

# HELROM

## Trailer Rail

**FOR CLIMATE-  
NEUTRAL FREIGHT  
TRANSPORT  
IN EUROPE**

**PRESS FOLDER**

May 2024



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## THE TECHNOLOGY: BARRIER-FREE

The Helrom Trailer Rail overcomes the barriers of previous approaches to combined freight transport. A truck trailer is simply shoved into the Helrom wagon without a loading terminal or crane. All that is needed is an asphalted surface next to the track. With this globally patented technology, Helrom can put 100 % of all truck trailers on the rails without much effort – with only with only 2 minutes loading time per trailer.

Helrom offers booking options for individual truck trailers on open train connections to enable small and medium-sized companies to shift goods sustainably.

Through exclusive block trains, Helrom contributes to the decarbonization of industrial companies' supply chains and enables up to 90 % CO<sub>2</sub>e reduction with comparable operating costs to road transport.

## THE GOAL: NET ZERO TRANSPORT

The climate targets cannot be achieved without a transport revolution in freight transportation. To this date, this transportation has mainly taken place on the roads. In Germany alone, road traffic is responsible for 20 % of all carbon emissions, not least due to freight transport. Truck semi-trailers, or trailers, account for 78 % of road freight transport. But so far only 2 % of all trailers travel by rail. The reason for this are technological and infrastructural barriers.

In order to put more truck trailers on the rail, we need simple and fast solutions for combining road and rail. Offers that are also feasible and economically viable for small and medium-sized companies.



© Helrom / top Photo: Norbert Miguletz

## THE FACTS:

- No investment in expensive loading terminals. An asphalted surface next to the track is all that's required.
- 100 % of all truck trailers can be loaded quickly and without barriers.
- The Helrom train causes only 10 % of the climate-damaging emissions compared to road traffic.
- To date, only 2 % of all trailers travel by rail.
- Every trailer on a Helrom wagon saves an average of 984 kg of carbon emissions per 1,000 km compared to a truck.

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## Trailer Rail

Helrom Press Release  
April 2024

# HELROM LAUNCHES EXCLUSIVE BLOCK TRAIN FOR AUDI AG

# HELROM

## Trailer Rail

Press Release

## Helrom launches exclusive block train for AUDI AG



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**With the official launch on April 4, 2024, the first exclusive Helrom block train is set to take off. The new Helrom Trailer Rail connection is part of AUDI AG's logistics chain and connects the supply of materials for the three Audi sites in Ingolstadt, Neckarsulm and Győr via the rail route from Regensburg in Germany to Lébény in Hungary. The project is a cooperation between AUDI AG, the Duvенbeck logistics group, bayernhafen and Helrom.**

**By integrating this innovative intermodal concept into the Audi supply chain, Helrom GmbH is making a decisive contribution to saving up to 11,500 tons of CO<sub>2</sub> emissions per year on this route.**

**Frankfurt, 4. April 2024** – After a planning and implementation phase of less than 12 months, Helrom's first exclusive block train will commence operations on April 4 following a festive opening event. The globally patented technology of the Helrom trailer wagon makes it possible to load all types of truck semi-trailers onto a train without special terminals and cranes – a significant step towards more climate-friendly and efficient logistics. In combination with Duvенbeck's sustainable truck drive concepts for pre- and on-carriage, the new connection between Regensburg and Lébény in Hungary will save up to 11,500 tons of CO<sub>2</sub> emissions per year.

# HELROM

## Trailer Rail

The new connection is part of AUDI AG's Mission:Zero sustainability strategy and the first realization of barrier-free rail transport of truck semitrailers as an exclusive block train. Audi is thus setting new standards in transport logistics. The Helrom train travels 1,000 km per round trip (Regensburg-Lébény-Regensburg) in just 24 hours. Within these 24 hours, the train travels there and back and the loading and unloading takes place in Regensburg and Lébény.

Each train consists of 18 wagons that can transport 36 trailers. This means that 72 trucks are shifted from road to rail every day from Monday to Friday, resulting in a weekly reduction in truck transport performance of around 185,000 kilometers.

Roman Noack, CEO of Helrom, speaks of a major step for the company and emphasizes the forward-looking nature of the new block train connection: *"With our innovative technology, we are overcoming the barriers of previous intermodal transport. By eliminating the need for special terminals for loading semi-trailers, we are integrating ourselves smarter into the supply chains, completely without detours. We are also faster and more reliable than previous intermodal transport. The efficient networking of different technologies and transport routes such as road and rail to form a Physical Internet of Semi-Trailers via Helrom hubs as smart interfaces is key to achieving climate targets in freight transport."*

According to Roman Noack, the basis for the successful implementation of this project was above all the good cooperation between all those involved: *"The successful start is the result of a shared vision between Audi, Duenbeck, Helrom and bayernhafen. The project shows that innovative technology makes it possible to harmonize environmentally friendly solutions with economic interests and social concerns."*

**Dieter Braun, Head of Supply Chain AUDI AG:**

*"Consistent decarbonization is one of our central challenges in the supply chain. At Audi, we are pursuing a holistic approach to optimizing the logistics processes between our suppliers and our plants. This project shows that we are also integrating innovative and climate-friendly solutions from partners in our supply chain."*

[www.audi.com](http://www.audi.com)

**Norbert Joichl, COO South/East Duenbeck:**

*"Intermodal block train concepts are an important part of our strategy to reduce CO<sub>2</sub> emissions. We are delighted to be implementing this project with innovative partners such as Audi and Helrom. In addition to the train handling by Helrom, we will use alternative technologies in the pre- and onward carriage."*

[www.duenbeck.de](http://www.duenbeck.de)

**Joachim Zimmermann, bayernhafen Managing Director:**

*"In combined transport today, we mainly see containers. Now we are looking at solutions for the large trailer volumes on continental routes. We are open to all proposed solutions here. With the trailer port, we have set the course for this segment in particular at an early stage."*

[www.bayernhafen.de](http://www.bayernhafen.de)

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# HELROM

## Trailer Rail

Deutsche Verkehrszeitung

June 2022

Author: Heinrich Klotz

# INTERVIEW WITH HELROM DIRECTOR OF SALES BRUNO WEISSMANN



Helrom's cargo handling technology is in the wagon. The loading unit switches by shunting between road and rail.

## WHAT DRIVES HELROM

**Horizontal handling without terminal: the provider has cornered the market with its special wagon technology. Sales director Bruno Weissmann answers the questions of the DVZ.**

**DVZ: What are the advantages of the Helrom cargo handling system compared to the conventional combined transport which is of course handled vertically?**

Bruno Weissmann: Our system enables barrier-free access to intermodal transport for hauliers with non-craneable trailers. Since we don't just organise handling but also perform the rail transport, we have control over the entire value chain which is not performed on the road. This allows us to offer our clients a very high quality of service. Handling times are short. Our express trains provide transit times in intermodal transport which are close to those of road transport. We are flexible in the choice of our start and end point, as we only require a long track and a paved road running parallel to it as well as a guaranteed parking space for trailers.

**Bimodal transportation also claims that it doesn't require a terminal for switching to rail – but they make do without expensive wagons. In your opinion, why is Helrom still better?**

Is there a significant volume of bimodal transport available on the European transport market? More than 90 per cent of trailers in Europe are non-craneable; we enable them access to the rails.

**Why are special horizontal handling systems, such as those by Helrom, needed when there are already well-established handling aids which enable access to the conventional handling terminal for non-craneable trailers?**

The 2030 climate targets are not achievable by building new terminals. Our system is easily scalable. This is why we are able to make a contribution towards the transport revolution.

**In Germany, there are high safety requirements for handling rail/road, such with regard to water protection. How are these requirements at Helrom met?**

An advantage of the Helrom technology is that the trailers or the loading units don't need to be lifted. This significantly reduces the risk of losing a larger quantity of liquid in an accident.

**The shunting onto Helrom wagons and back down again is precision work – to do this, skilled labour and specialist equipment need to be available during handling. Does that not increase the costs of the presumably simple switch?**

No. The handling is a partial process of our service. We carry out this partial process with our own employees and don't subcontract them. This means that we are in a position to optimise the throughput times and adapt them to the total transit time of the "external part" of the intermodal production process. The costs of the handling are included in the total price, which is why an isolated view is not constructive. Furthermore, our solution does away with the enormous investment costs of conventional handling systems.

**What does a comparison of the investment costs for a Helrom wagon and a classic pocket wagon look like and what about the operational costs?**

In our system, we use the assets very intensively accordingly to the model of successful transport companies (airlines or road haulage companies). When it comes to intensive use, the unit price of the wagon does not play a major role.

**If he could transport his trailer in the conventional CT system or with the Helrom system, which would be cheaper for the customer?**

The total service has to be right. For trailer volumes which

have been on the road for decades, a very high level of reliability is crucial. The price is only one component of the total product.

**Where do you see the ideal handling locations for your system – in high-volume business hubs or more in the countryside where the construction of a crane terminal is uneconomical?**

Few road miles for the pre-carriage and onward carriage and as many rail miles as possible: that is what underpins this idea. We, therefore, see ideal locations for our trailer hubs in geographic proximity to business which requires loading. The trailer hub in Düsseldorf, for example, is right by Henkel and BASF.

**Do you tend to see your system more from the perspective of a partner or a competitor of conventional providers in combined transport?**

Our mentality is focussed on cooperation. Everyone has to work together to make sure that the transport revolution works.

Bruno Weissmann

The sales specialist has been working at Helrom since April 2021. He previously worked for 20 years for the European market leader in the FTL sector, the Austrian logistics firm Lkw Walter, thus bringing along a wealth of experience in all things road haulage and the expansion of intermodal solutions. At Lkw Walter, Weissmann was most recently responsible for the Europe-Romania region as Senior Sales Manager.

Author: Heinrich Klotz



# HELROM

## Trailer Rail

Österreichische Verkehrszeitung  
April 2022

**SWISS LIFE  
ASSET MANAGERS  
BECOMES KEY  
HELROM SHARE-  
HOLDER**



## SWISS LIFE ASSET MANAGERS BECOMES KEY HELROM SHAREHOLDER

**Helrom Trailer Rail offers reliable environmentally friendly rail transport for semi-trailers on European long-haul routes.**

Helrom Trailer Rail offers reliable environmentally friendly rail transport for semi-trailers on European long-haul routes.

Swiss Life Asset Manager has concluded the acquisition of a significant share in the Frankfurt-based rail and technology company Helrom GmbH. On 21 April, the company announced that this investment supports the expansion of climate-neutral long-haul transport in Europe.

Swiss Life Asset Managers becomes a key shareholder and supports the growth ambitions of Helrom Trailer Rail to serve more European freight transport corridors. The company is a licensed rail operator with headquarters in Frankfurt, having a patented proprietary rail wagon technology which enables the efficient loading of semi-trailers onto rail wagons without the need for a crane or extensive terminal infrastructure.

Due to the proven success of the proprietary technology on the connection between Düsseldorf and Vienna, Helrom aims to expand its business to various routes across Europe to cover a major unmet demand for rail transport of semi-trailers. The company's transport system has a simple timetable which, unlike conventional rail freight transport, does not include any complex train rotations. This leads to a punctuality and reliability rate which is unique on the market.

For Swiss Life Asset Managers, the financing of this growth plan is particularly attractive due to its major market potential and its technological leadership, backed

up by global patents and a considerable development lead. Semi-trailers are responsible for 75 per cent of European road transport, which dominates European freight transport. But only two per cent of all semi-trailers currently use rail.

For Swiss Life Asset Managers, Helrom Trailer Rail represents a market-ready technology for climate-neutral net-zero transport in Europe. Compared to an HGV, a freight train only requires 20 per cent of the energy and produces only around 25 per cent of the climate-damaging emissions of that of trucks. The argument goes that today, 92 per cent of rail transport is already electrified.

Christoph Manser, Head Infrastructure Equity International of Swiss Life Asset Managers explains: "One of the cornerstones of our investment strategy is to make a contribution towards decarbonising the economy by supporting companies with a positive influence on the environment. Our long-term view of the investment and the experience gained in the rail sector will substantially support Helrom to achieve its growth and development targets.

Roman Noack, CEO of Helrom, is very delighted "that we can take an important step forward in our development with one of the major infrastructure funds in Europe as a key investor". The commitment of Swiss Life Asset Managers underscores the target to make Helrom Trailer Rail into the infrastructure for climate-neutral long-haul transport in Europe.

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## Trailer Rail

Helrom Press Release  
April 2022

# HAFEN WIEN AND HELROM RECEIVE EL-MO AWARD 2022

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## Trailer Rail

Press Release

## Hafen Wien and Helrom receive the EL-MO Award 2022



(f.l.t.r.) Austrian Minister for Climate Protection Leonore Gewessler, Roman Noack (CEO Helrom), Monika Gindl-Muzik (Managing Director WienCont), Doris Pulker-Rohrhofer (Managing Director Hafen Wien), Secretary General of the Austrian Chamber of Commerce Karlheinz Kopf  
Foto: © www.annarauchenberger.com / Anna Rauchenberger

**The prize honours innovative companies and projects that do ground-breaking work in implementing the mobility transformation for a CO<sub>2</sub>-neutral economic cycle. The Trailer Rail loading point at the Port of Vienna, the joint project between Hafen Wien GmbH and Helrom, was also one of six award winners. The award was presented by the Secretary General of the Austrian Chamber of Commerce, Karlheinz Kopf, and by the Austrian Minister for Climate Protection, Leonore Gewessler.**

**Frankfurt, 11. April 2022** – The award ceremony took place as part of the trade congress EL-MOTION 2022 on 4 April in the Hotel Radisson Blu Park Royal Palace in Vienna. The expert jury selected six companies and projects from the submissions that make an

especially innovative and sustainable contribution to CO<sub>2</sub> reduction and the climate-neutral mobility transformation. The loading hub at the port of Vienna for the Trailer Rail connection Vienna – Dusseldorf convinced the jury with its loading technology which is unique in the world and allows conventional non-craneable truck semi-trailers to be quickly transported by rail without any terminal. The Austrian climate protection minister, Leonore Gewessler, noted at the beginning of the award ceremony how vital an award like the EL-MO award was for the public perception of the mobility transformation: *“It is important to highlight projects that demonstrate success, how this happens and how we can organise transport to ensure its operation is climate-friendly and emission-free.”*

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## Trailer Rail

The award was accepted by Doris Pulker-Rohrhofer, the technical manager of Hafen Wien GmbH, who had shown extraordinary devotion from the beginning to implementing the Trailer Rail connection between Vienna and Dusseldorf. *"I believed in this innovative project for climate-neutral freight rail transport from the start. I absolutely wanted to have Helrom at our location,"* Ms Pulker-Rohrhofer revealed at the award ceremony. *"This award shows we were right and serves as confirmation of our path towards climate-neutral freight transport."*

### **Huge CO<sub>2</sub> savings by barrier-free intermodal freight transport**

Since the beginning of operations in 2020, initially still in a trial phase and from 2021 in regular operation, around 500 HELROM Trailer Rail trains have already run on the Vienna - Dusseldorf connection. As a result, about 14.000 truck trailers have been taken off the road and put on rails. This corresponds to a saving of 8.000 tons of CO<sub>2</sub> emissions. In the next few years, Helrom GmbH will significantly expand the capacities of this connection in cooperation with Hafen Wien. In future, 42 trailers will be transported per train. As a result, over 25.000 semi-trailer trips between Vienna and Dusseldorf will be saved annually - a CO<sub>2</sub> reduction of 15.000 tons per year. *"Reconciling ecology and economic efficiency is one of our most important tasks,"* emphasised Doris Pulker-Rohrhofer. *"And if we want to master the challenge of the climate goals, moving from the road to rails is essential. Together with Helrom GmbH, we are making a noticeable contribution to climate protection and the mobility transformation with this reinforcement of barrier-free intermodal freight transport."*

### **Confirmation of the corporate goals and growth course of Helrom GmbH**

Roman Noack, CEO of Helrom GmbH, also sees this award as an important confirmation of the corporate vision of net zero transport: *"I'm delighted by this award. Many people in Vienna and Dusseldorf have demonstrated a great commitment to the realisation of this innovative freight transport solution. Politics and business recognised the potential and contributed to its success. The great success of the Vienna - Dusseldorf connection has exceeded all of our expectations and confirmed our plan to use HELROM Trailer Rail with greater capacities and also on other European connections."*

### **About Helrom GmbH**

Helrom GmbH is a rail freight transport and technology company based in Frankfurt. Our worldwide patented freight wagon technology has enabled European long-distance logistics to achieve a truly barrier-free transition between road and rail for the first time - without large investments in loading terminals and close to customers.

Currently, we are operating a very successful connection between Dusseldorf and Vienna in the form of the HELROM Trailer Rail for truck semi-trailers, with a logistical catchment area consisting of Hungary, Rumania and Serbia all the way to the Benelux and the UK. We are working towards CO<sub>2</sub>-free freight transport in Europe. Net zero transport is our goal.

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## Trailer Rail

Deutsche Verkehrszeitung  
May 2021  
Author: Frederic Witt

**“IT IS THE TASK  
OF A CENTURY”**



## HELROM CEO: "IT IS THE TASK OF A CENTURY"

**"The market participants themselves are also asked to make rail more attractive within the realms of possibilities and to make greater use of it," says Roman Noack in interview. (Photo: Helrom)**

Roman Noack is CEO of the technology and transport company Helrom. He previously worked for a long time in leading roles for Deutsche Bahn, including as Senior Vice President for DB Cargo. He talks in an interview about his goals with Helrom and explains why rail freight transportation will gain in importance over the coming years.

### **DVZ: Mr Noack, you founded Helrom in Frankfurt in 2018. How did you manage to get through the recent turbulent months with your fledgling company?**

Roman Noack: After the first few years in which it was all about getting our technology market-ready, from 2020 we worked intensively on establishing our product on the market. To date this has been very successful. With Düsseldorf-Vienna, we successfully got our first corridor into operation. We use our own technology for this – the barrier-free goods wagon, as DVZ called it. This title has now become a well-established term. We have become a rail transport company in Germany and Austria, and now have the opportunity to grow in Europe with further utility licences.

### **The logistics sector has now been impacted by the coronavirus pandemic for more than a year. How did this situation impact your fledgling company?**

The coronavirus crisis delayed the delivery of our wagons. We had first-hand experience of the supply chain problems. We then adjusted ourselves to the situation operationally. The contactless locomotive driver change now takes place on the platform and not on the locomotive. The driver's cabin is aired and disinfected. On the other side, the customers also have to battle with the

pandemic. This makes us all the more ready to be there as a reliable service provider.

### **What kind of response have you had from clients to your new offering in recent years?**

A major change is currently taking place here. The subject of sustainability is meanwhile playing a very major role for the carriers, as well as in industry and trade. The focus here is increasingly shifting from core value creation also towards transport. The trading companies are going through a rethink, which in turn is increasing the demands on the transport companies. Our solution has arrived at precisely the right time, as we are offering a sustainable alternative, for which the transport companies don't need to make any equipment changes. They can use our services with their existing fleet of trailers.

### **What client cooperations do you already have in place?**

I would like to explain the conditions here again. What do location-flexible start and end mean? In intermodal transport, the start and end is in a terminal. Our technology does away with the need for a terminal. We have a very interesting trailer hub in Düsseldorf. It is a hub for industrial enterprises, including BASF and Henkel. We load and unload there using our trailer rail. While two-figure millions are required for installing a terminal, hardly any investment has so far been required here. This also is a good way of describing how radical our solution is. Not only are we able to take all our trailers with us, but we can also very easily select suitable locations for our hubs.

### **With Helrom, you want to make a contribution towards shifting more goods onto the rail network. In 2021, the European Union was also placing the focus on the subject with the Year of Rail. What is your opinion on this political initiative?**

With this Green Deal, the EU has formulated the aim of reaching a greenhouse-gas-neutral economy by 2050. This is an important and visionary superstructure. Now all that is required is for it to be backed up at the country level with the corresponding measures. In Germany, the

transport minister Andreas Scheuer is demanding that the switch from road to rail needs to be greatly simplified. The rail freight transportation master plan is planning considerable investment in infrastructure. The Year of Rail is important to enable these plans to be visible to a wider audience. The market participants, which to my mind of course includes Helrom, have to face up to this mission of society as a whole.

**Do you believe that the Year of Rail is getting the necessary attention it deserves?**

This will become clear during the course of the year. The Federal Constitutional Court has just ruled that the climate policy is insufficient and that it requires more ambitious and more specific targets which also apply to the transformation in the transport sector. That makes me optimistic.

**You have now been working in logistics and, in particular in rail freight transportation, for many years and must have been able to follow the political developments along the way. Do you now see German policy as being on the right track with regard to shifting freight traffic?**

Rail has always been favoured politically. However, looking back with a focus on the market shares, road has been the clear winner over the past twenty-five years. As things stand today, road is the leading service provider for our standard of living, and our way of doing business. This is quite simply a fact. On the other hand, I see a great commitment at various levels towards real change. But, in my opinion, it's not solely the task of politicians to solve this problem. The market participants themselves are also asked to make rail more attractive within the realms of possibilities and to make greater use of it.

**According to this, companies should not just take action if they are forced to do so by policy.**

This is absolutely right. But companies also need to be in a position to do this. So there is a crucial question of what companies require in order to be able to take action accordingly. No-one can be forced to use rail. Moreover, rail as a product needs to be a transport service provision which is equally as good as, if not better than, road provision so that there is plenty of demand. Let's take another look back: Why wasn't there any stronger trend towards rail in the past years? The trailer is the standard in the continental transportation of goods. However, it has so far only been possible to transport this by rail to a very limited extent. This is something that only very few craneable trailers can do. And even if they could do it – the volumes involved in the target for 2030 couldn't be processed with the existing terminal infrastructure nor could one be implemented by that date.

**These are hurdles which you now plan to overcome with Helrom.**

Precisely. Our new technology enables a simple shift from road to rail. For the business of today, for industry and trade, logistics reliability is a decisive factor. As a transport company, we are focussing on this at Helrom, and rely on shuttle traffic which we operate ourselves, and therefore very reliably. The fact that we also carry refrigerated trailers on every train shows that we are also meeting the requirements of the food sector.

Policymakers can and therefore must create framework conditions, ideally EU-wide, such as the provision and operation of rail infrastructure. But it also requires market solutions.

"When it comes to the carrying of trailers, we offer a unique service," says the Helrom CEO. (Photo: Helrom)

**So, do you believe that the trailer will continue to be the standard?**

A look at the current state of goods transport in Europe shows that the vast majority of consumer products, industrial requirements and goods are transported in trailers. These trailers are the basic unit of the transport economy. The European stream of goods is an immense circulation of these flexible and omnipresent transport containers. The trailer is a wonderful standard, it can be coupled to various traction engines and fits at all loading points. But the trailer will also be increasingly travelling by train via new reliable rail products. This is a whole new way of looking at logistics and long journeys will increasingly be made via rail.

**Helrom is now offering a technological solution for rail. Are there alternatives?**

Yes, there are alternatives for carrying non-craneable trailers, but these all require elaborate and high-capital terminus infrastructures. But even if a larger quantity of trailers could be craneable, then their sheer volume would overload the reloading sites currently available. The expansion of a robust infrastructure made of corresponding loading terminals requires billions in investments and decades of ongoing major construction projects.

The shifting of traffic aimed for by 2030 cannot, therefore, be realised with conventional technology alone. When it comes to the carrying of trailers, we offer a unique service. Only horizontal, barrier-free Helrom technology can start at any chosen source point which doesn't have any conventional terminal infrastructure. The ambitious targets for 2030 can therefore only be realised with the widespread inclusion of Helrom technology.



**How quickly would you now like Helrom to grow on the market? How scalable is your business model?**

We are basically planning for the long term. The rail freight transportation master plan talks of 2030. There is an expected shift to rail, from the current 19 per cent to 25 per cent by that date. In the coming years, we would like to make our contribution by opening up more and more corridors.

**Two years ago, you set the target of 50 corridors by 2026 for Helrom. Are you still committed to this?**

Yes, that's right. It continues to be our plan to realise this by that date.

**Do you believe that the target of "25 per cent by 2030" will be achieved?**

Rail transportation will become part of an ecological market economy because environmental policy determines elections and the climate balance sheet determines consumer behaviour. With a view to the target of climate neutrality by 2050, we are already very late to the party. Therefore, I believe that the efforts will now become exponential. In the shift to rail, there has so far been a lack of very specific measures and initiatives from the market participants, but we are now on the right track here. I believe that the Year of Rail 2021 will trigger action but there will be much stronger actions adding to this in the coming years.

**Politics creates the framework conditions. Companies do the rethinking. The rail freight transportation project, therefore, appears to be on the right track.**

When you look at the business and political consensus, as well as the agenda of large corporations, then it has never looked as good as it does now. It is and continues to be the task of the century, which we are taking very seriously. Because, as already mentioned, in the past only little action has been taken. An important subject remains the capacity of rail infrastructure; this is a job for governments. In Germany, the network is operated by DB Netz AG on behalf of the government. Here an analysis needs to be made about where the capacity is sufficient, where there are already bottlenecks and where these will arise in future. According to forecasts, freight traffic is expected to increase by 30 per cent. So we have a huge challenge ahead of us. The overall target can only be achieved with all existing market participants as well as surely additional new players.

**To conclude, another look into the distant future: what will rail freight transportation look like in 2050 and what role will Helrom then take on?**

In 2050, rail transportation for trailers is a given. The interfaces between road and rail will be very simple. In 2050, climate-neutral HGVs will pick up the load and place

them onto Helrom trailer wagons at decentralised hubs. The longer stretch being carried out by rail significantly reduces the primary energy requirement. As energy in 2050 will also be generated climate neutrally, freight transportation will be completely climate-neutral.(fw)

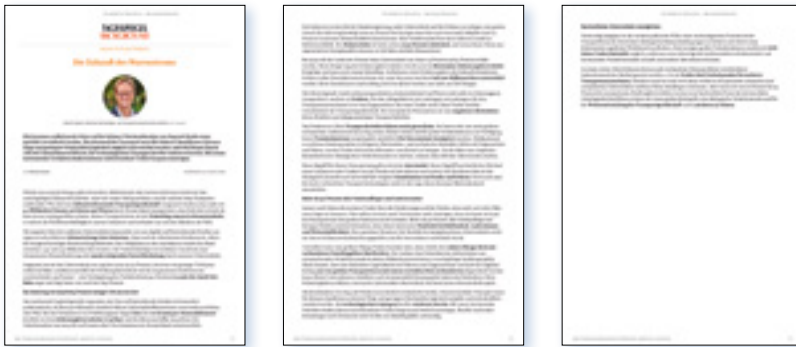
Author: Frederic Witt

# HELROM

## Trailer Rail

Tagesspiegel  
May 2021  
Author: Roman Noack

# THE FUTURE OF COMMODITY FLOWS



## THE FUTURE OF COMMODITY FLOWS

**How do we finally get more freight onto rail? The combination of rail and road needs to be significantly simplified. Intermodal transport must become logistically possible and profitable for smaller hauliers, shorter routes and lower lot sizes, writes Roman Noack, CEO of the company Helrom. The technological solutions for this are already in place. New horizontal loading technology allows non-craneable trailers to be comfortably switched.**

If we were to put a note on every orange, every television, fridge or garden chair with the miles travelled, it would show at a glance what most people turn a blind eye to when shopping: we are a transportation society that chews its way through many miles. In total, more than 4.7 billion tons of freight and goods were transported through Germany in 2019, a figure which is so high that it is hard to grasp. This flow of transport is the pulse of our standard of living, it secures the competitiveness of our industry and links us with the world's markets.

The negative side of the endless freight transport is something that each of us can experience for ourselves on Germany's roads: miles of HGV conveys, jams and an overloaded road network. Alone, the provision of the urgently needed HGV parking spaces on the motorways would cost the government between 1.35 and 2.32 billion euros. The breakdown of transport is a visible expression of an elementary challenge: the massively growing environmental damage from our freight transport.

In all, freight transport grew from 1991 to 2019 by 75 per cent, but only a small portion of this was carried out by rail and barge. Road freight transport grew during the same period by a shocking 103 per cent – a doubling of traffic output. At the same time, the share of rail actually fell and today stands only at 18.9 per cent.

### A freight train is responsible for 85 per cent less CO2 than an HGV

The growing imbalance in favour of HGV on Germany's roads is particularly problematic, as this causes significantly higher air pollutant emissions than rail or car. When it comes to greenhouse gas emissions, at 111 grams per thousand kilometres, HGVs are significantly ahead of the rail freight transport (17 g/tkm) and barge (30 g/tkm). In 2019, the transport sector was responsible for 20 per cent of all CO2 emissions in Germany.

For years, it has been the goal of the federal government to shift more freight transport onto the rail. For good reason: a goods train requires around 20 per cent of the energy of an HGV, and causes only around 15 per cent of its climate-damaging emissions. No mode of transport has a higher share of electromobility. Rail transport is already up to 92 per cent electrified, and when this electricity comes from renewable sources of energy, it is properly climate neutral.

By 2030, the share of rail freight transport is expected to be increased from today's 19 per cent to 25 per cent. This increase in rail freight transport was set down in the 2017 master plan of rail freight transport and reinforced again in 2020. As part of the rail package of the future rail alliance, rail companies are expected to be supported by the government from 2020 to 2025 with 200 million euros. These investments are important, but they alone will not help us meet our target.

The overwhelming majority of consumer products, industrial supply and goods will not be transported in freight wagons but in trailers. Looking at it through everyday eyes, a truck is a truck, and for the haulage company, it is a tractor that pulls a trailer. These trailers are the basic unit of the transport economy. The European stream of goods is an immense circulation of these flexible and omnipresent transport containers.

The problem is that these transport containers don't travel well by rail. They can only be shifted onto the rail with major technological effort. Until now, major loading stations were available for this, whose terminal systems were originally actually designed for shipping containers. At these intersections, there are often long waiting times and, at the end of the rail journey, there is often a lack of tractors and drivers to take the trailer the last few kilometres to its destination. In order to make rail a major component of an ecological transport revolution, these hurdles need to be overcome.

A term for this method of transport is already available: intermodal. This term describes the switch of a container or trailer from road to rail and back again. The aim of this idea is the environmentally expedient and economically viable combination of road and rail. But today's widespread transport technologies are still not in a position to implement this concept across the board.

### **More than 90 per cent of all semi-trailers are non-craneable**

The majority of trailers still travel over all distances by road without coming anywhere near a train. What should they do there? They can't get on, because they can't be loaded using the crane systems of the major stations. More than 90 per cent of all semi-trailers on Europe's roads are non-craneable, as this system has disadvantages for storage life, loading volume and economic viability. A paradox: the reality of the land-tied freight transport is that it is faced with an expensive rail loading system which was developed for shipping containers.

And even if a larger quantity of trailers could be craneable, then their sheer volume would overload the reloading sites available today. The expansion of a robust infrastructure made of corresponding loading terminals requires billions in investments and major construction projects over many years. Added to this is the fact that a seamless logistics chain with drivers and tractors at the end of the train journey could previously only be processed by major hauliers with a distribution network at locations. Small companies, suppliers and deadline sensitive consumers-goods are left behind. These difficulties explain why intermodal freight transport has until now played no major role.

The combination of rail and road needs to be significantly simplified. Intermodal transport must become logistically possible and profitable for smaller hauliers, shorter routes and lower lot sizes. The technological solutions for this are already in place. New horizontal loading technology allows non-craneable trailers to be comfortably and simply

switched. For this, neither crane systems nor terminals in the size of small airports are necessary.

### **Enabling barrier-free freight transport**

What is necessary, in contrast, is the structural and political will to demand a technological advancement of the transport sector with clear environmental framework conditions and to promote non-discriminatory competition. Instead of fewer larger loading stations, today many smaller trailer stations are possible on which new freight trains are quickly and easily able to accept the conventional road trailers using horizontal loading technology.

In a first step, existing platform connectors from various industry locations can be flexibly utilised e.g. as trailer-rail loading points for several transport companies. Of course, we are far from being able to overcome the total national and European freight transport using this method. But if only 20 to 25 per cent of the current road freight transport was shifted to a new barrier-free form of intermodal freight logistics, we will be making a major contribution towards an ecological transport revolution and for the further development of the transport business in the next 50 years.

Author: Roman Noack

# HELROM

## Trailer Rail

Österreichische Verkehrszeitung  
Author: Joachim Horvath

**“OUR SYSTEM  
DEMOCRATISES  
TRAILER TRANSPORT  
BY RAIL”**



The Helrom trains serve the WienCont terminal in the Vienna harbour three times a week.

## “OUR SYSTEM DEMOCRATISES TRAILER TRANSPORT BY RAIL”

**Where the corresponding spaces are available, the approach by Helrom GmbH for solving the problem of combined transport of non-craneable semi-trailers is relatively easy to implement. This is the case at Vienna’s Wien-Cont terminal, which receives three round-trip transportations per week to Düsseldorf.**

VIENNA. There are various reasons why road freight transport is always well ahead of rail logistics in Europe. At universities, coursework and degrees on this subject are stacking up. Roman Noack, CEO of Helrom GmbH, has been able to debate the facts for a long time. But his main task has been to shift long-distance transport from road to rail. To do this, the Frankfurt-based company, founded in 2018, developed a special concept. It democratised the system of trailer transport via rail by opening up access to combined transport also to SME hauliers and logistics service providers.

Demand for this always remains. If freight transport in Europe grows by 25 per cent by 2030 as forecast by independent experts, road haulage companies will also be irrevocably reaching capacity. In addition to this, awareness of climate protection among major haulage firms is on the rise too. Well-known producers, retail and service enterprises want to process the dispatch of their goods in as environmentally friendly a way as possible. Long-haul HGV transport is only conditionally suited to this. Rail logistics requires only 20 per cent of the primary energy that road does. If electricity for this is from a renewable source, such as in the case of the ÖBB infrastructure, then rail transport is not just electric, it’s also climate-neutral.

Roman Noack has experience in rail logistics spanning two decades. He argues soberly and factually. For example, he acknowledges that road freight transport has a high degree of reliability. This, combined with attractive pricing, is something that managers in the freight forwarding business value. If a provider is over budget, he will be replaced by a competitor. That works pretty easily and is hard to replicate on the track. But for Helrom, this is not the *raison d’être*. The company is after long-term customer loyalty. To do this, it developed and implemented a highly standardised rail transport concept between Düsseldorf and Vienna.

The starting point was and continues to be the knowledge that there are many largely non-craneable semi-trailers in Europe. This vehicle type overcomes the majority of long-haul freight transport. If one wants to change conventional thinking in favour of rail, CT terminals are required which are geared towards rail. But these systems cannot be planned and approved fast enough to enable vertical trailer handling and thus implement the targets for shifting by 2030. The expansion of a robust infrastructure made of corresponding loading terminals would require billions in investment and major construction projects over many years. Roman Noack asserts that the transport shift could therefore only be realised in the planned scope by 2030 using Helrom’s technology. But the majority of systems have been conceived for container handling. One of the exceptions to this is WienCont at Vienna’s harbour. Its location has in recent years developed into a hub for continental intermodal rail-road transport, which is also due to the commitment of a well-known FTL specialist.

For Helrom GmbH, the combined traffic has to be as easy and reliable as possible while also being as attractively priced as road transport. „From handing over the semi-trailer in Düsseldorf to its collection in Vienna takes 23 hours. The same applies vice versa,” says Roman Noack, explaining the process. The rail shuttle, which opened last summer between the Ruhr and Eastern Austria, is now so straightforward that even refrigerated

trailers are transported that way. A few years ago, this would have been unthinkable. It reinforces the conviction of the managers at Helrom that they are doing a lot in the right way.

Helrom describes itself as a technology and transport company. The supporting pillars of the business model are the rolling stock. The Helrom trailer wagons open and close at the side. This enables fast loading and unloading on the basis of horizontal technology. A train with 36 trailer positions on 18 wagon units is handled by three HGVs carrying out terminal operations in one hour. This means no additional costs for haulage firms in the form of investment in new equipment, not to mention in CT systems. Helrom provides the traction service as a licensed rail transport company in Germany and Austria with its own train drivers on rented locomotives. Roman Noack: "This makes us very punctual and reliable."

The Helrom trains shuttle three times a week between Düsseldorf and Vienna. For independent observers, it's just a question of time before further routes are added. For Roman Noack, the most urgent task is "to convince many more road hauliers of our approach". He helps the company to better utilise their traction engines, along with a concept for reducing long-haul CO2 emissions. All that is required is the development and implementation of logistics for pre-carriage and onward carriage in combined transport. For this, Roman Noack imagines e-trucks, which would make the transport logistics even more environmentally friendly when viewed as a whole. JOACHIM HORVATH.

As CEO of Helrom GmbH, Roman Noack aims to promote the transport shift in Europe.

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# HELROM

## Trailer Rail

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