



Stagnation in the EU for 30 years

The deregulation of the European railway system began in 1991 with the publication of the Directive 91/440/EWG. Open market access for railway undertakings (RUs) to the rail freight transport market should allow for continued growth in the EU member states. So where are we 30 years on? Have opportunities been missed?

By Wolfgang Gross, Bonn, Network of European Railways; Commissioner for Competition; Member of ERFA Board

Despite deregulation, an increase in the share of rail freight transport (RFT) in total freight transport performance (modal split) has not been achieved in the EU as a whole over the past decades. Since the 1990s, the modal split has stagnated at a level of about 20% throughout the EU. And this despite the fact that freight transport throughout Europe has experienced exceptional growth in absolute terms in recent decades.

Mixed progress in Central Europe

With the rail infrastructure in most central European countries having been severely neglected or dismantled in the decades before 1990, the planned traffic increases in the RFT could only have been achieved through major expansion. However, the change in per capita expenditure on rail infrastructure in recent years illustrates

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Dear readers,

Even 30 years on from deregulation, far too little has happened in rail freight transport (RFT). More innovation, flexibility and reliability are urgently needed, writes Wolfgang Gross in his lead article. I can only agree.

For state-owned companies, the question after deregulation was: should we sell, expand or optimise? In his article on page 4, industry journalist Karl-Arne Richter can't quite (yet) paint a story of success: In spite of deregulation, it still has not been possible to increase the total share of rail-based freight transport in the EU (modal split).

The UIC plays an important role in the workings of Europe's state railways. As an international association, it acted as a unifying body for all state railways at a time when, prior to 2006, all rail wagons, including private freight wagons, had to be registered with them. Today, the UIC focusses on promoting international cooperation as an accelerator: Working closely with other modes of transport, it is doing everything it can to change the modal split in favour of rail freight transport. For more on this, please read the article by UIC Director General Francois Davenne on page 6.

Digital automatic coupling (DAC) is seen as a major innovation and a lot of hope rests on it. As Stefan Hagenlocher says in his interview on page 8, "It is unacceptable that by 2040, driverless electric trucks will be on the roads in Europe whilst manual coupling is still being used for rail freight transport." It is a positive development that the European DAC Delivery Programme seems to be on track and that the decision in favour of the Scharfenberg coupling has now been made, and ahead of schedule as well!

I hope this is a positive sign for rail freight transport going forward. In any case (and with the end of year celebrations looming), we hope that you will once again enjoy reading our infoletter.

Best regards,

Philipp Müller
Chairman of the Board of Directors

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the different levels of investment that have been put into existing or newly built railways: The country ranking in terms of per capita expenditure has hardly changed since 2014.

In 2019, Switzerland, a country which although small has a lot of transit traffic spent 404 euros per head, followed by Austria with 226 euros. For years, both these Alpine countries have been investing more in their railway networks than in their road infrastructure. The larger countries such as Germany or France continue to languish at the bottom of the table – despite ever higher expenditure. Germany, for example, with 76 euros per German citizen, has still not caught up with the rich countries in Europe.

Dilemma: Low train path availability

The low expenditure in major Central European countries such as Germany, France and Italy highlights a dilemma that has long been criticised by railway associations for years, and this is the capacity offer (train path availability) for the RFT which hasn't changed at all. While smaller countries such as the Netherlands (keyword Betuweroute) or Switzerland (Gotthard tunnel) have built new lines, Germany (keyword Oberrheintalbahn) and France (only lines for the TGV) lag far behind.

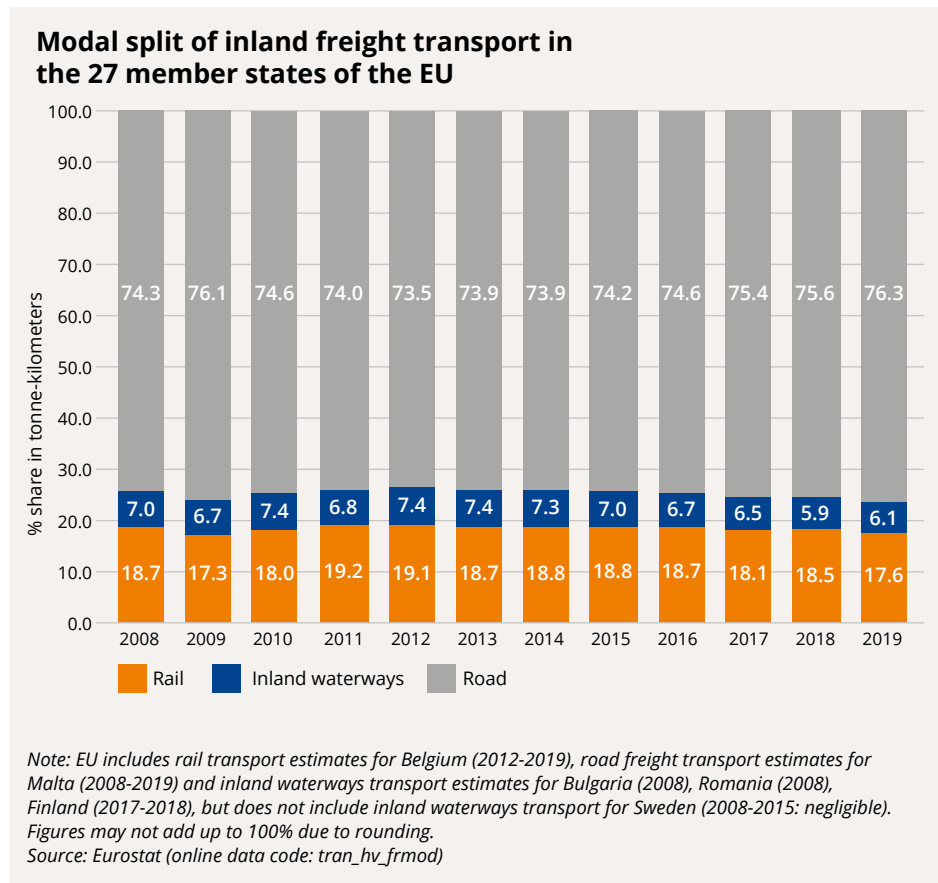
In Germany, there has also been a massive reduction of tracks as well as in stations and sidings. In 1994, for example, there were around 11,472 private sidings in Germany. But by 2018 there were only around 2,351, roughly the same number as in Switzerland. However, sufficient capacity in these service facilities is an absolute prerequisite for an increase in traffic in the RFT.

Persistent quality and coordination problems

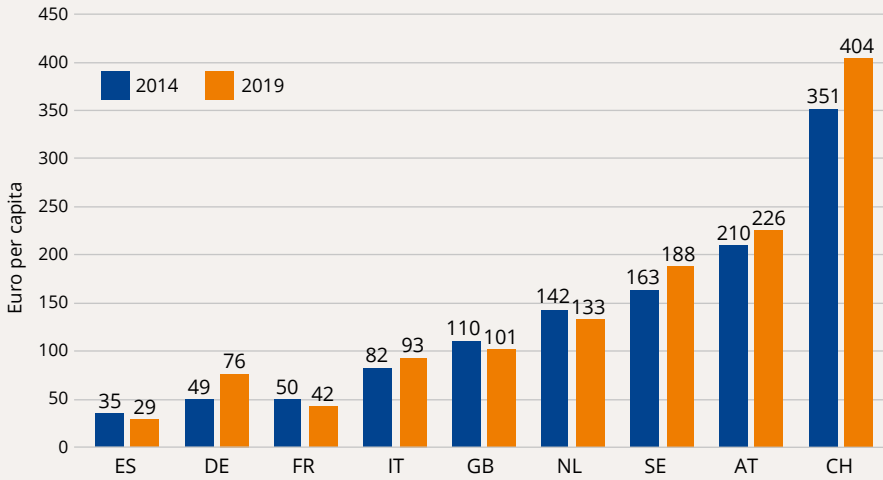
In addition to the afore-mentioned capacity problems, quality problems above all, have massively undermined the confidence of shippers in the railways. A variety of technical and organisational inadequacies have led to deficiencies in punctuality and reliability in the planning and execution of train journeys.

One of the main problems here is construction work, which causes reduced train path availability and route closures at short notice. Despite European requirements, there is simply not enough coordination between the railway infrastructure companies (EIU) and the RUs in most countries and the IT applications for communication are inadequate.

There are also considerable coordination difficulties among the EIUs, which create major delays and additional costs for the



Per capita state investment in rail infrastructure in selected European countries



Source: Pro rail alliances based on BMWI (Germany), VöV (Switzerland), BMVIT (Austria), SCI Verkehr GmbH

Outlook

In order to achieve the EU objective of increasing the share of rail freight transport and therefore reduce energy consumption by 2050, there is no alternative other than a shift from road to rail freight transport.

The modal split share of RFT can only be increased if the related infrastructure is significantly expanded and a technological improvement is brought about through state aid for modern, quieter rolling stock, including digital automatic coupling (DAC) (see interview on page 8ff.).

Furthermore, the performance, flexibility in respect of customer requirements and reliability of the infrastructure must be improved. Even small measures such as, for example, the reduction of block distances or the increase of the maximum speed can have a capacity-increasing effect even without infrastructure expansion. Capacity-increasing measures in the infrastructure and modern dispatching systems can have a positive effect on reliability and quality if a better way can be found to avoid operational disruptions so that as a result operating processes are less affected.

RUs. EIUs are still unable to provide the RUs with an estimated time of arrival (ETA) for long-distance freight trains, which is an essential prerequisite for providing reliable information to the RUs' customers.

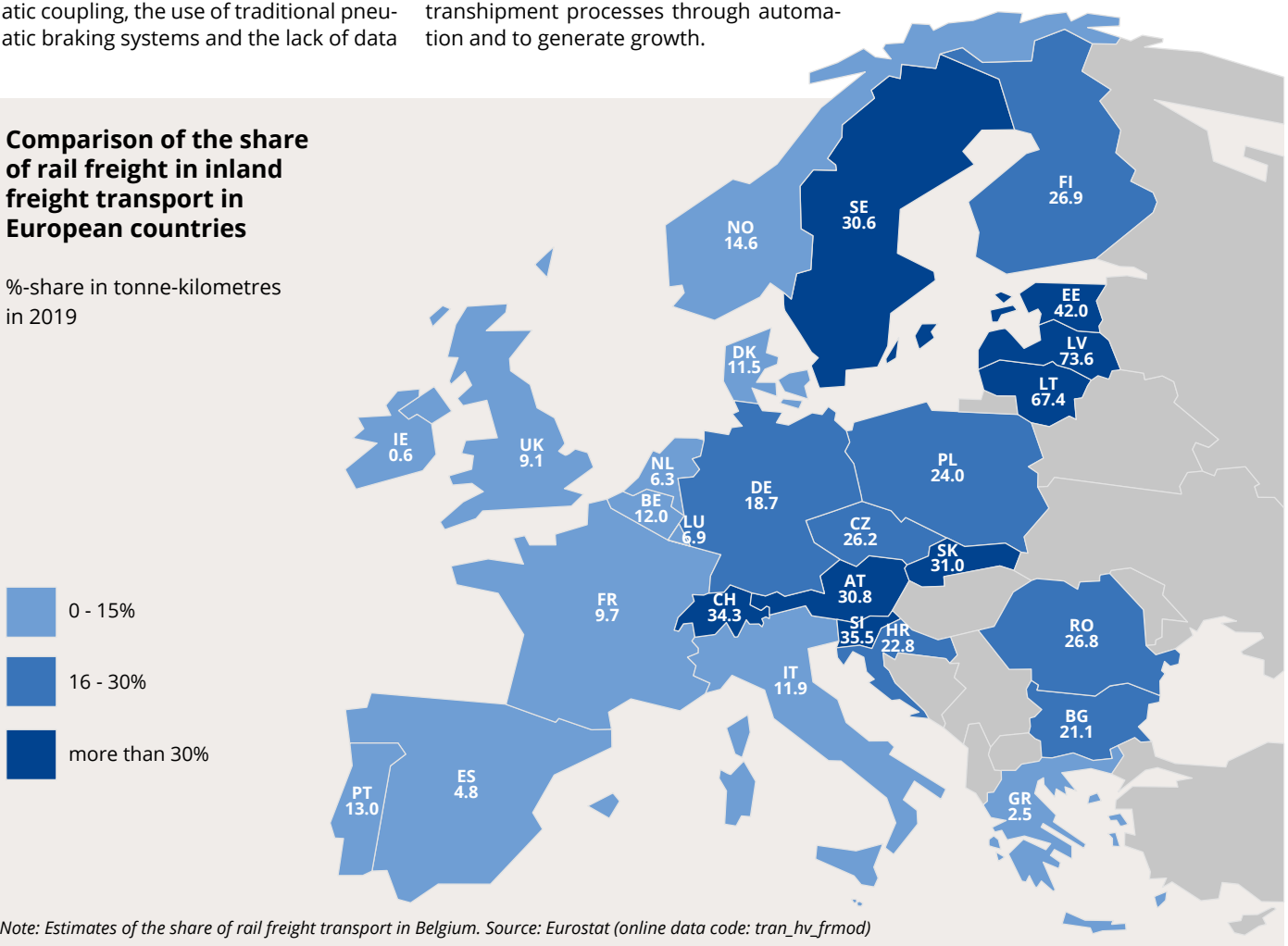
Rolling stock situation

As regards rolling stock, the lack of automatic coupling, the use of traditional pneumatic braking systems and the lack of data

lines as well as energy supply for wagons are key technological obstacles. Modern axle bogies are what are needed to take the reduction of noise emissions to the next level. Only through a comprehensive leap in freight wagon technology it will be possible to enable modern energy management, train diagnostics and accelerated transshipment processes through automation and to generate growth.

Comparison of the share of rail freight in inland freight transport in European countries

%-share in tonne-kilometres in 2019



Note: Estimates of the share of rail freight transport in Belgium. Source: Eurostat (online data code: tran_hv_frmod)

On a slippery slope or forging forward: State-owned freight railways after deregulation

30 years ago, the start of a Europe-wide railway reform heralded a fundamental change in market structures in rail freight transport. Whereas the railways in the UK and Germany were quick to change, the state railways in south-eastern European Countries were able to hold out much longer against the opening of the market. The question for all state-owned companies was: should they sell, expand or optimise?

By Karl Arne Richter, Editorial Director of the "European Railways"

With the emergence of competitors – at national level or through cross-border logistics service providers – it must have become clear to all established players that a pure wait-and-see attitude would lead to a severe loss of market share or even the complete loss of market relevance in the medium term. In most cases, state railways were left with only two alternatives: Either "forge forward" in the form of expansion into surrounding countries or sell their rail freight businesses and just hold on to passenger transport, which is seen as a public service. Infrastructures were to be managed separately anyway in accordance with the separation of network and operations.

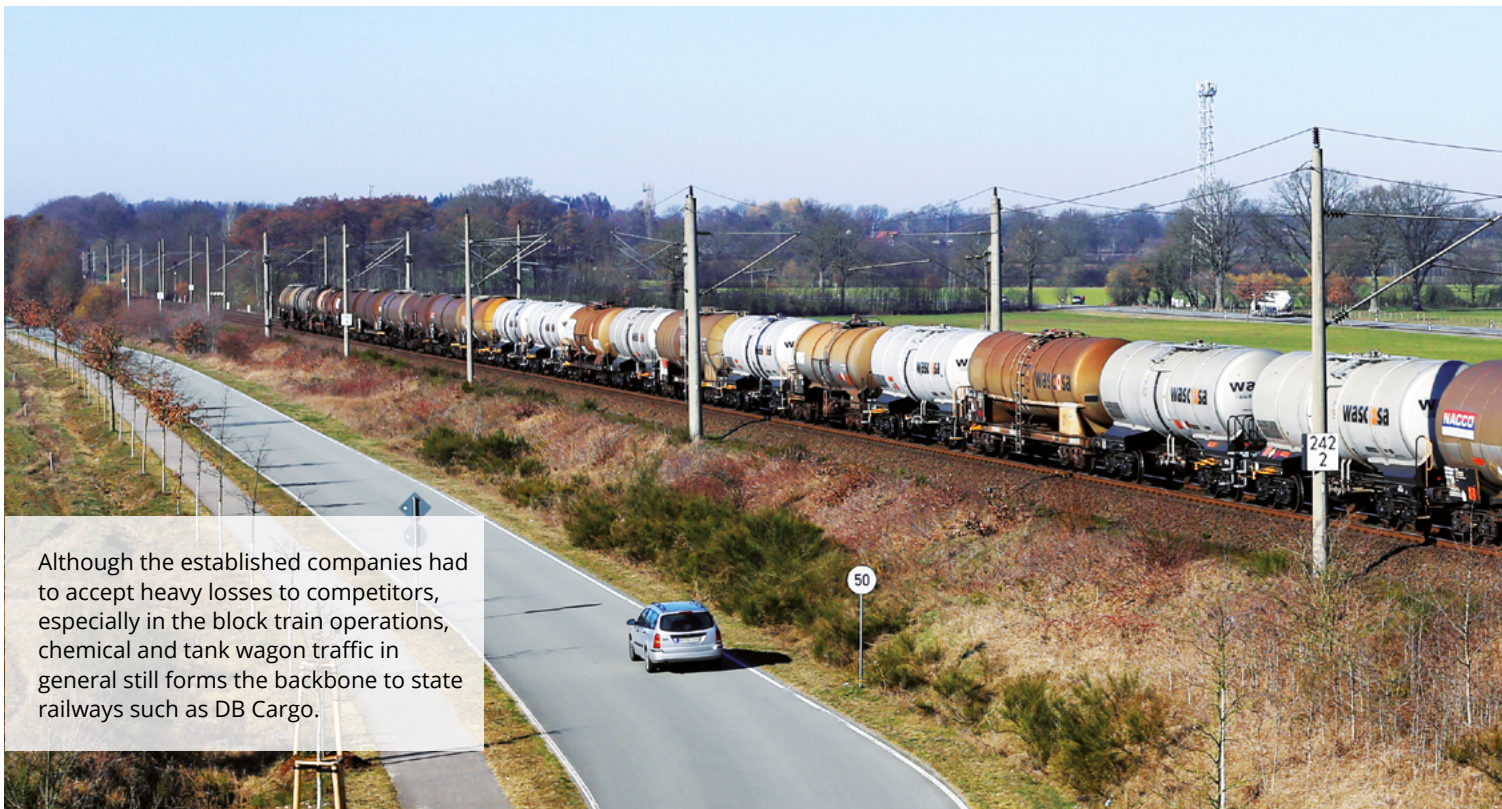
Expansion or sale as predominant reactions

A prominent pioneer among the expanding companies was the Deutsche Bahn. Over time, its model of a customer-focussed, integrated logistics provider with different divisions – with rail transport being just one of them – was adopted by the likes of the SNCF (France), PKP Cargo (Poland), FS (Italy) and ÖBB (Austria), all current or former state-owned companies. In Belgium, Portugal, Hungary and Denmark, on the other hand, government decision-makers opted for the sale of the freight railways. In Switzerland, a logistics consortium was brought on board by the rail freight company SBB Cargo.

Lack of profitability often unchanged

The rail freight companies that remain in state hands often suffer from business that continues to be unprofitable. Keyword: Strong trade unions and often politically imposed single wagon networks with strong market relevance but high costs. Several railways are trying to achieve a leap in quality and efficiency with special subnetworks in this segment. Examples include individual products of DB Cargo and the Green Xpress Network of Lineas from Belgium, which is now also completely privatised. A new initiative known as the "Network for the Future of Single-Wagon Transport" involving closer integration of DB Cargo's "black network" with the services or private and municipal railways was launched at the beginning of May 2021 under the auspices of the industry association VDV.

It has taken a long time for the effects on the state railway fleets to become apparent on a larger scale. While competitors have long been using rental locomotives from corresponding pools that can be operated across borders, DB Cargo and others were late in converting their electric locomotive fleets which could only operate nationally or at most just over the borders "of



Although the established companies had to accept heavy losses to competitors, especially in the block train operations, chemical and tank wagon traffic in general still forms the backbone to state railways such as DB Cargo.



Photos: © Karl Arne Richter

For its expansion, Lines, which emerged from the Belgian National Company of Belgian Railways (NMBS/SNCB), relies on a close partnership with the locomotive rental company Railpool. Railpool provides TRAXX MS locomotives in the required country configurations.



neighbouring countries” to multi-system locomotives. In the meantime, almost all established companies have modern fleets with multi-country capability along the transport corridors.

DAC as beacon of hope

The big hope is the digital automatic coupling (DAC), which industry experts say is long overdue (see interview with Stefan Hagenlocher on page 8ff.). The European DAC Delivery Programme (EDDP) facilitated by Shift2Rail is dedicated to the successful implementation of DAC. By 2030 at the latest, all 500,000 freight wagons in Europe should have DAC once the current test phase has been completed.

**After forging forward:
Current overview of the
international railway
undertakings, see page 16.**

UIC – Joint successes thanks to close, cooperative collaboration

Rail is the key to reducing emissions in freight transport. Innovations are indispensable for this. With the Global Rail Sustainability Taskforce and other initiatives such as the Rail Freight Forward Coalition (RFF), the International Union of Railways (UIC) enables success for the sector.

By François Davenne, UIC Director General

Global greenhouse gas emissions from transport are continuing to increase, accounting for 14% of all emissions in 2018. In Europe, the railways account for 18% of freight transport in tonne-kilometres, but are responsible for only 0.4% of overall greenhouse gas emissions. Rail is the only mode to have reduced its emissions, down by 2% between 2000 and 2018. Many of our European members committed as early as 2005 to drastically reducing emissions and energy use and they have done just that; freight improved efficiency by 28% (kWh/tkm) between 2005 and 2019.

As the only worldwide railway association, UIC believes that today's challenges can only be met by shifting to rail as the backbone of a seamlessly connected sustainable mobility system. The recent Intergovernmental Panel on Climate Change (IPCC) report once again makes it clear: there is

an urgent need for rapid and decisive action, and the railways are ready to step up.

The next ten years will be pivotal. The railways will play a key role in mitigating climate change as the backbone of a decarbonised and sustainable mobility system. We need a systemic solution that mobilises innovation and brings about a shift in behaviour. As rail becomes the backbone of mobility, and with infrastructure capacity enhanced by interoperable innovation, the railways will be able to handle ever-increasing mobility demands.

Digital, intelligent future in rail freight transport

The railways will be digitalised and "smart" to optimise existing system usage, ensuring seamless connection to all other modes of transport and thus offering an excellent customer experience for greater numbers

of passengers and freight customers. The developments will revolve around greater automation of processes, the Internet of Things and artificial intelligence, amongst others. This will be made possible by focusing on a new telecommunications infrastructure that makes the best use of 5G technology, which is being developed by all railway stakeholders.

We are confident that the Europe's Rail Joint Undertaking under Horizon Europe will provide the sector with an ambitious innovation programme that aims to transform European transport. UIC is particularly proud to be actively involved in the system pillar to which it can contribute with expertise in key domains.

Specifically concerning the freight sector, the Rail Freight Operators organised in the RFF coalition are already now driving the implementation of technology game changers (Digital Platform, Digital Capacity Management, Digital Automatic Coupling, ERTMS, ATO) essential to making rail freight seamless, interoperable and easier to use for which the support of programmes such as Connecting Europe Facility and Europe's Rail Joint Undertaking are essential.



Photo: © ÖBB Rail Cargo Austria, David Payr



International Union of Railways (UIC)

UIC is the worldwide organisation for the promotion of rail transport at a global level and collaborative development of the railway system. It was founded in 1922 at an international conference in Paris with the original principal task to harmonise and improve conditions for railway constructions and operations. Initially the UIC had 51 members from 29 countries. Until mid-2006, i.e. until the introduction of the General Contract of Use for Freight Wagons – GCU, the UIC was responsible for issuing and maintaining the «RIV Convention». Since, UIC is a member of the GCU committee and operates as its technical back office on behalf of the parties.

Today the UIC brings together some 200 members on all 5 continents, among them rail operators, infrastructure managers, railway service providers, etc. UIC maintains close cooperation links with all actors in the rail transport domain right around the world, including manufacturers, railway associations, public authorities and stakeholders in other domains and sectors whose experiences may be beneficial to rail development. The UIC's main tasks include understanding the business needs of the rail community, developing programmes of innovation to identify solutions to those needs and preparing and publishing a series of documents known as IRS that facilitate the implementation of the innovative solutions.

Sector collaboration as an accelerator

UIC's strategy is consistent with the strategy outlined in the Green Deal. The recently launched Global Rail Sustainability Taskforce accelerates action for decarbonisation not only in our own sector but also in combination with the other modes. This new taskforce, with representatives from all regions, has begun its work to create a global vision for 2030. The results will be presented at the upcoming UN Climate Change Conference COP26.

We will be able to find a solution to this global issue only if we align our efforts

through international cooperation and continue to adopt a collaborative approach.

The Rail Freight Forward (RFF) coalition, managed by UIC Freight Department, is a prominent example of this willingness to collaborate internationally and promote a systems approach in order to deliver fast tangible results. Successes have been realised thanks to this focused and hands on approach supported by the highest level of management. Rail freight has never been as prominently on the radar of policy-making discussion.



“With the DAC, not everything is perfect, but it is getting better.”

The third attempt to introduce automatic coupling in rail freight transport is running at full speed in Europe. The European DAC Delivery Programme (EDDP), initiated by the EU Commission, took over the lead in autumn 2020. In an interview with Stefan Hagenlocher, Project Manager of the Technical Innovation Circle for Rail Freight Transport TIS and Managing Director of hwh Gesellschaft für Transport- und Unternehmensberatung mbH we discuss where the prospects of a digital automatic coupling (DAC) lie and what challenges still have to be overcome as part of its introduction.



Stefan Hagenlocher

The projects in the 70s and 90s failed because of a lack of funding and strategy for implementation. So why should the project be successful now?

In the first two attempts, only the coupling was to be automated. Safety would have been improved, but not productivity. Today, a digital automatic coupling (DAC) is to be introduced. Not only are the mechanics coupled automatically, but also the air-brake lines as well as a power and a data line. This will make it possible to automate many of the process steps, such as the brake test, the recording of the wagon sequence or the technical inspection of the wagons. Today, it takes two to three hours to prepare a train for departure. Once DAC is up and running, this should be possible in 20 to 30 minutes.

Where does the project stand now?

All major players in European rail freight transport are involved in the EDDP. An important milestone was reached in September 2021 with the decision in favour of the Scharfenberg coupling as the future stand-

ard coupling type. In the run-up to this decision, four prototypes were put through their paces in two major test projects over a period of 12 months. In Germany, the DAC4EU Consortium carried out over 400 different coupling tests with each type on a test site. At the same time, the four types were tested in Sweden to assess their suitability for winter use.

In the spring of 2021 the prototype of an SA3-DAC from CAF was withdrawn from the tests by its manufacturer. In the end, there were three types of couplings on the shortlist: two so-called Scharfenberg couplings from the manufacturers Voith and Dellner, and a Schwab coupling from the manufacturer Wabtec.

Based on the test results, the Scharfenberg couplings were the ones chosen. These two prototypes will have technical improvements made to them before they go into series production. The life-cycle costs, i.e. the production costs as well as the operating and maintenance costs, will

now be examined again in detail. But this decision was an important milestone. And what is particularly pleasing is that it was one that was taken earlier than originally planned. Valuable time has been saved for preparing the next steps.

What is the next step?

The objective is an open European DAC standard. The basic condition for all 4 manufacturers who took part in the prototype tests was that their design should be licence and rights free. So what was chosen was not a model from a particular manufacturer, but a Scharfenberg type,

“It would be unacceptable for there to be driverless electric trucks on the roads in Europe in 2040 whilst manual coupling is still being used for rail freight transport.”

which will in the future be available on the market from a wide variety of manufacturers. It's not just the coupling which will be standardised by CEN, the European standardisation body, but also the energy and communications system which will be standardised by CEN ELEC.

In addition, the legal framework conditions must be created. For this, the DAC must be included in the next revision of the Technical Specifications for Interoperability (TSI) in 2022. The next revision would not be until 2027.

Is practical experience still being gained with the selected prototype?

Yes, as part of the DAC4EU project, a demonstration train with Scharfenberg couplings will travel through Germany, Austria and Switzerland as well as other

European countries until the end of 2022. In particular, the DAC freight wagons will be used to test shunting procedures in marshalling yards, but also in sidings. Any faults that occur will be reported back to the manufacturers so that they can take the development to a stage where the prototype is a product ready for series production.

“Today, it takes two to three hours to prepare a train for departure. Once DAC is up and running, this should be possible in 20 to 30 minutes.”



In rail freight transport, Europe is the last (entire) continent where screw couplings are still used.

What are the challenges in implementing the project?

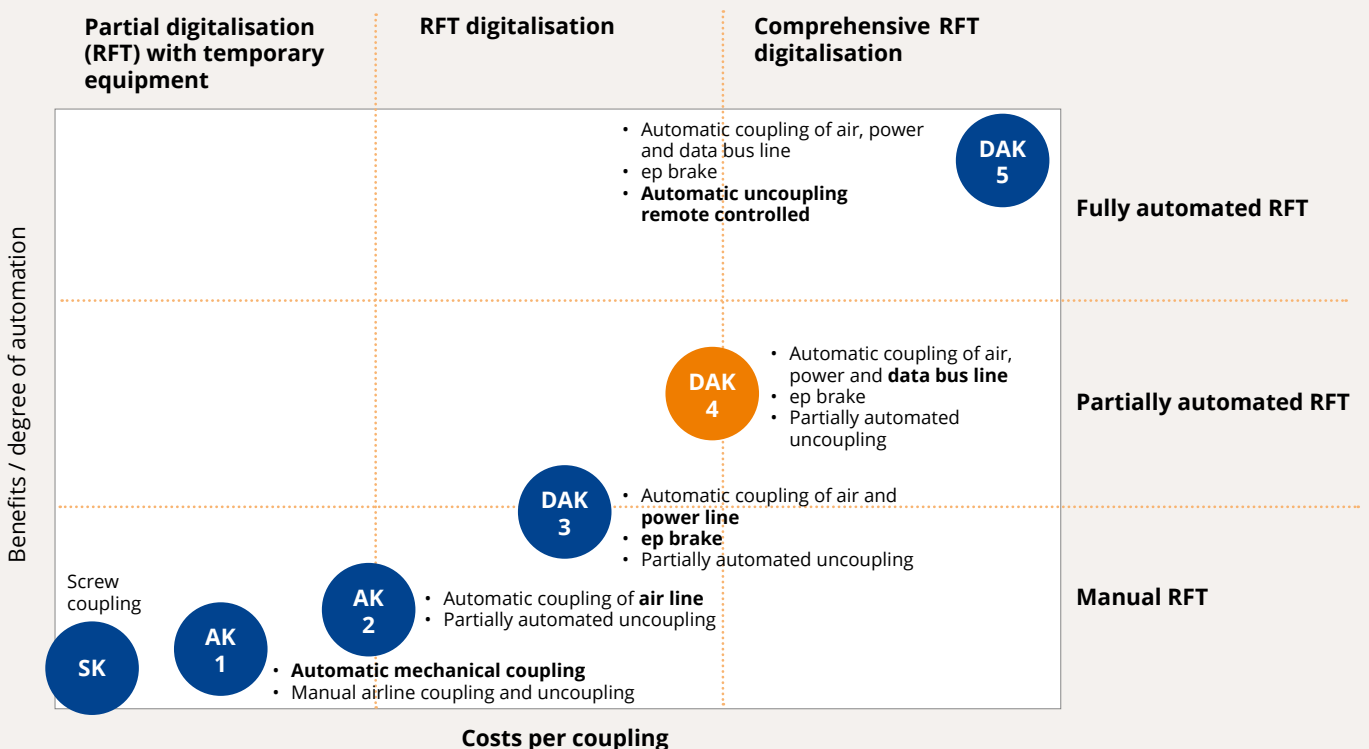
The first challenge is financing. The introduction of the DAC including a standardised energy and communication system costs billions. The payback period is very long. From an economic point of view, it is not worthwhile for the wagon owners to pay 100% of this investment themselves. Nor does the industry have the means to do so. The introduction of the DAC will only work with massive funding from the

EU and national member states. In Switzerland, the Federal Office of Transport (FOT) has a project aimed at achieving this. It's called "Automation of rail freight transport", in which, for example, the financial share of state support in Switzerland is discussed. The same thing is happening at EU level at the moment.

The second challenge is the introduction or the migration project. This will involve the conversion of 430,000 to 480,000 freight

wagons and approx. 17,000 locomotives. And no matter from which manufacturer a future standard Scharfenberg DAC is purchased, it will not be compatible with today's screw coupling. From the first day of introduction, two incompatible coupling systems must be operated side by side. This must be planned extremely carefully. Major interruptions of operations or delays must be prevented.

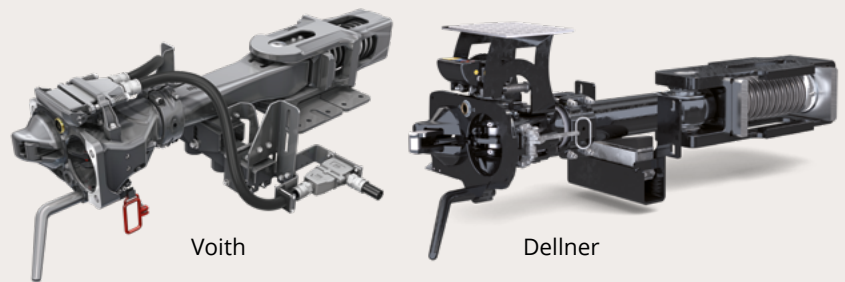
EDDP is pursuing the introduction of a DAC of type 4 or type 5



Source: hwh Gesellschaft für Transport- und Unternehmensberatung mbH

The selected DAC coupling head (Scharfenberg type) and selected technical specifications

- Designed for 1,000 kN tensile forces and 2,000 kN compressive forces without plastic deformation
- Installation space according to UIC 530-1
- Weight of DAC equal or less than screw couplings and buffers
- Collecting range according to UIC 522
- Automatic connection of 5/4"-air line
- Connection of a second main tank line possible and to be decided (for full ep brake functionality)
- Hybrid coupling for locomotives and coupled wagons for compatibility with screw couplings
- DAC type 4 with upgrade concept to DAC type 5 (installation space for actuator as well as radio chips for remote uncoupling required)
- Specification for electric power system under development (not yet confirmed and decided):
 - 110-V power line with 16 mm² diameter
 - At least 30 W per wagon (for 835 m train, 50 wagons) – correspondingly higher for trains with fewer wagons or shorter length
 - On-board power distribution with 48 V
 - Buffer batteries are included in concept
- Specification for communication system under development: On-board communication system for safety-relevant information required by the driver (e.g. train complete, automatic brake test, etc.)
 - Communication architecture under construction
 - Various communication technologies are being evaluated and tested (WTB, ETB, Single Pair Ethernet, CAN-FD, Powerline plus, short-range radio) – communication technology still to be selected
 - Adaptation to the higher layers of existing communication standards



What is the earliest conceivable date for migration?

If everything continues to go according to plan, the DAC should be ready for implementation by 2025. It is not yet known how long the migration will take, but it should be as short as possible in order to minimise additional operational burdens during the migration.

“The first challenge is financing. The introduction of the DAC will only work with massive funding from the EU and national member states. The second challenge is the introduction of the migration project. This will involve the conversion of 430,000 to 480,000 freight wagons and approx. 17,000 locomotives.”

And what would happen if the project fails?

It would be unacceptable for there to be driverless electric trucks on the roads in Europe in 2040 whilst manual coupling is still being used for rail freight transport. This is also the answer to your question about why the introduction of the DAC should work now, when it has already failed twice: because it must work. Otherwise, don't expect much to happen on the railways in the future. For express parcels or other goods for which the transport is time-critical, such as consumer goods, railways are currently only competitive in certain limited conditions and will not become so without DAC. Many bulk commodities such as mineral oil or coal will decline sharply as we move over to new energies. What will perhaps remain will be containers in intermodal transport.

However, what is needed in terms of transport policy is a bigger market share for rail compared to road, not the other way round. Because traffic emissions are still rising and there is no way that the climate goals set by the Paris Agreement will be

“Based on the test results, the Scharfenberg couplings were the ones chosen. And what is particularly pleasing is that it was one that was taken earlier than originally planned. Valuable time has been saved for preparing the next steps.”

achieved if we don't change things. In Germany, the modal split is to be increased from 18 per cent today to 25 per cent by 2030. But without DAC, how are we supposed to double rail transport services? We need a more attractive offer, lower costs, shorter turnaround times, etc. on the railways. With the DAC and the automation of processes, not everything will be perfect, but it will be better.

The future belongs to modular logistics concepts

Modular systems offer large companies enormous efficiency gains in rail freight transport, because the big costs occur in the first and last mile. In this respect, BASF has been a pioneer and a success story that shows what is possible when an entire logistics concept is optimised using modular systems and automation.

“Dismantling a freight train and bringing the individual wagons to the loading points – some of which are kilometres apart – is time-consuming and cost-intensive,” explains Stefan Hagenlocher, Project Manager of the Technical Innovation Circle for Rail Freight Transport TIS and Managing Director of hwh Gesellschaft für Transport- und Unternehmensberatung mbH in Karlsruhe. Many special freight wagons are also used as temporary storage facilities for the transported goods. They often stand around for days until they are finally unloaded before returning to their place of origin empty or with a new load.

Lower investment, maintenance and operating costs

Modular freight wagon systems are significantly more efficient: because there is no fixed connection between the carrying wagon and the container, the container with the transported goods can be removed from the wagon and stored temporarily without any problems. The carrying wagon, however, can be immediately reloaded with new containers. The savings potential is considerable: “If we assume that a company will only need 1,000 carrying wagons instead of 2,000 special freight wagons in the future, it can significantly

reduce its investment, maintenance and operating costs, even if it has to use 3,000 containers,” explains Hagenlocher.

The increase in productivity is reflected in the mileage: while special freight wagons have an average mileage of just 30,000 to 50,000 km per year, modular, standardised carrying wagons cover three or four times that distance, i.e. 150,000 to 200,000 km per year.

Standardisation of the interface

A working group within the Technical Innovation Circle for Rail Freight Transport (TIS) is currently working on a possible standardisation of the interface between the carrying wagons and containers/superstructures of the modular freight wagon systems: “It will take some time before we have a European standard,” explains Hagenlocher, “but from my point of view modular systems will be essential in the future.”

BASF: The showpiece in Europe

BASF has built a fully automated terminal and tank container storage facility on its site in Ludwigshafen, Germany. With virtually no staff, the tank containers are lifted from the trains, temporarily stored or transported to the different loading points by a driverless vehicle. BASF changed its entire logistics concept for this purpose and has since been held up as an example in Europe. The BASF concept involves the use of more than 400 Wascosa flex freight system® carrying wagons.



On track for success: The Wascosa flex freight system®

The concept behind the Wascosa flex freight system® was launched back in 2009 when Wascosa presented an open, modular bulk freight wagon at the transport logistic trade fair. There will soon be around 1,000 Wascosa modular freight wagons travelling throughout Europe.

“The order for the innovative BASF tank containers was our breakthrough. In the last two years alone, we have doubled the number of basic wagons from 500 to 1,000 while also increasing the number of market areas and customers. This means that the Wascosa flex freight system® has finally arrived on the right track for success. The many enquiries from all over Europe demonstrate that the flexibility and

efficiency of the system is both convincing and in great demand,” explains Irmhild Saabel, Head of Business Development at Wascosa.

BASF has already replaced a large share of its chemical tank cars with Wascosa’s new freight wagon systems. Modular wagon concepts are also becoming more and more popular in other market segments

such as bulk freight, timber or steel. In addition to solutions for heavy tank containers in single wagon networks, numerous other applications are now part of the Wascosa portfolio, e.g. the transport of hot steel slabs.

Pure flexibility: from hot steel to rail construction

Currently, a larger series of Wascosa flex freight systems® with different superstructures for rail infrastructure construction is being delivered to Great Britain. This means that almost 1,000 Wascosa modular freight wagon systems will already be in use – flexibly, with a variety of customers, and in numerous markets and countries.



The Wascosa flex freight system® in use with superstructures for steel transport and rail infrastructure construction.



The brand new, white bogie bulk freight wagons Falns for thyssenkrupp Steel Europe.

thyssenkrupp Steel Europe chooses bulk freight wagons from Wascosa

In order to supply the Duisburg blast furnaces with lime, thyssenkrupp Steel Europe AG rents modern, payload-optimised bulk freight wagons from Wascosa. The newly developed wagons are more flexible and enable thyssenkrupp Steel Europe to transport its products more efficiently and cost effectively.

To supply the Duisburg blast furnaces with lime, thyssenkrupp Steel Europe AG issued in 2017 a new invitation to tender for the rental of bulk freight wagons. Since 2013 thyssenkrupp Steel Europe has been managing lime transport for the supply of the blast furnaces and steelworks by itself, using its own fleet of locomotives and rented wagons, which it maintains at its own wagon workshops.

Consciously focussed on new developments

In the new invitation to tender, the company wanted to avoid simply taking an existing "off the shelf" type of wagon. In-

stead, the focus was deliberately on new developments, on designs inspired by the experience gained from previous traffic as well as the conditions at the loading and unloading points. So, thyssenkrupp Steel Europe commissioned Wascosa (or rather Hamburg based Nacco GmbH as its predecessor was known) to supply new open bulk freight wagons capable of carrying D-loads, all of which have since proven themselves in service.

"By switching to these new, payload-optimised bulk freight wagons, we were able to transport more efficiently and flexibly – and also significantly more cost effectively.

By optimising the wagons, we were able to reduce the wagon requirement by more than 10% without changing the transport volume. The experts from Wascosa were very helpful in this respect," says Achim Figge, Head of Resource Management at thyssenkrupp Steel Europe.

Top marks for Wascosa

The satisfaction of thyssenkrupp Steel Europe with the rented wagons and the services from Wascosa is reflected in the supplier evaluation that thyssenkrupp Steel Europe regularly conducts. So it was with great pleasure that Torsten Wagner, General Manager Wascosa GmbH, proudly accepted the positive service provider rating as "Preferred Supplier" (A-supplier) from thyssenkrupp Steel Europe at the beginning of 2020. The underlying criteria cover the most diverse areas of cooperation such as purchasing, quality, logistics and technology. The assessment is carried out by a cross-functional team.

About thyssenkrupp Steel Europe AG

Thyssenkrupp Steel Europe AG is one of the world's leading manufacturers of high-quality flat steel and stands for innovations in steel and high-quality products for the most modern and demanding applications. thyssenkrupp Steel Europe AG employs around 27,000 people and, with a production volume of approximately 11 million tonnes of crude steel annually, is the largest flat steel manufacturer in Germany. The company meets the increasing demands for ever more efficient lightweight construction and safety standards, researches and develops new high-performance steels and sets standards in surface and processing technologies. A wide range of industries are served internationally, including the automotive industry, mechanical engineering, special vehicle construction, the household appliance and packaging industry, the energy sector and the construction industry. thyssenkrupp Steel Europe has set itself the goal of producing 3 million tonnes of CO₂-neutral steel annually as early as 2030. By 2050, steel production is to be completely climate-neutral.



Achim Figge, Head of Resource Management, and Bert Kloppert, Head of Transport and Logistics, from thyssenkrupp Steel Europe AG, receive a picture of the bulk freight wagon from Torsten Wagner, General Manager of the Hamburg branch of Wascosa AG, on the occasion of the wagon delivery (from left to right).

Cooling with electricity instead of diesel: Irmhild Saabel receives the award for innovation

In mid-October 2021, the Allianz pro Schiene ("Pro Rail Alliance") transport association awarded both railway pioneers, Irmhild Saabel of Wascosa AG and Julia Kuhfuss of S-Bahn Hamburg GmbH, with the Clara Jaschke Innovation Award at Hamburg's ITS World Congress trade fair. Whereas Irmhild Saabel received the award for her management of the project to develop Wascosa freight wagons that keep perishable goods chilled using electrical instead of diesel engines, Julia Kuhfuss won an award for developing a new system for measuring the utilisation of the Hamburg S-Bahn.



In 2021, Wascosa submitted an application for a European approval for the Wascosa e-car® to the European Union Agency for Railways (ERA).



2021 Clara Jaschke Innovation Award for Irmhild Saabel and Julia Kuhfuss (from left to right).

Perishable products are currently chilled by means of diesel engines when transported by rail – previously there was no electrical solution for doing this. However, diesel engines are less efficient, less environmentally friendly, and noisy. Over time Wascosa managed to develop the technology to supply freight wagons with electricity and operate electrical cooling tanks which work on 400 volts of standard industrial electricity. Consequently, it is now possible for many more goods to be transported by rail rather than by road. As Irmhild Saabel was keen to stress at the award ceremony in Hamburg, "This has huge potential. We are certain that quite a few thousand wagons in Europe can be equipped with them. A lot of traffic from this sector currently goes by road."

Award for creativity, ingenuity and know-how

The Clara Jaschke Innovation Award recognises ingenious women in the railway industry. It is organised by the Allianz pro Schiene transport association. The jury includes well-known traffic and railway industry associations from Germany and

Austria. Both of this year's award winners, Irmhild Saabel and Julia Kuhfuss, were commended for using their creativity, their ingenuity, and their know-how to drive progress in rail freight transport. The organisers had this to say in the award ceremony's press release: "The railway industry needs this pioneering spirit so that it can continue to innovate and develop its environmental and competitive advantages over other modes of transport in the 21st century".

Ambitious innovations require a lot of courage and confidence

Wascosa would like to congratulate Irmhild Saabel on this innovation award and the company is very happy for her. In congratulating the award winners in Hamburg, Peter Balzer, CEO of Wascosa, said: "I am very proud and grateful that Irmhild Saabel has won the Clara Jaschke Innovation Award. She more than deserves this recognition. At Wascosa it is our fascination for rail freight transport that drives our ambition to innovate. It requires a lot of courage, and even more confidence, as well as a bit of a "rebellious" streak but, most



importantly of all, plenty of resilience to overcome those temporary setbacks along the way. Irmhild Saabel is the embodiment of all these qualities which have helped her and Philipp Müller develop innovation at Wascosa over the last 16 years. However, it takes more than one person to pull off a project like the Wascosa e-car®, which is why I would also like to sincerely thank our project partners TU Berlin, Siemens Mobility, and the Swiss Federal Office of Transport. Irmhild, please accept my heartiest congratulations on this outstanding award".

Calendar of events

Due to the Covid 19 pandemic, changes in dates, venues and the form of the events (e.g. online) are still possible. It is recommended to consult the individual websites of the organisers for the definitive dates and type of event.

Date	Event	Location	Website
2021			
07.12.2021	RNE General Assembly	Vienna, AT	http://rne.eu/calendars
07. - 08.12.2021	European Silk Road Summit 2021	Amsterdam, NL	www.silkroadsummit.eu
08.12.2021	Xmas Lunch 2021	London, UK	www.rfg.org.uk/allevvents
09.12.2021	99th UIC General Assembly	Paris, FR	https://uic.org/events
09. - 10.12.2021	Shift2Rail Innovation Days	Brussels, BEL	https://shift2rail.org/calendar
2022			
Beginning of 2022	European Railway Award 2022	Pending	www.europeanrailwayaward.eu
10. - 11.01.2022	VPI New Year reception and VPI Symposium	Hamburg, DE	www.vpihamburg.de/veranstaltungen
21.01.2022	15th VAP-ECM Exchange of experiences	Olten, CH	https://cargorail.ch
01. - 02.02.2022	15th BME/VDV-Forum Rail Freight Transport	Berlin, DE	www.bme.de/2022/15-bme-vdv-forum-schienengueterverkehr
08.02.2022	RFG Member's Party	London, UK	www.rfg.org.uk/allevvents
09. - 11.02.2022	Fruit Logistica	Berlin, DE	www.fruitlogistica.com
15. - 17.02.2022	11th International Railway Summit	Berlin, DE	www.irit.org
08. - 10.03.2022	Railtech Europe 2022	Utrecht, NL	https://events.railtech.com
End of March 2022	VAP Forum Freight Transport	Zurich, CH	https://cargorail.ch
29.03. - 01.04.2022	Intertraffic 2022	Amsterdam, NL	www.intertraffic.com
05. - 08.04.2022	Semaine Internationale du Transport et de la Logistique (SITL)	Paris, FR	www.sitl.eu
20. - 21.04.2022	6th Railtech Track Access Charges Summit 2022	Riga, LVA	https://events.railtech.com
Spring 2022	VPI Austria General Assembly	Vienna, AT	www.vpirail.at
Spring 2022	IBS Spring Convention	Pending	www.ibs-ev.com
Early May 2022	RFG Spring Group Meeting	Pending	www.rfg.org.uk/allevvents
10. - 12.05.2022	Railtex / Infrarail 2022	London, UK	www.uk-railhub.com
11. - 13.05.2022	F&L Meeting	Luxemburg, LUX	www.europeanfreightleaders.eu
18. - 20.05.2022	UIC world congress on rail training, talent and development	Moscow, RUS	https://wcrt.uic.org
18. - 20.05.2022	ITF Summit 2022	Leipzig, DE	www.itf-oecd.org
19.05.2022	UIRR General Assembly	Brussels, BEL	www.uirr.com
06. - 10.06.2022	World Congress on Railway Research	Birmingham, UK	www.wcrr2022.co.uk
Not yet defined	AFWP General Assembly	Pending	www.afwp.asso.fr
13. - 16.06.2022	Technical Meetingw	Vienna, AT	http://rne.eu/calendars
20. - 22.06.2022	VDV Annual Convention 2022	Frankfurt a.M., DE	www.vdv.de/vdv-jahrestagung.aspx
22. - 23.06.2022	VPI Get Together and 22th Technical information day	Berlin, DE	www.vpihamburg.de/veranstaltungen
20. - 23.09.2022	InnoTrans 2022	Berlin, DE	www.innotrans.de


Impressum

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International railway undertakings

Overview of all international railway undertakings operating in at least three countries with their own licence.

Group	Name	Head office																						
			DE	DK	SE	NO	BE	NL	LU	FR	ES	CH	IT	PL	CZ	SK	AT	HU	RO	BG	SI	HR	RS	GR
State owned	ČD Cargo	CZ-Prague	●																					
	DB Cargo	DE-Mainz	●	●	●		●											●						
	Mercitalia Rail / TX Logistics	IT-Rome	●	●																				
	Rail Cargo Group / RCC	AT-Vienna	●																					●
	SNCF Logistics / Captrain / Railtraxx	FR-Paris	●				●																	
Privatised	LINEAS	BE-Antwerp	●				●																	
	PKP Cargo	PL-Warsaw	●																					
	BLS Cargo / Crossrail Benelux	CH-Bern	●				●																	
Public-Private	CFL cargo	LU-Bettembourg	●	●	●																			
	LTE / Adria Transport	AT-Graz	●				●																	●
	HHLA / METRANS Rail	CZ-Prague	●																					●
	SBB Cargo International	CH-Olten	●				●																	
	Budamar Logistics	SK-Bratislava																						
Private	CER Cargo	HU-Budapest																						●
	EP Cargo / LOCON	CZ-Prague	●																					
	Exploris / HSL Logistik / Delta Rail	DE-Hamburg	●				●																	
	FOXrail	HU-Budapest																						
	G&W Europe / Freightliner / RRF	UK-London	●				●																	
	Hector Rail	SE-Danderyd	●	●	●																			
	Grampet / GFR / GCA / Eurorail	RO-Bucharest																						
	Petrolsped / MMV	HU-Budapest																						
	Railtrans International (RTI)	SK-Bratislava	●																					
	R.A.T.H. / RTB CARGO	DE-Aachen	●				●																	
ŠPED-TRANS / PSZ	SK-Bratislava																							
S-Rail / Ten-Rail	AT-Salzburg	●																						
twentyone GmbH	AT-Vienna	●																						
VTG Rail Logistics / ReTrack	DE-Hamburg	●																						
WRS Widmer Rail Services	CH-Glarus	●																						

Legend: ● = licence available / ● = licence applied for