Sleepers or open track?

ACTS

ERS RAILWAYS

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Contents

Introduction

The reason for this report ...

Since 1998 deregulation of rail goods transportation in the Netherlands has brought about a revolution. Rail is the fastest growing form of transport. In less than 10 years traffic has doubled. The opening of the Betuweroute on 1 January 2007 will act as an additional stimulus. Before that time a number of crucial milestones must be reached by the authorities and the infrastructure manager. Only then will it be possible for trains to be operated on the Betuweroute as from the day on which the track opens. Rail freight operators are very concerned as to whether this will be on time, and whether all the relevant parties have taken on board the seriousness of the situation: as things look at present there will be no trains running on the Betuweroute on 1 January 2007. There are too many technical and financial uncertainties for users to be ready in time.

This document has been produced by Beaufort Business Partners B.V. on the instructions of three pace-setting private Dutch rail freight operators. It provides insight into the new rail dynamics, how these can be built on, what milestones must be reached, and what is necessary in order to make the Betuweroute a success.

As of March 1998 ACTS has been active as the first private rail freight operator. ACTS started with the movement of waste and container shuttles within the country, between the North Netherlands and Rotterdam. Since 2004 the majority of the company shares have been held by Husa Capital BV. Following the pioneer stage, the company has gained in its professionalism and has steadily extended its activities to Western Europe. www.acts-nl.com

ERS Railways, the biggest newcomer to the rail freight sector, is part of ERS (European Rail Shuttle BV). The shareholders are the shipping companies Maersk Sealand and P&O Nedlloyd. The company operates an extensive European network which currently runs 270 container shuttles a week. Rotterdam and the German sea-ports are connected with more than 18 destinations inland. In addition to freight on behalf of its own shareholders, ERS Railways has a large number of customers in the form of short-sea shipping companies, road haulage operators and forwarding agents. www.ersrail.com

Rail4Chem is owned by the chemical firms BASF and by three logistical service providers, Bertschi, Hoyer and VTG. Each partner is a 25% shareholder. Rail4Chem was started up in Germany. Rail4Chem has now become an international company with more than 80% border-crossing traffic and an extensive international network. By continuing the operational activities of rail freight operator Shortlines, since 2004 Rail4Chem has been active in the Netherlands. Rail4Chem has a large number of international companies as its customers. www.rail4chem.com

The combined international turnover of these three companies amounted to €141 million in 2004, and together the three companies employed 254 people in 2004.

Beaufort Business Partners BV supports (inter)national businesses with the realisation of large company transformations in the areas of production, logistics and buying. Beaufort provides consultancy, implementation, replacement and interim management services. www.beaufortbp.com

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www.tilleman.nl

1 Deregulation doubles rail freight

Following the introduction of deregulation, rail freight has developed at enormous speed in the Netherlands. New private companies are increasing their market shares at an impressive rate. In the container freight sector the new rail freight operators now account for over 80% of this fast growing market. The growth of rail freight is certainly on track. The opening of the Betuweroute could give further impetus to this development.

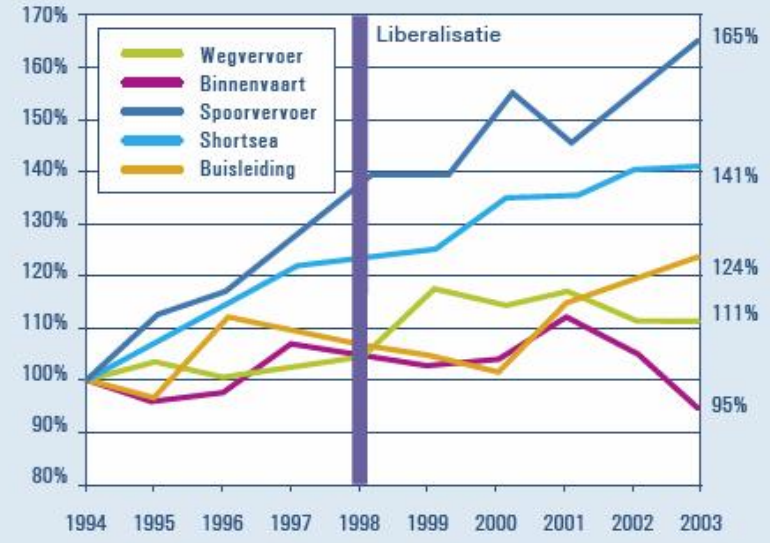
Rail freight has developed more rapidly in the Netherlands than other forms of transport

Recent years have seen an enormous growth in rail freight:

- Ø of all the available forms of transport, rail freight has developed most strongly over the last 10 years
- Ø as regards international destinations, in particular, rail freight growth has been rapid. For many destinations above five hundred kilometres, rail's market share is over 25%
- Ø the practical radius for road transport is becoming more and more limited by congestion and higher costs, and as a result rail's market share is increasing for shorter distances
- Ø the combination of inland navigation, road and rail supplement one another with an optimal mix of low costs, speed and reliability.

Figuur 1

Ontwikkeling tonnage van de verschillende modaliteiten van 1994 tot 2003



Bron: CBS, bewerkingen door AVV, Ecorys en NEA

Key:
Liberalisatie = Deregulation
Wegvervoer = Road Transport
Binnenvaart = Inland Navigation
Spoorvervoer = Rail Freight

Buisleiding = Pipelines

Particularly in the dry bulk sector (ore and coal) and in the container freight sector there has been a significant increase in the use of rail freight services. Rail's total market share has now increased from 5% to 6%. This gives an indication of the growth potential still present in the market.

Private operators have started a revolution and provided a boost for growth

The growth in the use of rail freight in the Netherlands springs primarily from the private rail freight operators, such as ACTS, ERS and Rail4Chem. The market share gained by these new companies has increased to over 20%. In the rapidly growing container freight business, the market share of the newcomers is already above 80%.

The former state company NS Cargo was taken over by Deutsche Bahn [German Railways] in 2000 and transformed into the trend-setting logistics company Railion/Stinnes. In the traditional bulk freight markets, such as ore, coal and steel, Railion/Stinnes has experienced a successful growth rate.

CASE 1: FLEXIBLE TRANSPORT IS A CRUCIAL ARTERY FOR THE DEVELOPMENT OF THE LOGISTICS CENTRE VENLO

On the instructions of ECT Venlo, Rail4Chem operates a high-frequency container shuttle between Rotterdam and Venlo. The city of North Limburg has developed to become the logistics centre for the South Netherlands and for the Western Ruhr conurbation. An increasing number of shipping firms are turning to logistics partners for the storage and handling of their products. This has a positive effect on working possibilities. Congestion-free connections, including connections to sea ports, are of vital importance to logistics centres. The number of shuttles has increased from one to three per day. As of August 2005, there have been four trains per day.

Results:

- Venlo has developed to become the most important national logistics centre, with 115,000 container movements per year.
- More and more (German) shipping companies are opting for logistics partners in Venlo for the storage and transportation of their products.
- It has been proven that rail transport can be of really high quality and flexible for short distances and can stimulate new business.
- For the first time refrigerated containers containing fresh produce are being operated. This promises to be a growing market for rail freight

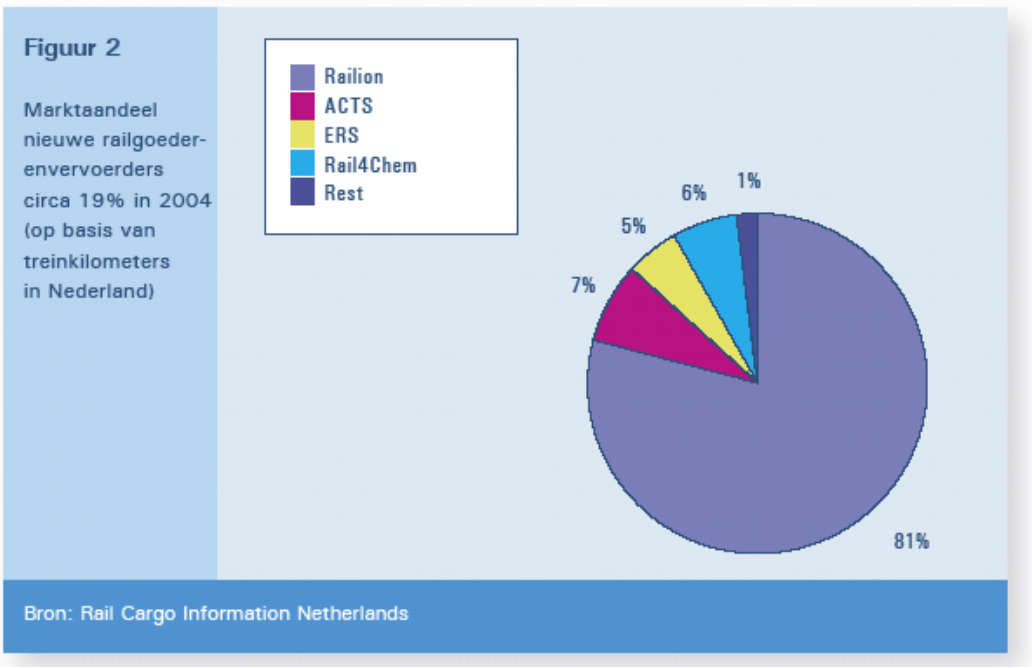


Figure 2

Market share
New rail freight operators
Around19% ... 2004
(based on train distance
covered in the Netherlands)

Source: Rail Cargo Information Netherlands

Between 2000 and 2004 the volume of the new rail freight operators rose to 4.5 million tonnes in 2004. For 2005 further growth to 6.2 million tonnes is forecast. Moreover market leader Railion/Stinnes has increase its volume by 17% since 2000, in a fiercely competitive market.

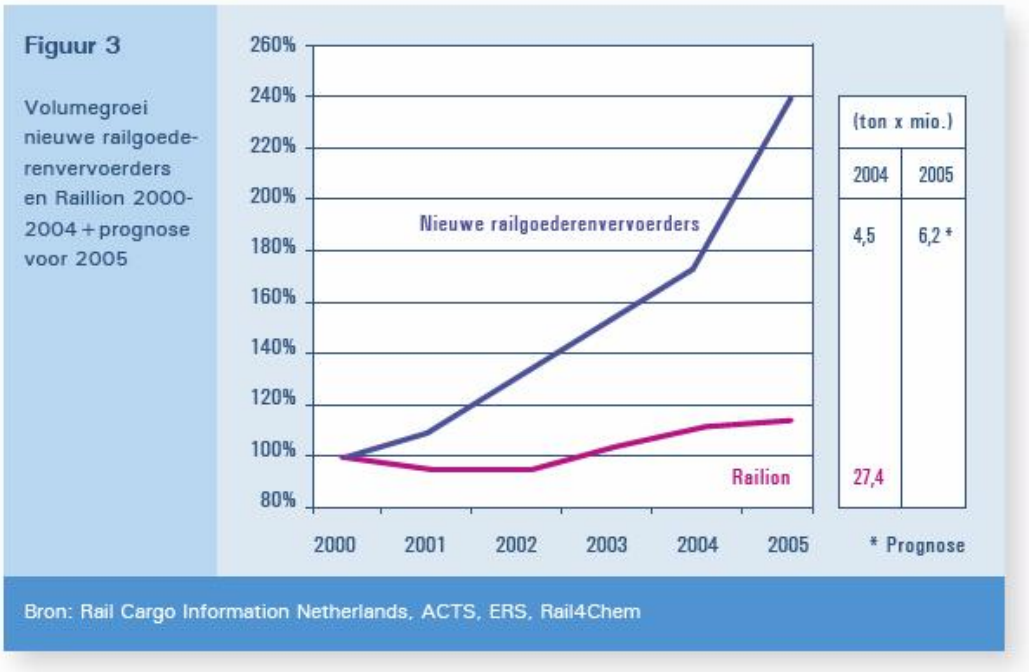


Figure 3

Nieuwe railgoederenvervoerders = New Rail Freight Operators
ton x mio. = x million tonnes
Prognose = Forecast

Source: Rail Cargo Information Netherlands – ACTS – ERS – Rail4Chem

The introduction of so-called container shuttles (fixed high-frequency line services), for instance between Rotterdam and Germany, Austria, Italy and Eastern Europe has given a tremendous impetus to rail freight. Over five years the number of direct connections between Rotterdam and destinations inland has significantly increased.

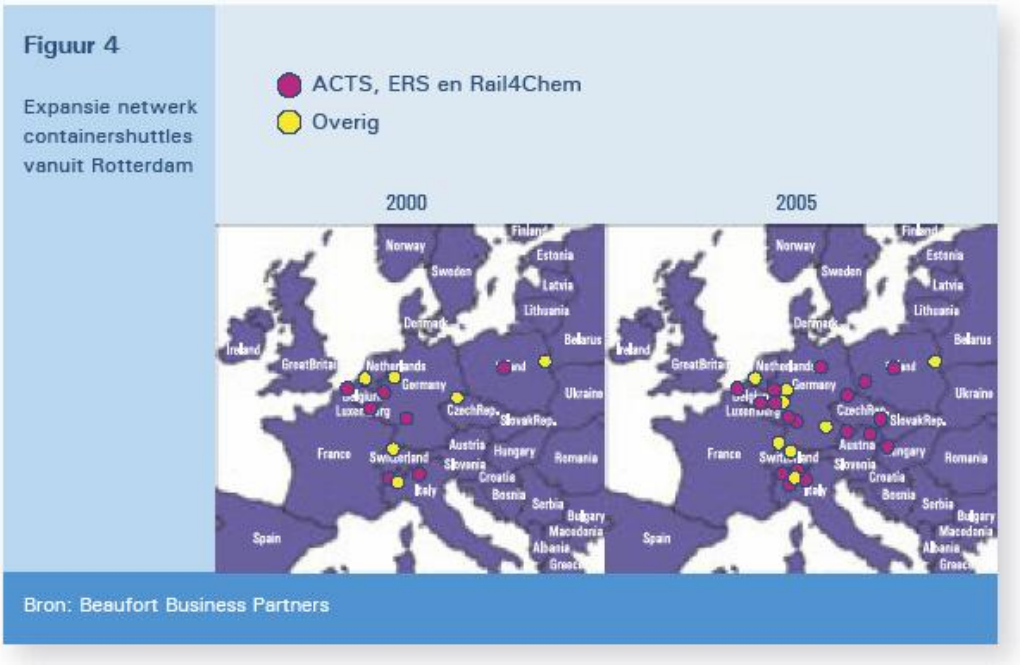


Figure 4

Expansion of network of container shuttles from Rotterdam

(X) ACTS, ERS and Rail4Chem
( ) Overig = Others

Source: Beaufort Business Partners

CASE 2: RAIL SHUTTLE TO THE CZECH REPUBLIC OPENS ACCESS TO THE EAST EUROPEAN MARKET FOR MANUFACTURERS AND SHIPPING COMPANIES

On the instructions of Maersk Sealand and P&O Nedlloyd, ERS operates a daily train between Rotterdam and Melnik in the Czech Republic. These trains are also able to be booked by other shipping companies. Because of the high degree of service, with pick up today and delivery tomorrow, people are opting for rail freight in preference to road or navigation routes.

Results:

- for the rapidly growing trade (imports and exports) between the Netherlands and Eastern Europe, a crucial artery has been established
- a very fast rail link has been established between the Netherlands and the Czech Republic; because of the high quality offered, the volume of traffic is growing rapidly
- from the hub in Melnik there are good connections to a number of destinations in Eastern Europe
- a significant proportion of the goods transported is of a continental or short-sea nature, and were it not for the rail link would be carried by road
- an important collection and handling service is offered via Rotterdam, instead of from the competing ports. There are real possibilities of attracting greater volume to Rotterdam which at present uses other routes

Complete European deregulation stimulates further rail freight growth

Many factors are now in place for making the Betuweroute a success. In 2007 the whole of the European rail market will be opened up to competition. As a result of this transport activities from the Netherlands will be able to grow even more. Significant indicators of this are:

- both the European Commission and our neighbouring countries are striving towards a modal shift from road to rail.
- so far the forecasts for rail freight have been fully realised. Recent forecasts show that this trend is likely to continue after the opening of the Betuweroute
- the Betuweroute provides for extra growth capacity on the East/West axis towards Germany and the countries beyond
- the new rail freight operators are well established and are extending their services to include the bulk market, amongst other areas
- an increasing number of trend-setting logistics companies are making the transition from road freight to intermodal freight
- complete opening up of the European network to competition in 2007 will also provide scope for significant expansion into Belgium and France. In France the first newcomer has been active since 2005

Rotterdam port has a great deal to gain from a competitive rail market and from the construction of the Betuweroute

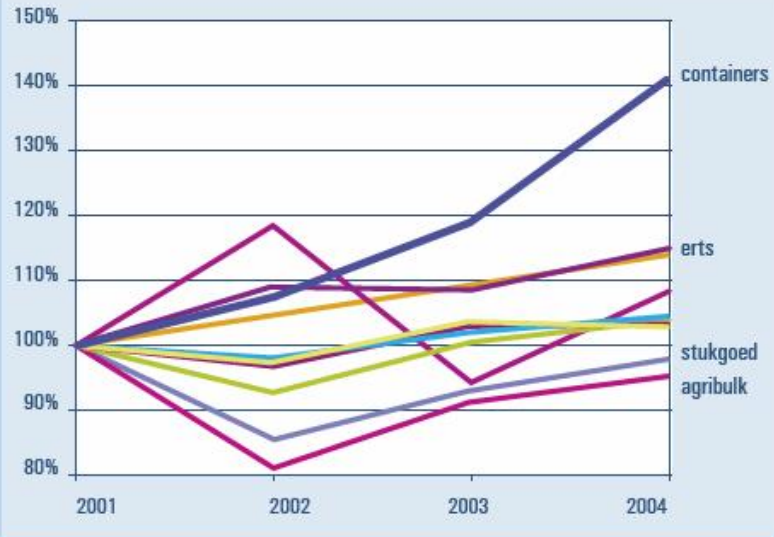
Since 2004 the container business has developed significantly in Rotterdam, and recent figures indicate that the growth is now higher than in competing European ports. Movements through the port have increased in particular in terms of dry bulk goods (most significantly coal for the German electricity power plants) and loose materials. The latter are primarily transported in containers. The growth of container freight is a result of the enormous growth in world trade and in particular trade with the Far East.

[An extra daily shuttle train means 800 fewer lorries
with containers on the roads each week]

In terms of container freight from Rotterdam bound for inland destinations, the total market share accounted for by rail increased from 8.5% in 2002 to 9.5% in 2004. Recent forecasts show an increase to 14-15% in 2015-2020.

Figuur 5

Ontwikkeling volumes in Rotterdamse haven



Bron: Port of Rotterdam

erts = ore
stukgoed = loose goods
agribulk = bulk agricultural goods

A competitive rail solution is necessary for the Dutch ports and economy:

- In the first half of 2005 the Rotterdam port handled 4.6 million TEUs (see list of abbreviations). In addition to growth at Maasvlakte I, it is expected that the annual through-put at Maasvlakte II will be at least 16 million TEUs. On the basis of the forecasts it is estimated that of this at least 18% will be carried by rail to inland destinations. Without a good rail link, this would be equivalent to an additional 2-2.5 million lorries on the roads each year
- Because of their mass and volume, many bulk products can only be transported by inland waterways or by rail. "Dry" destinations can only be reached by rail
- Commercial and logistical service providers established in the Netherlands can take advantage of the inland connections being brought into being as a result of the critical mass represented by Rotterdam port. This offers an important competitive advantage for firms setting up business in the Netherlands.
- Other ports, such as Antwerp and Hamburg are working hard to improve rail links with the hinterland. In our neighbouring countries politicians and the authorities are increasingly imposing barriers to discourage road freight.

[Without rail Rotterdam would face a traffic overload
with the introduction of Maasvlakte II. If rail is too expensive,
there will be a further 2 to 2.5 million additional lorries
on the roads transporting goods to and from other ports]

To make the Netherlands more attractive as a country in which to set up a business, so that goods can be transported from the Netherlands to the hinterland, a competitive rail product is essential.

CASE 3: ROTTERDAM IS LEAVING OTHER COMPETING PORTS BEHIND WITH ITS DIRECT RAIL SHUTTLE TO AUSTRIA

Since March 2005 ACTS, acting on behalf of the shipping company Kühne & Nagel, has been operating a daily container shuttle between Rotterdam and Linz in Austria. With a capacity of almost 1200 TEUs per week, the 'Blue Anchor' is the fastest connection between a seaport and Austria. Today goods sent out from Rotterdam are delivered in Austria within 24 hours.

Results:

- The migration of a significant volume of freight (60,000 TEUs) from Bremerhaven to Rotterdam. A doubling is expected
- Further expansion of collaboration with the big shipping companies such as Kühne & Nagel may result in significant additional volumes for Rotterdam
- Collaboration between three new rail shippers in Austria, Germany and the Netherlands highlights the innovative approach of the Dutch rail operators and is a stimulus for further growth

2 The success of the Betuweroute is still uncertain

The interests at stake in making the Betuweroute a success are significant ones. All parties must contribute to this. At the moment there are a number of crucial issues that have not been resolved, or that have not been resolved in full, in order that trains can be run on the Betuweroute. Is the Iron Rhine [the freight railway connecting Antwerp with Mönchengladbach in Germany] a cheaper alternative?

There are significant interests in making the Betuweroute a success

On 1 January 2007 the Betuweroute will be opened. All parties have an interest in making the Betuweroute a success from day one:

- Ø the authorities and politicians can finally place the emphasis on making a reality of the advantages and on increasing the commercial opportunities that the Betuweroute will provide
- Ø congestion-free connections are crucial for the development of Dutch ports and industry
- Ø large parts of the central and southern Netherlands are far more accessible because free capacity is created on the existing rail freight network for passenger transport
- Ø inhabitants along the existing tracks will experience less traffic as a result of a large volume of rail freight being moved onto the Betuweroute
- Ø for manufacturers, particularly in the chemical industry, rail freight is of crucial importance for ensuring durability and risk reduction
- Ø for rail freight operators the Betuweroute can provide stimulus for further growth

There is significant motivation and commitment to making maximum use of the Betuweroute

The three new rail freight operators are particularly motivated to make use of the Betuweroute as soon as it is opened. The Betuweroute offers a number of advantages for traffic between Rotterdam and the border:

- Ø the track is intended exclusively for freight trains, which will increase the speed of transport on the Dutch section of the international route
- Ø there is sufficient capacity to cater for the envisaged growth on the Dutch section of the Betuweroute
- Ø the safety of many transport activities will be increased because the route has no road crossings and it does not run through any densely populated areas
- Ø for a limited number of destinations, particularly in the northern Ruhr region, the route is somewhat shorter which will provide greater efficiency

At the same time interest in the Betuweroute must be seen in relative terms. The Betuweroute is only a section (150 kilometres) of the long distance between the point of arrival and the possible train destinations. Efficient rail freight requires a well oiled organisation and maximum freedom of circulation

between the train arrival and departure points. A flexible 'organisation' is as important to the market as the 'infrastructure'.

There are significant uncertainties regarding the possibility of using the Betuweroute

Less than eighteen months before the opening date, rail freight operators are confronted with a significant number of crucial uncertainties and potential cost increases. The most important of these are:

- complete and detailed specifications (ETCS safety system, flow systems, gradients, tonnages, speeds, etc.) have not yet been fully released. The version under consideration, 2.2.2.C (Consolidated) was not adopted until autumn 2005 as the industrial standard
- the requirements, specifications and rule for use with regard to stock are still not clear. This is the result of the recent appointment of the Port of Rotterdam and ProRail as the operator of the Betuweroute
- there are as yet no firm statements regarding the number of trains that can be run per hour over the Betuweroute
- it is uncertain whether there is available Betuweroute capacity in Germany and no clear information in this regard has yet been produced
- the tariffs for use of infrastructure after 2006 have not yet been decided. This applies both to the Betuweroute and to the rest of the network
- there is significant uncertainty as to whether price differentials will be introduced, and what the rules will be in this regard
- there is still no agreement on the capacity that is to be available for rail freight on the rest of the network in the Netherlands
- there is a risk that rail freight operators will be forced to use the Betuweroute, even if other routes are shorter or generate fewer external risks. It is still uncertain what the effects of this will be on such aspects as the cost price of the rail product and journey times for freight. The stated efficiency advantages of the Betuweroute may be negated by this
- a back-up scenario has not yet been made known to the rail freight operators. The possible resulting economic damage is unknown

In order to invest in the future, four important milestones need to be reached

It is crucial that four points be clarified as quickly as possible from the perspective of rail freight operators:

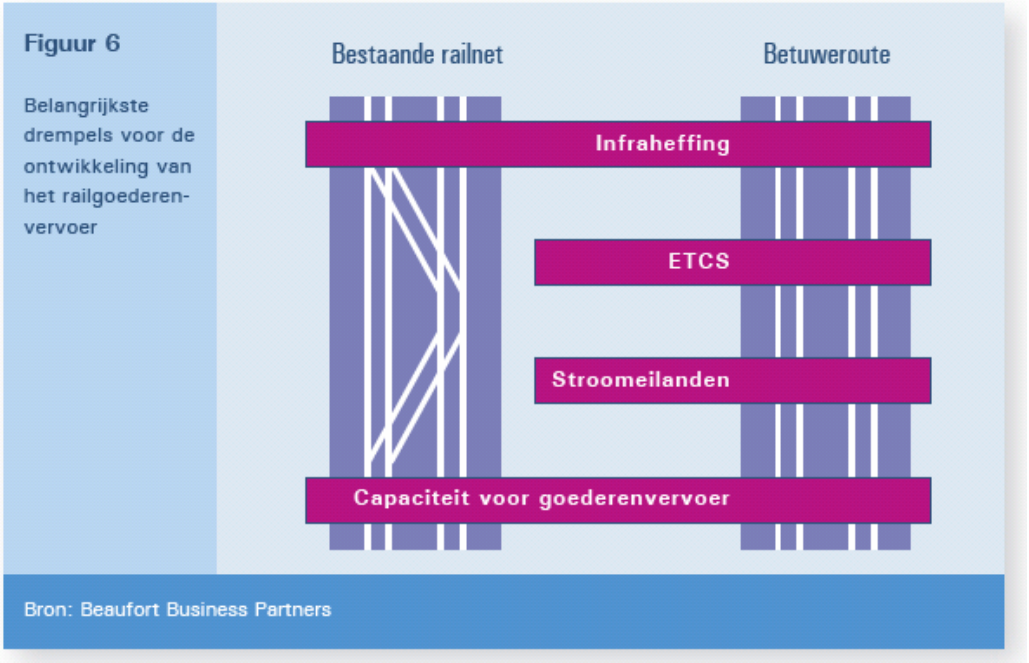
- a **moderate infrastructure levy** (for the Betuweroute *and* the existing network)
- a **fair capacity allocation** for passenger transport and goods freight (for the Betuweroute *and* for the existing network)
- an **appropriate solution and cost remuneration system for the purpose of applying the new ETCS safety system** (for the Betuweroute)

Ø **remuneration for additional costs connected with the divergent and complex power system**, which would make the acquisition of expensive new locomotives necessary (for the Betuweroute)

In greater detail:

Ø ***infrastructure levy:*** there is particular uncertainty regarding the systems-related aspects and the size of the levy on the Betuweroute. For 2006 (ProRail Network Statement for 2006) an increase from 50% to 250% was announced with regard to 2005. For the following years nothing is yet known. This is dealt with in the following chapter.

Ø ***the new ETCS safety system (Version 2.2.2.C):*** the ETCS safety system selected by the authorities for the Betuweroute differs from the existing systems in the Netherlands, Germany and the rest of Europe. The current stock is not suited to the ETCS and must therefore be replaced or modified at great cost. This too will be discussed in the following chapter.



The most important milestones for the development of rail freight

Bestaande railnet = Existing rail network
Infraheffing = Infrastructure levy
Stroomeilanden = Power islands
Capaciteit voor goederenvervoer = Capacity for goods freight

Source: Beaufort Business Partners

Ø ***Traffic islands:*** the traffic power system (25 KV) chosen by the authorities for the Betuweroute differs from the systems in Germany and the Netherlands. This requires the acquisition of new additional expensive locomotives. Because in two locations (Kijfhoek and Zevenaar-Emmerich)

the Betuweroute coincides with the existing Dutch network, for which the old system was chosen, the locomotives must be equipped to operate on at least three different power systems.

- ***Capacity for rail freight on the other networks and a good connection in Germany:*** the Betuweroute is but one part of the overall, international route. It is not clear how the capacity on the existing network will be divided up between freight and passenger transport as of 2006, and whether sufficient capacity will be available in Germany for connection to the Betuweroute. The required expansions of the infrastructure in Germany have not been prepared (in time) and as a result the capacity is not present for operating all the desired trains via the Betuweroute.

[Of the existing electrical locomotives in the Netherlands, there is not one suitable for use on the Betuweroute]

There is great uncertainty regarding all these points. This means that:

- it is not economically possible or responsible, for the new rail freight operators and their shareholders, to make investment decisions on this basis. Uncertainty regarding the threatened raising of the infrastructure levy means too great an investment risk for investments with a depreciation term of 15 to 20 years
- because of these uncertainties, long-term arrangements with customers are not possible. Customers will react by switching to other forms of transport, ports and countries where clear information is available regarding tariffs and capacity
- the Iron Rhine may be a more competitive alternative

3 Extra costs act as a brake on rail freight

In 2006 rail freight operators are faced with an average 50-70% higher infrastructure levy. In the years ahead there is the threat of an increase in this "rail tax" on the basis of a cost-plus method. In addition to these costs, as of 2007 operators will also be faced with additional costs and financial burdens. Use of the Betuweroute will require buying new stock or converting existing stock. The market is not prepared to see these costs passed on to customers.

The infrastructure levy to rise by an average of 50-70% in 2006

Since 2000 rail freight operators in the Netherlands have had to pay an infrastructure levy for maintenance and operation of the rail network. In line with EU guidelines 2001/14 EC, it has been necessary to pay variable costs. The rail freight operators are faced with two developments that have particular consequences:

- a significant increase in the infrastructure levy in 2006 (ProRail Network Declaration 2006), from 50% to 250% for heavy trains
- uncertainty regarding the tariff on the infrastructure levy as of 2007 for the Betuweroute

Since its introduction in 2000, the infrastructure levy in the Netherlands has undergone an explosive increase, as shown in the figure below.

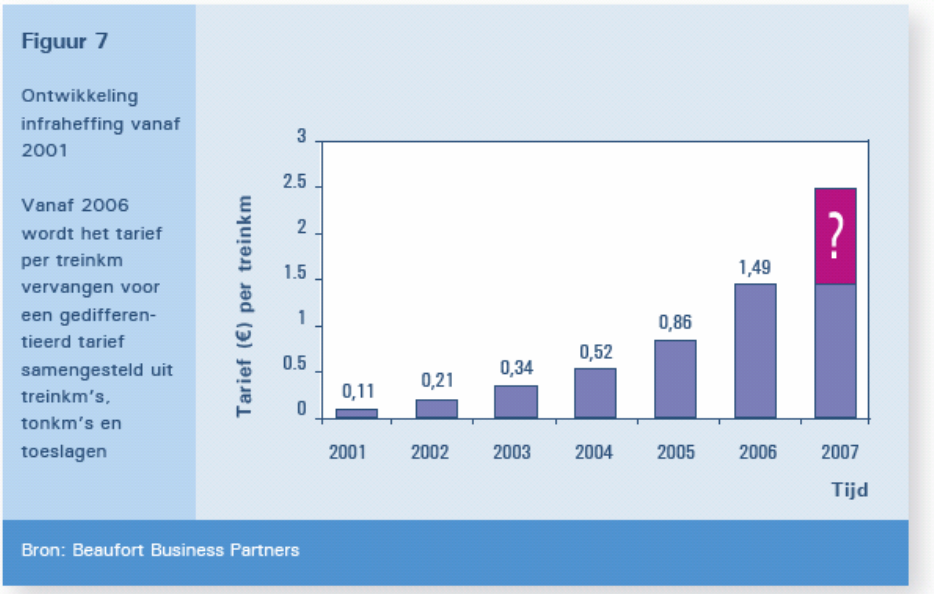


Fig. 7
Development of the infrastructure levy since 2001
As of 2006 the train/kilometre tariff system will be replaced by a differentiated tariff system taking account of train/kilometres and tonne/kilometres ...

Tariff (€) per train kilometre

In 2006 the train/kilometre based tariff will be replaced by a much more complex system, The new infrastructure levy will consist of:

- a tariff per train/kilometre
- supplemented by a tariff per tonne/kilometre
- additional charges for shunting and parking (parking areas) and the operation of separate locomotives (repositioning)

For 2006 this will mean:

- an average 50-70% increase in load per freight train
- efficiency is the target: the new tariff rises progressively for long, heavy trains and may rise to 250% compared with the current tariff
- for traffic within the country in particular, where competition for road freight is significant, there is likely to be a serious disturbance of the 'level playing-field' between modes of transport. For inland navigation there is no such levy
- no stimulus will be built into the system to increase the efficiency and performance of the manager ProRail
- the supplements for shunting and parking will be disproportionate
- there will be additional supplements for the shunting, parking and repositioning of trains

[An effort will be made, in light of the new 'rail tax', to ensure efficient working, because long, heavy trains will mean a 250% greater tax burden. This affects the rail sector at the heart of its activities.]

The Minister of Transport and Waterways has stated that he decided not to introduce an even higher tariff for rail freight operators. In practice it has to be recognised that the increase in rates will be much higher in 2006 than in the previous years, and no account has been taken of what the rail market can bear.

Infrastructure levy brings an end to internal (container) transport by rail

A large percentage of internal import and export freight is moved in containers by inland waterways or rail between inland terminals and the sea ports. Rail provides speed and reliability, and may also offer a competitive price. Inland waterways are not an option in some regions where there are no canals or rivers. For a large number of products the speed of transport via inland waterways is inadequate for competing with road freight.

It is becoming more and more common to use rail and inland waterways in combination, so that each load transported achieves the optimum in terms of cost, speed and reliability.

It requires some inventiveness to make it possible for inland waterways to compete with road transport.

Extra long trains, cheap transhipment techniques, high frequencies and the very efficient use of locomotives, personnel and wagons are necessary in order to make profits. So far it has been possible to transfer significant volumes of freight from road to rail. However, with the proposed infrastructure levy for 2006 it will no longer be possible for rail to compete with road.

CASE 4: RAIL OFFERS AN ALTERNATIVE TO ROAD FREIGHT FOR WASTE COLLECTION BETWEEN HAARLEM AND AMSTERDAM OVER SHORT DISTANCES

For the South Kennemerland Waste Procesing unit (AZK), ACTS offer the transportation of containers from the waste transfer stations in Haarlem to the incinerator plant AEB at Amsterdam West Port. After the waste is collected, it is compressed in containers and transferred to rail. Five days per week an average of 30 waste containers are transported by rail.

Result:

- an annual reduction of 9000 journeys, or 100,000 tonnes, each year
- significant steady movements and a reduction in lorry use around the incineration facility
- innovative solution for short distances (<30 km) through the use of cheap conversion technology from road to rail
- this type of rail solution has also been opted for in such regions as North Brabant, Zeeland, Overijssel, Gelderland and Limburg
- this concept is being adopted more and more abroad (including Berlin)

For a container train between Rotterdam and Groningen the new infrastructure levy has the following consequences on a round trip basis:

Distance of 332 Km x 2 directions	**Existing levy or 'rail tax' (a)**	**New infrastructure levy (b)**	**(b) – (a) ... ...**
Gross weight of train 2000 tonnes	***€335***	***€1067***	***€730 (-218%)*** ***€730 (-218%)***

This leads to an annual cost increase, for this train alone, of €228,000, more than 20% in percentage terms. In addition to this additional tax burden there is an additional 6% in annual costs brought about by the compulsory conversion of locomotives in line with the ETCS (the Port rail line is ETCS; the existing network runs on the ATB EG/NG system.

(X) ACTS, ERS and Rail4Chem
(0) Others

Source: Beaufort Business Partners

These charge increases will probably mean the end of a large number of container shuttles between the Rotterdam port and terminals in the Netherlands, and nearby regions across the border, such as Venlo, Coevorden, Leeuwarden and Veendam.

The tariffs and system related aspects of the infrastructure levy for the Betuweroute (as of 2007) are still not known

For the Betuweroute the authorities are not only striving to achieve variable costs, but are also seeking to cover the total authority and operating costs, including renewal following writing off the infrastructure, the so-called cost-plus method. This will be a one-off in the Netherlands. For the existing network even the variable costs are not covered, and for many other infrastructure types (road, locks, canals) this is also not the case. This means a significant increase from the present tariff. There is talk of an increase in the average tariff from €0.86 per kilometre in 2005 to €6 per kilometre in the future.

In order to prevent the market losing confidence in rail transport, the operator of the Betuweroute (ProRail/the Rotterdam Port Authority) will endeavour to introduce a system of price differentials for the Betuweroute (Source: Businesscase Exploitatie Betuweroute, 2004). Market segments for which there seem to be limited alternatives (such as the transportation of coal or containers to destinations over medium distances) will contribute more than

market segments for which switching to other forms of transport (such as the use of containers over short distances) is relatively simple. In the extremely competitive transport market alternatives could and must be sought via other forms of transport and ports.
Further it is unclear at the moment what tariff systems will be in operation once the Betuweroute opens. Rail freight operators are unable to reach any price agreements with customers for the next two or three years.

New safety and circulation systems only result in lower costs and greater competition in the long term

In Europe almost all countries have developed their own safety systems for trains over the last one hundred years. In the Netherlands this was the ATB EG (Automatic Train Safety First Generation) and later the ATB NG (ATB New Generation). None of these systems is compatible with the systems adopted in other countries. In practice this means that trains run from, say, the Netherlands to Switzerland, via Germany, currently have three different systems in the locomotive.

In the context of open European traffic and the wish to ensure that competition is present in the system, the European Union has decided to switch to one safety system within Europe, the so-called ETCS. In the longer term this will result in cheater rolling stock and thus in lower costs.

In the case of traditional track there are signal-posts every 800-1200 metres. The engineer actually runs his safety cable from post to post along the track. ETCS functions on the basis of advanced electronics in the locomotive. By means of radio signals, communications are maintained with beacon points along the track in order to prevent trains becoming too close to one another. This system replaces the posts along the track. This change, in the case of the Betuweroute, means a significant cost saving for the authorities and the infrastructure manager. However it results in a sign cost increase for the rail freight operators who need to convert their locomotives.

It was only in 2005 that the European Commission signed a Memorandum of Understanding with the network managers and suppliers:

- amongst other things this contained a resolution that within 10-12 years a Europe-wide ETCS network of important transport corridors (around 10% of the total network) would be created
- a great amount of investment would be required for this: €638 million for the infrastructure and €8800 million for conversion of stock (source: UIC-ETCS Migration Strategy Group, 2004)
- the creation of a harmonised inter-operable European system for the whole network will take several decades and will cost many billions of euros

The Dutch authorities have decided that the Betuweroute will be the first rail freight line in the EU to be constructed based on the ETCS safety system. In addition to the existing system, the locomotives operated on the Betuweroute must be equipped for ETCS. This requires an expensive conversion of the existing stock or the purchase of expensive new equipment.

[To operate on the 150 kilometres length of the Betuweroute, five times as much must be converted in terms of the power supply and safety systems]

Because ETCS is still at the development stage in Europe, the European specifications are not yet finalised and no “known technology” is available. In addition to the conversion costs, the rail freight operators and locomotive owners (leasing companies) will then be faced with development risks in relation to the new system.

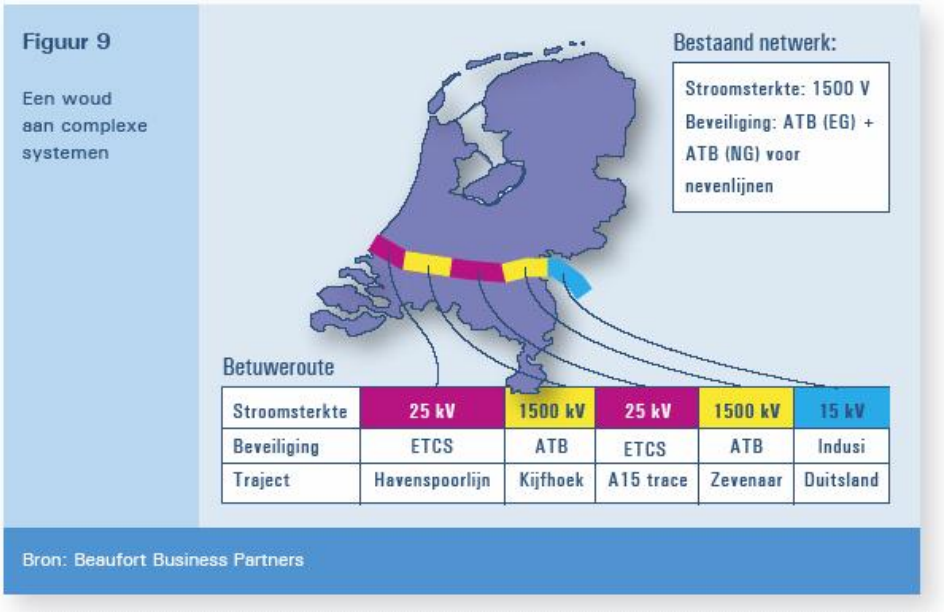


Figure 9
A forest of complex systems

Existing network:
Power: 1500 V
Safety: ATB (EG) +
ATB (NG) for subsidiary lines

Betuweroute

Power	25kV	1500kV	25kV	1500kV	15kV
Safety	ETCS	ATB	ETCS	ATB	Indusi
Route	Port rail line	Kijfhoek	A15 trace	Zevenaar	Germany

In addition rail freight operators are faced with a complex forest of power systems. For the use of electrical locomotives it is necessary to take account of dividend voltages (1500 V D.C. voltage, 15kV and 25kV A.C.):

- the current standard within the Netherlands is 1500 V D.C.
- for the Betuweroute and the Port rail line the National Authority decided to use 25kV A.C.
- because the Betuweroute coincides with the existing network at two points (Kijfhoek and Zevenaar-Emmerich), where the old system is in use, additional expensive locomotive are necessary
- and finally in Germany 15kV A.C. is used

[Locomotives are almost 70% more expensive than they need be, because of all the different voltage and safety systems in European countries]

Because the Port line in Rotterdam is also equipped with ETCS and 25 kV, it will be necessary for the whole Dutch locomotive freight fleet to be converted or replaced.

THE ADDITIONAL COSTS FOR LOCOMOTIVES SUITED TO THE BETUWEROUTE		
Acquisition + ATB (EG + NG) + Indusi – Memor	€2.5 M	€3.9 M (including. €0.6 M additional cost for 4 different power systems)
ETCS	Not applicable	€0.3 M (excluding costs for prototype
Total	€2.5 M	€4.2 M

(Private) rail freight operators will be unable to, and will not wish to incur the costs of the ETCS conversion and the development costs

On the basis of the available ETCS specifications there are three relevant suppliers for this system: Alstom, Siemens and Bombardier. These suppliers have produced offers for the ETCS requirements. The costs of the gradual conversion to ETCS have been estimated as follows by the Ministry of Transport and Waterways:

- development of an ETCS prototype (necessary for each locomotive type, and in the Netherlands 6 different train types have to be taken into consideration): €2.6 million per type
- implementation of ETCS (following the prototype stage): €350,000 – per locomotive

The three private rail freight operators use around 37 locomotives, divided up into four different locomotive types. The total costs for construction of the prototypes and for the implementation of ETCS are estimated:
No task is assigned to the rail freight operators themselves. These investments must be paid out by the locomotive owners (i.e. leasing companies). It is necessary to ask whether the leasing companies are prepared to take on the risk themselves for the Netherlands, and what the effect of that would be for the lease prices.

Number	Costs per unit	Total costs
4 x prototypes	€2,600,00	€10,400,000
37 x seriousness implementation processes	€350,000	€12,950,000
Total costs for conversion to ETCS		€23,350,000
Source: Ministry of Traffic and Waterways		

The authorities have made subsidies available for the development of prototypes, at a maximum of 50% per locomotive type, with a maximum of €700,000 per prototype. Only the owners of rail stock are entitled to this subsidy.

It seems that the Dutch authorities will not make maximum use of the European policy and guidelines with regard to subsidy facilities, because:

- Jacques Barrot, Vice Chairman of the European Commission, with powers in the area of transport, has recently stated: “in order to create a proper European rail network that is competitive for rail freight, we must make use of the European signalling system. There will involve costs, i.e. on the part of the initial rail companies that switch to the ETCS system. I therefore regard this (i.e. the European Union’s aid programme for ETCS) more as compensation than a subsidy”.
- In Switzerland the complete conversion costs for ETCS have been reimbursed by the authorities. Even for foreign rail operators. Switzerland has complied with the EU guidelines in terms of the subsidy guidelines.

It is clear that the Dutch rail freight operators and operation of the Betuweroute has suffered seriously from the incomprehensible approach taken by the Dutch authorities regarding subsidies for changing over to ETCS.

The case of Dortmund: cost increases result in operators migrating from Rotterdam to other ports

In the case chosen detailed figures have been calculated regarding the effect of changing over to ETCS and different levels of infrastructure levy on the rail freight operators, and regarding Rotterdam's competitive position.

We have chosen a container shuttle on the Rotterdam-Dortmund route. This may be regarded as a 'representative' case, because:

- Ø the Betuweroute is designed to improve connections with the interior between Rotterdam and Europe, and inland Germany in particular
- Ø Dortmund is a dry destination. There is therefore competition, via rail and road, with other ports
- Ø the eastern Ruhr region is an important economic centre, and falls within the inland focus area as far as the port of Rotterdam is concerned
- Ø there is competition with existing rail shuttles to North German ports

In this particular case, on the basis of detailed cost comparisons, we have calculated the effect of:

- Ø the infrastructure levy of 2006 and the cost of converting stock to ETCS, on the costs of the rail operators and the competitive position of Rotterdam
- Ø a further increase in the infrastructure levy to €2, €4 and €6 per km as of 2007

The extrapolation of this business case is based on certain assumptions, the most important being:

- Ø 1600 tonne train, 22 wagons, 88 TEUs per train, 90% of maximum use
- Ø 250 round trips per year
- Ø 1 locomotive per train
- Ø infrastructure levies abroad based on the 2005 tariffs in Belgium and Germany

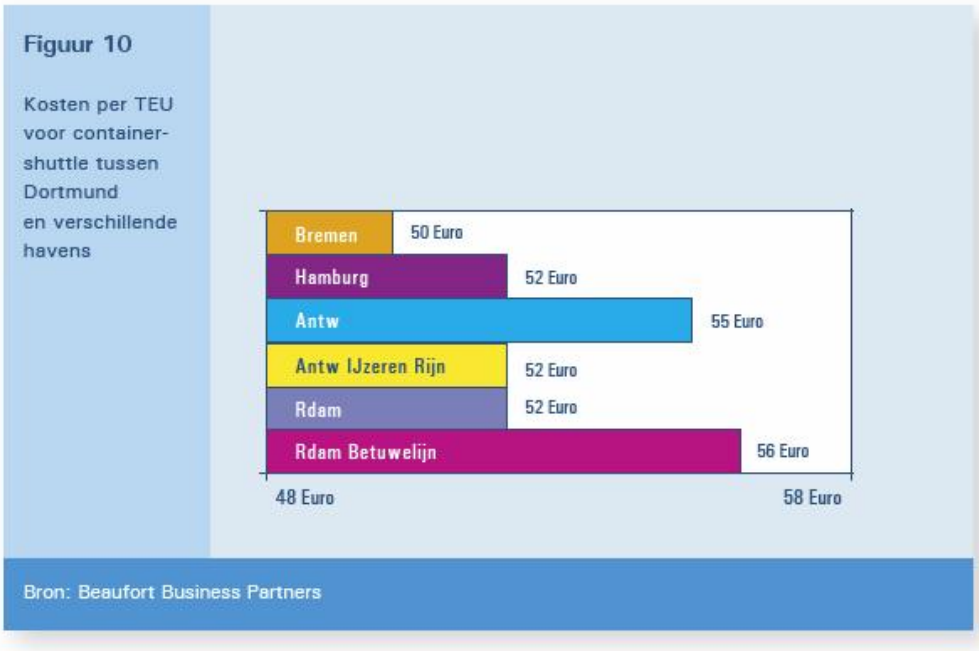
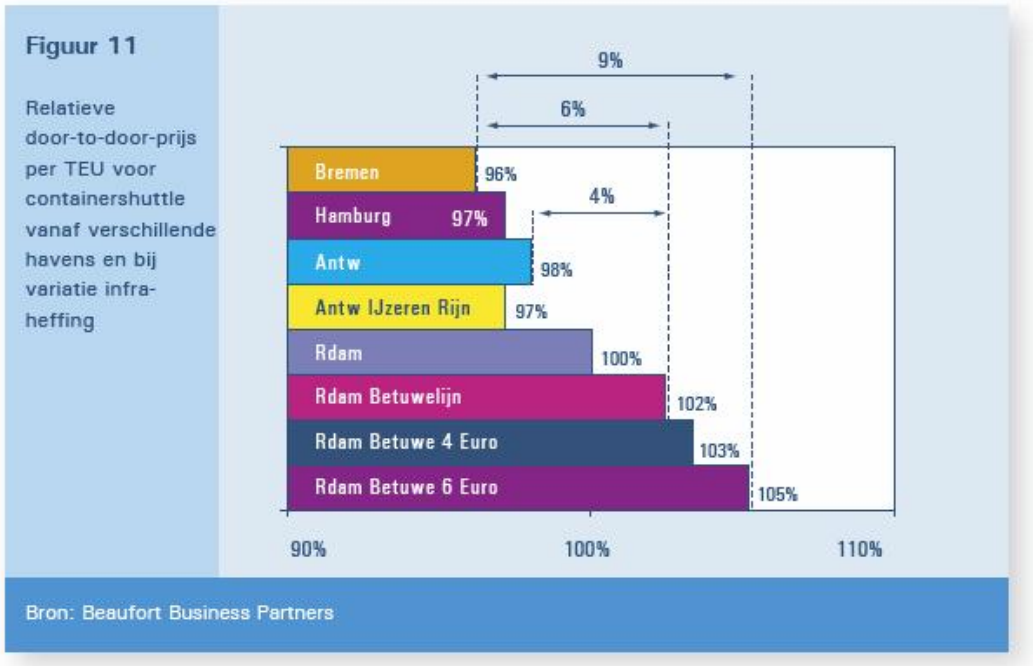


Figure 10
Costs per TEU for container shuttles between Dortmund and different ports

Antw = Antwerp
Ijzeren Rijn = Iron Rhine

Source: Beaufort Business Partners



Antw Ijzeren Rijn = Antwerp Iron Rhine

Source: Beaufort Business Partners

In the first instance we have calculated the effect of the 2006 infrastructure levy and the costs of changing over to ETCS as of 2007 from the point of view of the rail freight operators.

In the second instance we have calculated the effect of the increase in the infrastructure levy on the Betuweroute in the future. We have assumed three different scenarios, namely €2, €4 and €6 per train/kilometre.

[With the opening of the Iron Rhine, rail freight from Antwerp to Dortmund became 6% cheaper. With the opening of the Betuweroute, in contrast, rail freight from Rotterdam to Dortmund will be 7% more expensive]

Conclusions:

- for rail freight operators the 2006 infrastructure levy (a 50% increase) together with the change-over to ETCS in 2007, will result in a significant overall increase in costs, amounting to 7%
- with the opening of the Betuweroute there is a cost difference of 4-9% compared with competing ports. Shipping and forwarding companies are thus prepared to migrate to other ports for new volumes of business
- the door-to-door costs from Antwerp have fallen by 1.5% with the opening of the Iron Rhine, because this route means a shortening of the rout to the inland regions. The cost difference in the case of Antwerp is 8%
- with a further increase of the infrastructure levy as of 2007 to €2, €4 or €6 per tonne, rail freight operators will be expected to pay cost increases of between 8% and 21%

This results in a cost difference, per container, of between 7% and 8% compared with other ports. This will result in a reduction in demand for Rotterdam, and the migration of a certain volume of business to other ports and the Iron Rhine.

4 A rail track vision is badly needed

The Betuweroute offers great potential for expanding the economic and commercial development of the Netherlands and of the port of Rotterdam. The infrastructure is almost complete. From now on it is a case of creating the conditions and organisation that will make it attractive for the market to use the route and thus to cover the operating costs. This requires consistency and a clear vision for the (rail) freight market on the part of the authorities. The private rail freight operators need the authorities to come up with this vision. In addition it is necessary that certain milestones be reached in the short term so that trains can actually operate as soon as the route is opened.

The Netherlands will benefit from a consistent vision for the future in terms of (rail) freight

No one questions that the Betuweroute must be a success. The market as the sector have grown to such an extent that the Betuweroute is an absolute necessity if the Netherlands and Rotterdam in particular are to develop. The most important thing now is that all parties concerned lose no time in coming up with a clear blueprint for the next 5 to 10 years. Solutions need to be found in three different areas:

The infrastructure levy must be in relation to what the market can accept

- Ø the rail freight operators agree with the authorities that use of the infrastructure must be paid for. It is also appropriate that account must be taken of management, maintenance and operating costs. It is also expected that the operator will work as efficiently as possible, so that expenditure and cost rises are limited to what is really necessary
- Ø both the management and operating costs are, in the view of the rail freight operators, too high. There are sufficient indicators that the costs could be reduced. The rail freight operators are themselves of the view that the current operator, ProRail, could integrate the administration and management of the Betuweroute within its current organisation, without further expansion
- Ø for some time the maintenance costs have looked artificially high. Full advantage has not been taken of the full marketing potential of this part of the track sector
- Ø rail freight operators are only prepared to pay more if this is reflected in higher efficiency and quality. The authorities must be completely transparent regarding expenditure on management, maintenance and operation. This must be in the context of market tariffs. Furthermore it must be possible for the market to bear possible tariff increases. The proposed increases of more than 15% per annum are thus not sustainable or acceptable. This would result in a significant reduction in demand, so that the volume of traffic on the track actually fell, rather than increased, and the authorities' guaranteed income would fail

The new safety system is justified, but the freight operators must not be expected to pay

- Ø The rail freight operators are convinced that the new ETCS system can and must be the new European system. Its introduction results in long-term inefficiency, because it will take at least a decade just to implement the new system on the most important routes in Europe. It cannot be acceptable that the significant additional investment costs should be offloaded onto the rail freight operators. The rail freight operators also argue that, as long as the inefficiency persists, compensation should be paid to the said operators. This would be in line with the necessary investment.

Integration and efficiency must be the driving forces

- Ø The rail freight operators need the authorities to make an announcement of their vision for the next 5-10 years, the objective being that the rail freight operators can make maximum use of the Betuweroute and boost the position of Dutch rail freight in the European hinterland. A further positive effect of this will be the expansion of rail freight, making a positive contribution to reducing congestions on the roads
- Ø With the introduction of ETCS and the 25 kV power system, the Netherlands has taken a step towards European standardisation. The next step must be that the Dutch authorities actively and ambitiously encourage the extension of this standardisation. The authorities must also make provision for satisfactory capacity, particularly on the German section connected to the Betuweroute
- Ø The EU has an express wish to encourage rail freight. The Netherlands must now follow this up with an integrated vision and ambition to make this a success

The track must follow its course

The track must follow the course that has been embarked on. The potential for growth and market demand more, faster connections with inland destinations.

The rail freight operators are ready to invest, but before doing so they must know where they stand. There is not a single private company that would be prepared to invest in an uncertain outcome.

Are all parties involved prepared to leave behind our internal discussions of the past and to turn our attention to realising the commercial and economic opportunities that the Betuweroute offers the Netherlands? The rail freight operators are ready for this.

The following pages in the original text take the form of the same text, entitled Management Summary, in Dutch, English and German ...

List of Concepts

Rail freight has a terminology of its own which is often difficult for outsiders to understand. Below are the most frequently occurring terms and/or words used in this report.

List of concepts

1500 Volt islands	For the power supply on the Betuweroute the new European 25 kV standard has been chosen. The other Dutch network uses a power supply of 1500 V. Because the Betuweroute makes us of the existing network at 2 points (between Zevenaar and Emmerich, and at Zwijndrecht/Kijfhoek), it has been decided to use the old power rating at those points so that it can also be used by other trains
Aslast	The weight per axle for freight transportation. Aslast is determined by the maximum weight that a wagon can carry
ATB EG	Automatic Train Safety First Generation. The safety system used on the main Dutch network
ATB NG	Automatic Train Safety New Generation. The safety system that is used on a number of Dutch subsidiary lines. ATB NG offers a number of additional functions compared with ATB EG, as a result of which risks in terms of deployment are significantly reduced
Betuweroute	A special new track for freight, laid between the port of Rotterdam (Maasvlakte) and the German border (Emmerich), including the Port Track (Kijfhoek-Maasvlakte)
Containershuttle	Train used for the transportation of containers on fixed routes, with high frequency, providing a service between fixed locations/terminals
ERTMS	The European Rail Traffic Management System. The inter-operable standardised European safety system. ERTMS = ETCS + GSM-R
ETCS	European Train Control System. The new system that replaces the traditional posts along the track with a control system in the locomotive itself
GSM-R	The rail track adaptation of GSM. A system for determining location, and radio communications
Indusi	The safety system used on the German rail network
Infrastructure levy	The charge that carriers pay the manager for maintenance and management of the rail infrastructure
Memor	The safety system used on the Belgian rail network
Prototype	Before the new ETCS system can be implemented, it must undergo practical testing and be monitored. For this purpose a prototype of an ETCS locomotive is built to serve as a basis for ongoing production
Rail freight operator	Rail freight companies that transport goods, as defined in the EU Guidelines 95/18/EU, and any other company that makes use of or intends to make use of the track and thus has access to rollingstock, has

	obtained a commercial permit to operate, has valid safety and test certificates and is insured against the relevant liability risks
TEU	Standard unit for a 20 foot container. The length of containers is expressed in TEUs
Container versus TEU	Because there are different sized containers, the length ratio is expressed in TEU. A 20 foot container is 1 TEU, and 40 foot container 2 TEUs, etc.