

## Contact

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You can see a film on the website showing exactly how the CargoBeamer system works.

### Project partners:



### The Project is supported by:



## EU Project ESTRaB Solution for broader gauge tracks in Eastern Europe

The European Commission is supporting the testing and market introduction of the CargoBeamer system. It regards CargoBeamer's technology as an opportunity to make transit transport more efficient and more environmentally friendly, especially to Eastern Europe, since the CargoBeamer system also solves the break of gauge problem. Because the whole of Eastern Europe uses a broader gauge than Western Europe, the trains have to be reloaded at the border, which generally takes 2 to 3 days. This is a disadvantage compared with road transport. With the CargoBeamer system, re-loading is easier and faster, and is completed within less than an hour.

## Strong partnerships

### ... in the industry

The inventors of CargoBeamer, Hans-Jürgen Weidemann and Michael Baier, and the CargoBeamer AG company, which is located in Leipzig (Saxony, Germany), have found some strong partners for the ESTRaB project. The cargo handler and terminal operator Achema Group, the largest transportation and energy concern in Lithuania, and Deutsche Bahn Schenker Rail as train operating company are participating in the project. They will operate CargoBeamer trains on the route between Rotterdam and Riga. This proves that important international players in the freight transport business are convinced of the merits of the CargoBeamer concept.



## From Rotterdam to Riga

The project "Efficient Semi-Trailer Transport on Rail Baltica" (ESTRaB), which is being funded by the European Commission as part of its Marco Polo II programme, is due to test and introduce the CargoBeamer system on the route between the Netherlands and Lithuania. As part of the ESTRaB project, CargoBeamer wagons will be manufactured and CargoBeamer terminals will be constructed in Leipzig (Germany) and Mockava (Lithuania) for the purpose of testing and licensing. From 2014, the CargoBeamer system will begin operations on the route between Rotterdam and Riga.



## ... in politics

The ESTRaB project will be supported by the Pro-Rail Alliance (Allianz pro Schiene), the German political alliance for the promotion of rail transport that unites 18 non-profit organisations and more than 100 companies.

According to the railway alliance, the CargoBeamer system will contribute towards fulfilling the technical requirements that are a precondition for shifting a considerable volume of freight transport onto the railways, as desired by transport policy.



## CargoBeamer teaching trucks to use the railways

EU Project ESTRaB: Efficient Semi-Trailer Transport on Rail Baltica



## CargoBeamer – reducing the burden on the roads and the environment

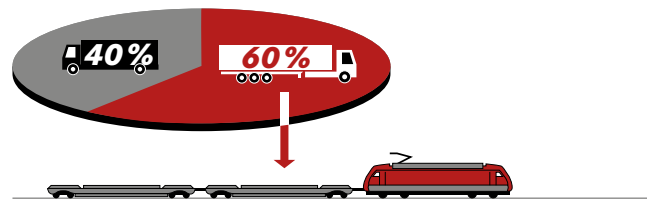
Over 60 percent of all HGVs on Europe's motorways are comprised of semi-trailers, but 98 percent of these semi-trailers cannot be loaded onto the environmentally friendly railways – purely for technical reasons. Now, however, with a new type of loading technology called CargoBeamer it is possible to transport all existing semi-trailers by rail. It is a real opportunity for the transport sector to reduce the burden on Europe's roads and its environment. Even compared with road transport using modern Euro V trucks, CargoBeamer saves over 14g CO<sub>2</sub> per tonne-kilometre – in addition to the lower transport costs.

## Sixty percent of all HGV transport onto the railways

Currently, HGV semi-trailers are loaded by crane onto wagons at loading terminals for combined transport. This is assuming that they have been technically modified or designed for the crane lifting process. Only two percent of semi-trailers fulfil this requirement.

Thanks to the CargoBeamer technology, all semi-trailers can now use the combined road and rail transport system, without the need for technical changes. At the same time, this new technology does not compete with the existing combined transport system.

CargoBeamer therefore will make it possible for 60 percent of all HGV transportation to be loaded onto the railways – a massively increasing the market for rail freight transport.



### Current practice: transfer to train by crane

- HGVs have to be specially adapted for crane lifting. This makes them more expensive. They also have less loading space because they have been strengthened, which makes them heavier.
- A crane loads the HGVs one at a time by lifting each semi-trailer into the air and lowering it onto the wagon.
- Cranes cannot load and unload wagons on tracks with overhead lines. Wagons have to be shunted onto tracks without overhead lines before loading can begin.
- HGV, wagon and crane have to be manoeuvred separately. Truck drivers have long waits at the loading terminal.
- Loading a block train takes several hours.

### New: transfer to train by CargoBeamer

- There is no need for HGVs to be adapted for crane transfer. Loading space remains at a maximum.
- The CargoBeamer loads and unloads all the semi-trailers in parallel and at the same time.
- The CargoBeamer works under overhead lines without the need for shunting wagons.
- The loading process is fully automated. HGVs and trains do not need to wait for each other.
- A block train with up to 36 semi-trailers can be unloaded and loaded within 15 minutes.

**In a nutshell:** The CargoBeamer is faster and more cost-effective.



## Closer to the customer

The CargoBeamer technology, made up of new types of terminals and wagons, will complement the existing major terminals. The CargoBeamer wagons can also be used in conventional crane terminals, meaning no stand-alone solutions or parallel systems will exist, which is very important for a networked system like the railways. The fact that CargoBeamer terminals are cheaper to construct than conventional terminals and also require less space will make it attractive for customers in more remote areas. Another advantage is that the CargoBeamer loading system works on electrified sections of track underneath overhead lines.

## Lower costs than by road

CargoBeamer will reduce the cost of a unit of freight by more than 10 percent compared with single mode road transport, depending on the route. Semi-trailers can finally profit from the advantages of combined transport, where part of the journey is by rail and the rest by road.

By comparison: combined transport has a 70 percent share of the container transport market on certain routes, for example to and from the major sea ports.