verkehr/schienenbahnen/Schienengueterverkehr.html>
<https://www.schienencontrol.gv.at/files/1-Homepage-Schienen-Control/1g-Presse/Pressemappen/Pressemappen%202022/Presseinformation-mit-Grafiken.pdf>

Annual report of Schienen-Control 2021

<https://www.schienencontrol.gv.at/de/presse1.html>
 Press information Schienencontrol <https://www.schienencontrol.gv.at/files/1-Homepage-Schienen-Control/1g-Presse/Pressemappen/Pressemappen%202022/Presstext-OTS.pdf>

VCÖ:

REACTIVATE SIDINGS!



In Austria there were 1,046 reported sidings in 2020, of which only half (547) were served. Compared to 2010, when 840 sidings were served, this means a drop of 35 percent. In the same period, the share of rail freight transport in terms of net tonne-kilometres fell from 33 percent to 28 percent in 2020. While all company premises in Austria are equipped with a publicly financed road connection as standard, there are many hurdles when it comes to railway sidings.

Connecting railways as a gateway to rail transport

Branch lines are non-public railways, usually without scheduled operations. Although they are not subject to an operating obligation, they are subject to a maintenance obligation. If the infrastructure operator does not have a general safety management system for this purpose, siding railway users are obliged to provide the railway authority with proof of operational safety every five years. Otherwise, the branch line in question will be blocked, which can only be lifted again after an assessment has been carried out.

Branch lines are divided into “main feeders” with a direct connection to the core network of a railway infrastructure company and “secondary feeders” that branch off from other feeder lines. Around 95 percent of all sidings in Austria branch off from the route network of ÖBB-Infrastruktur AG. The remaining about 30 sidings begin on the route network of private railways, more than half of them on the Graz-Köflacher Bahn.

In order to protect the main network, there are so-called flank protection devices, such as locking shoes or protective switches. These can either be operated locally with key locks or electrically remote-controlled when integrated into the interlocking of the infrastructure operator. In the siding railway agreement, a wagon handover area is specified between the infrastructure and siding railway operators. In general, sidings are mostly owned by private companies. Depending on whether the owner himself

or a train operating company (TOC) handles the operation, one speaks of sidings with or without own operation. An operation by a TOC takes place, for example, with shorter feeder lines (often less than 200 metres) at warehouses.

Preservation by takeover after decommissioning

In order to counteract the downward trend in rail freight transport, several formerly public railway lines used for freight transport were converted into non-public sidings in Austria from the 2010s. This eliminates the obligation to operate under railway law, which means that individual companies along the siding can continue to use it economically. Since the railway legal consensus remains in place even with siding operation, a short-term reactivation as a public railway is possible at any time if the traffic situation changes, and an imminent closure of the line can be averted.

Source: <https://vcoe.at/publikationen/vcoe-factsheets/detail/vcoe-factsheet-an-schlussbahnen-reaktivieren-fuer-guetertransport-mit-zukunft>

The VCÖ was founded in 1988 as the “Verkehrsclub Österreich” (Traffic Club Austria) and is an organisation specialising in mobility and transport that is geared towards the common good. Under the motto “Mobility with a future”, the VCÖ advocates an ecologically compatible, economically efficient and socially just transport system. <https://vcoe.at/>

Share of sidings in the total transport volume on the railway lines:



A trend reversal in sidings?

INCREASED INTEREST
IN GOODS BY RAIL

For decades, the development of the number of sidings in Germany only went in one direction: downwards. More and more direct connections to the railway network disappeared from commercial areas. Will the trend reversal be achieved now?

In 1994 there were still 11,742 sidings available. In 2021 there were only 2,314. The federal government

subsidised new sidings and the reactivation of older track systems. But the funding program was not very popular and was certainly not able to stop the dying of the sidings.

In March 2021, the Federal Ministry of Transport presented a new funding guideline. The scope of eligible measures had been expanded. Previous ►

Matthias Gastel, a trained geriatric care assistant and graduate social worker (FH Reutlingen) and business graduate (FH Reutlingen), worked in wholesale and retail and as a social worker in youth welfare and from 2006 to 2012 ran his own temporary work and recruitment agency for specialists in the social sector. He has been a member of the German Bundestag for Bündnis 90/Die Grünen since 2013. In the current legislature, he is a full member of the Transport Committee, where he is the rapporteur for his parliamentary group on railway issues and a full member of the Tourism Committee.



Credits: Grüne im Bundestag/S. Kaminski



Credits: M. Gastel

A cut-off siding: a train has to go here again!

subsidy rates have been increased. There is positive feedback from the industry. It is emphasised that the modernisation of existing systems or the connection points are now also being funded. This has eliminated previous obstacles. However, other aspects, such as a lack of available planning staff and a lack of capacity in the network, could prove to be permanent problems.

The numbers, however, give reason for hope: Before the funding guidelines were revised, an average of 18 applications were made each year, of which an average of twelve were approved. In the first year and a half of the new funding guidelines, 44 applications were made and 21 approved, as a request I sent to the federal government in the summer of 2022 shows. The development of funding applications since then should also be carefully considered and analysed, which is why I asked the Ministry of Transport for current figures on the number of funding applications.

More sidings at companies and in industrial areas are an important prerequisite for strengthening freight transport by rail. Once goods have landed on the truck, they often remain there for hundreds of kilometres because reloading is time-consuming and expensive. With its own siding, a company secures an

efficient interface between production and transport processes, which benefits from the efficiency and planning security of the rail transport mode in the transport processes. After years of a massive decline in sidings, the trend could now be reversed.

Far more funding applications than in previous years are a good sign. I hope that the number of permits will continue to rise, both for the reactivation of older sidings and for the construction of new ones. The transfer of goods to rail is an important prerequisite for achieving climate goals in the transport sector and for energy-efficient logistics. In addition to the funding program that has now been adjusted, the project from the coalition agreement to oblige the examination of a rail connection in new industrial and commercial areas will also contribute to achieving a shift in freight traffic to rail in the long term.

In August 2022 I was back at the wood recycling company Schmid in Gerstetten on the Swabian Alb (district of Heidenheim). That is where the photo shown here was taken. The company has an old siding that is no longer usable. There is interest in rehabilitating/modernising the track and bringing it back into working order. I wish the company that it achieves this goal!

Matthias Gastel MP

175 years of Siemens:

MOBILITY FROM BER- LIN TO THE REST OF THE WORLD

Credits: Hermann Schmidtdorf



In the beginning there was Berlin – and the Prussian military. The officer Werner von Siemens (1816-1892), son of a tenant family from near Hanover, had completed a scientific education at the artillery and engineering school and served from 1842 in the artillery workshop in Berlin. But he was interested in the development and practical realisation of his own inventions. He should be so successful that in 1888 he was raised by the German Emperor Friedrich Wilhelm III. raised to the hereditary nobility.

Werner von Siemens acquired his first patent for a process for gilding silver elements. His brother Wilhelm (William) settled in Great Britain and was able to sell the patent there at a profit. This spurred Werner von Siemens on to construct a new pointer telegraph starting in 1846, in which two devices communicating with each other were electrically synchronised. In the precision mechanic Johann Georg Halske, von Siemens found a congenial comrade-in-arms who was able to actually build the inventor's developments. On October 1, 1847, with a loan from a Siemens cousin, the two founded their first workshop in a rear building at Schöneberger Strasse 19 in Berlin. Today you would say a small start-up.

To avoid a collision with Siemens' status as an army officer, the company initially traded as "Werkstatt Halske". It later became Siemens & Halske until Halske left. Commercial success came quickly. The responsible telegraph commission of the Prussian army decided to lay an underground communication line between Berlin and Frankfurt. Pointer telegraphs based on the Siemens patent and cable lines that were insulated using a process developed by Siemens were used.

The following years were characterized by large

sales in the laying of telegraph lines all over the world. The Siemens brother Carl founded a Russian branch of Siemens & Halske in St. Petersburg, whose sales skyrocketed. But Werner von Siemens had yet another groundbreaking invention up his sleeve: a dynamo machine based on the dynamo-electric principle. This could be used to produce electrical energy.

Dynamo and pit locomotive

In 1866, Siemens invented the self-excited DC generator, which produced electricity economically on a large scale. Siemens also experimented with alternating current. He was convinced that electricity would change the world. Using a cable, the new form of energy can be brought from the place where it is generated to any place where it is needed. Now it was time to convince the world of the universality of the new method.

As a first demonstration of the new possibilities, Siemens had buildings and streets illuminated. The inventor organised a large demonstration on March 1, 1879 in the Siemens villa in Charlottenburg. Von Siemens invited around 250 guests to a large ball at which his villa was the first private house in Ger- ►

many to be electrically illuminated.

And Siemens thought further: Electricity is the key to modern mobility! Only a few weeks after lighting up his villa, the inventor presented a small, electrically operated mine locomotive at the Berlin trade exhibition. He was sure to attract a great deal of attention, as until then only the traction power of horses had been used in underground mines and in above-ground passenger and freight transport.

The now iconic drawing of the first Siemens mine locomotive, reference illustration of all Siemens stories, adorned a multi-system Vectron locomotive from the rental company MRCE in 2019. The inscription on the locomotive: e-mobility 140 years made by Siemens Mobility. A considerable time has passed between the primitive two-axle, narrow-gauge mine vehicle and the leading European, standard-gauge electric locomotive licensed in 20 countries. But the link is the determination of the visionary developer Werner von Siemens and his successors, who stub-

bornly stuck to the goal of improving living conditions with technical solutions even in difficult times.

The world's first electric tram...

Berlin during the Empire. The years of the industrial revolution changed the city. More and more people came to the up-and-coming German metropolis. Horse carts and horse trams shaped the Berlin landscape. New solutions were urgently needed to organise the chaos of urban passenger transport. More and more people had to be transported, especially in an east-west direction from the city center to the up-and-coming industrial and residential area of Charlottenburg. As a solution, Siemens suggested a means of transport that works independently of the road – a City Railway, S-Bahn.

Siemens imagined it as an elevated railway on pillars. But the place where he presented the first plan for an elevated electric railway to the authorities in 1880 was unfortunate. The well-to-do society living ►

Werner von Siemens

Credits: Archiv Siemens



ANNIVERSARY II: INDUSTRY & INFRASTRUCTURE

in Friedrichstrasse strongly protested that any public could look into their living room from such a train! Besides, it's more of a wagon on stilts than a train, so it's a tasteless invention. And what if lubricating oil dripped from the coaches onto the hats of the dignified residents...? So the topic of a future additional means of mass transport seemed to be still open.

Third rail and catenary

But von Siemens quickly changed his mind. In 1881 the construction of the **Royal Prussian Main Cadet Institute** (HKA) was completed in Groß-Lichterfelde near Berlin. What remained was a 2.5 km long standard gauge track from the local train station in Lichterfelde to the army school. The route had been used to transport building materials to the school and was now redundant. So the owner left the route to Siemens to try out his modern light rail system – albeit under new conditions. “I brought my elevated railway to earth!” the inventor noted at the time. Von Siemens converted a former horse-drawn carriage body so that the body now had its own drive. The energy for locomotion was provided by electric current, supplied by a third rail on the ground. The railway line was converted to metre gauge. The first demonstrations turned out to be extremely impressive: the world's first electric tram was a reality.

But there were still some technical changes to be made. Taking current from the third rail on the ground was risky. The army often held parades in the area. Horses — not just military horses — could be electrocuted if they touch live rails on a tram. It was also too dangerous for people to step on such a power rail on level ground.

The Siemens engineer Walter Reichel (1867-1937)

found the solution. The electricity had to be supplied to the cars from a cable line hanging above them. For this purpose, a metal bracket should reach from the car to the overhead line and thus divert the current. The term “Reichel stirrup” was created for this innovative principle. After the principle was clear and worked, it was refined in the following years and was later also used for the energy supply of large electric locomotives. Only in the case of the S-Bahn and the Underground, U-Bahn, power was still drawn from a third ground rail. Because these are systems on separate railway lines that are inaccessible to the public.

The electric tram became the next export hit from the von Siemens factories. The first electric light rail system ran in Paris in 1881 and in Vienna in 1883, and soon there were also electric trams in Russia, China and Brazil. Between 1896 and 1902, the entire local transport network in Berlin was converted to electric trams. In addition, in 1882 von Siemens also designed the world's first trolleybus operated by overhead lines for Berlin. But even so, the heavy traffic in Berlin could not be managed.

In January 1863, the world's first metro was built in the British capital of London, the London Underground, also known as the “tube” because of the way it runs through narrow tubes. Wouldn't that also be something for Berlin? Von Siemens quickly heard: No. A sewage system is being laid underground. A train running in tunnels and drilled deep into the ground using the mining method could lead to collisions. In addition, Berlin has a high groundwater level. Therefore in 1896 von Siemens transferred his project, which had been rejected in Berlin, to a metro construction in Budapest. It became the first regular metro system on the European continent.

But Berlin's traffic problems were still waiting to be solved. In the end, Siemens won in 1902 with a cheaper proposal to build a metro. It was actually an above-ground railway, with only certain sections directly underground. Werner von Siemens won over the decision-makers for these sections with a new term. He now spoke of an “under-paved railway”. Actually, it is an elevated railway, a Hochbahn, with only a few sectors that could be built directly under the road surface in an open construction. ►

Model of a first Siemens tram with Reichel's bracket.



Credits: Hermann Schmidtendorf

ANNIVERSARY II: INDUSTRY & INFRASTRUCTURE

The trains were powered by 750 volts DC supplied by a live third rail. This time, von Siemens took the previously received signals seriously. An unaesthetic means of transport? No! Renowned architects were involved in the construction of the stations and the decoration of the supporting columns. The above-ground rail line was built through the neighbourhoods of the non-rebellious, less affluent townspeople and, moreover, in the middle of the street, not on the sidewalk. The Berliners were thrilled. More and more districts in Berlin – at that time still independent cities – were connected to the subway.

The first line led from the station Strahlauer Tor to Potsdamer Platz. It was later extended from the Strahlauer Tor over the beautiful, 124 meter long Oberbaumbrücke to the Warschauer Straße station. In the first year of its existence, the railway carried 30 million passengers. With the construction of new residential areas in Berlin, the network was expanded, by 1913 the route network had already been expanded to a length of 37.8 km, 27 km of which were underground. The Wittenbergplatz train station,

for example, was impressive with its neoclassical entrance hall.

The city of Greater Berlin was founded in 1920 through the incorporation of neighboring cities and districts. Now the Berlin government, the Senate, is already building the metro lines on its own. By 1930, two north-south lines were established. These ►



The Berlin Hochbahn 1902.

Credits: Archiv Siemens & Halske

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Credits: Hermann Schmidtendorf

A Vectron locomotive with the image of the world's first electric locomotive from Siemens.

lines are entirely based on tunnels, which have an enlarged profile compared to the previous high lines. This creates the division of the Berlin U-Bahn into the so-called small and large profile, which still exists today. In both cases the gauge is the standard railway gauge of 1435 mm.

The London Underground was the reason for Werner von Siemens to build his own metro. In 2025, the Mobility division of today's Siemens Group will set its own distinctive accents there. The central Piccadilly line will then be served by 94 world-newest trains

made by Siemens – the circle is complete. To this end, a state-of-the-art manufacturing site is being built in East Yorkshire as a green field investment in Goole, which will also be able to manufacture high-speed trains. After World War II, the Siemens group moved its headquarters from Berlin to Munich. But one mainstay has always remained in Berlin – and this is currently being massively expanded. The same applies to Siemens Mobility: from Berlin to the world – and vice versa: no mobility in Berlin without Siemens.

Hermann Schmidtendorf



Credits: Transport for London

From 2025, such state-of-the-art Siemens trains will enrich the London Underground.

175 years of Siemens: “The hydrogen train – symbol for sustainability”

Dr Roland Busch (physics studies at the Friedrich-Alexander University of Erlangen-Nuremberg and the University of Grenoble, doctorate in 1993 at the Friedrich-Alexander University) has been CEO of Siemens AG based in Munich since February 2021. He has held various management positions at Siemens since 1994. The first hydrogen train from Siemens Mireo Plus H will be used in regular passenger service by Deutsche Bahn from 2024 as part of the H2goesRail joint funding project. rail & mobility editor-in-chief Hermann Schmidtendorf asked the questions.



Credits: Hermann Schmidtendorf

CARGO FREIGHT JOURNAL: What is special about the Mireo Plus H hydrogen multiple unit?

Dr. Roland Busch: For me, the hydrogen train is a symbol of sustainability, of Siemens' sustainable portfolio, of the fact that we are able to use technology to make an entire mobility sector green, i.e. to present green mobility. That is what we owe to ourselves, but also to our environment and society. And technology is the solution to that. The Mireo hydrogen train shows it once again quite clearly.

CARGO FREIGHT JOURNAL: And the propagation of this move is really starting now?

The goal, of course, is to scale that up. This is the first train. We already have three in the pipeline, with more to come. Of course, not only the hydrogen train is decisive, but also the hydrogen operating system, i.e. the generation, the conversion of green electricity to hydrogen, the transport and consumption to be scaled up. This is the first step, and there are many more to come.

The Mireo Plus H: with hydrogen to green mobility.



Credits: Hermann Schmidtendorf

AUTONOMOUS DRIVING – BEST ON RAIL

What is still associated with great uncertainties in road traffic can be presented much more easily on the rails – and with success. No one can give way to a train from the side or brake suddenly in front of it. In rail transport, there are already the first fully automated = autonomous trains.

Following the English one speaks of Automatic Train Operation (ATO). And because such a driving style requires the presence of a safe train control system such as the European ETCS, the term “ATO over ETCS” is also used in Europe. Intermediate stages are driver assistance systems. These also help to save energy and therefore money, we report later in the magazine.

The British government-funded Thameslink program began its first “ATO over ETCS” operation in 2018 on the newly built north-south connection across London. By installing the technology supplied by Siemens, 24 trains per hour can run in quick succession per track and direction – a decisive capacity improvement for London’s public rail transport. Siemens speaks of the “world’s first commercial ATO application in main line traffic with ATCS”.

However, the London project is still a long way from fully automated driving. Because that would also have to include the procedures on the platforms and

the reaction to unforeseen events. Govia Thameslink Railway described its first trial run at the time: “After the driver checked the platforms, closed the doors and then re-selected ATO, the train with its cab signaling then proceeded through Farringdon, City Thameslink and London Blackfriars under automatic control. It eventually exited the system on its exit from London Blackfriars.”

GoA2: Drive automatically yes, open doors no

So the London Siemens train was running at level GoA2 – semi-automatic train operation with a driver (STO). On the initiative of the city of Hamburg, DB and Siemens Mobility, there were also German demonstration drives with the same level of automation in 2021. An existing route and existing vehicles in the DB network were upgraded to the new ETCS Level 2 and ATO technology in a very short time. Since May 2018, ViP Verkehrsbetrieb Potsdam GmbH has been running test runs with a Siemens Combino tram, accompanied

by a safety driver who only intervenes in the event of danger. The tram was equipped with GPS, computers and a variety of sensors such as cameras, laser (LiDAR) and radar scanners for testing an autonomous tram. The route must be learned from the vehicle beforehand. The test distance is 13 kilometers. Buses also run on a covered, fenced stretch of road that is 800 meters long. ►

Automatic Train Operation: What is it?

Automatic train operation (ATO) is an operational safety enhancement function used to help automate operations of trains.

GRADE OF AUTOMATION	TRAIN OPERATION	SETTING TRAIN IN MOTION	DRIVING AND STOPPING	DOOR CLOSURE	OPERATION IN EVENT OF DISRUPTION
GoA 1	Automatic Train Protection with Driver			Driver	
GoA 2	Automatic Train Protection + Automatic Train Operation with Driver				
GoA 3	Driverless Train Operation	Automatic		Attendant	
GoA 4	Unattended Train Operation				

ALSTOM



Real-time automatic action on the Combino Tram monitor in Potsdam.

Credits: Siemens

ARTE = Automated Regional Multiple Unit with ETCS

ALSTOM has also been involved in the automation of trains for years. In the Paris area, a freight locomotive belonging to the state-owned company FRET SNCF was equipped early on so that it could be driven in the depot and on the open line without assistance. In 2021, Alstom was able to bring in a digitisation order from the lighthouse region of Stuttgart. 215 Stuttgart S-Bahn trains are to be equipped with ETCS and ATO for DB Regio AG. In addition, Alstom is to equip 118 vehicles of the S-Bahn series 423 of the Baden-Württemberg State Agency for Rail Vehicles SFBW for regional transport in the Stuttgart area with the same technology. In Lower Saxony, too, driving operations should initially run at level GoA2. So staff remain on board the train. The following stages can then be built on the evaluations of the practical tests: GoA3 – accompanied driverless train operation (DTO), instead of constant

control by a driver there is only one experienced train attendant, and GoA4 – fully automatic driverless train operation (unattended train operation – UTO, manless train operation MTO): The control center carries out the necessary interventions.

When presenting Alstom’s ATO project in Lower Saxony, Michael Kellner, Parliamentary State Secretary at the Federal Minister for Economic Affairs and Climate Protection, said: “We, as the Ministry of Economic Affairs, are extremely pleased that we can also raise the issue of autonomous driving in the rail sector to a much greater extent. This has not been the focus of our major research programs so far. For us, autonomous driving always involves normal vehicles.”

So Germany would be further along with this topic if politicians and ministries were to consider trains instead of road vehicles as “normal vehicles” for automation... Conclusion: the autonomous future is already here, but on the other hand it’s only just getting started!

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SCHWERPUNKT II Interview

A gestural lecture – Müslüm Yakisan in conversation

Autonomous driving: “A gigantic factor for more effective rail traffic”

? **CARGO FREIGHT JOURNAL:** ARTE – this is a project in Lower Saxony in Germany in which you want to test the autonomous driving of a regional train on normal regional traffic routes. You emphasise: This is a worldwide novelty. ARTE has already been compared to art and media. Please explain: What is the idea of this project?

Müslüm Yakisan: We’ve been working on this in theory for years, now we want to demonstrate that the technology is mature and enables automated driving in regional transport, i.e. an open system. An additional special feature: We retrofit an existing vehicle in such a way that automated operation can take place without trackside ETCS equipment. We do this together with our partners, the German Aerospace Center (DLR), the Lower Saxony Regional Transport Authority (LNVG) and the Technical University of Berlin. The state of Lower Saxony and the

Federal Ministry of Economics and Climate Protection provide funding.

In this project, we don’t just look at the vehicle. Of course, we at Alstom have this perspective, especially with regard to the safety-relevant areas. But our partners broaden the horizon again, so that we deal even more closely with the perspective of passengers and operators, but also with the drivers.

? What effects does that have on the job profile of train drivers, for example? Will their work profile change as a result of this digitisation?

We believe that escorting trains is an essential factor in making rail passengers feel comfortable. It was important to us to accompany the project holistically together with our partners and to take a scientific look at how job profiles could change. We look at the ►



Credits: Hermann Schmidtendorf (4)

The graduate electrical engineer (Ostfalia Hochschule Wolfenbüttel) Müslüm Yakisan became President of the D-A-CH region and a member of the management team at Alstom in 2021. Previously, he was senior vice president for the Central Asia, Middle East and Africa region at Alstom and held various senior positions at Siemens.

role of the driving personnel, i.e. the train drivers and train attendants, and the role of the troubleshooter.

? How will passengers perceive this?

Ideally, probably not at all – apart from the fact that punctuality will increase. We will be able to actively intervene in driving operations via diagnostics. Should a journey be affected, we could take appropriate measures to get back on schedule. This enables us to increase punctuality for passengers, which makes the rail system significantly more attractive overall.

? In France, Alstom started projects with the SNCF some time ago, initially at marshalling yards, but also on the route. For psychological reasons, however, people in France do not like to say autonomous or automated, even if there is a difference anyway. They say “remote-controlled train”.

Of course, psychology is important, the passengers should feel safe. We speak of driver assistance systems because operating personnel will continue to play an important role in the future. As I said, job profiles could change in perspective. We are ►



Credits: Alstom/Stefan Brausse

Müslüm Yakisan and CARGO FREIGHT JOURNAL editor-in-chief Hermann Schmidtendorf.

FOCUS II: AUTONOMOUS DRIVING

convinced that with this project we can show that we have come so far in regional transport. We have had driverless systems at metros for years. You have also had the autopilot in air traffic for generations.

? As Alstom, you have been operating an automatic airport train at Frankfurt Airport for over 25 years. I had an unpleasant experience years ago with such a feeder train from another manufacturer. So it suddenly stopped at a station, but the doors wouldn't open for the next 20 minutes. It was hot, no ventilation, no electricity, no window to open. At the time, I felt this technology to be extremely clumsy and downright dangerous in an emergency.

You are right, we have implemented such systems in many countries over the last 30 years. However, I am not aware of situations like the ones you describe from our trains.

But of course we have to think: What does the system have to be able to do in an emergency so that the passenger feels safe? We have implemented corresponding concepts in metro systems and airport people mover systems for years. We now have to transfer them to regional traffic. But above all, we have to convince people that the technology is ready in all aspects to go into series production. We are convinced of the advantages: energy-saving driving, punctuality, increased frequency. It is worthwhile to develop such a concept and translate it into a research project.

? You can then transfer the positive results to other regions and other routes. That means that in principle this is a pilot project with much greater significance than just for this region?

It is a pilot project that is unique worldwide because we will be using a converted existing vehicle in an ►

Such a converted train of the BR 648 – Lint 41 – is taught automated driving.

FOCUS II: AUTONOMOUS DRIVING

open system for regional transport for the first time, where higher speeds are already being used. This brings with it a corresponding complexity.

? High-speed routes are mostly inaccessible and fenced off. But in regional traffic, for example, do we have level crossings?

Developing and implementing solutions for this is a highly interesting challenge for our engineers. We are looking forward to it.

? And the year 2024?

The test drives will take place in 2024. In this country, it is also about the topic of digital rail. Germany has a specific plan. This new system is based on the solution that we are developing for the digital cross in Stuttgart.

? The traction vehicles from the Stuttgart area are now being fitted with ATO and ETCS at the Alstom plant in Hennigsdorf. What is the difference between the level you are trying out in Lower Saxony and what you are realising for Stuttgart?

For Stuttgart we are developing EVC three, the next generation of the European Vital Computer, which will then serve as the basis for digitisation and the rollout of the ETCS solutions in Germany. The ARTE project in Lower Saxony is a module that we build on. So both projects have a certain dependency on each other.

? So ETCS Basic will be installed for Stuttgart, so to speak, and the technological freestyle will come in Lower Saxony?

At the end of 2025 we will start passenger operations in Stuttgart with the latest ETCS solution. The system is ATO-capable. But in Lower Saxony we go one step further. Here we are demonstrating something that can also be made possible in Stuttgart.

? Then Stuttgart can decide that they would like to have it, too?

Correctly. The subsequent upgrade to the future European standard of TSI ZZS 2022 has been agreed by mid-2027. So, we're looking forward to it.

? I can only wish you the best of luck. But it takes more than luck, of course...

A bit of luck can't hurt, but in the end, experience and expertise determine the success of the project.

? Thank you very much for the conversation.

The interview was conducted by Hermann Schmidten-dorf.



A FULLY AUTOMATIC SHUNTING LOCOMOTIVE WITHOUT FAULT AND BLAME



Credits (3): PedroAlbino Agency

A locomotive rolls towards an unrestricted level crossing – without a driver. A car is parked on the crossing and won't come off the rails? Big crash coming? No! The locomotive brakes all by itself and comes to a standstill at a clear distance from the car.

Braking as if by magic – this was demonstrated in November 2022 by the mobility solutions provider Alstom in cooperation with the Dutch infrastructure operator ProRail and the Belgian rail freight company Lineas near Breda in the Netherlands. The demonstration concluded a series of tests that are part of an ongoing partnership between Alstom, ProRail and Lineas.

For the demonstration, a Lineas diesel-hydraulic shunting locomotive (HLR 77 series from Vossloh MaK) was equipped with Alstom's ATO technology. This was paired with an Intelligent Obstacle Detection System (ODS) developed by NIART by Elta, a vehicle systems spin-off from Elta Systems. The autonomously driving locomotive was confronted with a person standing on the track, a parked railway wagon and a wrongly set switch. It always reacted correctly, completely autonomously and without the active intervention of the crew on board.

The ODS proved effective in real conditions up to 500 meters away from obstacles and provided a significant safety buffer in marshalling yards. The group has already conducted successful ATO tests in France, Germany, Belgium, the Netherlands, Switzerland and the United Kingdom. The results of the work in the ►



Netherlands go into the further broad development of applications in commercial operation in shunting operations and on main routes in all degrees of automation up to the highest level GoA4 demonstrated here. The degree of automation known as GoA4 means fully automatic starting, driving, stopping and dealing with unforeseen obstacles or events without the direct involvement of the train crew during the shunting process.

NIART's ODS is a perception system based on high-resolution digital radar fused with multispectral electro-optics and supported by classical and machine learning algorithms to detect and classify obstacles on the train path in all weather and visibility conditions. The system is a complete, self-contained on-board solution that provides the ATO system with the information it needs to make autonomous driving decisions. hfs



Traveltainer:

WITH THE DIGITAL BOX FOR THE OPTIMUM DRIVING STYLE

How can energy savings of between 10 and 20 percent be achieved in rail passenger transport? Rolf Feldmann, Managing Director of the Altenbeken-based company traveltainer, relies on telematics.

"Our business is in the field of digitisation for fleet management solutions. We read data from the vehicles, calculate this data for services," explains Feldmann in an interview with CARGO FREIGHT JOURNAL.

"The customer receives the processed data from us, he can draw results directly from the measurements with a mouse click, reports such as fuel consumption, energy consumption or how the driving style can be optimised. The basis for this is our small electronics box, which is installed in vehicles and is identical for the road and rail sector. The data is read from the vehicle with the small box and transmitted to the server, where we then make the relevant calculations."

A tracking and locating module is integrated into the box, Feldmann explains: "The box can be connected to a vehicle network via a network adapter, and an online transmission unit transmits the data via mobile Internet to our own telematics server in Paderborn. So data protection applies according to



The Traveltainer box: small but mighty...

German law – the customers like that. Customers can conveniently log in from their PC via a website and view the results on their PC."

traveltainer has so far achieved the greatest savings with this system in rail passenger transport. Feldmann: "We are optimising the driving style of the train drivers and, secondly, reducing the idling times of the engines, which results in additional savings in terms of maintenance costs. With engine idling times reduced by 20 percent, a vehicle can of course remain in operation much longer before it has to be

served again because the power pack will be replaced later."

Similar to the truck sector, the device is connected to a CAN bus. Depending on the vehicle type, more or less data can be read there. The information on optimised driving is fed into the vehicle cabin via a system extension. Feldmann: "The CIM- ▶

Traveltainer Managing Director Rolf Feldmann in conversation with CFJ Editor-in-Chief Hermann Schmidendorf. He is holding his special box in his hand.

Credits: Hermann Schmidendorf

Credits: Hermann Schmidendorf



BA app is an app that you can load onto a smartphone or tablet and that gives you tips while you're driving. And at the same time there is feedback on where the driving style can be improved. In that way it's a self-training system and it can run anonymously, it doesn't have to be personalised data."

Of course, the system does not allow autonomous driving. But there are significant effects that also result from the higher-level automation of driving: effectiveness and savings. And that's exciting: The role models for the specifications of the digital device are the train drivers themselves. Rolf Feldmann: "They won't become superfluous because we say that the

train drivers are still the experts on the rails and we live off their expert knowledge. This means that the concept is actually based on best practice. We'll see what the driver can do. We then see a stray field where things sometimes work better and sometimes less well. We take the best results as a reference for good driving style.

So this is not something that we theoretically pull out of our fingers, which then cannot be implemented in practice. We really say, okay, we'll take the best rides and average them out, and that's what the others should follow – a training system." hfs



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The “new little kid in the HUPAC network”: Terminal Brwinów near Warsaw.

LOGISTICS, SERVICES Interview

HUPAC Group: “Think internationally, create networks and let economic areas grow”

A conversation with the CEO of the Hupac Group and Managing Director of Hupac Intermodal. The company is also represented at the transport logistic in Munich from 9.-12. May 2023 with booth B6.313/414.



Credits: Hermann Schmidtendorf

Credits: Hupac

? **CARGO FREIGHT JOURNAL:** Mr. Stahlhut, you were my valued interlocutor when you were still very successfully managing SBB CARGO International. Today you are the chief logistician of the HUPAC Group, which is also involved in SBB Cargo International, but you now use the trains of different companies.

But first I would like to remind you that on the occasion of the Chinese New Year, which this year is under the sign of the rabbit, you placed an advertisement for your company in a trade journal. I found it remarkable and also very thoughtful that you placed an ad with a cute, stylised bunny wishing your Chinese customers and partners all the best for this year of the bunny. Does the rabbit also have a meaning for your work?

Michail Stahlhut: One is always a bit tempted to interpret something into an animal. Most of the time, when you read the Asian description, it's totally ►

Michail Stahlhut (Dipl.-Ing. TU Hamburg-Harburg, Strategic IQ Harvard Business School Executive Education) held management positions at DB Cargo, Eichholz, OHE and Arriva after his time as a career officer in the German Armed Forces. From 2010 to 2018 he was CEO of SBB Cargo International. He has been Managing Director of Hupac Intermodal SA since 2018 and also CEO of the Hupac Group since 2020.

LOGISTICS, SERVICES

different. So speed and sociability, as a European I would see all these things in the rabbit. And we certainly also need speed in rail logistics in Europe.

? Can I conclude from this advertisement that the long logistical supply chain from China to Europe and back has a certain importance for your company?

It has meaning. I should say in fairness that we are followers of the market in the land bridge space. It's not all that nice at the moment. We say, however, that one cannot defend oneself against globalisation in the future either. And that's where China plays an important role. As Europeans, we certainly have to find our way into an independent, strong Europe. But the world belongs together, and in the world we produce together.

I don't think we can resist the fact that we also have production in China, in Africa, in Australia, in South America. Because the people on this planet work together, live together, and they do business together. Maybe we'll do a bit more in Europe in the future, but definitely also in China, definitely in Indonesia. This is an economic area with more than three billion people. We in Europe live with a good 400 million people, which is significantly smaller. So we are, I would say, in a certain sensible interdependence.

? You phrased that very nicely. I see that too. There has been a major viral shock lately. You literally had to hold your breath; otherwise you would have gotten the virus into your lungs. So there was also the economy a bit far, breathless. Then it just sort of caught itself again. But now we have a military conflict in the middle of Europe, which of course now entails completely different problems, because transport by rail or in airspace via Russia is now being made more difficult as a countermeasure by Western countries.

How do you currently see these paths? A Southern Silk Road by rail and ship needs to be organised, but that will be more expensive.

At least it will be different. But this is also an opportunity. We want to find a sensible way to build it

differently. And there you already have a traffic route through many countries, which of course requires an organisation to drive it along. That is a challenge. But starting in Turkey, Bulgaria, former Yugoslavia, Serbia or Romania, Hungary, we drive through many strong economic centres that can also be connected.

Unlike on the way via Belarus, you can of course also think of options to take with you. But more partners generate more interfaces and thus more “chatting effort” – much more coordination effort. And that is certainly a challenge that we have to face. The Süd-spange, Southern Clasp, is being built, but it will also take time.

? You say there are more connectable centres on the way. In fact, from Belarus to Kazakhstan nothing was unloaded, nothing loaded. On a different route you can also take something with you on the way back. Then maybe the additional costs due to fewer empty transports will be leveled out to some extent?

We'll see. It's not just 200 kilometers that you drive there, but several thousand. And in order to connect economic centres there, you also need a lot of logistical railway know-how, you probably need terminals in completely different places, and this know-how has to be bundled with several players. You have to understand that. However, I believe that every path will also have its meaning in the future.

As I said, we follow the market. If the LSP, the logistics service provider, has ideas about being more active in certain regions, we follow and see what is feasible and, above all, legally feasible. You always have to keep that in mind with every step you take in this direction.

? Do you need sensitivity and ears everywhere to process what is being debated?

Exactly. This is exactly what is necessary. And we then support our customers in order to be able to set up a rail service in the relevant regions.

? What are the strong relationships for you at the moment? Which activities would you ►

say have increased significantly in recent times?

Of course, we come from the transalpine business through Switzerland. In the future, the transalpine business will be a transalpine market for us. It's no longer just Switzerland, Austria. We also have to understand this market in this way, because I believe that despite all the disruptions, we must still have all paths in our hands in the future. That is clear. This is necessary because we can see how the German network is currently suffering from the pressure to innovate, and that will continue to be the case. We have to face it, which means we have to have resilience offers for all routes in the plan.

Of course, we will continue to refer to this axis as the top dog, and we would even see it as a growth engine, even under the current disruptive framework conditions. In addition, we have shown in recent years that we have made more than daily connections from two round trips to Turkey, which is the southern link we just spoke about, and are connecting several economic areas along this chain. It is currently a mega challenge in terms of energy and cost development and what requirements are being placed on the market. We are facing up to it, talking to the relevant partners, and we have to find the right price models based on performance.

Then I see a massive opportunity also in the southwest and south, in southern Italy and also in Spain, because these are the green kitchens of Europe. Fresh goods are produced there, even in summer under very hot conditions. We have to connect these kitchens of Europe with Northern Europe. And that's why Malmö – Bari and Stockholm – Barcelona is certainly also a way to think more than just transalpine, but also to lay a network across the whole of Europe that includes Spain now. The intermodal volume from Spain is still small, but there is so much more possible with the UIC lane, also in the direction of Barcelona and very likely further along the Mediterranean coast in the next few years, that I believe that there is a lot of market open for all players will be in the years to come.

? A year ago, there was an inaugural visit to a virtual conference with the rail commission-

er of the German federal government and State Secretary Mr. Theurer, where you spoke on behalf of the industry, as is fortunately your way. Mr. Theurer expressed great respect for you, he had heard a lot from you.

I was surprised myself, I have to say.

? I thought that was very nice. That's a kind of recognition that you obviously say something meaningful, even if not everyone likes it. At that time you said again very conciliatory but clearly that the German rail infrastructure is extremely fragile, especially in the north-south line, the Rhine line. And how nice it would be if, for example, the French would also electrify the long-debated bypass rail line. Unfortunately, Mr. Theurer replied that it would all take a long time. Did you expect a different answer?

I think we all need to realise that the simplest and easiest thing to do is to use the infrastructure that we have available in Europe before building new lines. And it makes absolutely no sense to think nationally when it comes to infrastructure. This continent needs to be networked, so we have to think internationally. And since there is a route that is underutilised, which is actually close by, parallel to the Rhine Valley Railway, which in turn will suffer from reconstruction over the next 20 years: It makes sense that Germany and France should then also sit down at the same table. One company cannot do that, all countries have to do it.

And we, as Europeans, have to understand that this infrastructure is a core asset for the economic networking of our continent. And if we really believe that we want to save these 1.2 billion tons of CO2 from the transport sector, and heavy goods make up around a quarter of that, and if we shift part of that to rail, then we first need the existing infrastructure and then new ones in the next ten years. But we have also learned that as Germans and Swiss, as Austrians, as every European: rail and road are not even built like that; we need what is already there. It makes mega sense to use this Alsace route, this fall line Wörth (Rhein) – Lauterbourg – Strasbourg – Basel to use. ►



Should be expanded as an important relief route in north-south rail traffic: the railway line Wörth–Strasbourg.

But you have to get everyone enthusiastic about this exercise. And of course we cannot expect the population to suddenly have 200 trains running without communication. You have to take people with you on everything. Maybe you can also create a good local transport service, and then there is freight transport. And that connects the regions. Then we finally think European. And just imagine, if we drove along monolingually and we made it a model region, how great would it be if Germany and France became an international model for consistency? I think that's awesome.

? I have the impression that France is now showing signs that they want to take up the matter more, that the rail sector should be given

even more support.

I like hearing that. Count me in. I know that there was a move in Switzerland that recommended that the Federal Council contact the French government. That was also published, this motion, as they say in Switzerland. And I'm curious to see how Germany, France and Switzerland will then talk to each other and what upgrading measures will then be necessary. I think we need to stop thinking very narrowly. We have to try to think internationally, because going that way we help create networks and allow economic areas to grow.

? Let's go to one of Germany's eastern neighbours, Poland. There you started a feat a few ►

months ago, opening a huge hub near Warsaw.

Brwinów is really close to my heart. This is a new little kid in our network. We believe that we can create more intermodality in Europe. There are economic areas in southern Poland and Katowice, there is an economic area in Warsaw, in Poznań. We have several economic areas in the east that also need to be networked and that we can connect well. That means it's not enough if we think from Duisburg to Warsaw. We may have to think from Warsaw to Barcelona. We have to think from Warsaw to Bari because that is the chance.

Thinking as a German along the A 2 autobahn, along the autobahn from the Rhine-Ruhr area to Warsaw, is certainly very easy. But there can also be a lot of trucks driving there, so you are in a tough competitive situation with the road. However, if we continue to extend that, if we think about moving further to southern Europe, I think we will create maximum energetic added value. And thinking again in the direction of CO2, we manage transport lengths of well over 1000 kilometers. And they're really, really fun. As Dortmunders, we say it's really cool to do that and to do a bit more there. We also believe in the location around Warsaw. We are currently in the process of trying to build the short sea connection to Warsaw, beyond Duisburg. We use the Duisburg location as a nucleus.

An inspiring debate partner: Michail Stahlhut during the interview with editor-in-chief Hermann Schmidendorf.



A new address on the Way to the East: the terminal Brwinów

Credits: Hupac

We are also involved with other partners in building a new terminal. We have just become more active in Cologne North as the operational manager of the location. We believe that the Rhine-Ruhr area can also be linked to the East, the South and the North. Above all, we also believe that the very long distances across the continent, such as Warsaw-Barcelona, are a mega-opportunity to build that up. Or if you think further to Portugal. That is of course a real challenge, because then you have system barriers in the form of the other, the Iberian gauge.

! Many thanks for the interesting conversation!

The interview was conducted by Hermann Schmidendorf.



Credits: CFJ

Switzerland:

HEAVY GOODS TRANSPORT VIA RAILWAY SIDINGS – PUBLIC FUNDING MUST CONTINUE TO INCREASE

In 1993, the Swiss Federal Railways AG SBB drew, compared to other countries, an astonishing picture in its annual report. According to this, 26.1 million tons of goods were transported by rail in 1993 in Swiss SBB freight traffic. In domestic traffic, 96% of the volume of goods began on a private industrial track, on sidings. In import and export it was still 88% and 74% respectively.

At that time there were around 2,300 private sidings in Switzerland. These connected around 4,000 companies to the public rail network. Under certain conditions, the Swiss Confederation contributes up to 60% of the construction and renewal costs. In the following years, however, the number of private sidings fell continuously. Today, the SBB speaks of around 500 sidings, which connect industrial and commercial companies as well as logistics centers directly to the SBB rail network: "This means that around 90% of conventional rail freight traffic runs via such sidings. These represent an important cornerstone for shifting freight traffic from road to rail."

Fewer connection points, same ton handling

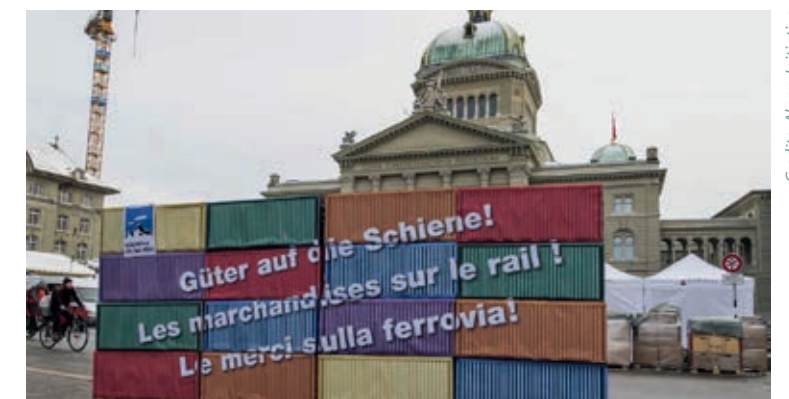
This means that larger tonnages are now being handled per siding. However, as in other countries, the volume of goods transported in Switzerland has meanwhile increased in absolute terms. At the "Forum sidings 2022"

The ecologically oriented „Alpine Initiative“ sometimes sets up containers in front of the Federal Palace in Switzerland to emphasise that goods belong on the rails!

organized by the **VAP (cargorail.ch) association of the shipping industry**, Heinrich Maurer, Head of Real Estate at mobilog AG, explained that the siding is an important part of transport logistics, because "particularly in inbound" 70% of the volume is dealt with by the train delivered.

This is a gratifyingly high value. However, access to the public railway network is limited, especially in the countryside. That is why rail traffic is only growing to a limited extent when it comes to freight transport in Switzerland. In 2021, the **Swiss Federal Statistical Office BFS** calculated that goods transport services on the Swiss rail network totaled 10.4 billion net tonne-kilometres. That was the highest level since 2016, and even compared to pre-pandemic 2019, it was a 3% increase. In 2021, the railways accounted for 37% of the total transport services by road and rail.

The FSO attributes this stabilisation to, among other things, the promotion of rail freight transport through the rail reform, the modernisation of the infrastructure and the subsidies and the introduction of the so-called **performance-related heavy** ►



Credits: Alpen-Initiative



Credits: Alpen-Initiative

The NRLA portal at Erstfeld is an important transit portal for rail freight traffic across the Alps.

vehicle fee (LSVA) for trucks and articulated lorries. However, the comparatively good percentage hides the fact that rail freight transport in pure domestic transport is far less popular than the general statistics would suggest. Because in 2021, 66% of the transport performance in rail freight transport was due to transit traffic. In the same year, **rail accounted for 75% of transalpine freight traffic. Domestic transport only accounted for 23%**, writes the FSO: "Since 2008 it has lost in importance both in terms of percentage (-6 percentage points) and in absolute terms (-0.7 billion tonne-kilometres). In 2021, imports and exports together made up a good tenth of transport performance in rail freight transport."

That is why the pro-ecological association "**Alpine Initiative**" uses every opportunity to draw attention to its goals. In 2021, it organised an "Alpine fire" in the mountains to oppose what it sees as "clear cuts in rail freight transport". In order to minimise environmental damage in the Alpine landscape, there is an effective program in Switzerland to shift transit freight traffic from road to rail. An analogue conveyor system "with a defined minimum proportion of transport by rail" should also be installed. "Although the federal government, parliament and the electorate

have committed themselves to moving goods transport to more environmentally friendly rails, import, export and domestic transport by rail has fallen from 29% in 2000 to 22% in 2018," explains the initiative.

"The road share, on the other hand, increased from 71% (2000) to 78% (2018). The rail share is only increasing in transit traffic. The reduction in inland rail freight traffic is nullifying the modal shift successes in transalpine transit traffic. Truck trips generate 0.97 Swiss francs (1 euro) per tonne-kilometre in external environmental costs (such as CO₂ emissions, particulate matter, traffic jams, noise or accidents). The train costs just 0.46 euros. The HVF contribution of EUR 0.33 per tonne-kilometre only partially compensates for the environmental damage caused." ►

Sometimes sweet coils are also transported! SBB Cargo International presents this tasty gift at trade fairs.



Credits: Hermann Schmidtdorf

Against unfair and distorted competition

The Alpine Initiative is therefore calling for the LSVA to be increased. The financially weak state freight transport company SBB Cargo should also continue to receive financial support. For Jon Pult, President of the Alpine Initiative, it is clear: Every reduction in the infrastructure for the rail handling of goods, every reduction in the operating points for the transfer of private goods wagons, "plays to the environmentally harmful goods traffic on the road. SBB Cargo and the other competitors in rail transport must therefore urgently be given fair and better competitive conditions."

The Alpine Initiative has other concrete proposals. For example, it calls for strict requirements for the transport of rail-related goods. Goods such as gravel, ores, waste, recyclable materials or logs should only be transported by rail from a certain distance and quantity. And new logistics centres and commercial areas should be forced by law to offer a railway siding from a certain size and freight traffic volume.

In March 2022, the Swiss Federal Council put legislative initiatives to support freight transport up for discussion. In the public debate, the Alpine Initiative pointed out that the Goods Transport Act of 2015 only stipulates that goods transport over large areas must always be carried out at own economic risk of the respective companies. However, road freight transport only pays for a third of the external environmental costs caused. The majority of the costs are borne by the general public, so road traffic is objectively "much too cheap". Rail freight transport can therefore not keep up in the price war and competition.

Ecologists call for better promotion of rail transport

The ecological transport experts analysed the current trends in Swiss freight transport. They fear that if rail transport is not given more support, there will soon be up to 650,000 additional truck journeys per year on Swiss roads, which is around 2% more than today. Of this, 50,000 transalpine transports could spill back onto the road every year. That would sabotage the statutory goal of reducing the number of 860,000 transalpine road transports in 2021 to a maximum of 650,000. Actually, the so-called relocation target should already be reached in 2018!

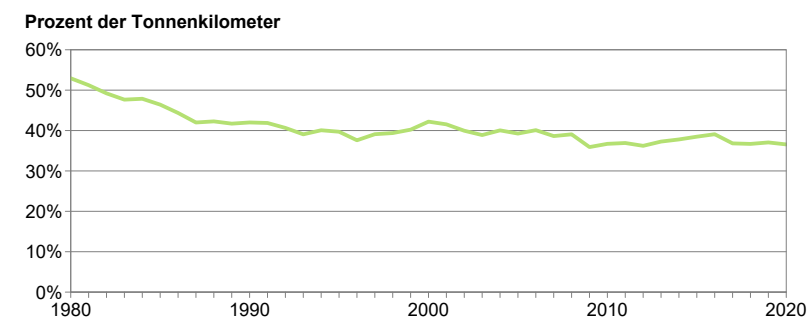
In February 2023, the Alpine Initiative spoke up again. It supported "Variant 1" of a bill proposed by the Federal Council. However, it wished the politicians "more courage" and "significantly more ambitious visions". The so-called loading bonus should be twice as high as proposed: "Instead of 40 francs (41.03 euros) per freight wagon, a bonus of 80 francs is needed." On March 23, 2023, the Federal Council presented its current "Relocation Report". Result: 880,000 trucks drove through the Alps in 2022, compared to almost the same number the year before at 895,000. In addition, rail's share of transalpine freight transport remained the same at 73.9%.

A through ball for the Alpine Initiative! In order to break this "stagnation trend", it is now also calling for the route prices for freight trains to be reduced and a subsidy program for making semi-trailers suitable for cranes. The next "Relocation Report 2023" is expected to be published in November of this year.

Hermann Schmidtdorf

Modalsplit im Güterverkehr

Anteil des Güterverkehrs auf der Schiene am gesamten terrestrischen Güterverkehr (Schiene, Strasse)



Quelle: BFS – GTS, OeV

© BFS 2022

Modal split in freight traffic in Switzerland by 2020: The table shows the share of rail freight traffic in total freight traffic by rail and road in Switzerland as a percentage of the tonne-kilometres transported. You can see that the curve is stabilising, but at a lower level.

Source: Bundesamt für Statistik BFS 2022.



A Prussian passenger carriage in the former Emperor's Station, the Kaiserbahnhof, in Potsdam, now the DB Academy, provided the framework for the 5th German-Polish Railway Summit.

5th German-Polish Railway Summit:

NEW PAIRS OF TRAINS, SLOWER ROUTE EXPANSION

Another Polish-German railway summit took place in Potsdam on February 8, 2023. It was the fifth edition of these intergovernmental meetings, where representatives of the governments of both countries, regions and railways discussed improving cooperation in the field of railways.

In the meantime, there had been some personnel changes among those responsible. The coordinator for Polish-German cooperation is now Under-Secretary of State Bartosz Grodecki from the Ministry of Interior and Administration of the Republic of Poland. On the German side, the coordinator for German-Polish cooperation is the Social Democratic member of the German Bundestag, Dietmar Nietan. Nietan is also federal treasurer of the SPD and chairman of the German-Polish Society Federal Association, so he has been trying to establish good relations between the two countries for a long time. The Polish delegation was headed by State Secretary Andrzej Bittel, who has been an excellent expert on railway issues for years.

The Polish delegation acted with the highest diplomatic level. Politicians from the German regions, on the other hand, clearly expressed their dissatisfaction with the German Federal Ministry of Transport. Sure, it's great that from June 2023, six pairs of trains will run

daily on the Berlin-Poznań-Warszawa route instead of the current five. It is also good that in the future there will be two pairs of trains a day on the Berlin-Frankfurt (Oder)-Kraków-Przemyśl route. But that's thanks to the Polish side, not the Germans. As far as is known, Polish wagons and locomotives will be driving, not German ones. So where is the independent German concept to improve the connections to Poland? asked Saxony's Prime Minister Michael Kretschmer (CDU) in front of the assembled press.

Kretschmer was loudly annoyed that the electrification of the Görlitz station with Polish traction current should take place by 2026, but the electrification of Görlitz into the German traction current network may not take place until 2038. The Brandenburg head of government Dietmar Woidke (SPD) supported the demands of his Saxon counterpart and also called for the expansion and electrification of the historic Prussian Eastern Railway, the Ostbahn, from ►

Berlin to the border with Poland in Küstrin/Kostrzyn. Both state delegations rated it positively that Mecklenburg-Western Pomerania was represented at the railway summit for the first time after a long absence in German-Polish committees. Secretary of State for Transport Ines Jesse campaigned for the expansion of additional railway lines in her federal state with a connection to Szczecin. This means that the state's one-sided orientation towards Russia has probably come to an end for the time being.

Apart from the State Secretary of the Federal Ministry of Transport, Michael Theurer, all participants at the summit felt that the two-track expansion and

electrification of the 80-kilometer east-west railway line from Berlin via Küstrin/Kostrzyn to Poland is particularly urgent. On March 16, 2023, the Brandenburg state parliament even debated this railway line for two and a half hours. After the end of World War II, the Soviet army dismantled the second track here as reparations for war damage in their own country. To date, the route is largely single track. If a train is delayed, this is reflected in all traffic in both directions. As a result, there is hardly any capacity for freight traffic – and that in politically tense times, in which railway lines also have to be thought of as supplying military trains to the NATO eastern border. hfs

Transport association VBB of the states of Berlin and Brandenburg: expand the "Ostbahn"

"In particular, the settlement of Tesla in Grünheide near Berlin and the planned expansion of local rail passenger transport will lead to severe congestion on the Berlin – Frankfurt (Oder) route. The Berlin – Kostrzyn route can make a significant contribution as an alternative route for cross-border long-distance freight and passenger transport from/to Poland as part of the trans-European transport network (TEN-T). On the Polish side, too, the importance is increasing due to the already apparent congestion on the route from Frankfurt (Oder) via Poznań to Warsaw. The expansion has already been registered several times for federal infrastructure programs, but funding via the Federal Transport Infrastructure Plan (BVWP) or freight transport projects has not yet been envisaged by the federal government."

EU: OSTBAHN BERLIN – KOSTRZYN BECOMES PART OF TEN-T

On April 13, 2023, at a meeting of the Transport and Tourism Committee (TRAN) of the European Parliament (EP), there was a vote on updating the TEN-T network – the transport corridors connecting Europe. One of the amendments strongly supported by the German and Polish Social Democrats was the inclusion of the Berlin-Küstrin-Kietz-Kostrzyn railway in the network. Polish Socialist MEP Bogusław Liberadzki, member of the Transport Committee,

was helpful. All political forces were won over to the change. Thus, the EP proposes to add this section to the TEN-T network. Germany could then receive up to 80 percent EU funding for the route expansion.

Now comes the trilogue – negotiations on the TEN-T network and all changes between the EP, the European Commission and the European Council. After that, the EP finally votes. If the German government supports the investment, there is a good chance that the amendment will be retained. The Polish side is in favour and announces the expansion of further part of the route from Kostrzyn deep into Poland, including Poznań. d-h



Polish-German Railway Summit: “Improve rail connections to the east”

A conversation between CFJ editor-in-chief Hermann Schmidtendorf and the district administrator of the Brandenburg region of Märkisch-Oderland, who advocates the expansion of the Berlin-Küstrin/Kostrzyn railway line from German federal funds.

? **CARGO FREIGHT JOURNAL:** Mr. Schmidt, does the Federal Ministry consider the cost-benefit analysis to be insufficient?

Gernot Schmidt: Doing a cost-benefit calculation for a route on which there are no more trains after a certain minute or which is a certain distance from the centres is of no use either. If the route is well developed and trains can travel quickly, then people will use the railway. If the railway is bad and it causes hardship for people, then they take their car.

? If I were to factor in the congestion on the Berlin-Frankfurt/Oder route due to freight traffic, would the result of the cost-benefit calculation be more likely to say that we need to expand the Ostbahn?

You are absolutely right that the infrastructure is already sewn to the brim with the challenges that we now have. And the other things you mentioned, the strategic orientation towards the east and so on, so far it doesn't matter at all.

District Administrator Gernot Schmidt is demanding better rail connections to Poland from the German government.



Credits: Hermann Schmidtendorf

? Although, as they say, we have had a turning point that has shocked the people for a year now, haven't we managed to take up these things in the infrastructure as well?

Yes, we did not manage to underpin this with legislative projects and simplifications at federal level. Although when we talk about the Ostbahn, we're talking about rail connections to the Baltic States. The partners there want an answer from us. And then you can't always wait for other countries. You can also pay in advance, and say, now you'll deliver too.

German-Polish rail connections: forging new concepts

? **CARGO FREIGHT JOURNAL:** State Secretary Bittel, what do you think was the most important event in the railway sector, including the Polish-German one, in the past period?

Andrzej Bittel: The most important issue is help for Ukraine, help for war refugees and implementation of related tasks. In fact, during these most difficult months, there were hundreds of thousands of people at the border who needed to be transported to safe places. It was also a great effort by the Polish, Ukrainian and German railway workers. This cooperation was really very good and fast.

? And with the standard topics?

Of course, there were also questions about the implementation of ongoing activities, which we usually carry out in constant good cooperation. I would like to emphasise that thanks to the ministers, thanks to the chairman of Deutsche Bahn, we have really great cooperation. As was said at the meeting today, let's not look through the prism of the border, but see what connects us. This is indeed the right direction.

The activities that are carried out within the framework of the realization of the connection Berlin – Szczecin and the almost completed bridge in Kostrzyn should be emphasised here. There are also concrete, very measurable effects of this cooperation, such as the electrification of the Zgorzelec/Görlitz section.

? Wouldn't it make sense to fully electrify the Berlin – Kostrzyn line on the German side over the new bridge and beyond? This would provide an additional backup route to Poland, because the route via Frankfurt/Oder and Berlin is already quite busy.

I believe that such new concepts must be forged. We in Poland are implementing a railway investment program that currently amounts to the equivalent of around EUR 16.44 billion. We are preparing for the next EU perspective. We want to focus heavily on the modernisation of the railways in Poland, on the construction of new railway lines within the framework of the CPK Central Communications Airport concept.

Of course we cannot decide for our German partners. But I believe that as part of aligning plans, we should combine different investments so they can work better together. Because if it works better, our efficiency will increase.

? Thank you for the interview!

The interview was conducted by Hermann Schmidtendorf.



Credits: Hermann Schmidtendorf

Andrzej Bittel in front of a Prussian saloon carriage in the DB Academy in Potsdam.

A lawyer (University of Warsaw) and a graduate of postgraduate studies (Management in Public Administration, Wyższa Szkoła Przedsiębiorczości i Management im. Leon Koźmiński; European Local Government Law, Polish Academy of Sciences) Andrzej Bittel has been Deputy Minister for Infrastructure and Construction since 2016 and Deputy Minister since 2018 for infrastructure as well as responsible designated expert for the railway system. Bittel began his political career in the local self-government in Warsaw. In 2007-2010 he worked in the Central Anti-Corruption Bureau.



Country Report Europe
Luxembourg
Interview

Fighting traffic jams with trams: two modern vehicles from the company Luxtram.

Credits: Hermann Schmidtendorf

Public transport in Luxembourg: “We now invest as much per capita as Switzerland!”

? **rail & mobility:** Minister Bausch, before you became politically active, you worked for the Luxembourg railway company, the Société nationale des chemins de fer luxembourgeois – CFL. What interested you in a railway job? What were you doing at the time?

François Bausch: I have been interested in trains since I was a child and, after finishing school, I decided to work for the Luxembourg National Railway Company to pursue my passion. I started my career in the 1970s as a track builder. Over the years I was able to get to know the most diverse facets of the railway world, the fascinating as well as the ugly sides.

One of them was that many people did not see a future in this profession in the long term. Because the employees were badly paid and rail transport was not

necessarily seen as sexy due to the triumph of motorized private transport. Looking back, I can therefore say that I know this company very well and that rail transport continues to fascinate me. Bis diese neuen Techniken ausgereift sind, verwenden die CFL noch Pflanzenschutzmittel, die in Luxemburg zugelassen sind.

? At the InnoTrans 2022 trade fair in Berlin, you took part in an event organised by the Pro-Rail Alliance, which presented the so-called rail ambassadors – people who work in rail-related professions. Why are you promoting rail jobs?

It is important to promote the railway professions as it is an industry that requires workers at all levels. The railroad will have to evolve to transport more people and more goods. Public transport is an important ►

Country Report Europe Luxembourg

part of tomorrow's mobility and the railway is its backbone, a term used across Europe today.

? Luxembourg is a smaller country than Germany. Are there enough applicants for jobs in the railways, in public transport and in the railway-related industry in Luxembourg? Or do you also have to advertise for these professions?

In Luxembourg, the CFL is the largest employer in the country. The offers are very diverse, ranging from train drivers to dispatchers for the operational area, but there are also positions for engineers, technicians, finance specialists, etc. The railway sector has managed to adapt to today's market. Recruitment takes place through different channels: recruitment day, social networks, etc. Therefore, at the moment I don't have to play ambassador to promote jobs in the railway sector, because the sector is very attractive.

? On March 1, 2020, Luxembourg introduced a completely free ticket for buses and trains throughout the country. The ticket is also valid for foreign commuters from the national border. That was a courageous decision, but it also costs money. How is this ticket accepted, is it worth spending for the state? Are fewer cars now being used in the city of Luxembourg, as hoped?

Since public transport was already 90% state-subsidized before March 1, 2020 and the tickets were correspondingly cheap, this was a smaller financial step for Luxembourg than would be the case in countries with a higher degree of cost recovery. The government wanted to send a clear signal in favour of public trans-

port. We were pleasantly surprised that even more was talked about and written about internationally than in Luxembourg itself.

But with ticket prices as low as we had before March 1, 2020, people are switching because of the quality of the offer, not because of the price. This is exactly what the user numbers show: if the tram, train or bus network is improved, the number of users will increase by leaps and bounds.

? At the time, some observers thought that the ticket price alone was not a sufficient reason for car users to drive less on the road. There must also be an efficient infrastructure, with comfortable vehicles and sufficiently dense, comprehensive public transport services. Of course, this argument also applies to Germany and other countries. What did and is Luxembourg doing in this direction?

I agree with you completely. I always say “When it comes to switching to public transport, the quality of the offer is the cake and the tariff is the icing on the cake.” As far as the tariff is concerned, in addition to the price, the understandability of the tariff structure is crucial. Germany experienced this with the nine-euro ticket. As far as public transport infrastructure is concerned, we are now investing as much per capita as Switzerland: train routes and stations are being expanded and modernised, a tram network is being built, as well as multimodal transfer points. In addition, we are investing massively in modern rolling stock, both in the railway and in the bus and tram network.

? At the beginning of 2022, Luxembourg commuters from the Konz area complained that their direct connection to Luxembourg City was cancelled. There were probably not enough passengers for the RGTR bus line, which opened in 2007. Interested parties now have to change buses and trains several times, and some will probably take the car again. Can the commuters be expected to ►

Credits: SIP/Yves Kortum



François Bausch was appointed Minister of Defense and Minister of Mobility and Public Works in 2018 and Deputy Prime Minister of Luxembourg in 2019. A member of the Greens since 1986, Bausch became a member of the Luxembourg government for the first time in 2013. Before that, he held various functions at local level and in the Chamber of Deputies.

do that, or could a direct service with a smaller bus perhaps be carried out as a compromise?

The reform of the RGTR regional bus network is based on a representative household survey in which around 22,000 Luxembourg residents and 11,000 cross-border commuters took part. From Monday to Saturday the lines run from 5 a.m. to 11 p.m., on Sundays and public holidays from 6 a.m. to 10 p.m. 99.92% of Luxembourg residents have at least one stop of this bus network in their city or village. You have to plan the network as a whole, for all the potential demand.

Everyone wants a direct bus route from their village to the capital. The capital, on the other hand, no longer wants to suffocate in the regional buses, as was the case until 2017. For this reason, the tram is being built in the core, with interchange points between buses, trams and trains on the periphery, and overland smaller lines are being linked to express bus lines. This is exactly the case for the people from Konz. They have an hourly connection to Grevenmacher, where they can change to the 311 express bus within 5 minutes. This will take you to the “Luxexpo” tram stop in Luxembourg. Alternatively, there are two direct trains every hour from Kreuz-Konz to Luxembourg City.

? In 2020 there were over 1000 trains a day, all of which were routed via the Luxembourg City star point. The much larger Frankfurt Hauptbahnhof has only a few more arrivals and departures per day, around 1200. Nevertheless, Frankfurt am Main is considered a bottleneck – if a train is late, it quickly spreads to traffic in many directions. How do you cope with this challenge in Luxembourg?

We are in the process of unbundling the lines in the main station. Then each line comes on its own track without crossing on its own platform. That should reduce the proportion (currently still 40%) of delays that are due to “domino effects”.

? Luxembourg is surrounded by neighbours. Smoothly functioning cross-border train services are important, preferably without changing vehicles and personnel. How do you organise that in your country, since Germany and Luxembourg have different traction current systems?

In traffic with Germany, the CFL uses two-system multiple units, which are equipped for both the Luxembourg and the German traction current system. These were also procured in coordination with the authorities in Germany. These multiple units enable both a good range of regional transport and hourly connections to long-distance transport in Koblenz. In addition, these vehicles are also used on direct trains to Düsseldorf.

? How is cooperation with other countries in cross-border ticketing, in transport associations?

The free public transport valid in Luxembourg also applies to cross-border traffic. This means that the journey to the border is free and the passenger in Germany only has to purchase a ticket to the border. The cooperation with the transport associations is therefore primarily designed to ensure that they have an offer in their range that is valid up to the limit point.

? Shifting freight transport from road to rail is also essential for climate protection. What about Luxembourg?

For several years, the Luxembourg State has been constantly lobbying rail transport companies, intermodal train operators and rail customers to encourage modal shift. This is reflected in significant investments in infrastructure, but also in a proactive policy to encourage modal shift through a combined transport support program that started in 2015 and that Luxembourg intends to continue in the coming years. These measures resulted in a doubling of the number of intermodal units, including a large majority of semi-trailers, that were shifted from road to rail at the Luxembourg intermodal terminal between 2015 and 2021, contributing to a saving of almost one million tonnes of CO₂.

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? Railway lines must be kept free of vegetation so that they are safe to drive on. For this ►

purpose, the track bed in Europe was usually sprayed with the weed killer glyphosate. Studies show that this agent is only harmful to humans in direct contact. But because the American manufacturer at the time apparently did not warn enough about such contacts, the drug came into disrepute as potentially carcinogenic. Europe’s railways are looking for alternative methods to keep rail lines free of vegetation, but this seems difficult. What is the situation in Luxembourg at the moment?

Since the beginning of 2021, the CFL, as an infrastructure operator, has stopped using glyphosate. It is clear that weed control is an essential point for the safety of rail traffic. In order to prevent the development of humus in the track bed, the CFL is trying out new techniques available on the market: hot steam with an ecological covering foam or electrocution of the weeds. Until these new techniques are mature, the CFL will still use plant protection products that are authorized in Luxembourg.

? In summary, what do you say to young people why they should take up a job in the railways and in public transport?

What I would like to say to the young people who are about to enter the labour market is that the railway sector has a great future, contrary to what I was told when I first started at the CFL. In fact, our government continues to invest heavily in mobility infrastructure, resulting in a large number of jobs.

Thanks to the support of the state through a new public service contract that is currently being prepared, passenger rail transport has a bright future ahead of it. Freight transport by rail will also continue to grow, and combined transport is one of the solutions to reduce CO₂ emissions on the road. The state will continue to support modal shift.

! Minister, thank you very much for this information!

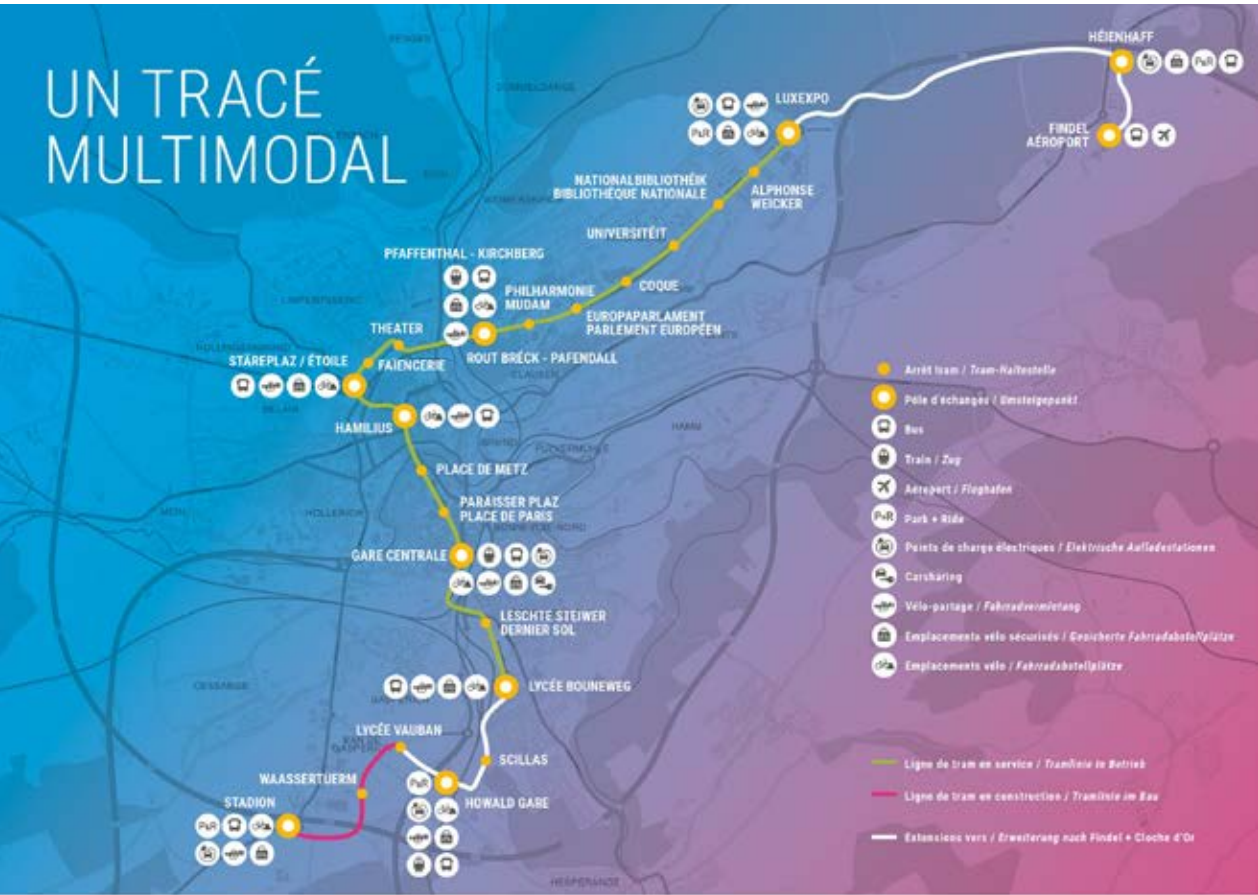
The conversation was conducted by Hermann Schmidendorf.



Tradition & Modernity – Luxembourg City Central Station as seen from the platforms.

Credits: Hermann Schmidendorf

LUXEMBOURG’S TRAM IS MODERN AND MULTIMODAL



Graphics: Luxtram

An important traffic artery for Luxembourg City is the modern tram.

Luxembourgers marked September 5, 1964 with sentimental melancholy. The last tram line 10 from Heisdorf to Luxembourg City was discontinued. A replica of the first horse tram that once ran here was used. Some took it as a symbol: finally the unfashionable junk is over, we’re going by car and bus!

But more and more vehicles were clogging Luxembourg’s city centre and the exhaust fumes were becoming more than a nuisance. The turnaround came on December 10, 2017: The tram is back! But this time it is modern and multimodal.

On October 4, 1859, the railway station was built near the city of Luxembourg. The station was not built closer to the city for military reasons, reports Wim Kusee on his website <https://www.kusee.nl/tramluxemburg/>. The city of Luxembourg was a fortress with city walls. The military authorities therefore demanded that the station should be outside these fortifications, but again close enough to the fort to be within reach of cannons. Eventually, the station was built in the municipality of Hollerich, exactly where it is today. The city centre was 1.400 metres away, which was not particularly attractive



Image: Archive Wim Kusee

It’s been a long time: an old-style tram in front of Luxembourg’s main train station.



Extremely modern: the headquarters of the Luxtram company.

Credits: GilPe



for visitors to the city. Therefore, a hotelier soon organised a “horse omnibus”. This became the forerunner of the public tram on rails, which began operating on February 21, 1875.

The tram currently serves 17 stations over a distance of ten kilometres. In the final stage, it will consist of 24 stations over a distance of around 16 kilometres – all on a single north-south line with tight travel times. Six of the stations currently served are important transfer platforms. These include the Luxexpo exhibition centre (bus and Park and Ride areas), Pfaffenthal-Kirchberg (bus and train) and Gare centrale (bus and train). Terminal stations are currently Luxexpo in the north and Lycée Bouneweg in the south.

But the extension in the south to the Stadion stop is already under construction. And in the north it should go to the Findel Aéroport station in 2024. With the connection to the airport, all multimodal transport routes in the region would then be accessible by tram.

In the main time on weekdays, the trains run every five minutes, but the system is even set to a three-minute cycle. The tram operator is the public limited company Luxtram. Fully air-conditioned Urbos 3 vehicles from the Spanish company CAF are used. The trains run on the standard gauge with 1435 mm, are fed with 750 V direct current from an overhead line and develop a maximum speed of 70 km/h. They are equipped with a driver’s cab at both ends of the car and are therefore suitable for two-way operation.

Each vehicle consists of seven segments connected by joints. In the city centre to the main station there is a section without overhead lines. The vehicles bridge this section with built-in supercapacitors, which are charged on the outer sections of the route under the catenary. The fully air-conditioned vehicles are 45.4 metres long and 2.65 metres wide and can accommodate 450 passengers. Entry and exit is via eight evenly distributed double passenger doors on each side.

If necessary, the Urbos 3 can be further extended with additional segments. In the final expansion of the line between Findel and Cloche d’Or, 32 vehicles will be in operation, they will be numbered 101 to 132. hfs

MaLoWa:

FIRST ELECTRIC, NOW MANUAL OPERATION: THE TECHNICAL QUALITY OF A SIDING IS ALSO IMPORTANT

The Mansfeld county in the southern Harz has a mining tradition going back centuries. After the formation of a common Germany, the newly formed Kreisbahn Mansfelder Land GmbH (KML) took over the rail transport area of the former transport company of the Mansfeld combine. Traffic is handled via the Hettstedt connection station. This became even more important after Deutsche Bahn closed the freight stations in the neighbouring towns of Sangerhausen, Eisleben and Aschersleben in 2001.

MaLoWa Bahnwerkstatt GmbH was founded in Benndorf on the basis of the former workshop in the mining area, and took over the neighbouring Helbra railway siding. "We keep the network available in case the industrial area is developed again," explains

Managing Director Gerhard Kellner. "Because once the rail is gone, it won't come back."

But such a forward-looking rail strategy is made more difficult by the actions of the infrastructure operator DB Netz, reports Kellner to the CARGO FREIGHT JOURNAL. A few years ago, DB Netz decided: "You can't have two sidings because the traffic on the sidings is far too little. We'll take a siding switch out of one direction, then you only have one switch, but you can still be operated."

But then it got even worse. Gerhard Kellner: "We used to be able to drive into and out of this siding from Magdeburg and Erfurt using remote-controlled points. But then, in the course of setting up the EStw, the electronic interlocking, the dispatcher was dis-

Gerhard Kellner at a manual switch of the branch line. In the background the closed former signal box, where the windows are boarded up. Left the DB main track.



Credits: Hermann Schmidtdorf

solved in this siding. The remote controlled turnout was converted to a key operated turnout. If we now want to drive in and out of the Helbra junction with groups of wagons, then we have to operate these key-operated switches together with the protective switches ourselves in the technology. This means that the single-track DB main track Magdeburg-Erfurt is closed for at least 20 minutes when entering and exiting."

To carry out the procedure, a railway representative has to walk to a yellow-coloured communication column at Klostermansfeld station. There he or she has to communicate with the interlocking via the "ZA request button" and also operate the "DB21 key button" with a special switch key. Later, the representative of the siding has to report to the electronic interlocking: "Yes, the original condition has been restored, safety has been restored, the main track can be used again."

I'm sorry, what? An electronic interlocking means that a point that was previously electrically controlled now has to be operated manually and on foot? Gerhard Kellner does not hold back with criticism. "Everyone knows that, and yet it's generally done in bulk all over Germany," says Kellner. "For a remote-controlled switch, you have to lay kilometres of cable in order to then be able to operate and monitor these switches. This is now simply saved on the DB side and passed on to the customer. The customer should see where he is, that's his problem now."

Isn't that a step backwards, which also blocks the possibility of bringing more traffic onto the rails on the main line and the sidings? Here, too, MaLoWa



Communicating with the electronic interlocking via this communication column takes a lot of time.

Credits: Hermann Schmidtdorf

Managing Director Kellner agrees: "Every such step means that rail traffic keeps going down and can never go up." And he gives another example from the neighbourhood. "We have been informed by DB Netz in the Hettstedt siding in the course of the conversion of the EStw that a double slip switch is to be cut from the main tracks to our siding and to be replaced by a single switch."

We learn: A siding isn't everything – it also depends on its technical quality. This problem should also be dealt with in the consultations of the railway associations with the federal politicians and the DB infrastructure.

hfs





A large container ship in Bremerhaven: The maritime sector is optimistic about 2023.

Credits: Iven Krämer

Skilled recruiting: FEWER JOB ADS, MORE INSTAGRAM

The shortage of skilled workers does not stop at Germany's maritime industry. Therefore, the association "BHV Bremen Port and Logistics Representation" founded a working group "Lack of Skilled Workers & Recruitment of Young Talent". The BHV (<https://bhv-bremen.de>) is an association with around 250 member companies from the logistics, port and transport industries, mostly from Bremen and Bremerhaven, but has an eye on the development of

the entire sector beyond its own region.

The BHV working group carried out a survey among the BHV member companies for the training occupations on offer. This was published on the BHV website under the heading "Apprenticeships" with descriptions of the job descriptions and the training positions offered. In the next step, the working group dealt with the issue of a shortage of skilled workers and inquired about the professions and vacancies ►

offered by the member companies. These can also be found on the website of the association and the German Shipping Association: <https://deutscher-schiffahrtstag.de/index.php/berufe-in-einer-maritimen-umfeld/>

The topic was also discussed at the 10th BHV project logistics specialist forum on January 16, 2023. Prof. Dr. Sven Hermann, Managing Director of Prolog Innovation and co-initiator of the specialist forum, moderated the panel discussion on the topic "What does the working world of the future look like?" According to Hermann, skilled workers are currently difficult to find, especially in the commercial sector: "More flexible working time models, measures to improve the compatibility of career and family, more targeted marketing activities for skilled workers and increasing the attractiveness of jobs in project logistics are possible starting points for taking counter-measures."

Hermann also pleaded for modern approaches to working life such as "new work", but conceded that not every novelty suits every company and every entrepreneurial personality. But where do we find young people today? Florian Hartke, head of the DOCK ONE innovation laboratory in Bremen, explained to the amazement of some Hanseatic executives:

"Young professionals and academics can certainly often still be reached with job advertisements on the job portals. But trainees also have to be picked up on Instagram and TikTok, for example."

Project logisticians are optimistic for 2023

Hartke referred to the results of the "Logistics Trainee Survey 2022". The #1 "best channel to engage young people" in this survey was Instagram with 89.3%, followed by YouTube with 48.9%. The companies looking for staff should "show why working in the company is exciting and why you should apply," Hartke emphasised: "That also has to do with how the training is designed and how you deal with change. For example, if someone wants to test another area of the company to see if that interests them, we try to make that possible. Those who have these opportunities are more likely to remain loyal to us than someone who doesn't make any progress with us."

Hartke sees a radical change through digitisation and technological progress and "of course also the personal change as a person and specialist". The labour market is on the way to becoming an employee market: "The applications received for job advertisements are falling in many places. We need to address the skilled workers of the future sooner. Compa- ►



Participants in the panel discussion on the topic of the working world of the future: from left to right Sven Hermann, Kai Stührenberg, Sina Hertwig, Florian Hartke, Svende Stähr.

Credits: BHV

nies have to go to schools and arouse people's interest." It is important in job interviews "to get to know the people and to get the most authentic and comprehensive insight possible." Instead of memorised answers from the applicants, the maxim applies: "Authenticity is trumps." We are looking for people with communication skills, "problem-solving skills and sometimes courage."

In general, project logisticians in northern Germany see the year 2023 positively. The BHV managing director Petra Lüdeke refers to a recent survey. According to this, almost 70 percent of the participants report that their cargo volume has increased in 2022 compared to the previous year. Almost half of those surveyed assume that things will continue to increase in the current year and more than 20 percent expect volumes to remain the same. Stabilising sales also includes cooperation between the German seaports as part of a national port strategy: "Not only did more than 80 percent of the logistics service providers we surveyed support this, and that is particularly remarkable, but also 70 percent of the shippers."

Port digitisation by Ship Mooring Measurement System

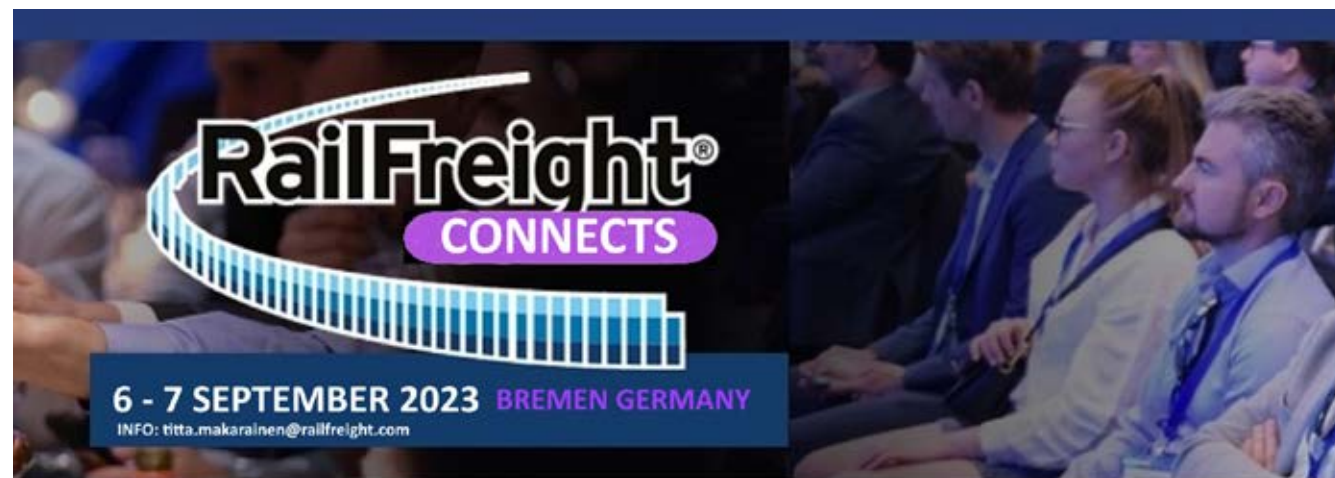
The digitisation strategy of the ports of Bremen and Bremerhaven received an important boost in February 2023. The German Federal Minister for Digital Affairs and Transport, Dr. Volker Wissing presented the Senator for Ports, Dr. Claudia Schilling the funding decision for the new ship mooring measurement system, abbreviated SAMS. SAMS means "SchiffsAnlege-MessSystem", Ship Mooring Measurement System, and is intended to digitally support berthing

maneuvers at the Stromkaje in Bremerhaven overseas port in the future.

Federal Minister Wissing: "Thanks to the innovative radar sensors that are being introduced in Bremerhaven as part of the SAMS project, the utilisation of the port can be optimally planned, port fees can be billed or ships can be navigated more easily. The data are the basis for innovations such as automated or autonomous driving to be implemented and tested on the water. We are currently setting up such real laboratories at 15 locations, and six more projects are being prepared. We have already launched a new call for funding. My appeal to the maritime industry: Take the opportunity, it's worth applying."

What does the new SAMS system do? Quay systems are exposed to special forces during the berthing manoeuvre. The consequences are wear and tear on the quays or damage caused by incorrect decisions when docking a ship. The digital test field with a total of 58 sensors in the area of the container terminals on the Stromkaje should remedy the situation. The installed sensors can measure the distance of a docking ship to the quay. The contact speed and the contact angle can be calculated from the respective distance measurements. In addition, the energy absorption of the fender construction that protects the quay can be measured. The data recorded by the georeferenced sensors are rounded off by their assignment to the respective ship. In the future, the data from the SAMS will be available to the pilots and ship's crews as live data to support the berthing process.

As you can see, maritime digitisation is in full swing. hfs



German freight railways:

DEMANDING A REORGANISATION OF THE SLOT BOOKING PROCESS



Credits: Hermann Schmidtendorf

Are freight trains slowed down by incorrect route management?

The network of non-federally owned freight railways in Germany NEE has accused the administrator of the federal railway infrastructure, Deutsche Bahn Netz, of performing an "emergency stop on rail network framework agreements". The German federal government and the Bundestag should now "seize the opportunity to implement the Deutschlandtakt concept properly" – the timetable-related infrastructure planning.

In his statement, the managing director of the network writes:

On January 17, 2023, DB Netz AG informed that, contrary to what had been announced, it could not guarantee the railway companies any capacity in the form of framework agreements for the timetable years 2024 and 2025 and justified this with the timetable – which was demanding from the start. I take the following position on behalf of the GÜTERBAHNEN:

DIE GÜTERBAHNEN want an end to the chaotic experimental phase in the allocation of capacity in the rail network. Berlin must make a clear legal requirement, based on the Deutschlandtakt concept, on how the railways can get timetables for their trains and how the rail network can be optimally used for the growing freight and passenger traffic.

To this end, framework agreements between DB Netz and railway companies should be permanently dispensed with. Instead, the legislature should consistently promote the introduction of the system route logic from the Deutschlandtakt concept and quickly come to an agreement with the industry and the EU Commission.

System paths are recurring minute-precise travel options in the network that are pre-planned and

well coordinated for different train characteristics, but not for specific railway companies. This type of timetable creation is becoming more and more popular throughout Europe. On the other hand, on the way to implementing the Deutschlandtakt concept, framework agreements are more of an obstacle, because they allow "minute-wide" capacity bands in the timetable process to be reserved exclusively by individual railway companies for a longer period of time.

From GÜTERBAHNEN's point of view, in the situation that has now arisen, all those involved are doing best with the previous procedure for train path allocation and, in parallel, with a concentrated development of a new allocation process. The Bundestag should withdraw the half-baked innovations introduced in 2021 shortly before the end of the legislative period in the Railway Regulation Act in Section 49 (framework agreements) and Section 52a (trial clause system paths on sub-networks) and instruct the government to present a new regulation in good time before the start of the usual train path ordering process in April of the year 2025. Thoroughness must now come before speed.

Peter Westenberger Managing Director THE FREIGHT RAILWAYS – Network of European Railways (NEE) e.V., Berlin

Ermewa/Nexxiot:

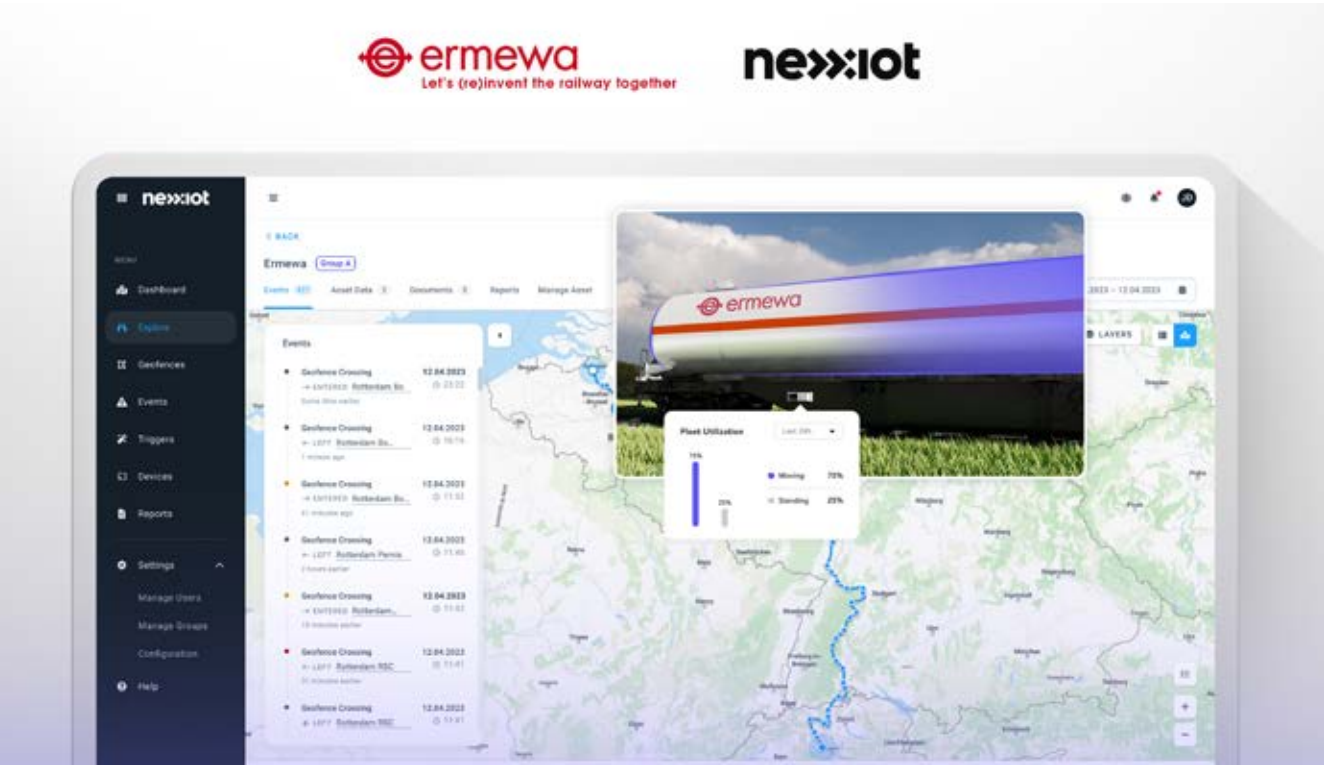
ERMEWA DIGITISES FREIGHT WAGONS WITH NEXXIOT TECHNOLOGY

The Paris-based company Ermewa announced a new chapter in digitisation on May 2, 2023. The leading European company for the rental of freight wagons is now expanding its telematics portfolio to include sensor and data technology from the Swiss company Nexxiot. Ermewa: "This is a state-of-the-art solution that enables better control of maintenance and thus increases wagon availability, transport quality and safety standards."

The lessor owns over 45,000 freight wagons, broken down into 120 types. It can be used to transport hazardous and non-hazardous liquids, gases, bulk goods and diversified general cargo including food and non-food products. The wagon keeper offers comprehensive maintenance and repair services as

well as services via a Europe-wide network of certified workshops and partners. Nexxiot's asset monitoring technology is now intended to further increase the availability of the wagons, the flexibility of the services offered and thus also safety through real-time data and forecasts for future developments.

On May 31, 2022, Nexxiot and the Munich-based company Knorr-Bremse signed a "comprehensive cooperation agreement". Content of the agreement: Knorr-Bremse will be able to make extensive use of Nexxiot's sensor technology and digital ecosystem. At the same time, Knorr-Bremse acquires a strategic minority stake in Nexxiot and becomes the "largest shareholder of the Internet of Things (IoT) provider". To this end, Knorr-Bremse is investing around EUR ►



60 million in Nexxiot, enabling the Swiss TradeTech company to continue its strong growth and gain further market shares in rail transport.

Both companies explained: "As soon as brakes, doors, air conditioning systems, sanitary facilities and other systems from Knorr-Bremse are connected to Nexxiot's digital ecosystem, important data-based insights can be generated. The added value for customers: The availability of trains can be increased, life cycle costs can be optimized and efficiency can be improved."

It is precisely this added value that Ermewa now wants to use for itself. "As part of their strategy of shifting goods from road to rail, our customers are demanding greater wagon availability. We meet this requirement with efficient maintenance processes that are supported by the best digital monitoring options," says Peter Reinshagen, Managing Director of Ermewa. "The partnership with Nexxiot allows Ermewa to offer an additional level of maintenance control that benefits our customers in terms of fleet access and transport quality."

Ermewa will integrate Nexxiot's asset intelligence technology into its existing telematics portfolio. Then the company can leverage the real-time data in Nexxiot's cloud-based solutions, including critical data such as location, occupancy, mileage, and shocks that affect maintenance issues, transportation quality, and safety.

An interoperable system of ATEX-certified Globehopper gateways and an intelligent cloud that offers

access to live data is to be used. The partners emphasise that this solution sets a new standard in terms of accuracy for the worldwide monitoring of the load carriers and freight containers used. On the IT side, it has an open architecture for merging data from various sources in order to obtain a complete overview of assets and fleets.

"We support Ermewa's move to further promote the 'digital freight train' of the future in Europe," says Stefan Kalmund, CEO of Nexxiot. "This is an important step for the global rail industry as it raises the bar for quality and ensures that rail transport offers optimum safety with maximum availability – for both the freight owner and everyone involved in the supply chain."

In its offers, Nexxiot emphasises that full fleet transparency should be given with interoperable technology: "Different technology providers can limit the full view of fleet operations due to infrastructural challenges. Our solutions are designed for easy integration of third-party devices or data sources." Inter-modal solutions are also offered: shipping containers are monitored "near real-time", reducing demurrage, improving utilization and increasing security in complying with cargo regulations.

Ermewa has 18 branches in Europe. The company has been certified as Entity in Charge of Maintenance (ECM) since 2010 and was awarded the EcoVadis gold award for its achievements in the field of CSR (Corporate Social Responsibility).

hfs

Saudi Arabia: Ambitious rail investments

A **CARGO FREIGHT JOURNAL** interview with the **President of Saudi Arabian Railways (since 2017), Dr. Bashar Khalid Al Malik**. He received his PhD in Civil Engineering from Tulane University (USA) in 2006. In 2011 he was seconded to the company by the Ministry of Transport.



Credits SAR

Destined for heavy freight service: SAR EMD GPL38S Diesel-Electric locomotives.

? **CARGO FREIGHT JOURNAL:** The first railway on what is now Saudi Arabian soil was a narrow-gauge railway, the **Hijaz railway**. It led to Medina. Today you have the **Haramain** railway line from Medina to Mecca – but it's a high-speed line, a remarkable progress. Where does your company, Saudi Arabia Railways, stand today?

Dr. Bashar Khalid Al Malik: SAR، إيدوعسلال ءكشرال، today is the national railway owner and operator in the Kingdom of Saudi Arabia and one of the biggest in the region. We run and manage over 5.000 kilometres of railway network. We run both passenger and freight trains and we have different technologies from ETCS level 1 signaling system to level 2, to the latest rolling stock technologies available. Our assets are of different ages.

We operate the only high speed network in the region and one of ten highest speed networks globally. Today, SAR has become a leader in the railway industry in the region. We run as well one of the longest freight trains in the world, over three kilometres in length of a single train. This train runs over 1.200 kilometres in the middle of the desert, in very high temperatures, there is sand everywhere, but the journey is very smooth. To achieve that, we have modified many of the products that were manufactured globally to fit to our climate and geographical-

ly to be able to operate such assets smoothly.

? In recent years, the Kingdom has invested heavily in the expansion of the railway. And you have bigger plans now?

! Being the national railway entity makes us also obligated to serve certain objectives within **Vision 2030 of the government** that our Crown Prince is leading. Under this vision 2030 there was a national transport and logistics strategy that was developed and approved, announced by the Crown Prince himself in 2021.

Under this there was the rail sector strategy and our company's, SAR strategy, as well, where we are planning to invest over 200 billion Saudi riyals (equivalent to around 51 billion euros) between now and 2030. **We will add another 8.000 kilometres of new tracks to our network.** We have already put forward some tenders in the market to support this vision.

? Saudi Arabia has a high-level railway training institute. At the beginning of 2022, your country surprised the railway world with the announcement that **ladies are now to be trained as locomotive drivers** for high-speed trains.

Thank you for highlighting this. ►

This is something we are very proud of, honestly. You know, this industry is harsh. It's not like working in a nice office with an air conditioner. So it really requires some gas to do it. Now we have 32 excellent graduated ladies driving our high speed trains. And the plan is to grow and expand the program as well, to give more opportunities for ladies to not only drive high speed trains, but maybe freight trains as well!

? Your country is looking for diversification in different areas. And you want to go green. This applies to the idea of using green energy for vehicles and also to the production of green energy.

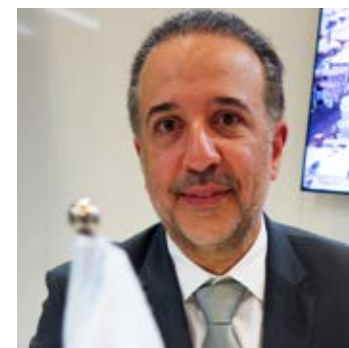
It even goes beyond this, if you allow me. Especially after the COVID 19 and the challenges around the supply chain as a whole, It became clear that we need to localise critical parts of this chain. So we invite all investors, manufacturers to come, explore the opportunities available in the Kingdom. We have announced some of these opportunities to the public and see great interest. To name a few: manufacturing wheels, wagons, locomotives, and other opportunities as well.

? You just told about the long freight trains. What goods you are transporting mainly and into what direction. I understand it is minerals, oil products?

We ship a mixture of products, actually. We do mineral phosphate, bauxite. We do some dangerous goods as well, like sulphur, some acids. We do cement, we do grains, bulk containers.

? To ports for the export?

Yes. To ports or to facilities close to the ports where



Credits Hermann Schmidtendorf

Dr. Bashar Khalid Al Malik

the goods get reprocessed and then exported again. And we do run one of the longest journeys as well. One destination that we operate to one of our clients is over 1.200 km between their facilities and the port.

? How does the majority of goods transport work today?

It's a mix, it's more towards road and we do have a strategy to move those goods from road to rail. It is one of our 2030 targets to increase the share of the rail towards ports.

? Perhaps we could talk on the lines that would be improved or built new. For example, you talk about a so-called land bridge.

We call it **Saudi land bridge** because it connects the Red Sea and the west coast of the country with the Arabian Gulf and the east coast, 1.300 km in length. It's a major enabler to the whole region, not only to the country itself. The land bridge basically goes from the high speed network between Mecca and Medina, from Jeddah in the West all the way to Dammam in the East. It crosses the country from both sides. Another major infrastructure that we are planning is to connect with the neighbour countries in the East and South East.

? To connect the six countries of the so-called Gulf Council?

Exactly. The **Gulf Cooperation Council GCC** – UAE, Qatar, Bahrain, Oman, Kuwait and Saudi Arabia. So this is also part of our investment. We have workshops, depots to maintain those trains. Passenger stations will be also developed as part of this. The beauty of this land bridge is that it will connect three ports on each side. So you will have a smooth connection between East and West without having to go, if necessary, around the peninsula. You will save a trip here by sea. Now it takes about over ten days. Then it could take less than 24 hours.

? This is also most important for the political stability, because if you provide a mobility connection, the countries might grow together in a better way and better cooperate. ►

No doubt railway lines in general serves to many purposes, let it be social, economical and so on. So definitely reaching new destinations will serve all interests. We have some short lines internally to serve certain destinations, but those are the two major projects that we are focusing on over the next seven years here. Trains, of course, will follow.

? What about electrification? Freight trains at present still are hauled by diesel locomotives, mainly by American General Motors/EMD locomotives. In your strategy I understand there would in the future also be electric freight locomotives?

Sure. The more powerful, the better. Of course, as you can imagine, our trains are long. And our infrastructure allows for 32.5 tons per axle. So they are quite designed and constructed to allow for huge axle loads. So we need our trains to be capable of operating in such infrastructure. We have a mixture between high speed and conventional networks to be developed. Recently we have announced the **Rijadh-Dammam line** where we are proposing investors to come and look into the possibility of working closely and evaluating how this could be done and transfer it into a high passenger speed.

? We live in difficult times of change. Every country must think carefully about how it intends to finance its plans. Is that why your country also relies on investments from other countries?

We have allocated funds towards such investments that will take place over the next few years. But yes, I think we are lucky and I see no better place, honestly, than to invest in Saudi Arabia. We have a safe, stable country. We have a very strong economy whereas different economies are suffering nowadays and expect challenges to move forward. Our economy is growing; our inflation rate is below 3%. So we are doing extremely well and the expectations and forecasts moving forward are quite promising. As individuals working in this industry we are lucky to work at this time where our needs are being met.

? At the last **InnoTrans** trade fair, you signed an agreement with **Deutsche Bahn**, among other things. You are looking for new partners and

already have well-established partners. Can you name a few?

Having any assets working on such hot weather and in harsh environment is not easy. We've worked closely with **Talgo** to upgrade the train sets they are developing. It was designed to be suitable to operate in such a harsh environment. And so far it has been very successful with no issues. Being transparent, Talgo has been a good partner and their electrical trains are operating. But we also worked with other train manufacturers as well.

Thales has been a partner for some time. We adapt in some of our networks their signalling system, and at InnoTrans 2022, we basically signed a new contract to support signalling in parts of our network. It is a part of a longer relationship that we have with Thales, and that is growing as we move on.

Alstom is a partner of SAR as well for quite some time. We have visited their hydrogen train at InnoTrans in Berlin. We have tried the train for about 20 to 25 minutes. It was a very smooth trip with no issues. We are always looking for new technologies that serve our strategy. It is not about adapting any technology. But if this fits within our strategy, our objectives and targets, then be it.

So today we are analysing and evaluating how can we best utilise such technology. Hydrogen train are still not very widely used anywhere in the world, but we are going to be one of the first as soon as this is commercially proven.

We have relationships with many companies. **Siemens** is one of them. We do work very nicely with Siemens. We have existing work relationship with them and probably will have more in the future.

? Would the Spanish state railway **RENFE** again work within your projects?

Renfe for now is only focused on the Haramain high speed railway as part of a Spanish consortium of twelve companies. Anyone who believes can contribute and add to achieving our targets is more than welcome. We have no restrictions or limita- ►

tions. Any party that believes to have the capacity to come, invest, build, operate, is more than welcome. We have proven over the years to be a very reliable partner, someone you can trust and can grow with. We believe in establishing win-win relationships. And that is why we would like to see more new

partners coming here, investing and working jointly with us in achieving our vision.

! Many thanks for this interesting talk!

The interview was conducted by Hermann Schmidtendorf.

IN THE OLD DAYS STEAM LOCOMOTIVES, TODAY ELECTRIC TRAINS WITH 350 KM/H

The first railway to transport pilgrims to the holy city of Medina was built under the Ottoman Empire – on a gauge of 1050 mm. The map to the right (author: Fremantleboy) shows the extent of the Hejaz Railway in 1914. In present-day Saudi Arabia, high-speed trains run between Medina and Mecca. The other map (author: Maximilian Dörrbecker/Chumwa) also shows planned new railway projects. Freight traffic in particular is taken into account.

There are three museums in Saudi Arabia dedicated to the history of the Hijaz Railway. The most important facility is being built in Medina on the site of the former railway station. Some locomotives have already been transferred there and partially rebuilt. The historic reception building of the Medina narrow-gauge railway station has also been lovingly restored.



NEE:

GERMAN RAIL FREIGHT ASSOCIATION IMPROVES RECOGNITION VALUE

Sometimes freight rail lobby associations also have to polish their names in order to be more recognisable in the media storm. This was practiced in mid-May 2022 by the **NEE – Netzwerk der Gütereisenbahnen e.V. – network of freight railways** – in Germany. This umbrella organisation of private rail freight companies has now perkily given itself the additional brand „**Die Güterbahnen**“ – **THE rail freight companies**. True to the mantra of leading brand researchers, the innovation was not widely communicated. Apparently, it should be „de-novelised“ as quickly as possible, incidentally trickling into consciousness. Of course, the NEE players know that they do not represent all companies in the industry, especially not the state-owned **DB Cargo**. But this company had previously given itself a brand slogan with an implied claim to leadership, namely „**Wir Sind Güter**“ – **We are the goods, or: We are better**. How nice! All players in the sector are passionate about their business of getting transport from road to rail.

The association explains the new corporate design: The colours connect the network of European railways (NEE) as the carrier with the new railway alliance. The logo, which shows a moving freight train,



includes the claim “Because good is better on the rails”, which has been in use since 2019. As you can see, the claims are pretty creative!

The NEE network often criticises German politics, but on April 28, 2023 there was great praise for the German Federal Minister of Transport, Dr. Volker Wissing. A new draft for the “3rd Law to amend the toll regulations” is intended to implement two key announcements made by the coalition committee of the government. The draft provides that from January 1, 2024, the truck toll will include 200 euros per tonne of CO₂ as so-called external costs of climate change. This generates an estimated additional income of 6.8 billion euros in 2024 alone. The ►

NEE’S SELF-PORTRAYAL:

“**DIE GÜTERBAHNEN handle almost 60 percent of rail freight traffic in Germany.** In 2021, a record transport performance of 139 billion ton kilometers was transported by rail. We want it to be more: DIE GÜTERBAHNEN is an association of almost 100 members, including railway companies and companies from their environment. Fair competition on the rails and achieving at least a 25 percent market share by rail by 2030 are our main concerns.”

Credits Hermann Schmidtdorf



This container from DB Cargo proclaims: goods belong on the rails – we are goods.

change accelerates the switch from conventional diesel trucks to new drives and to the railways alike. In addition, a decision by the coalition committee on March 28 provides that the additional revenue from the truck toll should be used “for mobility”.

“This would interrupt the unfortunate “road financing cycle” that was installed a good ten years

ago, which led to rising toll revenues being channeled into more and more road construction”, explained NEE manager Peter Westenberger. In the future, revenue from truck tolls can and should also be used for the construction of railways. This would also counter-finance part of the additional EUR 45 billion promised for investments in rail infrastructure. hfs

Let's (re)invent the railway together!



HSL LOGISTIK:

„WE SEE YOU AS A PERSON!“



In day-to-day freight transport, autonomous locomotive driving is still a long way off. That's why the railway companies operating under the HSL Logistik label are still looking for new staff. Founded in 2017, HSL Netherlands B.V. even advertises with the unusual promise: Here you are a human, here you may be it!

The HSL Group has licenses in eight European countries and is also active there. In addition to the Netherlands, these are Germany, Poland, the Czech Republic, Slovakia, Austria, Belgium and Switzerland. HSL Logistik has existed since 2003. It is a purely private, owner-managed company, which therefore also has to assert itself against state competition on the rails. It is doing this successfully: The competitor report 2021/22 of the Association of Private Railways mofair shows HSL in 7th place in the German company ranking. If you exclude the freight railways, which are dominated by state railways, HSL even ranks 4th in Germany.

The transports are flanked by extensive training services for railway workers in several specialist acade-

mies associated with the group. Sven Schallach is Head of Sales at HSL Logistik GmbH and CEO and shareholder at HSL Netherlands B.V. His credo: "The people who are crazy enough to think they can change the world are the ones who do." A man who would rather roll up his sleeves than complain at length.

Instead, he says, "If a product is volatile because of the global economy or its nature, that doesn't shake us as HSL. About 80 percent of the transports driven by HSL NL are conventional freight wagons such as tank wagons, grain wagons. 20 percent are container transport and others. In the countries served by our trains, HSL can offer everything from a single source, from the first to the last mile, but we also attach great importance to a good partnership with our competitors. Because we have to stand together "against" the road in order to get more goods onto the rails."

At the transport logistic 2023 in Munich from 9.-12. May 2023 HSL Logistik will be represented with booth **B6.301/402**. **Contact:** <https://www.hsl-logistik.de> hfs

ZEDAS LOGISTICS SOFTWARE SUPPORTS EFFECTIVE LOGISTICS PROCESSES

How do I plan and monitor my shunting trips effectively? How do I always keep an overview of the current wagon locations, delivery and collection orders? These and other tasks are solved by the zedas®cargo software from ZEDAS GmbH, based in Senftenberg in Brandenburg. The company will provide information in webinars and at the 9.-12. May taking place transport logistic trade fair in Munich – at booth 317/418 in hall B4.

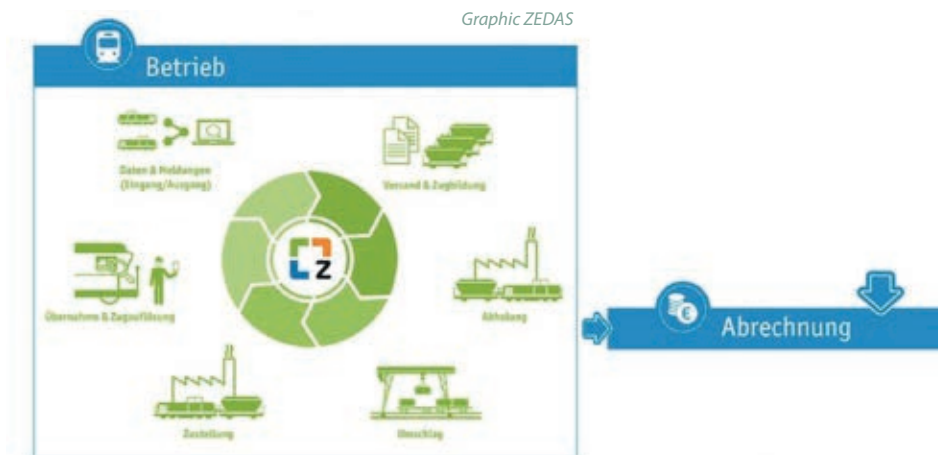
The company explains: "The zedas®cargo Train Check greatly **simplifies train dispatching and the creation of wagon lists and brake slips**. The app uses all data from previous processes, such as the transport order, and uses it for all subsequent steps. The Train Check was awarded the German Mobility Prize 2020 as an innovative, sustainable project."

The company further explains that the customer can use the Rail Hub module from zedas®cargo to transmit transport orders to the railway operator in a simple and standardized manner. Intelligent algorithms predict the time of arrival (ETA) of the customer order to avoid idle times and adjust follow-up activities in case of delays. The Train Check app from zedas®cargo enables paperless train dispatch and automates many on-site processes. With these apps, working hours can be recorded and billed in a personalised way.

Also exciting: the product suite for the seamless connection of the logistics management of rail freight traffic (zedas®cargo) with the fleet and maintenance management (zedas®asset). The automated flow of information significantly **reduces the need for coordination** between the areas, the company explains: "The status and load data as well as recorded

damage and fault reports enable **reliable, load-dependent maintenance planning**. On the basis of comprehensive data, zedas®asset creates condition forecasts for the vehicles, which in turn form the basis for well-founded investment decisions."

In this way, the day-to-day business of rail operations benefits from the **increased availability and reliability of the vehicles**. Railway production accesses current information on the decommissioning/recommissioning of vehicles and residual values for deadlines at any time. Transport tasks can be planned much more efficiently. Operations are less often hampered by waiting times or technical disruptions. Information on the company's offers and webinars can be found under the link: <https://www.zedas.com/de/webinare> The company has around 90 employees. hfs



Logistic control processes with the software zedas®cargo.

To Zero:

ENGINE OUT, BATTERY IN – A SECOND LIFE FOR DIESEL BUSES

CARGO FREIGHT JOURNAL met Andreas Pfeffer in northern Germany in front of a coach with the inscription “Diesel out”. The engineer used to deal with diesel optimisation, now he throws the diesel engine out of existing vehicles and puts them on electric drive. Our editors wanted to know details, also about the developer’s motivation. Did he go from Saul to Paul?

I studied combustion engineering, so from Saul to Paul, that fits. Everything has its time. In 2007 I got to know the first battery-electric vehicles and it was clear that combustion technology was coming to an end. And if the end is foreseeable, then you have to turn to the new in good time.

An **IVECO** bus just passed here, it’s a newer model. We look forward to these vehicles. We started our conversions with a **MAN** bus. There are a lot of them in circulation at the moment. This is a 2010 model, and that’s where we come in. We see that vehicles are coming to the end of their lives because they no longer have acceptable exhaust emissions here in the cities with their Euro 4 or Euro 5 engines. Then selling them to Prague or Budapest makes no sense because the same emission regulations apply there as here. It therefore makes a lot of sense to electrify these vehicles.

We do exactly the same as a MAN or a **Daimler**. These are exactly the same vehicles that are battery-electric from the factory, only that we don’t take a new vehicle, but a good used one. You can clearly see that there are no signs of corrosion on this vehicle. It’s just good again for the next 10, 15, even 20 years. Passengers don’t ask, is this a 2019 vehicle or is it from 2010? They get in and are happy when there is WiFi and a USB charging socket in the vehicle. These are the criteria of the passengers and we can cover that. And we save around 100,000 kilograms of CO₂ per year. That is exactly what electro mobility is aiming for. Those are the issues.

Over there we raise the dikes, here we save the CO₂. This is exactly where it has to go, that with our stream, before we take the oil from the sheikh, we prefer to take the stream from the dike. We use the wind power that we generate here sensibly, ►

The graduate engineer (mechanical engineering, business administration, TU Hamburg-Harburg University of Applied Sciences, FH Kiel) Andreas Pfeffer was Managing Director of I SEE Electric Trucks GmbH and I SEE Electric Busses GmbH until May 2022. Since then he has been Managing Director of to zero electric vehicles GmbH, Hamburg. Before that he worked for several companies in the automotive industry.

Enthusiastic about sustainability: Andreas Pfeffer in front of a converted diesel bus.



Credits: Hermann Schmidtendorf

pumping it directly into the buses. But we can also get out of the bus and go to the inn over there, where a pizza will be baked with it. These are all the possibilities that this form of energy storage in the battery allows us to do. And they make a lot of sense in the bus, because there they cover 200 kilometers every day with exactly these daily mileages. The bus makes its rounds every day, and here the battery works day in and day out for the next eight years.

Pioneering wheel hub engines

In order to turn a diesel bus into an electric bus, the core components have to be removed. It’s debatable whether to keep the old axle in, but we went with the axle in a really forward-thinking way. We installed wheel hub engines. That means we don’t have a single gear left in this axis. The advantage is: We have an extremely high level of efficiency. We drive with 0.8 kilowatt hours per kilometer. That doesn’t mean much to most people now. But that’s a benchmark at the point.

The other is where the tank, gearbox, motor were, that’s where we could put the batteries because we no longer have a motor that sits in front of the axle to turn the axle. So that gives us all that space in the back for batteries. That’s why we don’t have batteries on the roof.

Amazingly quiet when driving

That’s one of the key features of this bus, that we have all of this vehicle’s 210 kilowatt hours in the engine and transmission compartment. The other thing is that you can now hear how quietly it drives. We know that competitor products for this axle make significantly more noise. The axle then howls in the underfloor at 80 decibels; our – we hear nothing. Also the compressor, which is necessary for the brake system in commercial vehicles: where you normally hear the compressor, you can hear it clearly, it sounds like a single-cylinder engine, here you don’t hear it, it’s quiet, it’s in the back.

We’re on this bus right now. I can have a good conversation on the bus because it’s really quiet. We no longer have a combustion engine, and our axle is also something special. The motors are located directly in the wheels. That means we can do without a spring and gear reduction. The magnets are very far out and the coil is in the middle. They bring a mur-

derous torque of almost 20,000 Newton metres to the tires. That’s significant. That means we can also manage any incline. This makes the axle quiet, having no gears in it, but also gives a very high level of efficiency.

That means we need very few kilowatt hours per kilometer driven. In the background you can see the windmills. One turn of the windmill lets us travel more than ten kilometres with this bus. The whole design leads to avoid noise, avoid friction, avoid heat, simply leads to overall high efficiency of the vehicle. And that’s why you get by with very little energy per kilometer driven.

For the winter: a CO₂-neutral bio-heating system

A fact that you definitely have to talk about when it comes to electro mobility: we have 210 kilowatt hours of battery storage on board here, which is not even the equivalent of 30 litres of diesel. And when you have so little energy on board, you have to think: How do I cover this one cold day here in the north in winter of minus 20 degrees Celsius?

Just for heating, it makes no sense to lug around twice the amount of batteries all year round. The batteries are also still very expensive. So it’s very smart, and that’s what we’re doing: We either install a bio-diesel heater or a bio-ethanol heater in these vehicles, so that we’re still CO₂-neutral and have enough energy on board for those few, very cold days have in order not to have any losses in driving comfort. I think we really need to start changing course. We have to get away from fossil fuels, and we are currently trying to show the feasibility in these vehicles, that we can assume that we can completely avoid CO₂ emissions, that we can completely avoid fossil fuels. And this bus is a really good example of that.

We educate and train our employees ourselves. We developed this bus ourselves. This means that the necessary know-how is very specific. It is important for us that we train our employees on this high-voltage technology. This is connected to work security. The other issue is this axle, which has the motors directly in the wheel hubs. We don’t find these employees on the market, we train them ourselves from scratch.

Dipl.-Ing. Andreas Pfeffer

www.to-zero.de | mail@to-zero.de

Boeing:

LAST BOEING 747 DELIVERED: END OF AN ERA



The last Boeing 747 was built for Kühne+Nagel/Apex.

Credits: Kühne+Nagel

When a plane starts its engines at exactly 7:47 a.m. and takes to the skies with flight number 5Y-747, no supernatural abilities are needed to suspect that it could be a Boeing 747. Bingo! This is what happened on **February 1, 2023** on the runway at the Boeing plant in **Everett near Seattle**. A symbolic day: the last aircraft in this series that will ever be built took up flight duty.

The destination of the first flight was Cincinnati, where new owner **Atlas Air** operates a large base. But in doing so, the 747-8F took a three-hour detour. Only flight control could understand what happened: the crew drew the number 747 and a crown in the sky with their machine – as a reference to the nickname **“Queen of the Skies”**.

An aircraft of superlatives

The Boeing 747-8 is 76.25 meters long. This makes it the longest active passenger plane in the world and also the longest cargo plane in the world – at least after the Ukrainian Antonov **An-225 Mriya** (84 meters long) was destroyed in the Russian attack on Kiev in February 2022. The Boeing factory in Ev-

erett also has gigantic dimensions of 492 x 1067 metres. It had the largest hall in the world in terms of volume and was built between 1966 and 1967 within just 14 months for the then announced construction of the new celestial star.

The first 747 took 16 months to build. **On February 9, 1969, Boeing’s first aircraft took off for the first time**, to the great sympathy of thousands of guests. It went to the American airline **Pan Am**, one of the most important global players

among airlines until it closed in 1991. Pan Am wanted a passenger aircraft with twice the capacity of the Boeing 707. The manufacturer had just developed large, high-bypass-ratio fan engines. These were suitable for transporting passengers and cargo over very long distances on an unprecedented scale. In 1966, Pan Am ordered 25 aircrafts as a launch customer; smaller orders came from **Lufthansa** and **JAL**. Boeing then decided to let the 747 go into production.

Now more than 9,000 people have gathered in Everett – current and former employees, emissaries from operators and enthusiastic onlookers. They all wanted to witness the historic moment of delivery of the last large machine of this type. Because the Boeing 747 was not only built for 55 years and is therefore already extraordinary. It is also an iconic aircraft that evokes special emotions in many people.

“This product is second to none,” said **Boeing CEO David Calhoun** on the Everett festival stage. The last Boeing 747, serial number 1574 and registration N863GT, will go to customer Atlas Air. **Apex Logistics International, a company of Swiss-German logistics giant Kühne+Nagel**, will operate ►

the last Boeing 747-8 freighter under a long-term charter agreement. After the first Kühne+Nagel aircraft “Inspire,” “Empower” is to be used on the transpacific routes and strengthen the inner-Asian network. **Atlas Air CEO John Dietrich** said at the ceremony in Everett: “We started with a single 747-200, a conversion freighter, in 1992 with its unique noseloading capability, payload capacity and fuel efficiency. Today we’ve fielded almost every version, including the Large Cargo Freighter, the specialty transporter for 787 sections and wings. We thank Boeing for the reliability, quality, innovation and environmental concern to ensure our success with the 747 continues in flight for decades to come. It has good range and nose loading is unmatched.”

Today his company owns 56 copies – more than any other operator. There is simply no better freighter. **Bill Moore** was also enthusiastic: “The Boeing 747 shaped **UPS**,” emphasised in Everett the head of maintenance at the logistics group. The 747 made it possible to build a global network. Today UPS is one of the largest operators of the jumbo jet. And **Lufthansa CEO Carsten Spohr** emphasised: “Above all, the 747 has made the world significantly narrower!”

Democratisation of air tourism

When the 747 was designed, the fuselage cross-section was designed to be round, but the cabin floor was deployed at a level just above the wings. This left enough space for baggage and freight. The flight deck was placed higher and further away from the bow to utilise the full space up to the nose of the bow. This meant a very large gain in space and also the possibility of installing a front loading door for a cargo version. The flight deck, which was moved upwards, caused the characteristic “hump”, which flowed out into the back in a streamlined manner.

The basic version 747-100 was 70.51 m long, had a wingspan of 59.60 metres and could **carry up to 490 passengers**. It had a **takeoff weight of 322,100 kg** and a **range of up to 9,800 km**. The pilot, co-pilot and flight engineer were on duty in the cockpit. A navigator could be dispensed with thanks to the built-in inertial navigation system (INS). The large



An emotional presentation: the president of Atlas Air John Dietrich at the take-over of the last jumbo.

Credits: Boeing

number of places for passengers, combined with its high range, allowed airlines to set cheap ticket prices for long-haul flights. Now not only distinguished company directors and millionaires could afford such a flight, but also entire families. The result was a democratisation of air travel. ►

“a lot of nice little things” – Boeing-advert from 1971.

The 747 is a lot of nice little things.

- 1 Enjoy a new feeling of freedom under 8 foot ceilings. You can stand up and stretch in a way never before experienced on a jetliner.
- 2 Your choice of wide-screen, full-color movies with full-dimensional stereophonic sound. Controls at your fingertips also let you select from a variety of music and other programs.
- 3 Conveniently located overhead luggage compartments to put your carry-on things up and out from underfoot. Gives you more room to stretch your legs.
- 4 Full-course meals from ultra-modern galleys and service centers conveniently located between each passenger section.
- 5 Relax in extra-wide, extra-comfortable seats. Two, three, or four-abreast seating arrangements to meet your needs whether you're alone or with a whole family.
- 6 Easy access to any cabin section. Wide double aisles the length of the plane, plus numerous cross aisles, add to the feeling of spaciousness.

There are other nice things to know about the 747, too. For example, the superjet flies to 58 major vacation and business centers around the world. Since going into service, the 747 has carried 12 million passengers and flown 150 million miles. Try a 747 soon. And see how everything adds up to a fun way to fly.

BOEING 747

Credits: Boeing

Those were carefree times. Not burdened by today's "flight shame" because of climate change, Boeing advertised in a 1971 advertising leaflet with the "nice little things" that make the flight with the four-engine 747 pleasant: legroom, freedom to the ceiling, spacious overhead compartments, films in stereo sound, "full-course meals from ultra-modern galleys and service centers"...

The 747 pilot with the steam locomotive

The author of these lines had the pleasure of flying from London to New York in a 747 in 1976. I was excited! I worked as an ambulance driver for a few months immediately after graduating from high school, and I was already able to afford such a flight. I didn't have enough money to have drinks at the airplane bar upstairs. But just being able to "hike" such a spacious aircraft impressed me. And yes, it really was, as the nickname said, a "jumbo jet"!

In 1988 a Brit contacted me. Martin, that was his name, was a BA pilot on a Boeing 747. He had heard that I, as a railway consultant, repaired and sold steam locomotives from Poland. Martin looked exactly how I imagined a 747 pilot to look: tall, lean, steel blue eyes, dynamic and likeable. What do you want with a steam engine, I asked him. The answer: "Commuting between London and Hong Kong on a 747 is super strong. But then I see nothing of the landscape. And should an error occur in the technology, I can't necessarily fix it myself.

It's different with a steam locomotive – I can repair a lot of things myself with a wrench, hammer and lubricating oil. From the window of the steamer I constantly look at the landscape – of course, I drive my steam locomotive myself! It's a great contrast, a relief, and a way to keep me grounded." The deal went through, the German Class 52 steam locomotive, Polish marked Ty2-7173, was shipped to the UK by ship and later even appeared in a music video clip. The title was: "The Air That I Breathe". How fitting!



A big star in small format: stamp of the West German Post from 1980.

A family with many variants

On November 30, 1971, the first all-cargo aircraft flew, the 747-200F. This cargo version featured a new hull with no windows, a flip-up bow at the front for loading, and a reinforced cargo hold floor with a mechanical cargo-tracking system for pallet movement. Lufthansa was the first airline to put the 747-200F into service in 1972. The 747-200B followed with an increased fuel capacity of 194,600 l and more powerful engines. The range has been increased to a maximum of 12,700 km. Initially, the **Pratt & Whitney JT9D** was still the standard engine of the 747-200B, but in 1976 the traditional British manufacturer **Rolls-Royce** was able to place its newly developed **RB211-524** with an order from **British Airways**. This engine was a huge success due to its fuel economy and was considered the most efficient turbofan engine in the world.

Later there were further developments and also various special civil, military and astronautical versions. Boeing had extensively modernised the 747 in 2005 with the 747-8 version. But despite the extended fuselage length, the latest GEnx engines and a newly profiled wing, the huge four-engine aircraft was only able to assert itself as a freighter. Modern twin jets, such as the 787 and 777X, were also increasingly fierce competition for the jumbo within Boeing.

The legendary four-jet family ushered in the new age of mass air travel, making travel affordable for new layers. But thanks to increasingly reliable engines, more economical twin-jet engines made life difficult for the giant in passenger traffic.

The future for Seattle is the 737

But just as in 1966 with the development of the Boeing 747, groundbreaking innovations will continue to be used in the future, said Boeing CEO David Calhoun. He announced the installation of a new **737 MAX final assembly line** for the Everett plant location, in addition to the previous 737 plant in Renton. Boeing could try to deliver the 737 MAX in larger quantities very quickly and take away sales from **Airbus**, where the very successful **A320neo** family has sold out for seven full years of production. Boeing is thus securing the workforce in Everett – no employees will be laid off.

Hermann Schmidtendorf, Editor-in-Chief

A five-country-road show:

eACTROS TO HIT EUROPE

On May 2, 2023, Daimler Truck AG started what is communicated as a "CO2-neutral tour across Europe". During the road show, three battery-powered eActros for distribution transport will initially drive from the Mercedes-Benz plant in Wörth via Austria to Italy. After a subsequent loop through Germany, the eActros continue to the Netherlands and Belgium.

Several stations are stopped along the route to present the vehicles and services to customers in detail. Experts from Mercedes-Benz Trucks are on the road with the e-trucks. In direct exchange with fleet operators, they should address market-specific issues relating to e-mobility and provide comprehensive advice to potential and existing customers.

Overall, the three eActros will cover a distance of around 3,700 kilometers purely on battery power over a period of five weeks, the company emphasizes. The trucks are to be charged both at public charging stations and at charging facilities in the branch depots.

Two eActros 300 (4x2) and one eActros 400 (6x2)

will be used at the road show. The battery-electric Mercedes-Benz eActros for heavy-duty distribution has been rolling off the assembly line at the Wörth plant since 2021. The batteries of the eActros consist of either three (eActros 300) or four battery packs (eActros 400), each with an installed capacity of 112 kWh. With four battery packs, the eActros 400 has a range of up to 400 kilometers. The technological heart of the electric truck is the drive unit, an electric rigid axle with two integrated electric motors and a two-speed gearbox.

To make the switch from diesel vehicles to all-electric trucks easier for potential customers, Daimler Truck offers a so-called e-consulting. Important questions are clarified in advance: On which routes can I use e-vehicles? What about the charging infrastructure? What structural measures and investments must be expected for depot charging? What public financial support can I apply for?

dt/hfs

Only drive with batteries in the Alps? The eActros should also master this task.



Credits: Daimler Truck AG

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Authors and correspondents

Dr. Robert Schönberger, Ben Holliday, Matthias Gastel, Franz Sonk, Andreas Mandl, Hermann Schmidtendorf (hfs), Andreas Pfeffer, Peter Westenberger

Interview partners

Andrzej Bittel, Dr. Bashar Khalid Al Malik, Gernot Schmidt, Michail Stahlhut, François Bausch, Müslüm Yakisan, Joachim Berends, Dr. Roland Busch, Andreas Matthä

Interlok Bahnconsulting Hermann Schmidtendorf

Bruchsaler Str. 3
10715 Berlin
Phone (+49) (0)1520-6839 235
www.interlok.info

TAX NUMBER – UST (VAT) ID

DE167943604

EDITOR IN CHIEF / V.I.S.D.P.:

Hermann Schmidtendorf
Bruchsaler Straße 3
10715 Berlin
Phone (+49)(0)157 8653 9357
E-Mail redaktion@bahn-business.eu

ONLINE BLOG

www.cargo-journal.eu

ADS AND SUBSCRIPTION MMANAGEMENT

Franz Sonk
E-Mail editor@cargo-journal.eu

GRAPHICS/DESIGN

Britta Ruge
buero-im-norden.de

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