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# NS Annual Report 2016





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This annual report is published both Dutch and English. In the event of any discrepancies between the Dutch and English version, the Dutch version will prevail.



# In brief



## CUSTOMER SATISFACTION

More satisfied passengers: 77% of passengers gave traveling by train a score of 7 out of 10 or higher (74% in 2015).



## ON TIME MORE OFTEN: 91.3%

Passengers on the main rail network arrived on time slightly more often and missed a connecting train less often than in 2015.



## JOURNEY PLANNER IMPROVED

Passengers can see how long the train is, how crowded, and which side to get off.



## NEW TRAINS

Phased introduction of 58 'Flirt'-class Sprinters from December 2016.



## CLEAN TRAINS

Passengers felt the trains were cleaner: 58% gave a score of 7 out of 10 or higher (51% in 2015). New train washing systems in Leidschendam and The Hague.



## PIT STOP

New working method for train maintenance inspired by Formula 1 to get trains back into service more quickly.



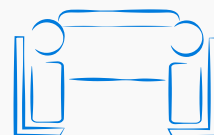
## GREEN TRAINS

Wind turbine farm delivered more quickly: 73% of the trains in the Netherlands ran on renewable wind energy; this figure will be 100% in 2017.



## LOWER CO<sub>2</sub> EMISSIONS

9.5g per passenger-km (16g in 2015).



## CROWDING

The likelihood of being able to get a seat or standing room in peak periods was 98.7% (also 98.7% in 2015).



## UTRECHT CENTRAAL OPEN

Refurbished stations at Den Haag Centraal and Breda as well.



## OV-FIETS

An extra 1,000 public transport bicycles. Over 2.4 million trips by public transport bicycle (up by 27%).



## NEW STRATEGY

Focus on better performance on the main rail network, world-class stations, and helping make the door-to-door journey go more smoothly.



## TRAIN JOURNEYS

Over 1.2 million per working day in the Netherlands.



## INTERNATIONAL CONNECTIONS

Thalys: extra trains in the morning and evening. Intercity direct: every fifteen minutes between Rotterdam and Amsterdam.



## ABELLIO

€2,100 million revenues. (€2,100 million in 2015)



**PROFIT**  
€212 million.  
(€118 million in 2015)



**INVESTMENTS**  
€791 million.  
(€536 million in 2015)



**REVENUE**  
€5,093 million.  
(€4,973 million in 2015)



**NUMBER OF EMPLOYEES**  
34,378  
(33,895 in 2015)



**AGGRESSION**  
More staff reported aggression  
(690 incidents as opposed to 642 in 2015).



**RAILWAY SAFETY**  
The number of signals passed at danger  
(SPADs) was 46 (45 in 2015).



# 2016 in a nutshell



2016 was the year in which NS put a difficult period behind it and was able to start looking to the future again. We are working towards the mid-term review in 2019 when the authorities will assess our performance. We therefore took measures to improve our performance structurally, we adapted our strategy and we paid a great deal of attention to compliance and integrity.

## Our performance on the main rail network

Performance	Baseline value for 2016	Target value for 2019	Realisation in 2016
General customer satisfaction with the domestic main rail network	74%	80%	77%
General customer satisfaction with HSL South services	68%	75%	78%
Customer satisfaction with personal safety on the train and at the station	81%	83%	87%
Punctuality for passengers (indicator to be achieved jointly with the infrastructure operator)	90.0%	92.3%	91.3%
Focus routes for punctuality for passengers (indicator to be achieved jointly with the infrastructure manager)	93.7%	95.6%	94.3%
Punctuality for passengers on the HSL South services (insofar as attributable to NS)	94.0%	96.0%	93.7%
Quality of the NS connections to other carriers at the major nodes	93.7%	95.2%	94.3%
Passenger capacity at peak times (main rail network)	98.7%	99.2%	98.7%
Focus routes for passenger capacity at peak times	96.5%	97.5%	96.8%
Passenger capacity at peak times on HSL South services (domestic)	97.5%	99.2%	87.6%
Journey information throughout the travel chain	78.0%	82.0%	85.8%
Information on the train and at the station about disruptions	75.0%	80.0%	82.0%

Many of our performance figures improved in 2016 compared to 2015. General satisfaction about travelling by train on the main rail network rose, as did punctuality, assessment of the cleanliness of trains and opinions on journey information. Nevertheless, it did not go well enough on all fronts: performance of the HSL South services remained below what was desired, for instance.

Furthermore, we introduced the first new Flirt trains onto the tracks, which will help raise levels of travel comfort and improve the chance of getting a seat, and nearly three quarters of our trains ran on wind energy. Passengers also felt safer in the trains and at the stations. The attention we pay to safety remains undiminished; every incident is one too many.

Unfortunately, the number of times our employees reported physical aggression increased. NS encourages staff to report all incidents of aggression.

## Integrity

Since the irregularities in Limburg and the Fyra inquiry, we have paid a great deal of attention to integrity and compliance. NS has been reorganising its processes and structures and is encouraging a culture of openness and addressability. There is now an integrity portal that staff can go to with questions about integrity, we have a new screening policy, and measures have been taken to guarantee a level playing field and manage risks better.

## Abellio

NS is continuing to acquire experience on the European railway market through Abellio and we are preparing for any further deregulation of the railways. In that regard, we have agreed that we will not take any major risks for new franchises. A piece of good news was winning the Greater Anglia franchise in October 2016. That was however offset by the loss of Northern Rail in April. ScotRail has got a challenging first year under its belt, as a result of which performance

remains below target. Abellio won three new tenders in Germany and our train service between Düsseldorf, Bocholt and Emmerich commenced in December. A noteworthy point is that this means Abellio will be operating a cross-border franchise for the first time, from Arnhem to Düsseldorf in April 2017.

## Finances

In financial terms, NS has a reasonable year under its belt, thanks for instance to a positive contribution from foreign activities and oneoff windfalls. Revenues were €5,093 million, which is an increase with respect to 2015 (€4,973 million). The main rail network franchise KPIs for 2019 are also leading factors in the financial policy for the NS business plan: as in 2016 (total investment of €791 million), we continued to invest in programs that help us achieve the KPIs, customer satisfaction, new rolling stock and productivity. Bringing the costs down further in the staff departments and in indirect costs will certainly be a challenge.

## Impact

The mobility that we provide means that NS makes a positive contribution to Dutch society. Our social impact improved in 2016. Reasons include the fact that passengers travelled considerably more by train than in 2015 (over 350 million extra kilometres), which had a positive effect on our impact on mobility and safe travel with respect to the car.

The negative environmental impact is the result of using fossil fuels. Because trains were running on 73% wind energy in 2016, that impact was less, yielding a positive effect of €15 million. Measures have also been taken that considerably reduced the negative impact of journey time in crowded trains. To provide safe travel, NS is working with its partners on preventing collisions and derailments or unsafe situations at the stations. There were only three incidents with injuries in 2016, compared with 30 in 2015. Because of a fatal accident involving a railway worker, the social costs of rail travel safety rose by €6 million (€3 million in 2015).

## 2017

In 2017, NS will continue on the course previously set. Concentrating on our core activities will let us genuinely focus on the passengers and help fulfil our social role of enhancing sustainable mobility in the Netherlands. Our electric trains in the Netherlands – including the first upgraded VIRM-I class double-decker trains – have been running entirely on green power since 1 January 2017. In terms of services, we are rolling out initiatives for greater ease of payment, such as travelling on account and paying by credit card. We are deploying increasing numbers of new trains, working on improving bicycle storage facilities and we will be opening the refurbished stations at Tilburg and Eindhoven again fully in 2017.



# Foreword

*'Illusion'*

*I went into the station,  
neither to say farewell  
nor to start a journey,  
but to be among people  
who live for a reason  
and have somewhere to go.*

(Eduard Hoornik)

The world around us is changing rapidly – just think of things like Big Data, artificial intelligence or nanotechnology. And people are changing too. We are travelling more and more, for instance. The most conservative scenarios for 2050 assume growth in mobility of 23% for cars and 20% for trains. The central conurbation of the Netherlands – the Randstad – is getting busier and busier, as is traffic between the Randstad and Eindhoven, Maastricht, Groningen, Arnhem and Nijmegen. All this growth raises the question of how we are going to make our cities and surroundings accessible and good to live in. One answer is making public transport the obvious choice in urban areas. NS has drawn up a vision for this together with the carriers who operate in the major cities. We are also working with partners such as the ANWB and RAI to shape the future of mobility. Freedom of choice and being able to travel flexibly are keywords: travelling by train, carpooling or trams – whatever works best. That offers plenty of opportunities for public transport, but it does also demand substantial investments in the existing infrastructure. This will present the new cabinet with a major challenge.

NS has its own role and responsibility in keeping the Netherlands accessible and in motion. We want people's journeys to be as pleasant and as easy as possible, both now and in the future. Not only by train, but from door to door.

After the irregularities in Limburg and the parliamentary inquiry into Fyra in 2015, we worked hard last year on regaining passengers' trust. We have a new strategy that lets us focus on our core activities so that the performance for the passengers will improve in the longer term: aiming for better performance on the main rail network, world-class stations and helping make the door-to-door journey go smoothly. And 100% sustainable operation has been the motto for our electric trains in the Netherlands since 1 January 2017. That is why we are investing in new trains, expanding the capabilities of the journey planner, investigating alternative methods of payment and why we will be running six trains an hour between Eindhoven and Amsterdam from 2018 onwards.

The fundamentals have to be in good order first, of course, and we want to make the daily train journeys as reliable as possible. This is plain to see in the results for 2016. Journeys by train were felt to be safer and we ran cleaner trains that were on time more often. After years of rebuilding work, Utrecht Centraal was officially reopened and we introduced new Sprinters in the completely renewed 2017 timetable. Things are not yet right everywhere for all passengers. The punctuality of the HSL remained too far below par and the chance of getting a seat in the Netherlands during peak hours is going to remain a challenge over the coming years: the influx of new trains is gradual and the improved economic situation will result in about 2% more growth in passenger numbers. We also see some inevitable challenges at the ScotRail franchise of our Abellio subsidiary. We were however pleased to win the Greater Anglia franchise in England and the three franchises in Germany.

We are continuing to invest in improvements and working on better satisfaction figures for our services. We are doing that together with our public transport partners, ProRail, the authorities,

carriers, consumer groups and interest groups. Within NS, we are improving cooperation and working on a new way of how we treat one another.

Our view is currently focused on 2019: getting a good result from the mid-term review at which NS will be measured against its targets. The authorities will then see whether we are meeting the agreements made for the main rail network franchise in the Netherlands. It is vitally important to our company that we retain the main rail network franchise. This includes keeping the stations and the HSL, which are an inseparable part of the main rail network and needed in the future too to enable us to offer passengers a good door-to-door proposal. The aim is to make sure NS remains a strong rail company. I have the fullest confidence in the route we have taken and I would like to thank all our staff for their huge efforts, involvement and contribution over the last year. We are doing it together, for more satisfied passengers.



Roger van Boxtel  
CEO

# I NS Groep

# Company profile



NS operates in the public transport sector. We encourage the use of public transport and we keep the Netherlands moving. Our activities are always centred on our passengers and we are working to make their door-to-door journeys as pleasant and as sustainable as possible.

Our 34,378 staff (30,945 FTE) in the Netherlands and abroad are working every day on reliable passenger transport, comfortable trains and buses, and world-class stations. Together with our public transport partners, we are working continuously on improving the door-to-door journey. The operations of NS cover both passenger transport and station development and operation, with combined revenues of €5 billion. More than 88% of that comes from passenger transport. Our activities abroad earn money, teach us how we can improve our services, and prepare us for the possibility of further deregulation of the railway market. In this way our activities abroad are contributing to the NS company objectives.

## NS in the Netherlands and Europe

The oldest predecessor of NS, HJSM, was founded in 1837. Since then, NS has been making a contribution to mobility and progress in the Netherlands. The company still plays a very significant social role in the domestic market. Since 2002, the NS subsidiary Abellio has been accumulating an increasing share of rail travel transport in the United Kingdom and Germany in particular. NV Nederlandse Spoorwegen is at the head of a group that includes NS Reizigers (approximately 11,000 staff), NedTrain (3,000), NS Stations (5,000, including retail) and Abellio (13,000). NS was restructured at the top in 2016 so that the day-to-day operations could be controlled better. In addition to the staff functions such as HR, Finance and IT, NS is organised as follows:

**NS Operations** is responsible for rail transport on the Dutch main rail network, including the HSL South. NS Operations is the most visible part of NS. Maintenance, repairs and cleaning of our trains in the Netherlands are covered by NS Operations, as well as modernising them and making them more sustainable.

**Commerce & Development** handles the development of train services in the medium and long term, as well as the sales and service activities associated with domestic and cross-border train transport. C&D sells tickets and manages the customer services. This same business unit also covers stakeholder management, running the main rail network franchise and the regional boards.

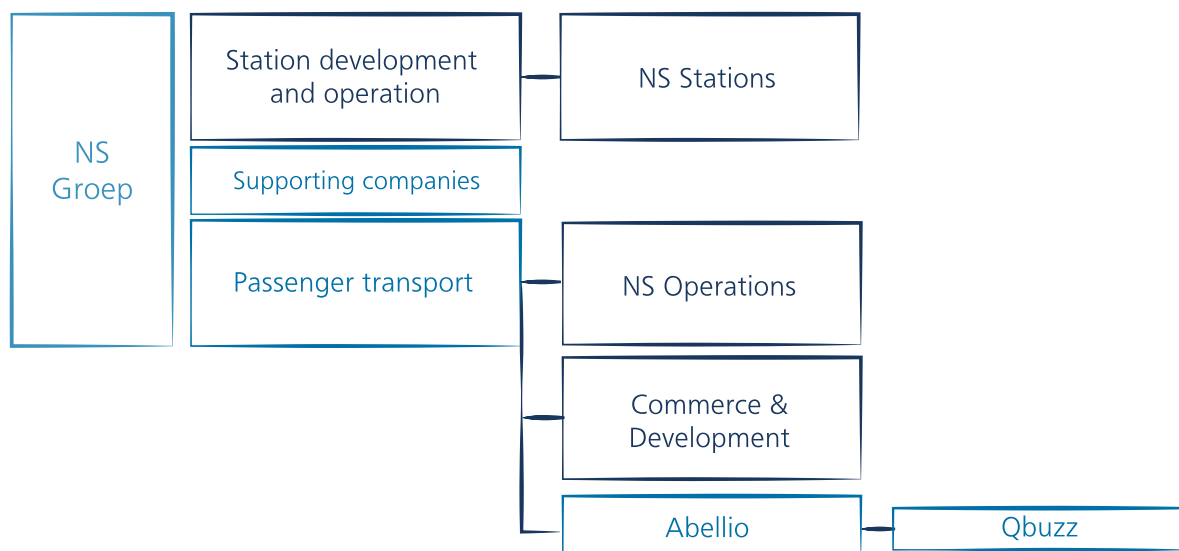
**NS Stations** works to create a good network of 410 stations, large and small. Together with ProRail, the authorities and all the carriers, NS Stations aims to make the journey and the time spent in and near the station as pleasant and comfortable as possible. Over recent years, NS Stations has worked with ProRail and various municipalities to rebuild major stations, emphasising that the stations are 'clean, complete and safe'. All activities – shops, services, facilities and transfer businesses – must make a contribution to the passenger's perception of the station and the journey.

**Abellio**, which was founded in 2002 as NedRailways, obtains and operates public transport franchises aimed at consolidating the position of NS in the European market as it becomes more deregulated. The company is now one of the largest railway operators in the United Kingdom and it carries 1.2 million passengers a day in the Netherlands, Germany and the United Kingdom (including joint ventures). Abellio currently has rail and bus transport operations in the United Kingdom (Greater Anglia, Merseyrail, ScotRail, Abellio London & Surrey) and in the Netherlands, through Qbuzz buses and trams. Abellio runs five train franchises in Germany (Emscher Ruhrtal-Netz, Ruhr-Sieg-Netz, Der Müngstener (S7), Saale-Thüringen-Südharz-Netz and Niederrhein Netz).

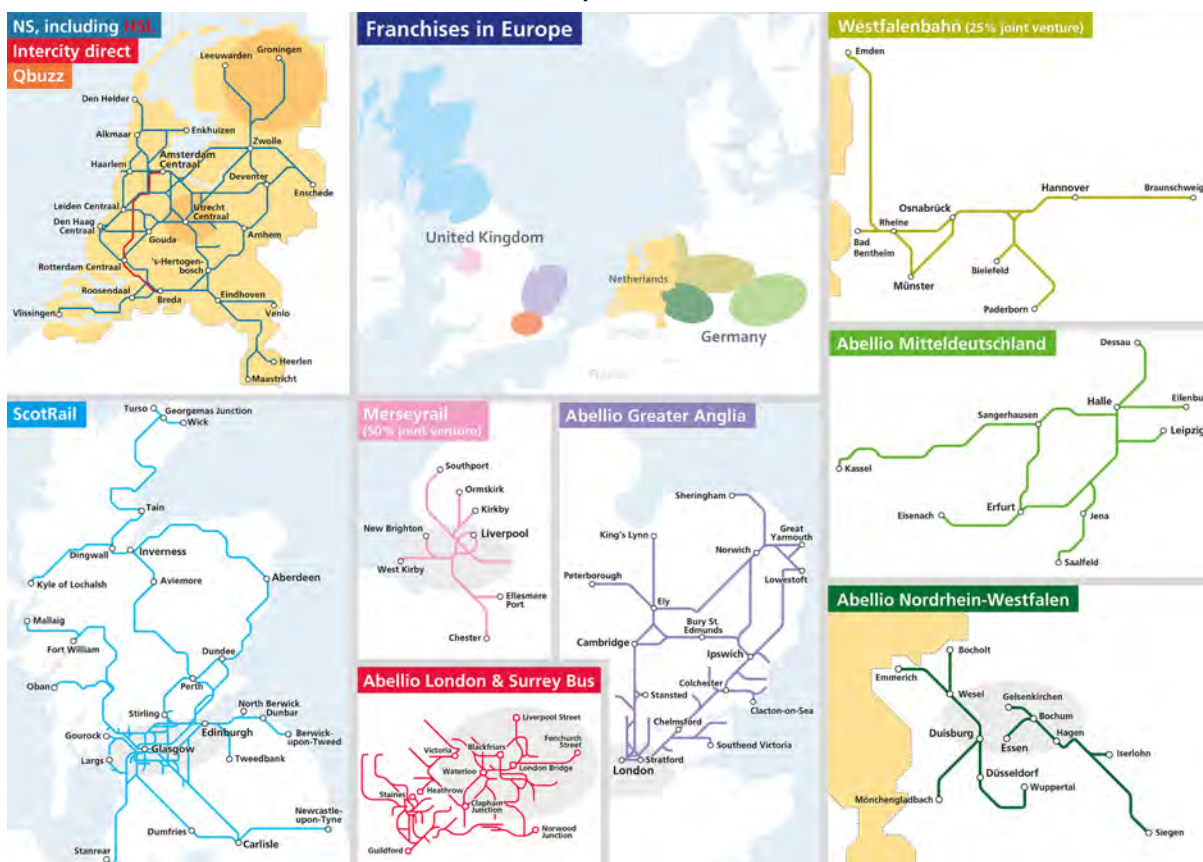


	FTE	Turnover*
Netherlands	19,886	3,172
United Kingdom	10,168	1,727
Germany	891	194

\* Turnover in € millions



## Franchises in the Netherlands and the rest of Europe





## How NS adds value to society

NS provides sustainable mobility to more than 9 million passengers every year, which is its contribution to the economic development and accessibility of the cities and the regions, as well as helping Dutch climate objectives. The annual report tells you about the ways we are creating value for society. The value creation model below shows the social, economic and environmental resources we use, the value NS adds to them and what that then yields for society.

### Input

To let our business model function as well as possible, we need a number of key inputs. As a carrier, we could not for instance function without our people and their knowledge of logistics. But other aspects are important too, such as energy (e.g. from wind) for powering our trains.

### Business model

Our *Spoorslags beter* strategy puts the passenger in the spotlight. In addition, we have the objective of improving sustainable mobility in the Netherlands while at the same time running healthy business operations. NS focuses on three core tasks: providing a good train journey, world-class stations, and playing our part in the door-to-door journey. This is our contribution to affordable and sustainable mobility in the Netherlands.

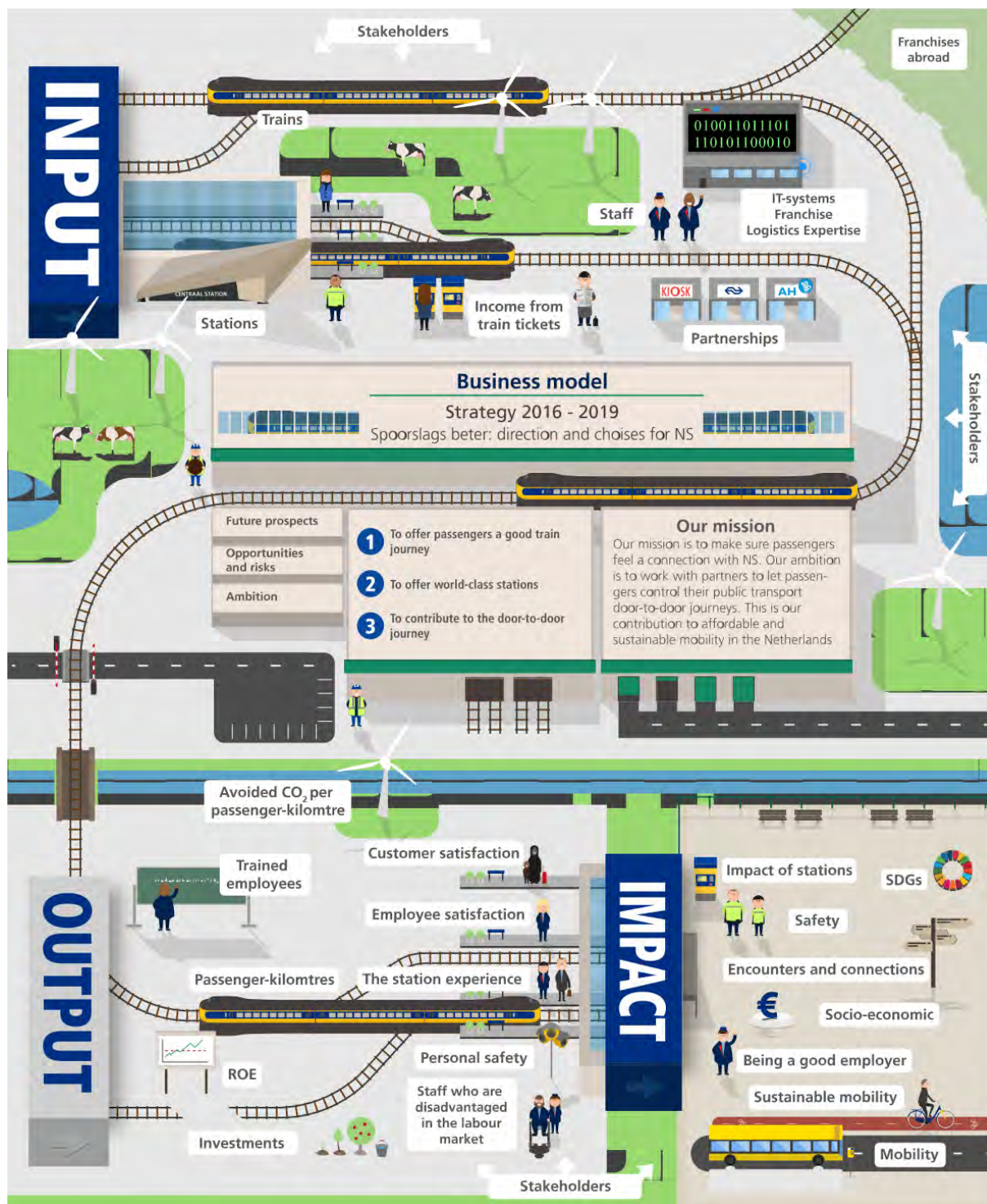
### Output

The activities in our business model have a variety of internal and external results. For example, in addition to our financial results, we carry more than 600,000 passengers a day in the Netherlands, we take good care of our staff and our trains almost always run on time.

### Our impact

We have a major impact on our surroundings. Mobility is very beneficial to the Netherlands in economic and social terms. But customers also lose journey time when there are delays and we do exert an environmental burden because of the raw materials we use. If we are to be able to keep travelling in future and keep the Netherlands mobile, it is important for us to have insights into the effects our business model has on society and to keep using them as control parameters. This means that we can be sure that the social costs of a train journey remain less than for a car journey and – where the environment or safety are involved – we will be able to increase our social return by increasing our share in overall mobility growth.

## Value creation model



## About the scope of this report

NS is a company that is based in the Netherlands and has a single Dutch shareholder, the Dutch State. In this annual report we are therefore primarily accounting for our actions for our Dutch stakeholders. NS focuses on the passengers and ensuring that their door-to-door journeys are comfortable. NS focuses primarily on improving operational performance on the railways, supported by activities that include bicycle facilities, stations and improving the door-to-door journey together with other public transport partners. In addition, we aim to remain a financially healthy organisation. Our stakeholders expect that from us as well. In addition, they want above all to see accountability for our non-financial results. To many stakeholders, the customer satisfaction, safety and punctuality are much more important than the financial position. This is also reflected in the regular dialogues with our stakeholders.

In order to offer passengers the best possible service at the right price, we are also accumulating experience abroad. That keeps us on our toes. Our goals in Europe are to acquire knowledge and experience, and to do so profitably. Like other major European state railway companies, we are preparing for possible further liberalisation of the market. Activities abroad have to contribute to the public interests in the Netherlands. This annual report has been written primarily for the Dutch stakeholders. They say that they believe our activities in Europe are a materially relevant theme. That is also why we have included Abellio's results abroad as a separate chapter.

In addition to the financial statements and our combined auditor's report thereon, the NS Annual Report 2016 contains other information, which consists of:

- The NS Management Report, which is included in chapters I, II and III
- The Report by the Supervisory Board, which is included as part of Chapter I, and
- the other information, in accordance with Part 9 of Book 2 of the Netherlands Civil Code.



# Report by the Executive Board



*Back on track.* That is how Roger van Boxtel, the Chairman and CEO, described 2016 for NS. NS is back on the rails and the Executive Board is looking to the future with confidence. “We are now starting to win back passengers' confidence,” says Van Boxtel. According to him, the key to that is good performance, dedicated staff and satisfied customers. In addition, NS is making substantial investments in improvements for passengers.

Performance is going in the right direction. Almost all the performance figures for the main rail network were above the required baseline values at the end of 2016, with customer satisfaction rising to 77. "Everyone deserves a big compliment for that, given the challenges NS had to overcome in 2016 too," says Van Boxtel, looking back. "We have responded well to these challenges and anticipated them: we have taken measures for the crowded trains, even if we haven't quite got there yet. We kept running while doing all the work, for instance at Utrecht Centraal. We are not happy about the nuisance that this creates for the passengers, but they too can see that we want to make the railways better for the future. That understanding also comes from our open way of communicating. We prefer to tell it like it is, rather than hide behind glib words. Which is something our passengers value, I have been told."

## New attitude

This new attitude is a logical outcome for NS of the strategic reorientation that was presented by NS in March 2016. NS is focusing on the passengers and on its social role. Van Boxtel says, "We are concentrating on our core activities, which will make us better at doing them and avoid us getting bogged down with things that other market parties can now do well." The core activities are the performance on the main rail network and the HSL, world-class stations and the door-to-door journey. "What won't change is that the top priorities are passengers, passengers and passengers. But we may be making other choices. Choices that are appropriate for an enterprise that is right in the heart of society. We have taken a critical look at our role in the commercial operation of retail outlets at stations and our interests in urban and district transport, such as Qbuzz and HTM. The interests of the public are paramount, even though we have to earn money so that travelling by train can be made better in the future."

## Progress

NS made progress in all three core activities in 2016. Passengers arrived on time more often and caught their connecting trains more often. The access gates made passengers feel safer at the stations, although the number of reports of physical aggression against staff did rise. We believe that every aggressive incident is one too many. "Safety is an important matter for the Executive Board," says Susi Zijdeveld, the Risk Management director. "That includes making sure that NS employees can work safely. NS holds exercises and training regularly for this and the Executive Board carries out what are known as 'safety walks' at working locations throughout the country."

More and newer public transport and bicycles were added in 2016 and splendid new stations were delivered once again, including Den Haag Centraal, Breda and Utrecht Centraal. "Genuine gifts for these cities and for our passengers," says Zijdeveld. The new stations are often part of larger-scale urban renovation projects, meaning that they help improve the quality of the public spaces and social cohesion. "That's why we also remain involved in retail at stations. Our aim is that we will increasingly have these operated through franchises, but our passengers' perceptions are the most important thing."

The Operations Director, Marjan Rintel, says that 2016 was an important year for the services of the future. "NS started the completely redesigned, future-proof the new timetable in December, which meant to changes for almost all passengers. The introduction of the new Sprinters in December went smoothly thanks to careful preparation, among other things. The new Pitstop working method, inspired by Formula 1, ensures that trains that fail can get back into service again more quickly. The *Instapzone* (Boarding Zone) that we prepared in 2016 and introduced at the beginning of 2017 is how NS is progressing towards safer and faster boarding. That will in turn make it possible to run trains more frequently, which improves the chance of passengers getting a seat." NS has introduced the customer relations programme NS Extra, through which it is aiming to bind customers closer by offering services such as a checkout alert service and special offers such as a Joint Journey Discount. In addition, the social media team is providing more and more advice to passengers, 24 hours a day and 7 days a week. Ms Rintel says, "NS staff are ready and waiting every day to serve our passengers – at the stations, on the trains, at the workshops and in the offices. It may be the conductor who has a friendly word with you as you go, the barista making you a coffee in the Kiosk or the

technician who maintains the trains: their efforts all improve satisfaction levels among our customers."

## Strengths

NS has used the experiences of 2015 to improve the organisation. "We haven't been contemplating our own navels and haven't been negative. Instead, we've turned that energy into strength and progress," says Van Boxtel. "NS and all our colleagues have had to go through a period of grieving. We had to get things off our chest. And then we picked up the pieces together again. All our staff remain critical. They have asked for attention to be paid to keeping a second conductor on the DDZ6 and for better work packages in the new timetable. It is important for us that we always keep talking and take criticism seriously. In general, our colleagues are once again proud of this company – they are staying positive and looking towards the future."

'The Hague' and the other stakeholders are seeing that energy too, he is starting to notice. "Asking for help if there is something we can't resolve is not a good feeling. We would like passengers' organisations and other carriers to help us think things through and take action together to resolve problems for the passengers. That makes discussions easier. We take our passengers' complaints and questions very seriously."

## Measures

After the irregularities in the tender in Limburg and the Fyra inquiry, integrity and compliance were emphatically present last year. The recommendations from the investigation carried out by Alvarez & Marsal provided the baseline. NS has been reorganising its processes and structures and is encouraging a culture of openness and addressability. Numerous measures are being taken to ensure compliance, guarantee a level playing field and manage the risks better. "Decisions must be carefully considered and taken by the right people throughout NS. They must be based on the correct information, so that the risks can be properly estimated," says Susi Zijderfeld, the Risk Management Director. "We have configured the processes with that in mind and we check whether what we want to do and have promised is feasible in practice." Although processes and procedures can keep the business operations on the right course, the credibility of NS is ultimately determined by human choices, conduct and integrity. "What NS staff have had to deal with in 2015 is painful but certainly not typical of the entire organisation," emphasises Zijderfeld. Nevertheless, recurrences must be avoided: "We are aiming high. We are working on greater awareness of the norms among all NS staff. Everyone should know what is 'the right way', what the rules are and what ought to be done. That is why we set up an integrity portal in 2016 that staff can turn to if they have questions or if they see something that is unacceptable. At the same time, we want our colleagues to have the freedom and security within that framework to feel they can take the initiative, be flexible and take on responsibilities. And they also have to be critical and be prepared to tackle each other – and the management – about such things." The Executive Board must lead by example, create clarity, encourage dialogue and be open to ideas. "The Executive Board is there for the company and its staff, not vice versa."

## Abellio

Modified governance and compliance are also expected to create clearer decision-making and responsibilities at the subsidiary Abellio too. The directors of the United Kingdom and Germany will shortly be appointed as statutory directors of Abellio Transport Holding, reporting to the new NS Director of Finance, Bert Groenewegen. "As a result of the events in Limburg, the due care taken and legality of foreign bids were assessed in 2015 and no irregularities were found," he says. "The principle is that we will not take any major risks for new franchises. We have made agreements with our shareholder about growth abroad with respect to returns, the available capital and a controlled risk profile."

Abellio is doing well abroad. We have won several new franchises. All the franchises are profitable; only ScotRail is lagging behind the targets. Reasons for this include disappointing economic developments, industrial action about driver-controlled operations and work to



improve the infrastructure. This has increased pressure from the media and political circles. As part of the NS strategy, Abellio divested its shares in HTML in 2016. The sale of Qbuzz is being prepared.

## New structure at the top

A revamped strategy, a new way of working, a new culture: these are preconditions that are intended to lead to improved performance. This also includes a change to the structure of the top, defining responsibilities more clearly and treating policy themes cohesively. Henceforth, NS will be managed by a five strong Executive Board. "It's a relatively new team," says Van Boxtel. "So it's important that you listen carefully to the people with experience and expertise." New roles in the Executive Board are the Operations Director (Marjan Rintel), the Director of Commerce and Development (post temporarily filled by Maurice Unck; as of 1 April 2017 it will be Tjalling Smit) and the Director of Risk Management (Susi Zijderveld). "I'm also pleased that we've found a good person for the CFO position in the organisation: Bert Groenewegen. The new Operations section was a logical step in the logistical setup of the organisation for good basic performance," explains Van Boxtel. Marjan Rintel and her team have been working on the operational integration of NedTrain and NS Reizigers. Ms Rintel says, "Our aim is to set up the organisation so that we can start the morning scheduled timetable at the right time, with the right trains in the right places – and with the right level of quality. In addition, we have decoupled the daily operations from the development of future timetables and services." These are a natural link with market demand in the new Commerce and Development section.

## Financial results

In financial terms, NS has a reasonable year under its belt. Groenewegen says, "Thanks to a positive contribution from foreign activities and one-off windfalls such as the sale of the Vastgoedfonds, among other things, we made a profit. The contribution from the main rail network in the Netherlands is not yet sufficient. The turnover of NS in the Netherlands was €3 billion and for Abellio the figure was €2.1 billion. The turnover for Abellio was lower than budgeted, primarily because of the fall of the value of sterling and lower economic growth in Scotland. The exchange rate of the British pound, partly a consequence of Brexit, has had a negative impact of €221 million on the turnover of our activities in Great Britain, as compared to 2015. But because this is balanced to some extent by expenditure in pounds sterling, the impact on the result is limited."

Over the coming years, the main rail network franchise KPIs for 2019 as agreed with the Ministry of Infrastructure and the Environment will be the main determinant of the NS business plan. "We are investing a lot in programmes for helping realise the KPIs for the main Dutch rail network, for instance in new trains, upgrades to rolling stock and IT. These are genuine improvements for passengers. We invested €791 million in 2016 and a further €3 billion of investment is planned in the period through to 2019, largely in expansions to the rolling stock fleet."

The income from the main rail network must be increased structurally and the costs of the indirect activities and staff offices must come down, according to the financial director. "We are busy organising tighter control mechanisms for the operational chains and tuning the internal processes better to each other, which will let us carry more passengers. We have already realised some significant improvements in that during 2016. It costs money when trains don't run, so it's important to get them back onto the tracks as quickly as possible." Combined with the increased frequencies and the influx of new rolling stock, we think we will be able to handle growth in passenger numbers and perform better. In the longer term, that should lead to improvements in the results, so that NS complies with the yield norm of over 5%, as required by the shareholder.

## Sustainable journeys

Major steps were taken in 2016, but Van Boxtel emphasises that NS is by no means finished. "The whole company must feel the urgency of achieving the ambitious agreements made for the interim assessment in 2019. That means improvements on all fronts, better cooperation

internally and externally and in the transport chain, as well as increasing our innovation capabilities. That's something that's by no means always obvious for a company like NS with a long tradition. We will have to get an even better picture of what passengers want and respond to it. They must get their money's worth."

Achieving these goals is not something that NS does alone. Examples of this are the cooperation with the four large urban carriers, setting up the sector association OVNL and the mobility alliance that includes the ANWB and RAI. "The Netherlands is at a standstill more and more often and there's pressure on how nice it is to live in the densely populated areas," observes Van Boxtel. "We at NS want to grasp hold of our social role and be one of the leaders – or even one of the controlling parties – in a rapid, pleasant and sustainable door-to-door journey, made possible by good cooperation with our public transport partners. We will only be accepted in that role if we perform well and give a good example; think of our joint purchases of wind energy with our partners on the railways, for instance, so that all electric NS trains in the Netherlands will be running entirely on green power in 2017. The transition to a modern, flexible carrier takes time."

## Personal details – Executive Board



From left to right: Roger van Boxtel (CEO), Susi Zijderveld (Risk Management Director), Bert Groenewegen (Finance Director), Marjan Rintel (Operations Director) and Maurice Unck (Director of Commerce & Development ad interim, acting as a non-statutory quartermaster)

### **Roger van Boxtel (1954), CEO, Dutch national**

- Focus on: strategy, HR, communications
- Other positions held: Member of the supervisory board of the APG Group, chair of the Geschiedschrijving Gorinchem Foundation, member of the advisory council of ECP-EPN, member of the Ajax members' council, member of the executive committee of VNO-NCW, chair of the supervisory board of Museum De Fundatie, member of the advisory council of the VUmc Alzheimer Centre
- Background: Dutch Law (University of Amsterdam)
- Career includes: VNG, AEF, Member of Parliament in Lower House and Upper House, minister for Cities and Integration and IT, CEO of Menzis

### **Bert Groenewegen (1964), Finance Director, Dutch national**

- Focus on: Finance, Abellio, IT, procurement, accommodation
- Other positions held: Member of the supervisory board and chair of the audit committee of Intertrust NV, member of the supervisory board of Todlin NV, member of the supervisory board of FD Mediagroep (until 1-Sep-2016), member of the supervisory board of Wereldhave (until 1-Sep-2016)
- Background: Business economics (Tilburg University)
- Career includes Exact Software, PCM Uitgevers, Ziggo

### **Marjan Rintel (1967), Operations Director, Dutch national**

- Focus on: Operational management, fleet services, international, service & operations, service & maintenance, refurbishment & overhaul
- Other positions held: Member of the board of Hermitage Amsterdam
- Background: Business Administration (Groningen University)
- Career includes Schiphol, KLM, Air France/KLM

### **Susi Zijderveld (1969), Risk Management Director, Dutch and Canadian national**

- Focus on: NS Stations, legal, risk management, concern-wide safety, corporate audit, compliance
- Other positions held: Member of the supervisory board of Filmfonds, member of the supervisory board of Propertize (until 1-Nov-2016), member of the board of the National Committee for 4 and 5 May Foundation
- Background: Master of Laws (VU Amsterdam)
- Career includes Stibbe, De Nederlandsche Bank, CBR

### **Maurice Unck, Director of Commerce & Development ad interim, acting in a non-statutory, preparatory sense, Dutch national**

- Maurice Unck started his career with NS in 2002; for the last few years he has been the Communications & Strategy director.
- Background: studied Dutch Law and International Law (Utrecht University)
- Career: NS

### **Other members in 2016**

#### **Bert Schouws (1958), CFO ad interim (18 Apr to 18 Sep), Dutch national**

- Other positions held: Member of the supervisory board for Rabobank IJmond
- Background: Chartered Accountant, NIVRA
- Career includes ASR, ABN AMRO, Fortis, EY

#### **Engelhardt Robbe (1955), CFO (1 Jan to 8 Apr), Dutch national**

- Other positions held: member of the supervisory board and chairman of the audit committee of Eurofima Switzerland (until 1-Apr-2016), chairman of the executive board of NS Financial Services Company (until 7-Apr-2016), chairman of the supervisory board of NS Insurance (until 1-May-2016), chairman of the supervisory board of the Dutch Railway Museum, member of the National 4 and 5 May Fund Foundation, ambassador for UAF, member of the board of trustees for the registered controller programme at the VU University Amsterdam.
- Background: Business Economics (Groningen University)
- Career: Shell



# Report by the Supervisory Board



2016 was the year in which NS picked up the threads again. Performance improved and the new strategy and new top structure mean that the company will be able to focus on its core activities even better and on the mid-term review in 2019.

For NS, 2016 was all about stabilisation and a renewed focus on the core business: carrying passengers, in clean trains that run on time and from attractive stations. Dossiers such as crowding on the trains and IC direct required a great deal of attention. NS tackled a lot of problems over the last year, including peak-time capacity. NS has started work with a new executive board, new trains, committed employees and a new strategy, going all-in to get a good journey experience for its customers.

## New strategy

In March 2016, NS presented its new strategy. NS has chosen three core tasks: improving performance on the main rail network (including the HSL), creating world-class stations and making a contribution to the door-to-door journey. The Board was closely involved in setting up the new strategy, for instance through the temporary strategy committee. The Board believes that the new strategy will enable NS to focus on the mid-term review that the Ministry of Infrastructure and the Environment will be holding in 2019. This will let NS continue to build a company with solid foundations, a vast amount of knowledge and the dedication of its employees. From December 2016 onwards, NS will in addition see large numbers of new trains coming in over the period to 2024, which will be a huge gain for its passengers as well as presenting a challenge.

As part of the new strategy, NS will dispose of some or all of the station retail outlets. To get world-class stations, NS believes it is not sensible to operate the retail outlets itself. The intended sale of Qbuzz and the sale of the HTM shareholding are also a consequence of the new focus. For an attractive, low-threshold door-to-door journey, NS wants to cooperate as well as possible with other carriers.

As part of the international strategy, NS is expanding the foreign activities of its subsidiary Abellio that are focused on the deregulated European markets in Germany and the United Kingdom.

Before the new cabinet is formed in March 2017, an investigatory committee set up for the purpose by the Dutch government will produce its conclusions about market regulation on the railways. NS will be contributing information, data and knowledge to this study. The Board awaits the committee's recommendations with interest.

## Structure at the top

NS adapted its management structure in 2016 in line with the new strategy. The Executive Board has been expanded from two members to five. A two-person Executive Board is vulnerable in terms of organised counter-arguments and continuity in staffing and is therefore (according to the board) not a suitable solution for NS, given the complex societal, political and legal arena in which it operates. The Executive Committee (ExCo) with no formal decision-making authorisation was dissolved at the same time. The Supervisory Board believes that an Executive Board with five members and direct operational responsibility is a better management model for NS. Setting up the Operations vertical control unit, in which NS Reizigers and NedTrain jointly control the day-to-day operations (everything from cleaning to train deployment), means we can concentrate even better on the passengers.

## Governance, Risk & Compliance

Integrity and compliance were two topics that were regularly on the Board's agenda during 2016. Measures, including some at the behest of the Board, were taken as a result of *inter alia* the irregularities around the tender in Limburg and the parliamentary inquiry into Fyra. The research and consultancy firm Alvarez & Marsal was commissioned by the board and the Minister of Finance to carry out a thorough analysis of the effectiveness of the internal procedures, risk management, compliance and checks at NS and all the subsidiaries. The final report was published in January 2016. NS has taken additional measures based on the Alvarez & Marsal report to refine internal procedures and checks and it has drawn up an action plan. The company has not only focused here on the things that went wrong, but also on measures that have a preventive effect. An internal culture programme is a major element of this. In addition, the new approach to governance, risk & compliance also presents commercial and



economic opportunities e.g. for assessing the working method in terms of effectiveness and efficiency and to get better insights into investment and procurement policy. The appointment of a Risk Management director in the Executive Board from 1 February 2016 means that governance, risk & compliance are embedded in the organisation at the highest level. In addition, NS had to deal with the legal aftermath of the public transport tender in Limburg. The Netherlands Authority for Consumers and Markets (ACM) concluded in 2015 after a complaint by Veolia that NS had violated the Railways Act in the tendering process in Limburg. The ACM rejected some elements of Veolia's complaint. Veolia submitted an appeal against this and on 14 July 2016, the Trade and Industry Appeals Tribunal ruled against Veolia. No further appeal is possible against that ruling. In the summer of 2016, the ACM concluded its examination of the facts concerning violation by NS of the Competitive Trading Act and NS explained its point of view. ACM will now assess whether any violation of the Competition Act did take place and if so, whether a sanction will be imposed by means of a legal decision. The Public Prosecution Service started an investigation in 2015 into possible criminal acts in connection with the tendering process for public transport in Limburg. A pre-trial review was held on 13 December 2016. The examination of the substantive details has yet to take place.

## Supervision in 2016

### Safety

Safety is a topic that is regularly on the Board's agenda. The Board looks at both personal safety and safety on the tracks. A good way of remaining well informed was the participation of a number of members of the Board in an exercise looking at the risk of a terrorist attack at a station.

### Operational performance

In terms of operational performance such as punctuality for passengers and customer satisfaction, there was a cautious upward trend for NS in 2016. Performance of IC direct still needs to improve and this was regularly on the Board's agenda. In order to understand the issues with this train service better, the Supervisory Board travelled in the cab during one working visit. Working visits help understand the company operations better, intensify the relationship with the Executive Board and ensure that the Supervisory Board can do its work better,

Over the last year, NS has paid a great deal of attention to tackling crowding in the trains. The organisation has kept its eyes open and its ears to the ground as it worked on improvements. The influx of new trains from December 2016 to 2024 will let NS offer its passengers more seating capacity and comfort (electricity sockets, better Wi-Fi). The trains will also be increasingly sustainable and the electric trains will be running entirely on green power from 2017. Highlights over the previous year were the opening of a number of renovated stations, such as Den Haag Centraal, Breda and Utrecht Centraal.

### Abellio

NS wants to continue gaining experience on the European railway market so that it can prepare for future developments on the railways. The Board sees a challenge in applying knowledge and experience from abroad so that passengers in the Netherlands can benefit. Particular attention has been paid to the problems at the start of the ScotRail franchise. The Board will be supervising bids for new franchises and looking at any risks such as sureties. A key condition is that Abellio's risks must be manageable and the franchise must provide added value for the NS Group. Like our shareholder, the Board wants NS to limit the risks being run with the capital it has invested in Abellio. In that context, the Supervisory Board also regularly holds discussions with the Executive Board so that the risks can be managed. In the Greater Anglia franchise that was recently won, Abellio elected to use a joint venture with Mitsui (60/40); the reasons included spreading the risks, making the financing more efficient and because of their knowledge and expertise.

## Investments

The Board monitors large investments closely. The Board also debated various investment proposals in 2016, such as the New Generation Intercity.

## Financial results

NS achieved a net profit of €212 million this year, compared to a profit of €118 million in 2015. The underlying result (disregarding one-off items) fell however from €234 million in 2015 to €136 million in 2016. A proposal has been made to pay a dividend of €78.7 million, which is 37% of the result for 2016. The board has made a critical assessment of the results and discussed them with the external auditor.

NS has an ambitious investment programme of nearly €3 billion over the coming years. These are long-term investments, largely in new rolling stock, that NS will finance over the course of time, partly with loan capital. As a result, NS will improve quality for the passengers.

## Corporate governance

After numerous discussions in 2015, the cycle of consultative meetings was back to normal again in 2016. The cooperation with the Executive Board was both pleasant and constructive.

### Functioning of the Supervisory Board

About once every three years, the Board has its functioning assessed by an independent expert. This was also done in 2016. The evaluation showed that the Board functions properly. The new members appointed in 2016 went through an intensive familiarisation programme covering all aspects of the company. This let them learn about the business quickly and thoroughly.

### Shareholder

There were numerous contacts with the shareholder in 2015. The frequency of these consultations was normalised again in 2016. The Board describes its relationship with the shareholder as professional, business-like and constructive. The Board's discussions also covered the composition of the Executive Board and the Supervisory Board.

### Employee participation

The Board has a good relationship with the Works Council (OR) and meets with them on a regular basis. An omission in the decision-making about setting up the supervision of Abellio led to the Enterprise Division of the Court of Appeal being asked to give a ruling. This did not disrupt the relationship with the Works Council.

## Changes in the Executive Board and Supervisory Board

### Executive Board

Roger van Bortel was appointed in December 2016 as the Chairman and CEO until August 2019. He had been in this role *ad interim* since August 2015 in order to guide NS into calmer waters and restore confidence in the organisation. The Supervisory Board is pleased that Roger van Bortel will continue to use his experience and unifying skills for the benefit of NS. Susi Zijderfeld started work on 1 February 2016 as the Risk Management director. Marjan Rintel joined the Executive Board in July 2016 as the Operations director and Bert Groenewegen joined in September 2016 as the Finance director. Bert Schouws filled the role of finance director *ad interim* from April to September 2016. The former finance director Engelhardt Robbe left NS in April 2016 at his own request. Our note of thanks for his contributions to NS was included in the 2015 Annual Report. Tjalling Smit will be joining the Executive Board as of 1 April 2017 as the director of Commerce & Development.

## **Supervisory Board**

Two new members joined the Board in 2016: Marike van Lier Lels as of 3 February and Janet Stuijt as of 15 August. Truze Lodder said farewell on 2 June after twelve years as a member, most recently also as chair of the Board. We would like to thank her for her exceptional commitment and efforts for NS. Ilonka Jankovich also left the Supervisory Board. We are grateful to her too. Gerard van de Aast was appointed chair of the Board as of 2 June. The Board currently consists of five members. The intention is that the Board will finally comprise six members again.

## **Meetings of the Supervisory Board and its committees**

### **Supervisory Board**

The Board met 17 times in 2016, of which 9 meetings were by phone. With only occasional exceptions, all members of the Supervisory Board were present at all the meetings. The Supervisory Board has the following permanent committees: the Risk and Audit Committee, and the combined Remunerations and Appointments Committee.

### **Risk and Audit Committee**

The Risk & Audit Committee has consisted since August 2016 of Jeroen Kremers (chair and the Board's financial expert), Gerard van de Aast and Marike van Lier Lels. The committee met 4 times, in the presence of the auditor and the Finance Director. With one exception, all the members attended all the meetings. The key topics were the financial statements, the annual report, the annual and six-monthly figures, the budget, the corporate plan for 2017 to 2021, audit reports, reports by the internal and external accountants/management letters, risk management and IT risk control, as well as a wide variety of investment proposals.

### **Combined Remunerations and Appointments Committee**

Since August 2016, the combined Remunerations and Appointments Committee had Paul Rosenmöller as its chair and Janet Stuijt and Gerard van de Aast as members. The remuneration and appointment meetings were held successively, using a single shared agenda. The committees met three times in 2016, with all the members present on one occasion. The topics discussed included the composition of the new Executive Board and Supervisory Board, the gain sharing plan for Abellio, the pipeline for senior management within the company, changes to the pension mechanism and filling the various positions in the expanded Executive Board and the Supervisory Board itself.

### **Temporary strategy committee**

In the first quarter, Gerard van de Aast, Jeroen Kremers and Paul Rosenmöller were closely involved as representatives of the Supervisory Board in developing the new strategy and the discussions about this with the shareholder. The Supervisory Board also discussed the new strategy in plenary sessions on several occasions.

All members of the Supervisory Board are independent, as defined in the Dutch Corporate Governance Code. The Supervisory Board broadly subscribes to and applies the best practices and principles in Chapter III of the code.

## **About this report**

The financial statements for 2016, as prepared by the Executive Board, were discussed by the Supervisory Board. The external auditor (EY) was present during the discussion. The financial statements are accompanied by the report by the Executive Board. We invite the General Meeting of Shareholders to adopt the 2016 financial statements. We also invite our shareholder to ratify the work done by the Executive Board and the Supervisory Board. The profit appropriation proposed by the board has been included here.

Thanks to the efforts and the contributions made by all NS staff in the Netherlands and abroad, NS has been able to rebound this year. The Supervisory Board is grateful to everyone for their resilience and would like to thank the Executive Board for the efforts it has made to restore confidence among the stakeholders.

Utrecht, 24 February 2017  
The Supervisory Board

## Personal details – Supervisory Board

### **Gerard van de Aast, chair (1957), Dutch national**

- Appointed on 4 March 2014 until 2018
- Background: Former chair of the executive board of Royal Imtech NV. Former chair of the executive board of Koninklijke Volker Wessels NV, member of the executive board of Reed Elsevier and member of the supervisory board of Océ NV
- Other positions held: member of the supervisory board of Witteveen+Bos, member of the supervisory board of Heisterkamp Transportation Solutions, member of the supervisory board of Wolters Kunststoffen



### **Jeroen Kremers (1958), Dutch national**

- Appointed on 26 January 2012 and reappointed in 2016 until 2020
- Background: Former Vice-Chairman & Chief Risk Officer, Managing Board, Royal Bank of Scotland NV and Head of Global Country Risk, RBS Group
- Other positions held: member of the senior advisory board of Oliver Wyman Consultancy, chair of the supervisory board of Robeco, chair of the supervisory board of bunq



### **Marike van Lier Lels (1959), Dutch national**

- Appointed on 3 February 2016 until 2020
- Background: Professional manager
- Other positions held: member of the supervisory boards of TKH Group NV, RELX Group and Eneco Holding NV



### **Paul Rosenmöller (1956), Dutch national**

- Appointed on 1 June 2007 and reappointed in 2015 until 2019
- Background: Chairman of the Secondary Education Council
- Other positions held: chair of the supervisory board of the AFM, chair of the Healthy Weight Covenant Steering Committee (until 1-Apr-2016)



### **Janet Stuijt (1969), Dutch national**

- Appointed on 15 August 2016 until 2020
- Background: General Counsel & Head of Compliance, Corporate Secretary, NN Group NV





## Other members in 2016

### Truze Lodder (1948), Dutch national

- Appointed on 1 June 2004 until 2008, reappointed until 2016 (until 2 June)
- Background: Former chair of the executive board of the 'Het Muziektheater' foundation in Amsterdam and former Commercial Director of De Nederlandse Opera
- Other positions held: chair of the Supervisory Council of Maastricht University, member of the Advisory Board of the Nexus Institute, board member and treasurer of Europa Nostra, chair of the Supervisory Board of Stichting NJO

### Ilonka Jankovich (1963), Dutch national

- Appointed on 13 March 2013 until 2017 (until 28 April 2016)
- Background: Innovation Investment Manager at Randstad Holding
- Other positions held: member of the supervisory boards of Exact, Vonq, Brazen, gr8people and Crunchr

# Dialogue with our stakeholders



NS has daily contacts with its passengers, both in person and through social media. In addition, we maintain close relations with a wide variety of stakeholders. Thanks to the dialogue with our stakeholders, we are able to make the most of opportunities and mitigate or accept risks at an early stage. It also lets us bring valuable knowledge and ideas from our stakeholders into the organisation. This lets us create a better train product for the passenger.

NS is a service-providing company that has a social role at the very heart of society. There is a great deal of interest in our organisation from the public and elsewhere – passengers, media, politicians and other stakeholders. The ongoing dialogue with our surroundings and our stakeholders is crucial for NS.

## Who are our stakeholders?

We see our stakeholders as the people or groups who are affected by our actions and who have an effect on our organisation and services. NS is continuously monitoring who the interested parties are, thereby identifying and selecting our stakeholders. There can also be stakeholders who are on the scene temporarily for specific subjects – their input can be relevant and we therefore take them seriously.

In the case of some specific stakeholders, our relationship with them is defined by law (the ministries and supervisory authorities), by cooperation within the transport sector (carriers, ProRail), or by the public nature of the services we provide (the media and interest groups). We discuss who the current and new stakeholders are once every two years at the Council for Sustainable Business. The results are then presented to the Executive board. This consultation will take place once again in 2017.

## Stakeholder management at NS

NS and the individual business units are talking all the time to our key stakeholders. These are ProRail, provinces, municipalities, franchise authorities, the shareholder, staff, the unions, other carriers, politicians, employee participation bodies, suppliers, non-governmental organisations, interest groups within society and passengers' and consumers' organisations. We involve them closely and (increasingly often) as early as possible when choices have to be made that affect passengers. We test ideas and listen to suggestions and criticism from the stakeholders so that we can improve our services and products. Creating and maintaining transparent relationships with key stakeholders lets us bring signals from the external surroundings into NS in good time and we can include them in our deliberations and decisions. The dialogues with our stakeholders take place at various levels in the organisation, with the Executive Board often being involved.

## Working visits from stakeholders

During working visits to NS, we kept various stakeholders informed throughout last year about our activities and intentions and we also let them experience for themselves what goes on in our 24-hour transport company. Representatives of various political parties accompanied an IC direct driver for an afternoon, for example, to experience from the cab what technical terms such as 'voltage changeovers' and the ERTMS safety system mean in practice. Others visited the upgrade workshops or talked to young train technicians going through their vocational training in the NS TechniekFabriek. After one visit, the State Secretary Ms. Dijkssma was so charmed by the Flirt that she concluded she 'understood why it was called that' (although the name of the new Sprinter train type in fact officially stands for *Flinker Lichter Innovativer Regionaltriebzug*).

## Frequent consultations

NS holds frequent discussions with ProRail and the Ministry of Infrastructure and the Environment about items such as cooperative projects, services and performance. In the national public transport users' forum LOCOV, NS regularly has discussions with broadly represented passengers' and consumers' organisations. This legally-defined forum consists of formal meetings and handles requests for advice on various issues that are relevant for consumers and passengers. There are also numerous informal themed sessions and working visits to provide information and consult the members. Recommendations made by LOCOV regularly result in us changing a decision. We bring participating organisations on board such as ROVER, Ieder(in), the KBO union of senior citizens' organisations and the ANWB for topics that have a longer-term impact. Examples include the purchase of new rolling stock, changes to the timetable and major service interruptions.

The new NS strategy was also discussed in 2016. All the important stakeholders are kept

informed at themed sessions and in face-to-face discussions. As part of the pilot with renewable diesel, NS also published a White Paper (in cooperation with GoodFuels). NS also took part in various round table discussions this year with members of the Lower House of the Dutch parliament. These covered items such as personal safety on public transport and the European train safety system ERTMS.

### **Masterclass: First-class Railway Knowledge**

Civil servants and other administrators in municipalities, provinces and urban regions regularly ask NS (via its regional boards) questions about the 'railway world'. Who takes the decision that a lift should be put in place at the station? How can a municipality get a new station built? What role does NS have in the High-frequency Rail Transport Programme? We respond to these questions by talking to our partners in an effort to satisfy their need for information. That is why NS started *First Class Railway Knowledge* in 2012, a masterclass in which we share our knowledge twice a year and give civil servants and administrators a better understanding of various aspects of the railway system (which can be rather technical). Subjects such as 'How do you arrive at a timetable for the next one to five or ten years?', 'How do you tackle the refurbishment of a station or station area?' and 'How do you deal with major engineering work?' were discussed over the past few years in the masterclasses, usually with 50 to 60 participants. In 2016, there was a masterclass on innovation and trends. The 'OV Toekomstbeeld' report on the picture of the future for public transport, trends at stations and the M-Lab (the NS innovation lab) were also discussed.

### **Dilemmas in the discussions**

Informing stakeholders about dilemmas in good time is how NS tries to provide insights into policy considerations and find joint solutions. We provide our stakeholders with a steady stream of feedback about their ideas and recommendations and the effect that the dialogue has on NS policy, both in the regular discussions and in reports.

#### **Example: multi-year consultation about the 2017 timetable**

We make many choices when drawing up a new timetable. It is unavoidable that while many passengers will benefit from any particular change, there will also be groups of passengers for whom the choice has an adverse effect. We enter into a dialogue with consumer organisations about these dilemmas. The 2017 timetable is a completely new design for the national timetable. NS has not been able to improve the timetable for all passengers: passengers around Dordrecht have to change trains, and the journey time between Almere and Schiphol has increased, as has the journey time between Vlissingen and Rotterdam.

The preparations were far-reaching and substantial compared with other years. The consequences were explained and discussed at an early stage. In spring 2016, NS completed a consultation process for the 2017 timetable that took several years. The objective was to involve the consumer organisations in the national public transport users' forum LOCOV and regional authorities prior to and during the development of the new timetable. The development of the 2017 timetable went through several iterations. In the years during which the timetable was being developed, NS involved these stakeholders at fixed points so that input from stakeholders could be incorporated in the next iteration, as well as on occasions when a particular dilemma arose during the planning process. The interaction with external parties during the design of the timetable resulted in a design that enjoyed broad support and was of a better quality. LOCOV felt this was a worthwhile process:



*We want to compliment you on the process adopted so far. You involved us from an early stage and at specific points in the working out the design for the 2017 timetable. This lets us present our views early on, and also lets us give you advice based on sufficient information. We appreciate this very much.*



This year, passengers were able to talk to the developers of the 2017 timetable in the NS online forum to get answers to their questions and an explanation of the choices made. Some passengers were more understanding after they heard from the developers that some problems simply did not have a better solution. NS also made amendments to the timetable in response to suggestions from passengers. For example, the early train service to Schiphol was changed based on comments by passengers, even though this meant a dilemma for the scheduling of trains.

### **Work packages**

The introduction of the work packages for 2017 led to dissatisfaction among drivers and chief guards, in particular because of a lack of variation and more turnarounds per shift, resulting in a greater feeling of being 'hurried' than in the past. Although the packages are in line with all the agreements, NS is not happy with them either. The introduction of new trains and the loss of some routes has made it more difficult to create work packages on a par with previous years, and there was not enough time to make the packages as varied as possible. NS is working hard on making improvements.

### **Example: social and commercial objectives**

Society and the government determine our objectives. The Ministry of Infrastructure and the Environment monitors the quality of our public transport product and the Ministry of Finance (as the shareholder) also monitors the return on investment. Both of these objectives are important: it is a question of 'both', not 'either-or'. In carrying out our core activities, we still face a potential conflict between our social and commercial goals. For example, how should we respond to new transport initiatives that are good for mobility in the Netherlands but result in reduced turnover for the main rail network, such as long-distance bus services? In the past we adopted a defensive stance, but now we prioritise the interests of passengers and collaborate with other parties. We are constantly talking to our shareholder and the franchise authority about how we can give top priority to passengers without endangering our own financial position.



## Regional case study: A rapid response – opening the Utrecht Vaartsche Rijn station

Utrecht Vaartsche Rijn is the seventh and final station to be delivered in the Randstadspoor programme, setting up a high-grade rail network able to transport passengers in the Utrecht region with more frequent services. Randstadspoor has more than 80 kilometres of new track, seven new stations, three reversing headshunts and two dive-unders. The station was due to come into use at the end of 2016. The provincial authority and municipality of Utrecht wanted to be able to use the station four months earlier, when the new school year started. That put huge pressure on the schedule and the work that had to be done. Despite this, we managed to open the station at the earlier date thanks to effective collaboration. For instance, the municipality of Utrecht worked hard on having the layout for the station surroundings ready on time. ProRail and NS went to great lengths to make sure the station was ready in good time. The tracks between Utrecht Centraal and Vaartsche Rijn were connected up at the end of May and work then continued on the track and the final stages of the station. Now there are eight trains an hour during peak periods.

## Stakeholder dialogues

In addition to our regular contacts with stakeholders about day-to-day matters, we also want to have a dialogue about opportunities, threats and trends in the medium term. That is why NS organises coordinated dialogues with a wide range of stakeholders about our social role and on specific themes where our organisation has an impact. These are themes that concern NS's stakeholders or NS itself. This lets us facilitate a dialogue not only between stakeholders and NS, but also between the stakeholders themselves. This form of stakeholder engagement regularly leads to a better understanding of one another's interests and valuable constructive criticism and ideas for NS.

In 2016, dialogues took place with passenger organisations and consumer organisations about the accessibility of rolling stock and stations. NS also talked to NGOs and scientific institutes this year about our ambition of making replacement bus transport more sustainable. Although NS will no longer be running trains on diesel routes as of 2018, diesel is still being used by external bus companies in the replacement bus passenger transport. After a trial run in practice with renewable diesel — hydrotreated vegetable oil (HVO) — we spoke to NGOs and experts in the field about the options for achieving our ambition and what was not possible. What sustainability criteria can you set without asking market players for something that is impossible? How can NS create enough of a critical mass for the market and what dilemmas will there be if it commissions the wide-scale roll-out of emission-free bus transport? The dialogue resulted in useful ideas and information that NS will be able to use in the future when making demands of the market.

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*Visually impaired passengers really want to be able to travel by train independently. In 2016, NS worked closely with the Dutch Eye Association (Oogvereniging) to make travelling easier for people who are blind, partially sighted or deaf and blind. For example, it is now possible to book a journey with OV-chip Plus digitally as well as by phone. In the design of new rolling stock, considerable attention has been paid to clear visibility through the use of colour and contrasts. In addition, it is possible to feel what functions buttons have. Accessible journey information for visually impaired passengers is an important issue for us that we are keen to work on with NS, both now and in the future.*

*Joep Aarts, director of the Eye Association*

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*Together with NS, we are delivering a top-class vocational training programme every day in TechniekFabriek. This is a unique apprenticeship in which mechatronics mechanics learn a profession in a venture that is a close collaboration between NedTrain and the ROC Twente regional training centre. It serves as an example nationwide of attractive vocational education, set up and executed in a respectful partnership.*

*John van der Vegt and Trudy Vos, board of governors of ROC Twente*

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*More trains, more stations, more passengers. The Stadsregiorail programme is enabling Nijmegen to benefit in 2017 from trains every fifteen minutes to the five new stations that have been built in the past few years in the region as well as a faster IJssel line. That gives tourists, shoppers, schoolchildren and commuters more options. Along with the fast connections, the station areas have also been revamped, making them safer and more accessible. That is really boosting other developments in these areas. And it is an important incentive in persuading people to take the train more often rather than the car. So Stadsregiorail is genuinely benefiting our region thanks to the successful cooperation between the municipalities and NS.*

*Harriët Tiemens, alderman responsible for Finance, Sustainability and Mobility, Municipality of Nijmegen*

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## Materially relevant themes

NS bases its policy priorities on material relevance, weighing up the interests of stakeholders and the actual impact that NS can have on the topic. Once every two years, NS arranges centralised dialogues with all categories of stakeholders about our social role and the themes that they find important and that our organisation has an impact on: the materially relevant themes. Based on the centralised dialogues, we draw up the material relevance matrix. The material relevance matrix lets you see which themes our key stakeholders deem most important, what priorities they assign to them and what impact NS has.

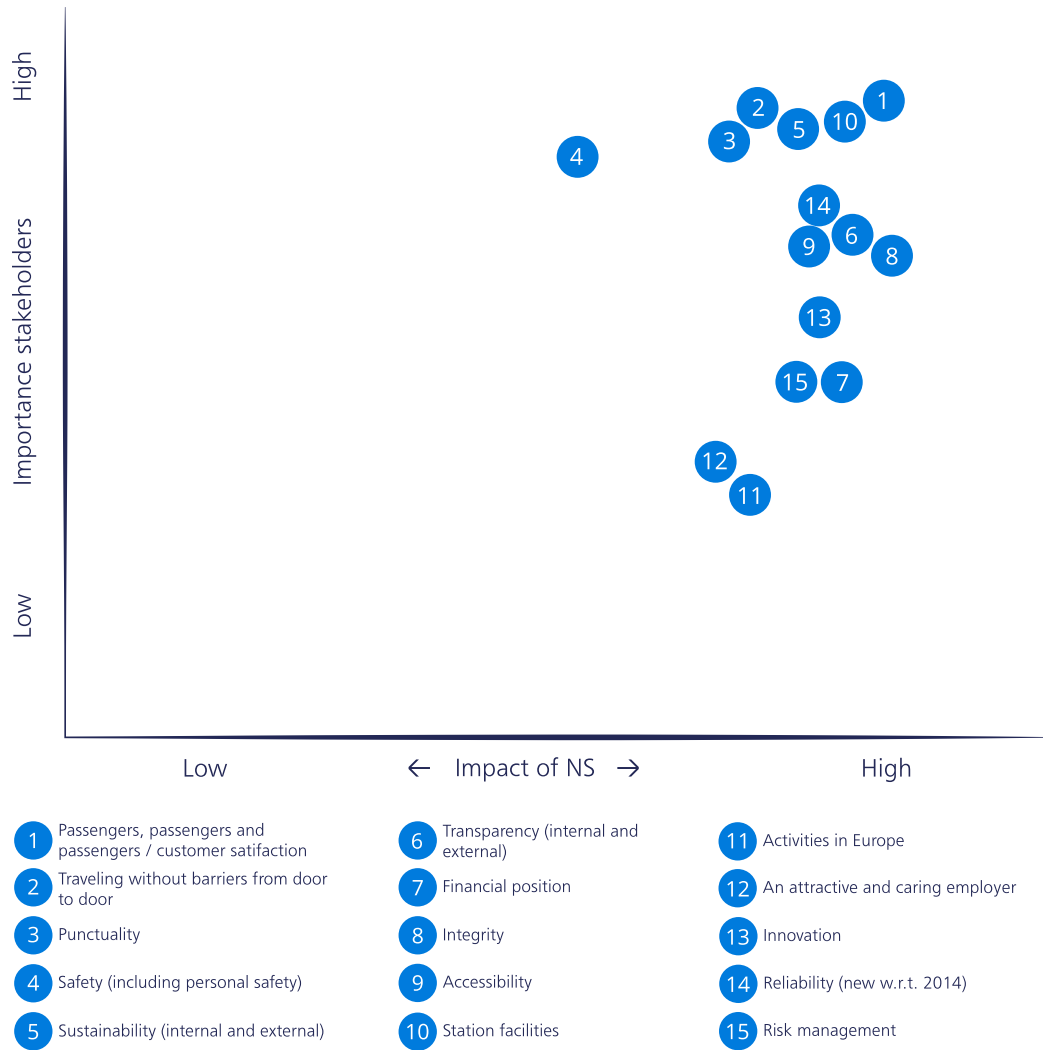
### Material relevance matrix 2016

NS assessed the materially relevant themes for 2016 to check that they were up to date and valid when compared with 2015, which was when the last stakeholder dialogue took place. This is how we made sure our stakeholders' expectations and interests were taken into account in the process of determining the materially relevant themes. Compared with the previous year, there were no changes at all in the materially relevant themes. This picture was confirmed in additional checks: continuous monitoring, media and Internet analysis and regular meetings with stakeholders. Furthermore, internal sector experts looked at developments within the public transport sector. The matrix for 2016 was then presented to the Executive Board and finalised.

The most materially relevant themes are: (1) customer satisfaction (Passengers, passengers and passengers); (2) no barriers to door-to-door journeys; (3) punctuality. Personal safety (4), sustainability (5) and facilities at stations (10) also score high. Two materially relevant themes have been given more weight and a different content. The first is NS as an employer: more attention is being paid by the outside world to certain issues relating to employee participation or the tasks of NS staff. Topics such as double staffing on trains, the implementation of measures dealing with personal safety and dissatisfaction among some staff about the lack of variety in work packages received considerable media attention in 2016.

The second theme that has been amended is sustainability. There is a demand among NGOs (including MVO Nederland, De Groene Zaak, the Confederation of Netherlands Industry and Employers VNO-NCW and the Netherlands Environmental Assessment Agency) and a need from the point of view of transparency for more explicit reports on the contribution NS makes to the UN Sustainable Development Goals (SDGs). In view of the materially relevant theme of sustainability, NS already reports on indicators relating to energy efficiency, waste reduction and the reduction of CO<sub>2</sub> emissions. They can be found as the contributions to SDG 7 (*affordable and clean energy*), 11 (*sustainable cities and communities*) and 13 (*climate action*) respectively. In the vision on mobility drawn up by NS and urban transport organisations and in the Mobility Alliance with a wide range of transport players, a view was presented on how to make the Netherlands sustainable, accessible and pleasant to live in, which also contributes to SDG 11.

## MATERIAL RELEVANCE MATRIX



The content of this report is partly determined by the outcomes from the analysis of material relevance; as such, it meets the information needs of stakeholders.

# Stakeholder dialogue diagram

The table below summarises the wide range of dialogues between NS and its stakeholders. The numbering refers to the themes from the material relevance matrix

	Type of dialogue	Content of dialogue	Effects of the dialogue on NS policy
<b>European</b>			
EU institutions, CER, UIC, ERA	For information and to determine standpoints	11  Fourth EU Railway Package, enhancing interoperability, ERTMS, accessibility, improving the passenger's position, advice on how the UN system can benefit sustainable mobility	Strengthening the position of the passenger and representing NS's position as the key rail passenger carrier in the Netherlands
<b>National (NL)</b>			
Customers (consumers and businesses)	Informational, monitoring	1, 2, 6, 13  Timetable and public transport smartcard, customer satisfaction, handling complaints and queries, consumer portfolio, corporate portfolio, cooperation with bus/tram/metro (BTM) companies	Improved services, including: <ul style="list-style-type: none"> <li>Lowering the prices of Weekend Freedom and Off-Peak Freedom 1st class</li> <li>Introduction of mobile ticketing: purchasing a train ticket by mobile phone and using it for travel</li> <li>Refunds for delays also available online for e-tickets</li> <li>Nationwide rollout of NS Extra (personal benefits and alerts after forgetting to check out)</li> <li>improved information (number of carriages and shortened trains)</li> <li>Pilot letting consumers travel on account, together with the ANWB</li> <li>Participation of students in MyOV: personal benefits for spreading out the peak on busy routes</li> <li>Introduction of Split Payment: business and personal travel with the NS Business Card</li> <li>Introduction of NS Business Collective: freedom for staff to travel at a custom rate based on actual use</li> <li>Fixed Budget pilot: maximum travel budget per staff member</li> </ul>
Shareholder  Ministry of Finance	Intensive involvement	6, 7, 8, 11, 14, 15  Performance of NS, the profitability requirement, remunerations, strategy, appointments, major investments,	<ul style="list-style-type: none"> <li>Determining financial policy and the Executive Board's remuneration</li> <li>Transparent reporting as per GRI</li> <li>Changes to the governance (articles of association)</li> </ul>



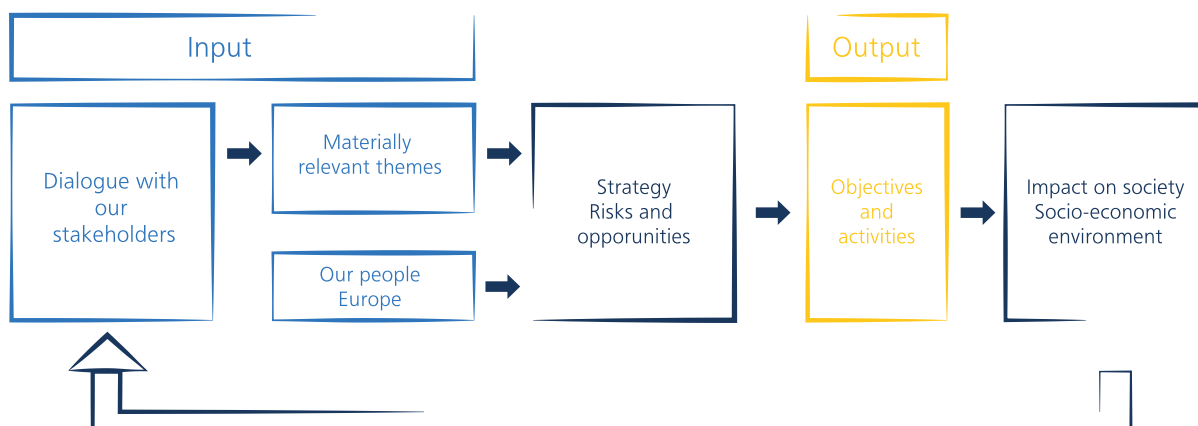
Type of dialogue		Content of dialogue	Effects of the dialogue on NS policy
		norm for returns from State participations	<ul style="list-style-type: none"> <li>• Strategic reorientation of NS</li> <li>• Irish leasing company</li> <li>• Foreign operations</li> </ul>
Ministry of Infrastructure and the Environment	Intensive involvement	1, 2, 3, 4, 5, 6, 9, 10, 13, 14  NS performance, main rail network franchise, reliability, transport capacity, the door-to-door journey, HSL South train services, safety, public transport smartcard, accessibility, timetable	<p>These include:</p> <ul style="list-style-type: none"> <li>• Transport Plan 2017</li> <li>• Package of measures to tackle crowded trains</li> <li>• Bicycle Parking covenant</li> <li>• Timetable for 2017 and 2018</li> <li>• Decision on high service frequencies on the A2 corridor</li> <li>• Package of personal safety measures and High Impact Crime approach with Ministry of Security and Justice</li> <li>• investigation of HSL South</li> </ul>
National political bodies	Informational, intensive involvement	1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 14  New NS strategy, performance, main rail network franchise, public transport smartcard/access gates, new rolling stock, international connections, winter measures, safety (including personal safety), ERTMS, Fyra, timetable	<p>These include:</p> <ul style="list-style-type: none"> <li>• Accessibility Programme</li> <li>• Transport Plan 2017</li> <li>• Transparency and a level playing field</li> <li>• Extra measures for personal safety</li> <li>• Working visits for new rolling stock</li> <li>• Improved implementation and service</li> </ul>
Supervisory authorities – ACM, IL&T, Personal Data Authority	Involvement, consulting ('guidance') and information	4, 6, 8, 9, 10, 11, 14, 15  Responding to standard and <i>ad hoc</i> requests for information. Discussing current topics such as professionalisation of the safety culture, market (and other) issues, admitting rolling stock, safety incidents, investigations of incidents, clarification of legislation and regulations, privacy	<ul style="list-style-type: none"> <li>• Promoting compliance</li> <li>• Transparency</li> <li>• Position statements</li> <li>• Improving safety on the tracks</li> </ul>
ProRail	Intensive involvement	1, 2, 3, 4, 5, 6, 9, 10, 13	<p>These include:</p> <ul style="list-style-type: none"> <li>• Realisation of <i>Better &amp; More</i></li> </ul>

Type of dialogue		Content of dialogue	Effects of the dialogue on NS policy
LOCOV	Intensive involvement	Long-Term Rail Agenda, timetable development, performance of the rail system, availability of infrastructure, safety	<ul style="list-style-type: none"> <li>• Cooperation on seasonal measures</li> <li>• Cooperation on safety and safety policy</li> <li>• Functionality of infrastructure for the timetabled services</li> <li>• Introduction of the ProRail dashboard for day-to-day performance on the tracks</li> <li>• Vision of sustainable stations</li> </ul>
		1, 2, 3, 4, 6, 8, 9, 10, 14	These include: <ul style="list-style-type: none"> <li>• A better train product by processing timetable suggestions made by consumer organisations</li> <li>• Changes to the choices regarding journey information and starting the process for developing a broadly supported vision of journey information resources</li> </ul>
Interest groups and NGOs (including employers)	Involvement, consultative, informational	NS timetable, tackling crowded trains, fares, journey information, public transport smartcard, services for passengers, transport plan, customer satisfaction figures, punctuality, new rolling stock, service interruptions, accessibility, international connections, boarding zones, HSL services, NS strategy	<ul style="list-style-type: none"> <li>• A more widely supported pricing policy</li> <li>• More rapid implementation to make traction greener (now 2017 instead of 2018)</li> </ul>
		5, 6, 12, 13	<ul style="list-style-type: none"> <li>• Large employers implementing and extending the Sustainable Mobility Pledge</li> <li>• Event for sustainability contacts and partners, to Westermeerwind wind farm</li> <li>• Contribution to the National Climate Summit</li> <li>• Spring Tide NS sustainability event</li> <li>• Translation of impact calculations into investment decisions</li> <li>• Determining the materially relevant SDG indicators</li> </ul>
Unions	Intensive involvement	Encouraging sustainable mobility, contributing to the SER (Social and Economic Council of the Netherlands) energy agreement, social policy, CSR, sustainability ambitions, the Dutch Climate Coalition, making replacement bus/coach transport more sustainable, contribution by NS to the Sustainable Development Goals	<ul style="list-style-type: none"> <li>• Implementation of the arrangements in the collective labour agreement for 2015-2017 and the HR policy pursuant to them</li> <li>• Implementation of the Social Plan</li> <li>• Implementation of the pension plan</li> </ul>
		4, 12	<ul style="list-style-type: none"> <li>• Collective labour agreement, personal safety, pension plan, social plan, personal and social consequences of organisational changes, signs</li> </ul>

Type of dialogue		Content of dialogue	Effects of the dialogue on NS policy
		suggesting satisfaction or dissatisfaction of staff, employees' interests	<ul style="list-style-type: none"> <li>• Implementation of a packet of measures for personal safety and the decision to implement them</li> <li>• Timetable</li> </ul>
Suppliers	Consulting, negotiating, contractual agreements, intensive involvement	5, 6, 7, 8, 13, 14, 15  Innovation, costs, sustainability, reliability, performance of suppliers (including IT services), cooperation with NS, compliance with legislation and regulations, payment schedules	<ul style="list-style-type: none"> <li>• Realisation of CSR objectives (by making the entire chain more sustainable)</li> <li>• Introduction of new products and services</li> <li>• Focus on more value creation for NS</li> <li>• Focus on reliability and availability of products and services for business-critical processes (IT and Maintenance)</li> <li>• More attention to the risks associated with compliance with legislation and regulations</li> <li>• Cooperation and innovation together with partners</li> </ul>
Media	Informational, intensive involvement	All NS-related subjects	<ul style="list-style-type: none"> <li>• Position statements</li> </ul>
<b>Regions</b>			
(Administrators and official representatives of the provinces, metropolitan regions and municipalities)	Informational, negotiation, contractual agreements	1, 2, 3, 4, 6, 8, 9, 10, 14  Quality of train services, crowded trains, punctuality, development and redevelopment of existing stations, Spoortafel discussion bodies, picture of the future of public transport and the Public Transport Development Agenda, timetable, cross-border transport, access gates, physical and personal safety, transport sector-wide agreements, regional franchises, noise nuisance near the railways	<p>These include:</p> <ul style="list-style-type: none"> <li>• New and more modern stations and redevelopment of station surroundings</li> <li>• Nachtnet expansion (night trains)</li> <li>• Agreement about the positioning and accelerated roll-out of access gates</li> <li>• Replacement bus transport in the event of train services being disrupted</li> </ul>

Type of dialogue	Content of dialogue	Effects of the dialogue on NS policy
Internal: central and local Works Councils, vocational training	See here	<ul style="list-style-type: none"> <li>Collective and regional objectives and Public Transport Development Agendas</li> </ul>

### From dialogue to impact

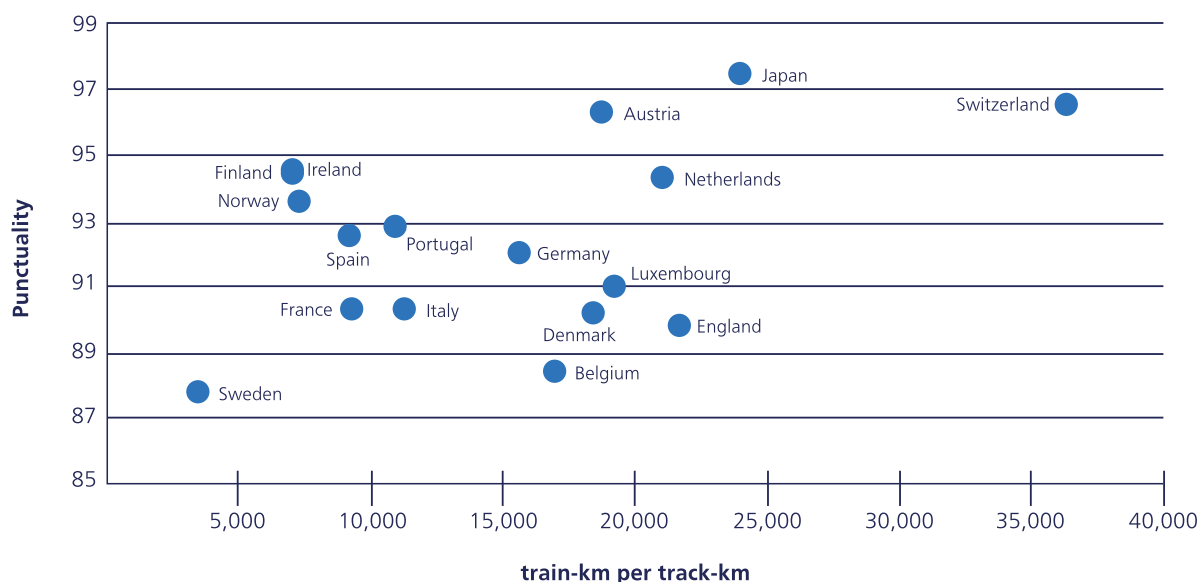


*This diagram shows the cycle for our stakeholder dialogues and how they influence our policy.*

## Our performance in a wider context

### Punctuality in a busy railway network

A comparison between punctuality and track occupancy in eighteen countries shows that NS is one of the top three. The Netherlands has shared the top spot for many years now with Switzerland and Japan, both of which also achieve a high level of punctuality on heavily congested tracks.

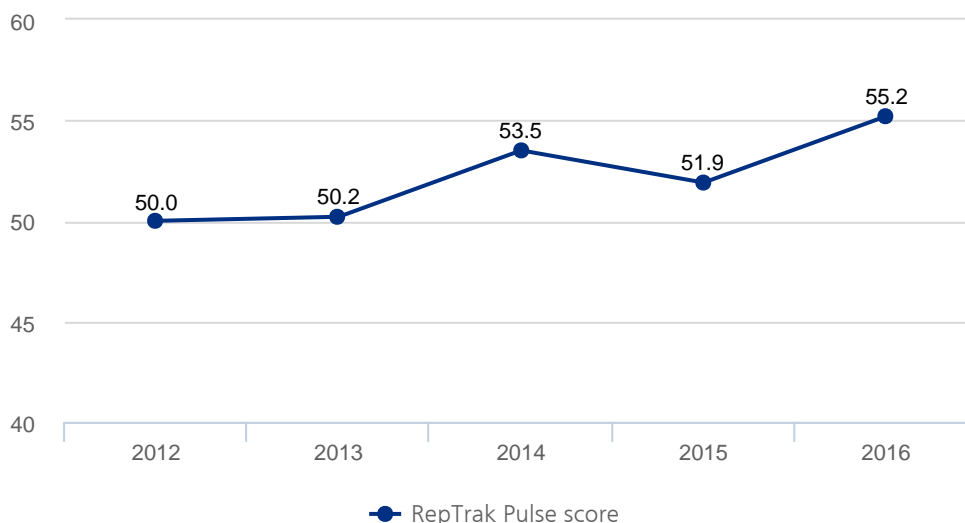


### Reputation

Our reputation is an indicator for the attractiveness of travel with NS. NS obtains regular measurements of its reputation using the RepTrak method (from the Reputation Institute). The reputation of NS weakened in the period 2010-2012. This fall was caused, among other things, by the performance of the railways in three successive winter periods, the tragic train accident in Amsterdam in 2012 and the developments around Fyra/V250. In 2014, the measurement of NS's reputation rose to an average annual score of 53.5 (on a scale of 100). This positive development did not continue in 2015. The reputation score fell to 51.9. This was partly due to one or two major disruptions, the attention given to aggression against NS staff, the irregularities in the tender in Limburg and the parliamentary inquiry into Fyra. In 2016, the reputation improved with a score of 55.2 (the target was 53). There were fewer serious disruptions in 2016. In addition, passenger punctuality was better than in 2015, resulting in a more reliable service for passengers. NS also attracted much less media attention compared with the previous year. The positive development in our reputation is also reflected in the development in customer satisfaction. Our target is a reputation score of 57 by 2019.



## RepTrak Pulse score



## Sustainable mobility

NS wants to be at the vanguard of sustainable mobility. However, in the eyes of the Dutch consumer, we are not a particularly sustainable brand. Train passengers do see our company and the train as more sustainable, but that is not the case for the Dutch public at large. That is why we want to improve our efforts in this area and make them clearly visible. A study by *Dossier Duurzaam* (2015) among consumers showed that consumers are increasingly interested in sustainability. They feel it is important for companies to operate sustainably and they take the sustainability of products into account when making purchases. Possible factors explaining this trend are increased media coverage of sustainability topics (the Paris climate summit, the lawsuit that Urgenda brought against the Dutch government, emissions-cheating software) and the greater visibility of sustainable products. The upturn in the economy is another reason why people are paying more attention to social issues. NS ended 17th in the list of major brands (16th in 2015). We achieved the same number of points as in 2015 but other companies achieved more points.

Research (in December 2016) among the Dutch population and rail passengers reveals that NS's sustainable image has improved. For example, more respondents think that NS helps consumers make more environmentally friendly transport choices.

## Emissions

30% of direct CO<sub>2</sub> emissions in Europe are caused by the transport sector, of which 1.5% comes from the railways (source: UIC, IEA). CO<sub>2</sub> emissions from the railways have decreased in recent years, whereas those from the transport sector as a whole have increased substantially. Emissions lead to global warming. During the Climate Conference in Paris in November, countries agreed to stay below an increase in temperature of 2 degrees. NS is contributing to this with its verified objectives for saving energy and becoming greener. As a result of these measures we have seen a reduction in CO<sub>2</sub> emissions by NS in the Netherlands over the last five years. Travelling by train is better for the environment than many other forms of motorised transport, given that the CO<sub>2</sub> emissions per passenger-kilometre are about 92.8% lower than for the average car. In terms of energy consumption, in 2016 NS was a good 35% below the European average of the UIC international railway norm of 0.11 kWh per passenger-kilometre.

## Transparency

NS is in the permanent group that is assessed in the Transparency Benchmark. This is a tool provided by the Ministry of Economic Affairs for improving reporting on social matters within

the Netherlands. The results are presented in a Transparency Ladder that is made publicly available and widely communicated. A score of 197 points out of 200 put NS in third place on the 2016 Transparency Ladder (2015: fourth). Our ambition is to stay in the top 10. The top 5:

1. Alliander
2. Schiphol Group
3. NS
4. Unilever
5. Nederlandse Gasunie

# Our strategy



On 1 March, NS presented its new strategy 'Spoorslags Beter'. With this strategy, we are focusing on our core activities with the aim of improving performance for passengers. NS is concentrating on achieving the agreed franchise KPIs by 2019. At the same time, NS is very much a company that is geared to the long term. Over the next few decades, the Netherlands will be facing major economic, social and sustainability challenges. NS is keen to help meet the challenge of creating good connections that meet the demands of passengers, companies and institutions.

## Why have a new strategy?

NS has been performing better on average in recent years. But that does not apply to all routes or all passengers. Also, merely 'good' is not good enough. Passengers want a comfortable journey from door to door, in a clean, punctual train with sufficient seats and good Wi-Fi connections, via world-class stations. The bar has been set high. Rightly so. We are a socially relevant company, tasked with helping the Netherlands to get ahead. To achieve this ambition, we want to make further improvements in our performance over the next few years.

The complications relating to Fyra and the irregularities in Limburg have damaged our reputation. These affairs have shown a side of NS that is not worthy of us. It is up to NS to regain the trust of our passengers. In the 'Spoorslags Beter' strategy document, we do that by making clear-cut choices in the interests of our passengers.

In the new strategy, NS has made choices aimed at improving performance in the period to 2019. The mid-term review of the main rail network franchise will take place in 2019. The government will assess whether NS has achieved the agreed targets for the performance indicators. The intention is that passengers will already notice the changes from 2017.

## Our mission, vision and ambition

Our mission is to make sure passengers feel a connection with NS. Our ambition is to work with partners to let passengers control their door-to-door journeys. This is our contribution to affordable and sustainable mobility in the Netherlands.

Our goal for 2019 is to pass the mid-term review by making passengers, passengers and passengers our top priorities. We aim to deliver a very good sustainable and robust train service and offer a seamless door-to-door journey experience. We will also give passengers the ability to be in control, freedom and respect. To achieve this, in our Spoorslags Beter strategy we are concentrating on three core activities:

1. **Better performance on the main rail network, including HSL and the associated international train services.** This means better train journeys, greater reliability, cleaner trains and investments in new trains. We are also increasing the frequency of services, which will result in a better timetable for passengers.
2. **World-class stations.** Without stations, there would be no trains. The stations are an essential link in passengers' door-to-door journeys and they have a major effect on our customer satisfaction figure. At stations, passengers expect easy connections to all transport modalities, time spent there to be safe and comfortable, a positive experience and a familiar ambience. We are working in close collaboration with ProRail and in consultation with public authorities to arrange that.
3. **Contributing to a better door-to-door journey.** NS is one of the elements in the passenger's journey from door to door. That is why we also want to make a contribution to the first and last stages of the journey. We aim to improve the journey experience by introducing new payment methods and even better journey information, whereby convenience takes priority. We align the timetable as much as possible with bus, tram and metro services, offer transport chain services such as the public transport bicycle (OV-fiets) and Zonetaxi and ensure that the stations can be comfortable, multimodal transport hubs for the passengers. We do this together with governmental authorities, other carriers, infrastructure operators and consumer organisations. This puts passengers in control of their journey.

By focusing on these three core activities, we will genuinely be prioritising passengers and we will be giving further substance to our role in society of strengthening sustainable mobility in the Netherlands. In everything we do, one question takes top priority: 'Will passengers benefit from this?' That is why NS is investing more than €3 billion in these core activities, for example purchasing new trains, offering better journey information and better Wi-Fi, introducing new payment methods and making further improvements to stations.

## Choices in the NS portfolio

In choosing to concentrate on these three core activities, NS has assessed its overall offering of services and products and made some clear-cut choices: NS will not be taking part in tenders for regional rail franchises until 2019 and we will be ending our involvement in Qbuzz. We will also be transferring some of our real estate and retail interests to third parties. As the formats' franchise holder, we will remain closely involved, monitoring the quality and making sure that they fit in with the intended station experience. In the United Kingdom and Germany, we are opting for targeted growth.

### Regional rail franchises and Qbuzz

With our primary focus on the main rail network, NS will no longer be bidding for regional rail franchises until 2019. That will make our collaboration with regional carriers and local authorities easier: we will be partners. More intensive cooperation is needed to deliver a sound door-to-door service. That is why NS has also decided to end its involvement in Qbuzz in due course and why we disposed of our stake in HTM in 2016. We are taking great care in this process in the interests of the employees and the value of the company.

### Retail and property

Ten years ago, there were no other market players interested in operating businesses at stations; therefore NS started commercial operation of retail outlets, in part at the request of the government, as a way of making stations more attractive with a better living environment. This has been successful. There are now many market players with the experience, expertise and necessary size for operating retail businesses at stations. That gives NS the opportunity to let other parties take over part of the operations. We will be building in proper safeguards to make sure that the quality improvements achieved in recent years are not lost. The Kiosk, Rail Catering and StationsHuiskamer (Station Living Room) products will remain part of NS's familiar assortment as they are closely connected to the passenger experience and therefore constitute part of our core activities.

NS owns land and property that do not contribute directly to the strategic focus on stations and station areas. NS initiated the policy of selling non-strategic sites some years ago and we will be continuing this in the years to come.

### Targeted growth abroad (prepare, learn and earn)

We will be expanding the foreign operations of our subsidiary Abellio in a targeted fashion, and with due consideration of the entrepreneurial risk, in a limited number of deregulated European markets. The focus is on Germany and the United Kingdom. This will let NS acquire experience in European railway markets and prepare for any further deregulation of the railways. We are applying knowledge and experience acquired abroad to the benefit of passengers within the Netherlands to a greater extent than before. We are bidding for franchises with a controlled risk profile.

### Main objectives

To achieve its ambition, NS is focusing on five primary objectives for 2019.

1. Customer satisfaction of 80% with the main rail network (including HSL South).
2. Achieving all the main rail network targets [<link to the next section>](#)
3. Growth in passenger numbers of 1.5% on top of the total growth in mobility
4. Return on equity of about 5.5%
5. Effective organisation



## Strategic themes

NS will achieve the above primary objectives for 2019 by focusing on eight strategic themes. Activities, projects and programmes have been clustered within these themes and linked to quantifiable objectives.

1. *Attractive physical offering*: our passengers will be offered a rail service that meets their requirements by giving them a seamless and robust door-to-door journey, in cooperation with our partners
2. *Optimising the customer experience*: the journey experience of every passenger will be optimised in terms of the passengers' key requirements (being in control, freedom, respect) by providing a valuable product and personal and intuitive service
3. *Performance of HSL South*: we will deliver a reliable HSL South service for our passengers by paying continuous attention to all the steps in the existing service and introducing new attractive services in a robust way
4. *Perfect execution*: our basic performance for passengers will improve continuously through fixed-role execution, in accordance with plans, fast decision-making and responsive journey information during disruptions, and continuous improvements to the execution
5. *New and upgraded rolling stock*: our passengers will see more seating and experience more comfort due to the smooth introduction and effective deployment of new and upgraded rolling stock in the service
6. *Organisational improvement*: NS will develop into a more dynamic and result-oriented organisation with effective leadership that acts in accordance with the agreed standards and values
7. *World-class stations*: all passengers will enjoy top-quality facilities at our stations, ensuring a pleasant experience and optimum use of their time
8. *Abellio - prepare, learn & earn*: Dutch passengers will benefit because NS will learn from its international activities.

## Activities and performance in 2016

We expect to see the first noticeable results for passengers of the new strategy in the course of 2017. In 2016, we took the following actions as part of the implementation of the strategy:

- The sales process for Qbuzz has been started. NS expects to complete this in 2017, in accordance with the schedule.
- In early December, NS sold its shares in HTM to the municipality of The Hague.
- In 2016, NS evaluated its transfer of the retail formats Burger King, Ola Happiness Station and La Place to market parties. We will use the lessons we have learned from this in the transfer of the remaining formats. Transfer of the retail formats to the market is going according to plan. As the formats' franchise holder, we will remain closely involved, monitoring the quality and making sure that they fit in with the intended station experience.
- Implementation of a new senior management structure in which the Executive Board is jointly responsible for performance on the main rail network. The composition of the Executive Board now reflects the priorities set in the 'Spoorslags Beter' strategy document. Furthermore, this structure enables more targeted management of processes and puts an end to the silo mentality, supporting cooperation within the organisation. One example of this is bringing the transport side and the maintenance side closer together, which should increase the availability of trains and consequently the chance of passengers getting a seat.
- At the same time, work has been done on making governance, risk and compliance more professional.

NS is transparent about its performance. Every six months, it reports via its website on the scores for the KPIs set for the franchise, with detailed supporting evidence. NS's performance in 2016 for the KPIs determined in the franchise:

Franchise KPI	Performance in 2016	Target value for 2019
General customer satisfaction with the domestic main rail network	77%	80%
General customer satisfaction with HSL South services	78%	75%
Customer satisfaction with personal safety on the train and at the station	87%	83%
Punctuality for passengers (indicator to be achieved jointly with the infrastructure operator)	91.3%	92.3%
Focus routes for punctuality for passengers (indicator to be achieved jointly with the infrastructure manager)	94.3%	95.6%
Punctuality for passengers on the HSL South services (insofar as attributable to NS)	93.7%	96.0%
Quality of the NS connections to other carriers at the major nodes	94.3%	95.2%
Passenger capacity at peak times (main rail network)	98.7%	99.2%
Focus routes for passenger capacity at peak times	96.8%	97.5%
Passenger capacity at peak times on HSL South services (domestic)	87.6%	99.2%
Journey information throughout the travel chain	85.8%	82.0%
Information on the train and at the station about disruptions	82.0%	80.0%

## Long-term developments

### Development in market regulation of the Dutch railway market

Over the next few years, three developments will affect the setup for the Dutch railway market and consequently the position and role of NS: the investigation into market regulation in the Dutch railway network by the Cabinet, the decision by the Cabinet to change the status of ProRail and EU decision-making concerning the Fourth Railway Package.

On the recommendation of the Parliamentary inquiry into Fyra, the Dutch Cabinet started an investigation in 2016 into market regulation in the Dutch railway network. The investigating committee set up for the purpose will probably present its conclusions in the second half of March 2017. NS is contributing to this investigation by supplying information and data.

In 2016, the State Secretary of Infrastructure and the Environment announced her intention to change ProRail's status to that of an autonomous administrative authority. This change and the need to prevent passengers from experiencing any negative effects as a result will require due attention from NS and all the parties in the sector in the years to come. Proper cooperation and contacts with ProRail are extremely important to NS.

Furthermore, in 2016 the European Commission reached an agreement on the Fourth Railway Package. That agreement will be worked out in legislation and regulations over the next few years. The implementation of this package will require the care and full attention of those involved in the Dutch rail sector, including NS.

### Preparing for growth with a vision on mobility

Over the next few decades, the Netherlands will be facing major economic, social and sustainability challenges. NS is keen to make an inspiring contribution in the challenge of creating good connections that meet the demands of passengers, companies and institutions. We seek to build on today's railways, with high safety and performance levels, with reasonable fares and proper safeguards for societal interests.

Work is currently being done on various fronts on the development of a long-term vision of mobility for the Netherlands, for example the vision of the future for public transport that is being coordinated by the Ministry of Infrastructure and the Environment, the national mobility council (with parties including RAI and ANWB) and the initiative headed by the Confederation

of Netherlands Industry and Employers VNO-NCW (Next Level). NS is making a strong contribution on all these fronts. In line with this, NS published a joint mobility vision with the city transportation players in the four biggest cities that is all about seamless door-to-door travel.

## **Demand for mobility creating pressure**

Urbanisation is increasing around the world. In the Netherlands too, estimates show that urbanisation is rising not just in the Randstad conurbation but also in other urban areas such as Eindhoven, Arnhem, Nijmegen and Groningen. Pressure is increasing from the demand for mobility, driven by a greater population density and a scarcity of land. The effect is intensified by the growth of hubs such as Schiphol, the port of Rotterdam and the IT hubs concentrated in Amsterdam, Eindhoven and Groningen. The Randstad conurbation is in danger of becoming clogged up due to the growing, concentrated demand for mobility and problems are developing at various points in the mobility system in the form of increased congestion, delays when travelling by road, problems with emissions and space being taken up in densely populated areas, and full trains.

At the same time, the mobility landscape will evolve fast over the next few years with the rise in new forms of transport on the roads and railways (electrical vehicles, self-driving cars, demand-driven transport) that will need to fit in smoothly with the mobility system as a whole. This is happening against the background of changing attitudes particularly among younger generations, with a shift from ownership to utilisation that is also affecting mobility.

## **NS is contributing to the evolving mobility landscape**

The connecting theme in the vision on mobility is that the Netherlands needs a strong public transport system if it is to deal effectively with the economic, social and sustainability challenges facing the country over the next few decades. An important key to this lies in improving the door-to-door journey for passengers. The door-to-door journey needs to be faster and more convenient and the Netherlands needs better international connections to the rest of Europe.

NS sees it as its task to make a substantial contribution with its partners to meeting the mobility challenges facing the Netherlands. NS is working with partners (other carriers, market players and national, regional and urban authorities) on making the door-to-door journey faster and more convenient. We are doing this for example by optimising connections between different modes of transport, improving transport to and from the station with the public transport bicycle (*OV-fiets*) and good bicycle storage facilities and working on further improvements to the journey planner and journey information. We see many opportunities for yet more improvements in the next few years in the door-to-door journey time and in the convenience of journeys from the point of view of passengers. In 2017 we will be working on making our plans more concrete.

## Strategy and materially relevant themes

The table below shows the connection between our strategy and the materially relevant themes and associated KPIs. We have also linked them to the risks we have diagnosed. NS has not yet determined any KPIs or risks for materially relevant theme of innovation.

1. Strategic priorities	2. Indicators with a quantitative target value	3. Objectives	4. Results	5. Risk factors
Core activity and materially relevant themes	KPI	Objective for 2016	Achieved in 2016	Risks
<b>Better performance on the main rail network, including HSL and the associated international train services</b>				
Passengers, passengers and passengers / customer satisfaction	<b>Customer experience<sup>1</sup></b>			Market regulation
	General customer satisfaction	74	77	
	General customer satisfaction with HSL South	68	78	
Safety (including personal safety)	<b>Personal safety<sup>2</sup></b>			Safety
	Passengers' perception of safety	81	87	
Accessibility / reliability	<b>Accessibility<sup>3</sup></b>			Introduction of new rolling stock
	Transport capacity in peak periods	98.7	98.7	
	Transport capacity in peak periods - focus on routes	96.5	96.8	
	Transport capacity on the HSL South	97.5	87.6	HSL service
	<b>Occupancy rates</b>			Introduction of new rolling stock
	Occupancy rates	no longer a KPI in the Annual Report	31%	
	Off-peak occupancy rates	no longer a KPI in the Annual Report	28%	
Sustainability	<b>Sustainable operations<sup>4</sup></b>			
	Perception of NS as a sustainable company	top 10 by 2020	17	
	Energy efficiency of traction	70%	74%	
	Waste recycling	80% reuse by 2020	33%	
Punctuality / reliability	<b>Punctuality<sup>3</sup></b>			Market regulation, infrastructure capacity, IT reliability
	% punctuality for passengers	90.0	91.3	
	% punctuality for passengers on focus routes	93.7	94.3	
	% punctuality for passengers on HSL South	94.0	93.7	

1. Strategic priorities	2. Indicators with a quantitative target value	3. Objectives	4. Results	5. Risk factors
	<b>Withdrawal of rolling stock for maintenance</b>	12	10	
	<b>Railway safety<sup>5</sup></b>			
	Number of SPADs (in NL)	51	46	
<b>Transparency?</b>	<b>Transparency</b>			Change programmes
	Position in the Transparency Benchmark	top 10	3	
<b>An attractive and caring employer</b>	<b>Employees<sup>6</sup></b>			Safety
	Employee engagement	none	7.3	
	Staff with occupational disabilities	200 before 2018	75	
	Women in senior management	none	30%	
	Position in the list of best employers	not a KPI	19	
	<b>LTIFR<sup>7</sup></b>	--	1.4	
	Sickness absence	5.1	5.1	

#### **Social impact:**

- 1 Mobility
- 2 Personal safety
- 3 Journey time
- 4 Environment
- 5 Safe travel
- 6 Training
- 7 Occupational safety

1. Strategic priorities	2. Indicators with a quantitative target value	3. Objectives	4. Results	5. Risk factors
<b>Core activity and materially relevant themes</b>	<b>KPI</b>	<b>Objective for 2016</b>	<b>Achieved in 2016</b>	<b>Risks</b>
<b>World-class stations</b>				
Station facilities	<b>The station experience</b>			
	Customer satisfaction with stations	68%	69.9%	



1. Strategic priorities	2. Indicators with a quantitative target value	3. Objectives	4. Results	5. Risk factors
Core activity and materially relevant themes	KPI	Objective for 2016	Achieved in 2016	Risks
<b>Contributing to a better door-to-door journey</b>				
Travelling without barriers from door to door	<b>Journey information<sup>1</sup></b>			IT reliability
	Information during disruptions	75%	82%	
	Customer satisfaction with journey information in the travel chain	78%	86%	
	Quality of connections to other carriers	93.7%	94%	

**Social impact:**

1 Journey time

1. Strategic priorities	2. Indicators with a quantitative target value	3. Objectives	4. Results	5. Risk factors
Core activity and materially relevant themes	KPI	Objective for 2016	Achieved in 2016	Risks
<b>Risk management</b>				
Risk management	<b>Risk management</b>			
	Management of significant risks	Four reports a year	100%	

1. Strategic priorities	2. Indicators with a quantitative target value	3. Objectives	4. Results	5. Risk factors
Core activity and materially relevant themes	KPI	Objective for 2016	Achieved in 2016	Risks
<b>Finances</b>				
Financial position	<b>Financial position<sup>1</sup></b>			Inadequate operating result, Brexit
	Revenue		5,093	
	ROE		6.2%	
	Investments (in millions of euros)		791	

**Social impact:**

1 Expenditure

1. Strategic priorities	2. Indicators with a quantitative target value	3. Objectives	4. Results	5. Risk factors
Core activity and materially relevant themes	KPI	Objective for 2016	Achieved in 2016	Risks
<b>Abellio</b>				
Activities in Europe	no KPI available for this	n/a	n/a	ScotRail, Brexit

# Managing risks



NS has adopted a three-lines-of-defence model to make sure the risks are managed as an integral whole. The guiding principle in this model is that the first line of defence (the operational business) is responsible for the control of its processes. The second line of defence (which includes risk management), provides support and advice and makes sure that line managers are fulfilling their responsibilities as intended. The third line of defence (internal audit) carries out independent checks to make sure that the system of risk management and internal controls is indeed working properly.

NS is exposed to various risks on a daily basis as it delivers its services. We subdivide these risks into strategic, operational, financial (reporting) and compliance risks. Effective risk management is crucial if risks are to be controlled properly. The NS Risk Framework helps make sure that we handle the most important risks appropriately when taking decisions and in day-to-day business operations.

## Organisation, governance and reporting

The business units and the Executive Board are responsible for managing the risks. Risks are therefore assigned an 'owner' within the organisation. Risk managers support the operational departments by helping to identify the risks and monitoring progress in the control of significant risks. To achieve a more uniform and independent way of working and be able to deploy the risk managers more widely, the risk managers report to the Risk Management Director.

The risks for each business unit are reported every quarter and discussed in the Executive Board as part of the planning and control cycle. Risks that exceed the tolerance thresholds are reported immediately. The Executive Board reports on and renders an account of the risk management system and internal control to the Supervisory Board after discussing this in the Risk and Audit Committee.

### Risk management system

NS has implemented a system for the identification and control of risks. We identify risks, deal with them and report on them. More attention is being paid to the quantification of risks, both in strategic decision-making and in the day-to-day business operations. Managerial control is strengthened by the establishment of integrated risk management in conjunction with the operational side and by systematically making risk assessments (in the light of the 'risk appetite'). This will help us to detect potential bottlenecks or opportunities at an early stage and make targeted and proactive changes in response.

## Risk appetite and risk tolerance

In 2016, the Executive Board redefined its risk appetite for eight themes. The Executive Board's definition of its risk appetite is given below.

Category	Risk appetite	Clarification, NS accepts
Operational	Averse	zero or minimal deviations from operational objectives
Safety	Averse	zero or minimal deviations from safety objectives
Integrity & compliance	Averse	zero or minimal deviations from integrity & compliance objectives
Staff	Neutral	limited deviations from human resource objectives
Growth	Tolerant	wider deviations from growth objectives
CSR	Tolerant	wider deviations from sustainability objectives
Finances	Neutral	limited deviations from financial objectives
Reputation	Averse	zero or minimal deviations from reputation objectives

Compared with last year, the Executive Board has changed its risk appetite in the category 'Reputation' from neutral to averse. The risk appetite for the category 'Growth' has shifted from neutral to open. The risk appetite acts as a guide in determining tolerance levels (thresholds) for objectives and KPIs. As part of the Business Plan and budget process, threshold values have been determined for the main NS KPIs. Further implementation of the KPIs and associated thresholds will take place within the organisation in 2017 to ensure that all staff are directly involved in achieving the objectives and managing risks.

## Risk identification and risk control

NS has introduced a system for identifying and controlling risks. Risk assessments of key programmes, projects and processes are carried out within the business units on a regular

basis. The Executive Board discusses the risks at regular intervals. NS records these risks in risk registers. NS Risk advises the Executive Board and Supervisory Board, among other things, on proposed investments of more than €5 million, for example investments in rolling stock or real estate, and on bids for franchises in the Netherlands and abroad. NS Risk does this together with the Business Control Group and NS Legal. NS also has a business control incident scheme, the aim of which is to respond to any incidents by looking into possible shortcomings in the internal control system and making improvements accordingly.

## Tools and IT support

NS also carries out stress tests in some circumstances. Risks with a high priority are investigated further using bow-tie analyses. This gives us a good understanding of the causes and consequences of the risks, as well as the control measures in place and those that are lacking. We do not yet have an integrated Enterprise Risk Management tool or system. This will be set up in the course of the next few years, possible as part of a broader governance, risk and compliance tool.

## Risk culture

Risk management must become part of our DNA, but without hindering the business operations. In 2017, a corporate culture programme will start at NS that incorporates risk management. This should increase risk awareness among staff.

## Statement by the Executive Board

The Executive Board believes that the risk management and internal control systems relating to the financial reporting risks in the financial year functioned satisfactorily and give a reasonable degree of assurance that the financial reports do not contain any material misstatements. The Executive Board states that as far as it is aware:

- the financial statements give a true and fair view of the assets, liabilities, financial position and profits of NS and the companies included in the consolidation as a whole;
- the annual report gives a true and fair view of the situation on the balance sheet date and the course of business during the financial year;
- the annual report contains a description of the principal risks NS is facing.

## Group risks

As part of the business planning process, the Executive Board has determined the principal group risks based in part on the risks that have been identified within the business units. The board has looked at how these risks affect the achievement of the strategic objectives and the materially relevant themes. The group risks are listed in the risk matrix and will be discussed in detail below, as will changes in the risk profile with respect to 2015. For the financial risks, please refer to the 'Financial risk management' chapter in the financial statements.

## Main changes in the risk profile compared with 2015



Market regulation, Brexit and ScotRail have been added. The market regulation risk has increased because of the market regulation study that was requested during the parliamentary inquiry into Fyra. The ScotRail risk has arisen due to unrest in Scotland (strikes, operational result and negative press coverage, economic developments and transformation of the infrastructure). In the past year, an intensive process has been followed to reduce the risk of us failing to comply as a company with the Railways Act and the Competitive Trading Act. We have also reduced the risk of us not applying a level playing field by implementing various measures to such an extent that this is no longer a top-priority risk. We do still pay continuous attention to the need to act with integrity, for instance by including this in the corporate culture programme that is being rolled out. The risk of the arm's-length management of Abellio is no longer a top-priority risk. Agreements have been made with the Ministry of



Finance on the parameters within which Abellio can do business. The governance structure has also been modified to ensure the right balance between management at a distance and control of the risks.

### Further information on the group risks for 2016 and in the future

In the table below, we have categorised the group risks into the COSO risk areas used by NS. The table gives the most important measures for each risk, shows the trend in how it is being controlled and compares the desired risk profile (blue dot) against the current risk profile (grey dot). The current performance is used to make an estimate of the current risk profile.


Risk area	Risk	Measures	Trend	Risk appetite		
				Averse	Neutral	Tolerant
Strategic	<b>Market regulation:</b> loss of commercial activities and contribution to results	Performance improvements by carrying out various programmes that increase the chance of award by private tender. An internal NS team has been set up to follow this issue.	=			
Operational	<b>Introduction of new rolling stock:</b> not achieved on time and in line with the intended quality	NS is carrying out the Smooth Introduction and Handling Shunting Capacity programmes in order to get an overview and to be able to coordinate the introduction properly.	-			
	<b>Change programmes:</b> changes realised too late or not at all	Professionalise portfolio management at the NS level. Management discusses the change agenda regularly. HRM is working on improving the expertise in change management.	=			
	<b>HSL offering:</b> not provided on time or in line with quality required	The IHA programme is working together with the line organisation on introducing new products properly. IC direct improvement team set up. Faster IC Brussels possible from the end of 2017.	=			
	<b>Infrastructure:</b> lack of infrastructure capacity and quality improvement backlog	Close cooperation (in programmes too) with ProRail and Infrastructure and the Environment so that the Long-term Rail Agenda can be realised.	-			
	<b>IT reliability:</b> not meeting the operational and IT security requirements for IT systems	IT continuity is guaranteed because NS has largely switched to a new IT environment. Critical applications are being replaced; more attention to cyber-risks.	=			
	<b>ScotRail:</b> disappointing operational performance	Performance Improvement Plan drawn up that focuses on bringing operational performance back up to par as of Q1 2017. Further initiatives that will yield results in the medium and longer term.	+			
	<b>Safety:</b> disappointing operational performance	SPAD and ERTMS improvement programmes to standardise and improve safety on the railways. There will be a single safety management system and a single QHSE department. The threat of terrorism is closely monitored.	=			
Financial	<b>Unsatisfactory operational result</b> insufficient operating results and not enough cash flow generated	Professionalisation of portfolio management at the NS Groep level. Discussions with the Ministry of Infrastructure and the Environment about fare differentiation. Focus on cost savings and increased revenues.	=			
	<b>Brexit:</b> pressure on profitability due to political and economic uncertainties	Uncertainties are priced into new bids. Active stakeholder management.	=			
Compliance	-					

 Management has improved

 Management is unchanged

 Management has worsened

 Desired risk profile

 Current risk profile

Management has improved
 Management is unchanged
 Management has worsened
 Desired risk profile
 Current risk profile

Based on the above overview, NS is prioritising the following risks: the introduction of new rolling stock, change programmes, the HSL service and the infrastructure.

## Market regulation

### Description

The risk that politicians decide to split up the main rail network franchise, have a public tender for all or part of the franchise or to split off NS Stations, which would lead to a loss of some business operations and put pressure on profitability.

## Explanation

In the spring, the Dutch government announced a market regulation study in response to the Fyra inquiry. The intention is that this study will give insight into the most effective way of safeguarding the quality and affordability of rail transport and the extent to which this can be accompanied by the free operation of market forces. The next government will be able to draw conclusions on the basis of the study. At the request of the Lower House of Parliament, the study will also look at the intertwining of different NS operations, such as transport on the main rail network and the operation of stations in the Netherlands. Furthermore, a comparison will be made with other rail companies in the EU and EU rules as set out in the Fourth Railway Package will be taken into account.

## Measures

Various improvement programmes are being implemented within NS. These programmes should have an effect on our performance, making it good enough to increase the likelihood of a private tender to award the main rail network franchise.

NS has set up a team to deal with the market regulation issue consisting of staff from the strategy department and various experts within the organisation who will be providing the investigative committee with the information they require. This team will also consider the consequences of the different scenarios for NS and the business model.

## Risk control trend

NS has taken measures to deal with this strategic risk. The investigative committee will identify the various advantages and disadvantages of the different scenarios for market regulation. Politicians can then make their decisions. There are therefore many uncertain factors in this issue. The degree of risk control is therefore unchanged.

## Residual risk

Medium. The current risk profile does not yet match the desired risk profile.

# Introduction of new rolling stock

## Description

The risk that, due to a lack of capacity for maintaining, combining and handling rolling stock and insufficient qualified staff, we are unable to realise the peak introduction of new rolling stock on time and in accordance with the envisaged quality requirements, leading to pressure on the transport capacity and a failure to provide our customers with the degree of comfort that they demand.

## Explanation

NS has purchased a great deal of new rolling stock over a relatively short period and is also reintroducing refurbished rolling stock. At the same time, the nature of the maintenance task is changing because systems are now installed on the train roof rather than under the train and because of new technology, while the allocation of the rolling stock to the various maintenance locations has also changed. The maintenance capacity schedule is tight and leaves no room anymore for overruns. For combining and handling rolling stock, supplementary measures are required from the sector (ProRail, the Ministry of Infrastructure and the Environment, NS and other carriers) if the growing shortages are to be dealt with appropriately. Extensions to the timetable and interruptions to services due to the considerable amount of engineering work are putting further pressure on capacity on the railways. Finally, we need to take care that our staff and the organisation do not become overburdened by the many changes that are already taking place. This will make demands on the preparations and power to execute tasks within our organisation but we are also dependent to some extent on the power of our sectoral partners to execute tasks.

## Measures

NS has initiated two programmes: the Handling and Combining Capacity programme together with ProRail and the Smooth Introduction programme. The first programme will give a better understanding of bottlenecks in the capacity for combining and handling rolling stock and will result in possible solutions. The Smooth Introduction programme will give an overview and coordinate the introduction of new rolling stock in the standing organisation. This includes ensuring there is sufficient maintenance capacity. This will increase predictability, reliability and realism in the introduction of new and refurbished rolling stock. It will also show which are the critical resources (in terms of availability and expertise) so that they can be deployed effectively and so that any problems can be identified in good time. There is also a larger technical reserve on hand for if problems arise with the operational deployment of new rolling stock.

## Risk control trend

While the introduction of the Flirt went smoothly, the risk has increased. The schedule is now on the critical path, despite the greater insights. This means that every delay has become an issue. In the next while, decisions will be taken regarding the portfolio of locations for combining, handling and maintaining rolling stock. Each of these choices will in turn incur a certain risk profile.

## Residual risk

High. Despite the measures that have been taken, the residual risk remains high at present because there are many uncertainties concerning the further implementation. The current risk profile does not as yet match the desired risk profile.

# Change programmes

## Description

The risk that, due to the many projects, the complexity of their content and the many interdependencies, the necessary changes will not be achieved (or not on time), as a result of which we fail to fulfil the agreements and the expectations of our stakeholders.

## Explanation

We need to implement organisational and other changes in order to improve our services and achieve our operational targets. This further increase in our professionalism is a challenge because staffing capacity is at a critical level and because of the knowledge required. In addition, a large number of changes are involved and there is a high level of interdependency between them. Finally, the underlying processes are very complex at NS, which means that it is not always easy to implement changes in good time.

## Measures

We are boosting the professionalism of the portfolio management. This is an important instrument for properly managing the large number of programmes and projects, and their interdependencies. The managers discuss the strategic change agenda in order to make sure that the intended changes can be jointly implemented effectively and smoothly. The HRM department is actively working on increasing expertise regarding change programmes. NS has set up a programme designed to bring about a change in the NS corporate culture. We assess new projects in terms of contribution they can make to performance in the franchise KPIs.

## Risk control trend

The increase in the number of changes and the associated complexity means there is a need for more coordination and priority setting. The improvements in NS-wide portfolio management should make an important contribution in this regard. So far, the level of risk control has remained unchanged; the desired changes have been initiated.

## Residual risk

High. The current risk profile does not yet match the desired risk profile.

## HSL service

### Description

The risk of problems in the delivery of the ERTMS software for the locomotives, overburdening of staff critical to the business and external factors meaning that the agreed product steps will not be delivered on time or not in line with the agreed quality level.

### Explanation

After the problems with Fyra, NS agreed an alternative HSL service with the Ministry of Infrastructure and the Environment. This stipulates when NS should introduce certain product steps (timetables) with alternative rolling stock. New combinations of rolling stock (locomotive plus carriages) need to be tested for the introduction before they can be given permission to operate. NS is dependent for this on suppliers and other transport sector partners.

Furthermore, external conditions such as side-winds play an important role in operational performance. When new product steps are introduced with new rolling stock, there is normally a growth path for performance. At present, our performance has not reached the desired level.

### Measures

The HSL Service Implementation programme team is preparing the implementation of the various product steps in collaboration with the operational business. Priority is given to ensuring that the existing organisation is put in the best possible position to manage the new product and minimise or avoid any decline in performance when the new product is introduced. The rolling stock part of the programme should ensure that the trains are available on time so that the agreed transport service is indeed achieved. The rolling stock needs to be technically appropriate, to be given permission to operate and to be reliable. NS has set up a programme to improve the performance of the Intercity direct (Amsterdam-Breda). This has already led to improvements in operational performance, but the percentage of cancelled trains is still higher than agreed.

The IC Brussels train journey may be about half an hour shorter as of December 2017. The faster Benelux train is NS's answer to the recommendations made in the parliamentary inquiry into Fyra. It advocated more fast, cheap train services to Brussels.

### Risk control trend

NS has implemented various measures as a result of which control over performance has improved. Even so, the performance is still not up at the required level. NS is also critically dependent on suppliers and partners. The introduction of new product steps is also associated with a high risk. The overall level of control is the same.

## Residual risk

High. The current risk profile does not yet match the desired risk profile.

## Infrastructure capacity

### Description

The risk that, due to numerous major planned interruptions to the service, lagging investment and political pressure on ProRail, there will be a shortage of rail infrastructure capacity and a lack of improvement in the quality, so that NS cannot achieve its growth goals and operational improvements to the extent it wishes.

## Explanation

In implementing the scheduled service, NS is dependent on having a sufficiently reliable rail infrastructure. Over the next few years, NS needs more infrastructure capacity and an increased infrastructure quality because of its growth ambitions, high-frequency services and the introduction of large quantities of new rolling stock. There is also pressure on the infrastructure due to increased safety requirements for example at shunting yards, environmental requirements (noise) and planned interruptions to the service due to the considerable amount of engineering work. The reliability of the infrastructure now and in the future is also critical given that this has a big impact on the ability to achieve the agreed performance targets in the Transport Plan.

## Measures

NS is collaborating intensively with the Ministry of Infrastructure and the Environment and ProRail to make sure that the infrastructure is tailored to the requirements of the agreements in the long-term rail agenda. The *Better and More* programme is one example of this intensive collaboration. NS is closely involved in the planning process at ProRail and seeks to exert influence on the improvements specified in ProRail's roadmap. NS is collaborating with ProRail and the Ministry of Infrastructure and the Environment in the Handling and Combining Capacity programme, the ERTMS programme and the High-frequency Rail Transport programme. NS also shows which of NS's KPIs are linked to the infrastructure. We proactively inform customers of interruptions to services via various communication channels and we put on replacement bus services wherever possible.

## Risk control trend

Control has worsened as a result of uncertainty concerning changes to the management of ProRail, the weak pace of investment, increased safety requirements and environmental requirements and interruptions to the service due to the large amount of work on the track.

## Residual risk

High. The current risk profile does not yet match the desired risk profile.

# IT reliability

## Description

The risk that, due to delays in the implementation of the migration strategy, a lack of expertise and a lack of capacity, our IT systems will not satisfy the operational and IT security requirements, as a result of which we are unable to achieve our strategic goals or guarantee the continuity of our services.

## Explanation

To run our timetable and deliver our service to our customers, reliable IT systems are needed. IT is an increasingly important and critical factor in the management of our operations, in particular in the provision of information for our passengers. To facilitate this, it is important that old IT systems are replaced and that current and new IT systems run on a stable, efficient and scalable IT infrastructure. Otherwise, this could lead to operational disruptions. We are dependent for this to some extent on the performance of our suppliers. Cyber risks are also becoming more of a threat as IT is used increasingly in applications aboard trains, in the infrastructure and so forth. The rail sector is becoming more digital in nature and therefore more vulnerable to cyber risks.

## Measures

NS is carrying out the Head Start (*Voorsprong*) project, which should safeguard the continuity of IT within NS. Furthermore, various older business applications are still running within NS.

The decision has been made to replace these rather than improve them. We have set up separate programmes for highly critical systems. The Resilient (*Weerbaar*) programme is our answer to the increased cyber risk. In that regard, we are identifying the IT risks in the travel chain. Portfolio management has been set up within IT to improve the focus in the IT project portfolio and the allocation of scarce resources. This will help achieve the IT objectives and keep the costs under control.

## Risk control trend

Many applications have been transferred to a stable IT platform thanks to the Head Start project. Upgrading old applications to satisfy current and future wishes is not going as fast as we would like. Portfolio management within IT has helped improve priority setting and the overall management of IT projects and programmes. NS is highly dependent on suppliers. Cyber risks are also increasing. The overall level of control is the same.

## Residual risk

Medium. The current risk profile does not yet match the desired risk profile.

# ScotRail

## Description

The risk that disappointing operational performance by ScotRail and the associated negative publicity will lead to increased political pressure on the organisation, which could result in reputation damage for Abellio and NS. There is also pressure on the financial performance due to adverse economic developments.

## Explanation

The operational performance is falling behind the agreed targets. Performance has worsened due to industrial unrest and strikes concerning driver controlled operations, work on improving the infrastructure (such as the closure of Winchburgh Tunnel and Queen Street) and autumn weather, although ScotRail performs relatively well in the United Kingdom given the size and complexity of the franchise. This has all led to increased pressure from the media and politicians.

## Measures

ScotRail has drawn up a [Performance Improvement Plan](#) that should make sure that the operational performance returns to the required standard as quickly as possible. The operational improvements lie to some extent in initiatives that will deliver results in the medium term, for example the introduction of new rolling stock. To make sure this major transformation of Scottish rail transport stays on course, ScotRail is liaising closely with the Scottish government and Transport Scotland and ScotRail also has a 'deep alliance' with NetworkRail. The aim of the Deep Alliance is to reduce the impact of maintenance and other infrastructural work and other unplanned disruptions on passengers through collaboration, and to improve punctuality. The four parties have now developed a joint approach. This will help improve the services to passengers, ensure proactive communication with passengers ensure fulfilment of the contractual obligations of the franchise. This forms one part of the proactive approach to safeguard our reputation in Scotland. Improvements in the operational performance and various financial initiatives will help improve the financial results.

## Risk control trend

The above-mentioned measures should lead to results in the short and medium term. The effects can already be seen to some extent. The degree of risk control has therefore been improved.



## Residual risk

Medium. The current risk profile does not yet match the desired risk profile.

# Safety

## Description

The risk that a serious safety incident occurs with passengers and/or employees due to non-compliance with safety procedures and infringements of processes by malicious individuals. 'Safety' covers safety on the railways, personal safety, security (including terrorist threats and cybercrime), occupational safety, fire safety and food safety.

## Explanation

Safety is always a focal point, given its importance for our operations. NS seeks to transport its passengers and staff in a safe manner and ensure their safety at stations.

## Measures

As part of the Transport Plan that NS has concluded with the Ministry of Infrastructure and the Environment, improvement programmes are being carried out (1) to further reduce the number of signals passed at danger (SPADs) and (2) to work on the introduction of the European Rail Traffic Management System (ERTMS) to standardise and improve rail safety. For rail safety, NS is working on assembling all the available expertise and experience in a single safety management system.

As regards personal safety and security, NS has implemented various measures based on the agreement with the trade unions on dealing with aggression. Furthermore, in the Controlled Access to Stations (*Beheerste Toegang Stations*) programme, the access gates are being activated at increasing numbers of stations, which is improving personal safety in the station areas.

NS maintains close contact with the National Coordinator for Counterterrorism and Security and the security services. NS is prepared (with plans and scenario scripts) for dealing with a terrorist threat or a terrorist attack. Regular practice drills are held in collaboration with ProRail and other parties. NS staff have received instruction on what they need to look out for and what to do in such situations.

There is a safety control board in which safety risks, safety issues and the follow-up are discussed and monitored. In 2016 a start was made with setting up a single department for Quality, Health, Safety and the Environment (QHSE).

## Risk control trend

The safety of our staff and passengers is a top priority. The level of control in this area was already good and has remained so thanks to the aforementioned additional measures, and is therefore unchanged. Despite the measures, NS cannot rule out safety incidents occurring.

## Residual risk

Low. The current risk profile matches the desired risk profile.

# Inadequate operating result

## Description

The risk that, due to costs rising faster than revenue, NS fails to generate a satisfactory operating profit or operating cash flow and as a result is unable to realise its strategy in the future.

## Explanation

Over the next few years, NS will have to invest substantially to facilitate the growth in passenger numbers and fulfil the franchise obligations and undertakings to our stakeholders. Because of the capital-intensive nature of NS, the company's cost structure is relatively fixed and costs will only increase further as a result of investments in new rolling stock and staff to expand the business.

## Measures

Portfolio management is an important instrument in checking that investments make a sufficient contribution to the realisation of our strategy. Portfolio management at the NS Group level still needs further improvement. There is a tighter focus on the costs of corporate staff, indirect and temporary staff and commercial expenses, which should lead to cost savings, operational improvements and consequently an improvement in the financial performance and room for essential investments in rolling stock and improvements to the passenger service.

## Risk control trend

NS has taken measures to reduce costs, as well as to increase productivity and revenues. Many of the measures are still being implemented, which means that the effect is as yet uncertain. The overall level of control is therefore unchanged.

## Residual risk

High. The current risk profile does not yet match the desired risk profile.

# Brexit

## Description

The risk that uncertainty regarding political decisions by the British government, a weak pound and falling economic growth will have an impact on the operations of Abellio UK, putting pressure on its profitability.

## Explanation

Much is uncertain about the effects of Brexit. For example, the economy is expected to grow at a slower rate (based on analyses by Oxford Economics and CEBR), but the extent of that effect is uncertain. The effect on the exchange rate of the pound is also uncertain, while this exchange rate affects the flow of capital from the United Kingdom to the Netherlands. In addition to the financial and economic consequences, there is also a considerable degree of political uncertainty.

## Measures

Commercial initiatives are being reviewed and modified where necessary. Stakeholder management is a continuous process in which the strategic intentions of key stakeholders can be identified. The impact of Brexit on our financial performance will be monitored continuously and as part of that, planned cost-cutting programmes will be brought forward.

## Risk control trend

Abellio has taken various measures in an effort to prepare for possible developments. However, there are many uncertainties concerning the impact of Brexit. It is not clear at present whether the current measures will be enough to deal with these uncertainties.

## Residual risk

High. The current risk profile does not yet match the desired risk profile.

## Organising sustainability

Sustainability of the business practices is safeguarded through a formal organisation consisting of a Council for Sustainable Business Practices, a Working Group for Sustainable Business Practices, a Communications Working Group and a number of temporary task groups. This organisation is supported by a Sustainable Business Practices Programme department, which was set up in 2010 (three FTEs with an annual budget of €250,000). The Council, which includes the directors of the business units and is chaired by the Director of Commerce and Operations (a member of the Executive Board and responsible for sustainability), has the task of preparing decisions and policies. Proposed resolutions and policies to be implemented by the business units and/or corporate staff groups are submitted to the Executive Board for approval. There are also (communications) representatives of the NS business units in the working group and communications working group for Sustainable Business Practices. Sustainable mobility is one aspect of the strategy of NS. This strategy is translated into plans and KPIs by the business units. The plans relate to the three strategic themes of Climate-neutral, the Circular Economy and Inclusiveness.

The progress and development of the sustainability results have been observed and managed through the regular planning, control and reporting cycle since 2010. Since 2012, NS has used a CSR reporting manual that specifies how sustainability information should be validated and reported in the monthly, quarterly and annual reports. Investment proposals should include sustainability impact reports.

In accordance with the Code, the Executive Board is responsible for the aspects of Corporate Social Responsibility (CSR) that are relevant to NS. The Executive Board reports on this to the Supervisory Board and the General Meeting. There were no changes in 2016 in the CSR policy and objectives.

# Corporate governance



NV Nederlandse Spoorwegen is a public limited company under Dutch law. Its registered offices are in Utrecht. The governance of NS, which is a state participation, is based on the modified two-tier company regime. NS has a two-tier management structure. The company is managed by the Executive Board and supervised by the Supervisory Board. These two bodies are independent of each other. Both bodies report on the execution of their tasks to the General Meeting of Shareholders (the 'General Meeting').

The Articles of Association of NV Nederlandse Spoorwegen were amended on 27 January 2016. This amendment brought the Articles of Association of NV Nederlandse Spoorwegen in line with the general standard developed by the Ministry of Finance for the articles of association of state participations. NV Nederlandse Spoorwegen is the holding company of NS Groep NV.

## Shareholder

The sole shareholder of NV Nederlandse Spoorwegen is the Dutch State. The role of the shareholder is fulfilled by the Ministry of Finance. The General Meeting is held annually, within six months of the close of the financial year.

The matters discussed at the General Meeting include the annual report by the Executive Board. The General Meeting also adopts the financial statements, approves the profit appropriation, discharges the members of the Executive Board from liability for their policy work, discharges the members of the Supervisory Board from liability for their supervision and appoints the auditor. Other general meetings can be held as often as is desired by the Executive Board, the Supervisory Board and the shareholder. Resolutions can also be adopted outside meetings.

## Corporate Governance Code

As a large corporation with an important public role of great social significance, and with the Dutch State as our sole shareholder, NS is keen to stress the importance of openness and transparency. Although not a listed company, NS applies the Dutch Corporate Governance Code (hereinafter the 'Code'). At NS, the Code is embedded in the rules of procedure for the Executive and Supervisory Boards, the Risk & Audit Committee, the Remuneration Committee and the Appointments Committee, as well as in a code of conduct and in a scheme for whistle-blowers. As NS is not quoted on the stock exchange and does not have a one-tier management structure, some parts of the Code do not apply.<sup>1</sup>

The Corporate Governance Code has been revised with effect from 8 December 2016. NS will apply this revised Code and will make the necessary changes in 2017.

## Executive Board

The Executive Board bears the responsibility for managing the business and reports to the Supervisory Board and the General Meeting. It establishes the vision for the company and the resulting mission, strategy and objectives. The Executive Board is responsible for implementing the NS strategy. Implementation is partly carried out by the business units and subsidiaries, for which the titular directors are also responsible. Pursuant to the Articles of Association and the Supervisory Board rules of procedure, some decisions by the Executive Board are subject to approval by the Supervisory Board and/or the General Meeting.

The Executive Board is responsible for managing the business in a transparent way, with the aim of providing all stakeholders with a clear understanding of the company's decisions and decision-making procedures.

Executive Board members are appointed by the General Meeting on the recommendation of the Supervisory Board. The Supervisory Board decides on the number of members in the Executive Board. Members of the Executive Board can be suspended or dismissed by the General Meeting. Following the memorandum entitled 'Spoorslags Beter', it was decided that the Executive Board should jointly manage performance on the main rail network in a more direct and integrated manner. To this end, the number of Executive Board members was increased as of 20 June 2016. The functions of director of Operations and director of Commerce & Development were added to the three existing functions (CEO, director of Finance

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<sup>1</sup> The following best-practice stipulations are not applicable: II.2.4, II.2.5, II.2.6, II.2.7, III.7.1, III.7.2, IV.1.1, IV.1.2, IV.1.7, IV.2.1, IV.2.2, IV.2.3, IV.2.4, IV.2.5, IV.2.6, IV.2.7, IV.2.8, IV.3.1, IV.3.2, IV.3.3, IV.3.4, IV.3.11, IV.3.12, IV.3.13, IV.4.1, IV.4.2, IV.4.3.



and Chief Governance, Risk & Compliance Officer).

The Executive Board consisted of the following individuals in 2016: Mr Roger (R.M.L.H.) van Boxtel, CEO, Mr Engelhardt (E.M.) Robbe, Finance Director until 8 April 2016, Mr Bert (A.P.) Schouws, interim Finance Director from 18 April 2016 until 18 September 2016, Mr Bert (H.L.L.) Groenewegen, Finance Director as of 15 September 2016, Ms Susi (S.M.) Zijderveld, Chief Governance, Risk & Compliance Officer as of 1 February 2016 and Ms Marjan (M.E.F.) Rintel, Director of Operations as of 15 July 2016. As of 1 April 2017, Mr Tjalling (T.B.) Smit will join the Executive Board as Director of Commerce & Development. Until that date, Mr Maurice (M.B.) Unck will perform the tasks associated with this position. New members of the Executive Board are appointed for four years, after which they may be reappointed. In 2015, Mr Roger van Boxtel was appointed for a term of one year. In 2016 this temporary appointment was turned into an appointment for the period of four years from 1 August 2015. The employment contracts of members of the Executive Board include the right to compensation upon dismissal, up to a maximum that has been fixed on the initiative of NS at one year's basic salary. Both the Executive Board as a whole and each individual Executive Board member are authorised to represent the company. The Executive Board's responsibilities, tasks and procedures are laid down in the Articles of Association of NV Nederlandse Spoorwegen and in the rules of procedure of the Executive Board.

The Executive Board performs its tasks in the interests of the company and affiliated enterprises. In cases where a (potential) direct or indirect personal interest of a member of the Executive Board conflicts with the interests of NS and this is of material significance to NS and the member in question, the member will immediately inform the chairman of the Supervisory Board and other members of the Executive Board. The member will disclose all relevant information, including information about any spouse, registered partner or other companion, foster child and relatives by blood or affinity to the second degree of consanguinity. A member of the Executive Board will not participate in discussions and decision-making about a subject or transaction where their direct or indirect personal interests conflict with the interests of NS. If all members of the Executive Board have a direct or indirect personal interest that conflicts with the interests of NS and therefore no decision can be made by the Board, the decision will be made by the Supervisory Board. The General Meeting also has the power to designate one or more people to act as representatives.

The Secretary of the Executive Board ensures that the proper procedures are followed and that the actions taken are consistent with the legal and regulatory obligations governing the Executive Board's actions. This policy was complied with in 2016.

## Executive Committee

Up to 20 June 2016, NS had an Executive Committee that supported and advised the Executive Board and had decision-making tasks and authorities. The Executive Committee was abolished following the strategic memorandum *Spoorslags Beter* and the expansion of the Executive Board, as described above.

The Executive Committee consisted of the members of the Executive Board and those people who were appointed as members of the Executive Committee by the Executive Board. Until 20 June 2016, these were (in addition to the members of the Executive Board) the chairmen of the business units and the directors of HR and Communication & Strategy.

## Supervisory Board

The Supervisory Board has the task of supervising the Executive Board's policies and the general management of the company and its affiliated enterprises, and it also provides the Executive Board with advice. The Supervisory Board performs its tasks in the interests of the company and its affiliated enterprises. The Executive Board provides the Supervisory Board promptly with the information and resources it requires in order to do its work properly. The Supervisory Board's responsibilities, tasks and procedures are laid down in the Articles of Association of NS and in the rules of procedure of the Supervisory Board and its committees. The Supervisory Board broadly subscribes to, applies and has complied with the best practices



and principles in Chapter III of the Code. The Supervisory Board also evaluates its own organisational structure and performance.

The Supervisory Board as a whole is responsible for performing its duties properly, and its members may adopt positions independently of the Executive Board. Members of the Supervisory Board perform their duties without a mandate and independently of any personal interest in the company. At least once a year, the Supervisory Board discusses the functioning of the Executive Board as a body and the functioning of the individual members of the Executive Board.

Supervisory Board members are appointed by the General Meeting, on the recommendation of the Supervisory Board and with due observance of the job profile and after consulting the Central Works Council. The Central Works Council has enhanced rights that let it nominate one third of the number of Supervisory Board members. The Supervisory Board has at least five members and at most nine. The Supervisory Board has drawn up a profile for its size and composition, taking account of the nature and activities of the company and outlining the desired expertise and backgrounds of its members. The Supervisory Board aims for a composition that is well mixed, including a mix in terms of gender and age. The profile is evaluated every three years to ensure it is up to date and accurate.

A Supervisory Board member can be appointed for a maximum of three terms of four years each. The manner in which the Board member fulfilled their duties in the previous term is taken into account, and they will only be reappointed after careful consideration. After the Supervisory Board has been brought back up to the desired size of six members, the retirement schedule for the Supervisory Board will be re-determined in accordance with the principles of the Code and designed so as to avoid too many Supervisory Board members retiring at once. In view of the extent, diversity and complexity of the matters it has to handle, the Supervisory Board has set up a Risk and Audit Committee and a combined Remuneration and Appointments Committee. The composition of these committees is determined by the Supervisory Board. The committees provide advice to the Supervisory Board about its tasks and prepare its decision-making. The committees therefore facilitate effective decision-making by the Supervisory Board.

## **Risk and Audit Committee**

The Risk and Audit Committee performs its duties in accordance with the rules of procedure as approved by the Supervisory Board, in accordance with the provisions of the Code. The Risk and Audit Committee advises the Supervisory Board on and scrutinises the annual financial statements, financing and financing-related strategies, fiscal planning and the performance of the risk management and control system. The Risk and Audit Committee consists of three members. The Risk and Audit Committee is chaired by the Supervisory Board's financial expert, Mr Jeroen (J.M.) Kremers.

## **Combined Remunerations and Appointments Committee**

The Remuneration and Appointments Committee performs its duties in accordance with the rules of procedure as approved by the Supervisory Board, in accordance with the provisions of the Code. The combined Remuneration and Appointments Committee has three members and is chaired by Mr Paul (P.) Rosenmöller.

The Remuneration Committee draws up an annual proposal for the remuneration policy for members of the Executive Board. The remuneration policy included in the remuneration report for the coming financial year and subsequent years is presented to the General Meeting for adoption. The Supervisory Board determines the remuneration of individual Supervisory Board members based on the proposals from the Remuneration Committee, within the limits of the remuneration policy adopted by the General Meeting. The remuneration report can be found [here](#).

The Appointments Committee decides the selection criteria and procedures for appointing members of the Supervisory and Executive Boards, as well as periodically reviewing the size and composition of the Supervisory Board and proposing a profile for its makeup. It also prepares a

report for the Supervisory Board on its own performance and makes recommendations for the appointment and reappointment of members of the Supervisory Board.

## External auditor

The external auditor is appointed by the General Meeting. The external auditor reports to the Supervisory Board and the Executive Board on the investigations performed and presents the results of the investigations and audit with an audit opinion concerning the fair presentation of information in the financial statements.

The Risk and Audit Committee, acting on the Supervisory Board's behalf, is directly responsible for overseeing the work of the external auditor. At least once a year, the Risk and Audit Committee prepares a joint report together with the Executive Board for the Supervisory Board regarding developments concerning the external auditor, and in particular the latter's independence. Once every four years, the Risk and Audit Committee and Executive Board also jointly carry out a thorough appraisal of the performance of the external auditor. The findings of this review are presented to the General Meeting and the Supervisory Board. The external auditor attends those meetings of the Supervisory Board at which its report on the audit of the financial statements is discussed and which deal with the adoption of the financial statements. The external auditor also attends the meeting of the Supervisory Board held to discuss the six-monthly figures. EY has been the external auditor since the financial year 2014.

## NS Audit

The internal auditors perform their duties under the aegis of the Executive Board. The results of their work are discussed with the Risk and Audit Committee. The Executive Board ensures that the Risk and Audit Committee is involved in setting up the working plan and that it is agreed with the external auditor. NS Audit is in direct contact with the Risk and Audit Committee.

# Remunerations of the Executive Board

## NS remunerations policy

The key objective of the NS remuneration policy is that this policy should enable the Supervisory Board to attract and retain well-qualified members for the Executive Board. The remuneration policy is aimed at supporting and furthering NS's objectives and strategy. The remuneration policy also reflects NS's public status.

## Objectives and principles

- Given that the Dutch State is the sole shareholder, the remuneration policy is based on the principles for the remuneration policy of state participations;
- The determination of job grades is an important element in determining levels of remuneration;
- To determine remuneration levels for the Executive Board, a market comparison is used based on two reference markets: the public and semi-public sector (AMC, the Tax and Customs Administration, GVB, Havenbedrijf Rotterdam, the Ministry of Infrastructure and the Environment, ProRail and Vitsens) and the Dutch private sector, using weightings of 60% and 40% respectively.
- The NS remuneration policy satisfies the best practice stipulations on remuneration in the Corporate Governance Code.

## Remuneration components

- Base salary
- Variable remuneration
- Pension
- Benefits

The financial statements contain a table showing all the remuneration components.

## Base salary

In 2016, the gross annual base salary including the holiday allowance for the members of the Executive Board was as follows:

	Position	Base salary (€)	Base salary received (€)
R. van Bortel	CEO	438,600	438,600
B. Groenewegen	Finance Director	344,000	101,289
M. Rintel	Director of Operations	344,000	157,667
S. Zijdeveld	Chief Governance, Risk & Compliance Officer	344,000	315,333

The overall income of the employee with the highest base salary, namely the CEO, is nine times the median value of the salaries of all NS staff in the Netherlands\*.

\*) Key assumptions:

- All staff at NS and Abellio Transport Holdings BV are included in the calculation
- The calculation is based on the following components: the base salary, variable remuneration and pension costs
- The above components apply to both the staff and the CEO
- Both full-time and part-time staff are included in the calculation.

## Variable remuneration

All members of the Executive Board have explicitly waived the right to variable remuneration in their employment contracts.

## Pension

All members of the Executive Board are also members of the NS pension plan. The employer's share of the pension costs for the entire Executive Board was €43,728 in 2016 (2015: €15,324). The employer's contribution is two thirds of the total pension costs.

	Position	Pension costs (€)
R. van Bortel	CEO	14,171
B. Groenewegen	Finance Director	4,169
M. Rintel	Director of Operations	6,495
S. Zijdeveld	Chief Governance, Risk & Compliance Officer	12,990

As required by legislation, pension accrual is capped at a salary of €101,519. NS and the trade unions have agreed to pay out a gross contribution in addition to the salary as an alternative for the cap on pension accrual. NS is allocating a gross contribution of 12% of the salary in excess of €101,519 to all current and new staff. A transitional scheme applies for members who were 46 or older on 1 January 2015. They will receive a supplementary age-related contribution. The percentage in question will be determined as a once-only action. In 2016, members of the Executive Board received a contribution that was the same as in the above scheme for NS employees.

	Position	Alternative for capping the pension accrual (€)
R. van Boxtel	CEO	40,450
B. Groenewegen	Finance Director	8,571
M. Rintel	Director of Operations	14,448
S. Zijderveld	Chief Governance, Risk & Compliance Officer	26,673

### Benefits

The benefits that apply to all other NS employees, including healthcare insurance schemes and transport facilities, also apply to the Executive Board members.

The benefits package for the Executive Board also includes an appropriate expense allowance, a lease car and the use of communication devices. The lease scheme offers the option of waiving the right to a lease car and being paid the gross lease amount instead. In addition, a chauffeur-driven car can be made available for business purposes.

	Position	Payment of lease amount (€)
R. van Boxtel*	CEO	-
B. Groenewegen	Finance Director	4,629
M. Rintel	Director of Operations	2,784
S. Zijderveld	Chief Governance, Risk & Compliance Officer	14,410

\* Mr van Boxtel used the directors' chauffeur-driven car in 2016 and waived the gross payment of the lease amount.

Furthermore, the company has taken out an accident insurance policy and a directors' liability insurance policy for the members of the Executive Board. The company has not extended any loans, advances or guarantees to members of the Executive Board and will not do so.

### Employment contracts

Members of the Executive Board are appointed each time for a period of four years at the most. Reappointments can be made each time for a period of four years.

	Position	Date employment started	End of employment contract
R. van Boxtel	CEO	1 August 2015	31 July 2019
B. Groenewegen	Finance Director	15 September 2016	14 September 2020
M. Rintel	Director of Operations	1 November 2014	Unlimited period
S. Zijderveld	Chief Governance, Risk & Compliance Officer	1 February 2016	31 January 2020

\* Marjan Rintel already had a permanent employment contract. On 15 July 2016 she was appointed a member of the Executive Board.

All employment contracts with members of the Executive Board include a period of notice for the employer of four months. On termination of the employment contract at the initiative of NS, the termination payment cannot exceed one year's base salary.

## Members of the Executive Board who retired

Mr E.M. Robbe (Finance Director) left his post as of 1 June 2016 (having remained active in the role until 8 April).

## Protecting privacy

The operations of NS involve extensive data processing, innovative technology and collaborative ventures in which personal data is exchanged. NS bears responsibility for ensuring that the personal data is processed in the appropriate manner. This responsibility is all the greater given the position and role of NS as a large company at the heart of society. In accordance with the Dutch Personal Data Protection Act and the Code, the Executive Board of NS bears ultimate responsibility for full compliance with the applicable privacy legislation.

The processing of personal data has to meet increasingly stringent requirements. For this reason, the NS privacy policy was recalibrated and strengthened in the year under review. Some key aspects of this are a firmer assignment of tasks and authorisations within the organisation, strengthening the role of the business units, regular training and a focus on raising awareness, the establishment of a reporting system and an intensification of internal oversight. This approach lets NS remain in control of the wide range of privacy issues that play a role within the company.

## Integrity and compliance

Following the irregularities in the bid for the public transport contract in Limburg, an investigation was carried out at the request of the shareholder and the Supervisory Board on the effectiveness of internal procedures, risk management, compliance and internal control at NS (hereafter referred to as the GRC organisation). This investigation was carried out signed by Alvarez & Marsal and concerned all group divisions and operating companies within NS, both in the Netherlands and abroad.

In its findings, Alvarez & Marsal conclude: "The GRC organisation within NS is not yet in a sufficient state to prevent the risk of irregularities and unethical conduct to the maximum extent possible or to encourage desirable conduct. As a result, there is insufficient insight into integrity risks and an increased likelihood that integrity risks will not be properly managed. Systematic improvements are necessary in the areas of governance, risk management and compliance in order to gain more control over the issues of integrity and irregularity and reduce these risks."

In the report, the researchers at Alvarez & Marsal say that the investigation did not produce any signs of irregularities similar to 'Limburg'. They did state that improvements were needed with regard to familiarity with internal rules and procedures and the development of a corporate culture in which colleagues are better at holding one another to account for their conduct.

## Measures in the NS Action Plan

Based on the recommendations made by Alvarez & Marsal, NS drew up the 'NS Action Plan for Governance, Risk Management and Compliance', which documents all the objectives and actions. The actions were tackled as a matter of urgency. NS has reported regularly to the shareholder and the Supervisory Board on progress in the implementation of the recommendations. In December 2016, NS sent the shareholder a letter giving substantive information on progress in implementing the Action Plan.

## NS in control

In addition to the events in Limburg, the Parliamentary inquiry into Fyra and the desired level playing field (the process for translating the Competition Act and Railways Act into practice) also led to measures and recommendations. Given the overlap between the different processes, the programme office NS In Control was set up. NS In Control is responsible among other things for providing support and monitoring the cohesion in the implementation of more than

one hundred measures from the above-mentioned Action Plan.

In the past year, NS has made significant progress in its transformation into a company that demonstrably, comfortably and credibly meets the standards in terms of governance, risk and compliance that are appropriate for a company of NS's social position and responsibility. To achieve this, far-reaching changes were implemented in 2016 in the organisational structure based on the recalibrated strategy. This resulted in a new structure for the approach to GRC within NS.

## Integrity Portal

In December 2016, NS launched the Integrity Portal for staff with queries about integrity. This portal also lets staff report integrity issues or abuses anonymously. Integrity and compliance are linked to the observance of policy and rules. That is why we use a number of instruments designed to help staff adopt the right behaviour, for example, to help with questions about which policy applies when and where, and where they can go for different kinds of questions, dilemmas or complaints. NS has also developed a company-wide e-learning tool on the code of conduct. All these measures, in combination with the new Integrity & Compliance department, are increasing employees' familiarity with the rules, compliance officers and confidential advisers.

Another measure is the improvement of the screening process and supervision of the new screening policy. For instance, we have established new criteria for determining which jobs require screening. In the 'Are you secure' campaign, NS raised awareness among managers and staff about the need to keep information secure. There will be a follow-up to the campaign in 2017 for operational employees. We have also organised training sessions and awareness sessions to raise awareness about how to deal with information.

## Three lines of defence

The appointment of a Chief Governance, Risk & Compliance Officer within the Executive Board means that GRC is embedded within the organisation at the most senior level. Within GRC, NS applies the 'three lines of defence' principle. The first line, the business units, bears primary responsibility for the identification and control of risks. The second line is formed by the Risk and Integrity & Compliance departments. They give support and advice to the first line but they also monitor and check that managers are fulfilling their responsibilities. The third line is formed by the internal audit department. It determines whether the processes and the system of internal measures are functioning properly such that the objectives can be realised in a controlled manner.

## Culture programme

The conduct of a company's employees and the choices they make are crucial to the integrity of a company. In 2017, NS will be starting an organisation-wide programme to encourage a culture of openness, holding one another to account and exemplary conduct throughout the organisation. We made preparations for this last year. From the autumn of 2016, we held talks with the management teams for the big business units with the aim of fostering awareness about integrity and the role of managers. In the sessions, we used examples of questions that employees had about the application of rules. We are incorporating these examples in the corporate culture programme so that other colleagues can learn from them.

## A level playing field

NS occupies a special social and economic position in Dutch society. Fair competition takes top priority. Compliance with national and international legislation and regulations is important for this reason too. In our strategy, we stated that NS can only achieve this by cooperating with other carriers as a good partner. It is essential here that we prevent any conflicts of interest, or the appearance of a conflict of interests. We are doing this by comfortably meeting the requirements of the new Railways Act and Competition Act. This is our contribution to fair and open competitive relationships.

In close collaboration with ProRail, we have set up a portal in which we offer services and



facilities to all carriers in the context of the Railways Act in a transparent and non-discriminatory manner. NS has designated single points of contact (SPOCs) for the various business units, where questions from other carriers can be dealt with carefully behind 'Chinese walls'. Initial experiences and feedback from other carriers are positive and we are using this information to make further improvements.

In approximately 40 training sessions, more than 500 employees, including the Executive Board and senior managers, received training in the Railways Act and Competition Act from the Legal department and the SPOCs. NS has developed an e-learning module to keep that knowledge up to scratch. Furthermore, a setup has been designed for a structural training programme in the Railways Act and Competition Act.

## **Legal aftermath of the public transport tender in Limburg**

### **Investigation by the Netherlands Authority for Consumers and Markets: violation of Railways Act**

The Netherlands Authority for Consumers and Markets (ACM) concluded in 2015 after a complaint by Veolia that NS had violated the Railways Act in the tendering process in Limburg. The ACM rejected some elements of Veolia's complaint. Veolia submitted an appeal against this. On 14 July 2016, the Trade and Industry Appeals Tribunal ruled against Veolia. No further appeal is possible against that ruling.

### **Inspection by the ACM: Section 24, Competition Act**

In the summer of 2016, the ACM concluded its examination of the facts concerning violation by NS of the Competition Act, submitted its findings to NS and asked NS to give its views. NS did this. The ACM will now assess whether a violation of the Competition Act did take place and if so, whether a sanction will be imposed by means of a legal decision. An appeal against this ruling is possible.

### **Investigation by the Public Prosecution Service**

The Public Prosecution Service (specifically, the Office for Financial, Economic and Environmental Offences in 's-Hertogenbosch) started a criminal investigation in 2015 into possible criminal acts in connection with the tendering process for public transport in Limburg. A summons was served on NS and its Abellio subsidiaries. A pre-trial review was held on 13 December 2016. It is expected that the substantive proceedings will take place in the second half of 2017. An appeal against this ruling is possible.

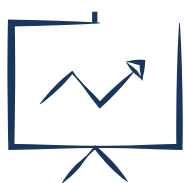
### **Summons by Veolia**

NS and five affiliated companies received a writ of summons from Veolia Transport Netherlands Holding BV and four affiliated companies on 22 July 2016 in relation to the tender in Limburg. Veolia is essentially submitting a number of claims in law that NS is liable for losses that Veolia alleges to have suffered in connection with the tender in Limburg. At this point, Veolia has not specified the claimed losses in detail.

# Finances in brief



NS had revenues in 2016 of €5,093 million. NS invested €791 million last year, mainly in trains. A profit of €212 million was recorded in 2016; that figure was €118 million in 2015.



## PROFIT

**€212 million**  
(2015: €118 million)



## INVESTMENTS

**€791 million**  
(2015: €536 million)



## REVENUE

**€5,093 million**  
(2015: €4,973 million)



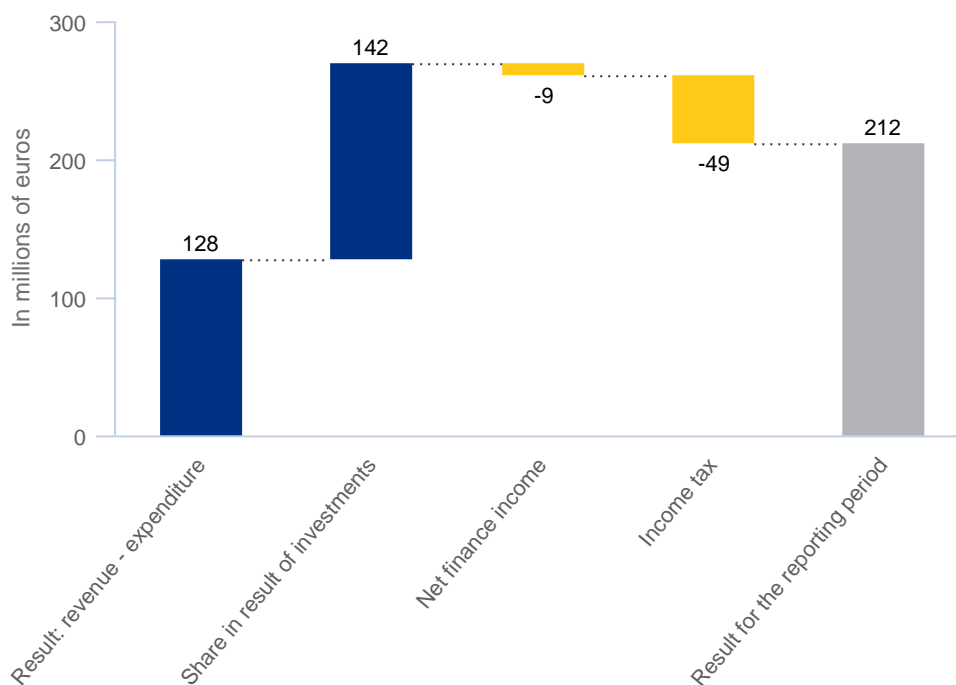
## ROE

**6.2% return**  
(2015: 3.6%)

### Consolidated income statement 2016 for NV Nederlandse Spoorwegen

(in millions of euros)	2016	2015
<b>Revenue</b>	<b>5,093</b>	<b>4,973</b>
<b>Operating expenses</b>	<b>4,965</b>	<b>4,876</b>
	<b>128</b>	<b>97</b>
Share in result of investments, accounted for using the equity method	142	70
Result from operating activities	<b>270</b>	<b>167</b>
Net finance income	<b>-9</b>	<b>-23</b>
Pre-tax profit	<b>261</b>	<b>144</b>
Income tax	<b>-49</b>	<b>-26</b>
<b>Profit for the period</b>	<b>212</b>	<b>118</b>

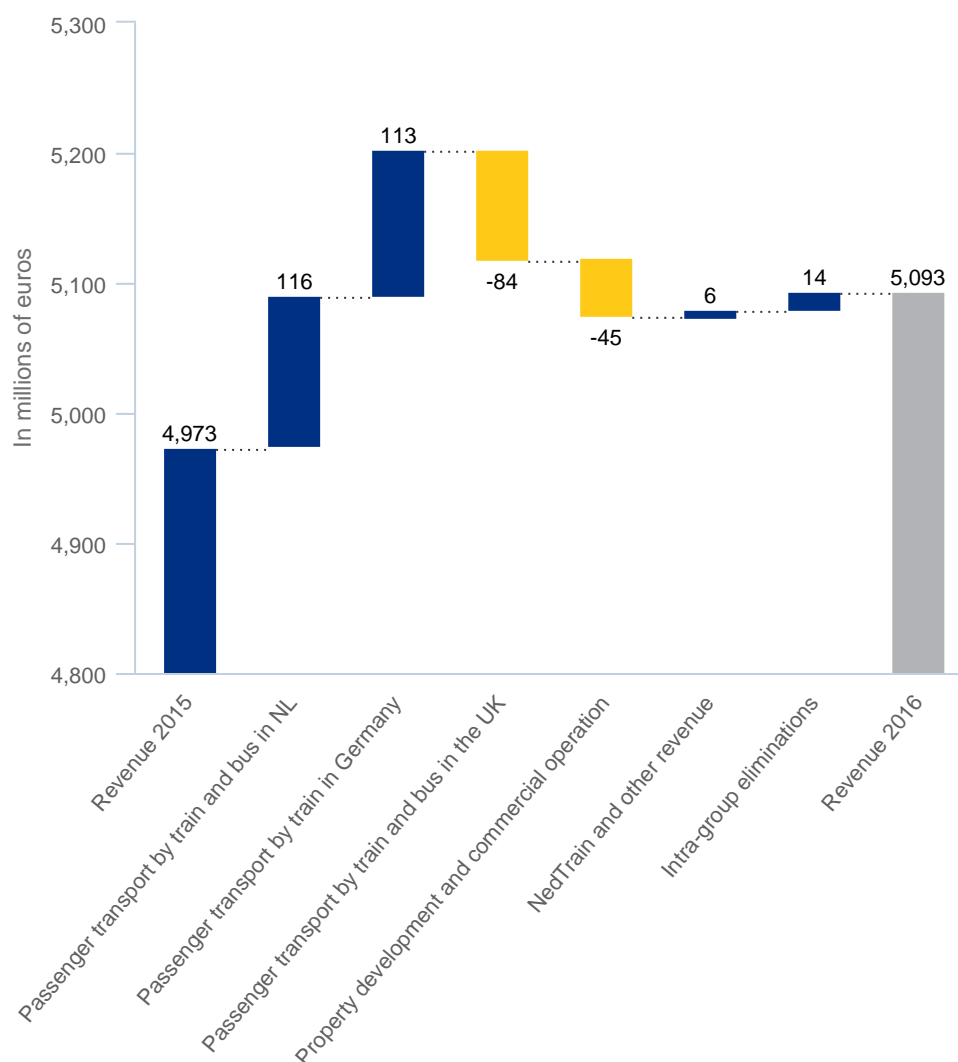
### Income statement 2016



## Operating revenue

Revenue was €5,093 million in 2016 compared with €4,973 million in 2015, an increase of 2.4%.

## Operating revenue



## Revenue in the Netherlands

### Revenue from rail passenger transport in the Netherlands

Revenue from passenger transport increased by €111 million (4.9%) to €2,358 million due to the annual price indexation (2.1%) and growth in the number of passenger-kilometres (2.0%). NS achieved higher revenue through an increase in season-ticket holders in the consumer market (2.3%) and growth in the corporate market (8.1%). The upturn in the economy and growing purchasing power had a positive impact on revenues. Furthermore, 2016 was a leap year, with one extra day compared with 2015. The number of people in employment (an important measure affecting peak-hour traffic) grew by 1.3% in 2016. NS recorded higher revenues from student public transport passes (0.9%) due to price indexation. However, the average number of students with a pass fell by 0.8% in 2016 compared with 2015, in part because of the social loan system.

### Revenue from bus passenger transport in the Netherlands

Revenue from bus operations in the Netherlands provided by Qbuzz was €212 million, compared with €207 million in 2015, an increase of 2.4%. Most of the growth came from higher revenues from the BRU/Utrecht franchise due to a rise in the passenger-kilometres and larger project grants from the province of Utrecht.

### **Revenue from station development and operation in the Netherlands**

Revenue from station development and operation in the Netherlands fell by €27 million in 2016. The underlying trend is good. The main reason for the lower revenue is the fall in revenue from property development and operation due to fewer development projects and fewer sales of property compared with 2015. Furthermore, retail revenue fell by €12 million in the Netherlands. That is the net effect of a decrease in revenue from the franchise formats Burger King, La Place and Ola Happiness (down by €26 million) and growth in revenue from the other formats (up by €14 million).

### **Revenue from station operation in other countries**

The revenues from retail operations abroad fell by €18 million due to these operations being discontinued.

## **Revenue from the United Kingdom**

### **Revenue from rail passenger transport in the United Kingdom**

The revenue from passenger transport by rail in the United Kingdom provided by Abellio was €1,430 million in 2016. This is €74 million less than in 2015 (€1,504 million). The effect of a full year of revenue from the ScotRail franchise in 2016 was partly offset by the transition in 2016 from the Greater Anglia franchise to the more limited Greater Anglia franchise as of 1 May 2015. However, the fall in the value of sterling in particular compared with the average exchange rate in 2015 had a negative impact on the revenue denoted in euros. The effect of the weaker pound was €183 million. The revenue denoted in sterling increased by 7.2% in 2016.

### **Revenue from bus passenger transport in the United Kingdom**

There was an increase too of 7.7% in the revenue from passenger transport for Abellio bus operations in the UK, expressed in pounds sterling, in part due to the start of new bus franchises. Despite this, the revenue in euros fell from €221 million in 2015 to €211 million in 2016 because of the fall in the value of the pound relative to the euro.

## **Revenues from Germany**

### **Revenue from rail passenger transport in the Germany**

In Germany, Abellio recorded revenue from passenger transport of €181 million (2015: €68 million). The growth came mainly from the Saale-Thüringen-Südharz franchise, which started in 2015.

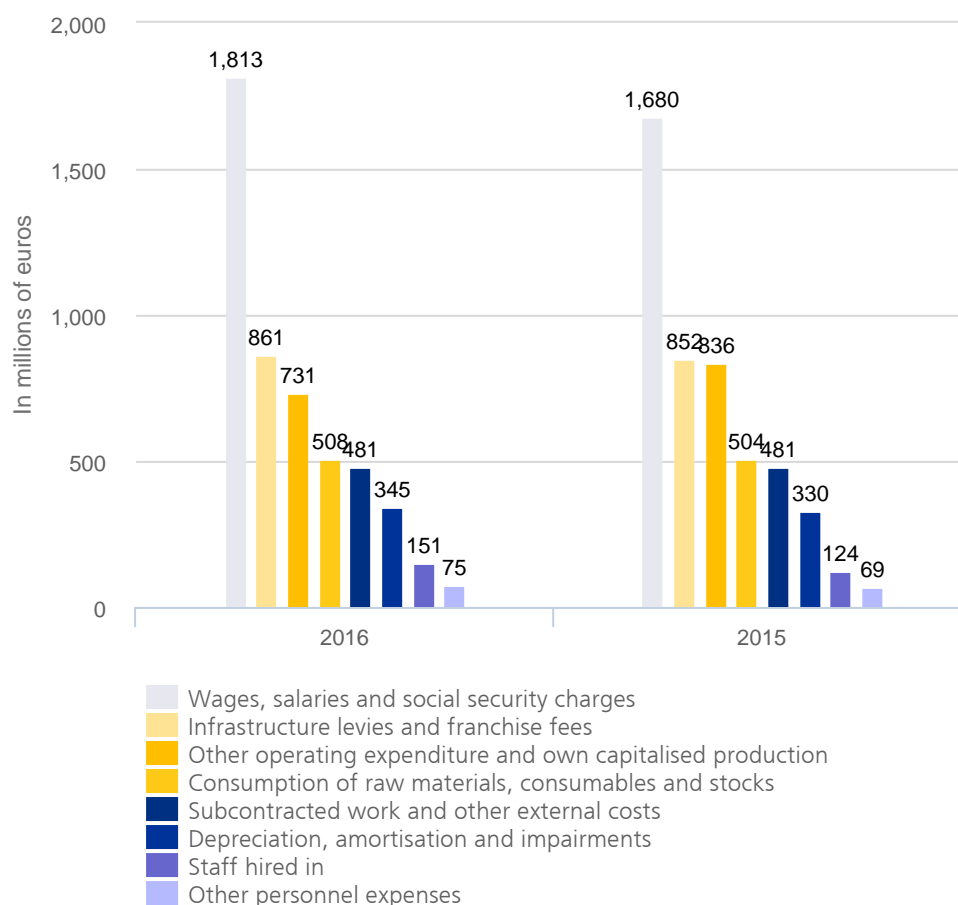
### **Revenue from other NS activities**

Other revenue rose by €13 million in 2016. In Abellio in particular, more external services were provided within the ScotRail franchise and in Germany more assignments were carried out by PTS, the maintenance and cleaning company that is part of Abellio Germany.

## **Operating expenses**

NS's operating expenses rose from €4,876 million in 2015 to €4,965 million in 2016, mainly as a result of higher personnel expenses, higher infrastructure levies payable to ProRail, lower franchise fees and lower other operating expenses.

## Operating expenses



(in millions of euros)	2016		2015	
	€	%	€	%
Wages, salaries and social security charges	1,813	37	1,680	34
Other personnel expenses	75	2	69	1
Staff hired in	151	3	124	3
Depreciation, amortisation and impairments	345	7	330	7
Consumption of raw materials, consumables and stocks	508	10	504	10
Subcontracted work and other external costs	481	10	481	10
Infrastructure levies and franchise fees	861	17	852	17
Other operating expenditure and own capitalised production	731	14	836	18
<b>Total operating expenses</b>	<b>4,965</b>	<b>100%</b>	<b>4,876</b>	<b>100%</b>

## Wages and salaries

Wages, salaries and social security charges rose by €133 million from €1,680 million in 2015 to €1,813 million in 2016. This was due to an increase of 823 FTEs in the number of employees and the rise stipulated in the collective labour agreement in wages, salaries, social security charges and pensions. Abellio experienced a rise in the number of FTEs and in wage costs mainly because of the Saale-Thuringia-Südthart franchise in Germany, while NS in the Netherlands increased the number of operational employees because of the 2015 personal safety agreement. Furthermore, costs have risen largely because of the 2% increase in the



collective labour agreement, higher pension and social security contributions and the inclusion of the supplement for irregular hours in the holiday pay following changes in the regulations. In addition, the costs of hiring temporary agency staff rose by €27 million due to ongoing projects and job vacancies that were difficult to fill.

## Infrastructure levies and franchise fees

The access charges for the rail infrastructure (infrastructure levy plus franchise fee) increased by a total of €9 million to €861 million. Higher costs for the use of the infrastructure provided by ProRail (€34 million) were to some extent offset by a lower franchise fee for the main rail network (€25 million). This is a consequence of the lower levy for the HSL and the adjustment mechanism for the main rail network franchise that was included in the implementation agreement with the Ministry of Infrastructure and the Environment.

## Other items

The other operating expenses fell by €92 million in 2016. The main reason for this was the reserve formed in 2015 for the period 2012-2015 in response to regulations concerning whether or not the supplement for irregular hours should be paid during holidays. After reaching an agreement on this with the trade unions in 2016, a retrospective payment was made to those employees of NS who were entitled to this.

## Underlying result from operating activities

Our financial position needs to be sound if we are to achieve our ambitions. Investments must produce sufficient returns to ensure the company's continued existence. This is also in the public interest. The development in the underlying result from operating activities is a good yardstick for this. It shows the result from business activities after eliminating exceptional items.

### Underlying result from operating activities

(in millions of euros)	2016	2015
<b>Result from operating activities</b>	<b>270</b>	<b>167</b>
Disposal of TLS	0	-36
Miscellaneous restructuring expenses	0	16
Abellio pensions contribution	22	22
Settlement of various claims	-23	55
Book profit on Fondsen property	-117	0
Impairment of stations and other premises	26	0
Adjustment mechanism for the franchise fee	-18	0
Other items	-15	10
<b>Underlying result from operating activities</b>	<b>145</b>	<b>234</b>
*) Of which the underlying result of Abellio was	71	71

The underlying operating result fell by €89 million in 2016 to €145 million (from €234 million in 2015<sup>1</sup>). In the main rail network, where the underlying operating result decreased by €20 million, generally higher revenues from transport were offset by higher personnel expenses and higher usage fees for the track. The underlying operating result at NS Stations fell by €32 million in 2016, mainly because of fewer sales of property, lower rental income from assets that were sold in 2015 and 2016, and lower rents as a result of the Railways Act. There was no loss on operations in 2016 for Retail Internationaal as it ceased operations. Finally, there was a fall in the underlying result of €36 million due to centralisation of the accommodation costs and increased personnel expenses for the corporate staff departments.

The largest profit item in 2016 from ad hoc business activities came from the sale of the properties in the Basisfonds Stationslocaties company, which resulted in a one-off book profit of €117 million.

## ROI

The return on invested capital (ROI) increased to 5.7% in 2016 (3.5% in 2015). Based on the underlying result, the ROI fell from 4.9%<sup>2</sup> in 2015 to 3.1% in 2016. NS seeks to achieve a return on equity that is in line with the market. The return on investment achieved in 2016 is sufficient, but the financial outlook for the long term is challenging. NS is working on improved controls, speeding up maintenance activities through Pitstop and embedding lean management across the organisation; this should lead to both excellent processes and better financial results. Increasing the quality and improving the cost efficiency of the support departments will also help improve the return on investment. Over the next few years, the costs of corporate staff departments and indirect employees should show a downward trend, which will create room for more investment in customers.

1 Comparative figures for 2015 have been adjusted by €22 million (2015: €212 million) as a consequence of a change in the classification of exceptional items

2 Comparative figures for the underlying result in 2015 have been adjusted by €22 million (annual report 2015: 4.5% was reported) as a consequence of a change in the classification of exceptional items

## Net finance income

The net finance income was a negative amount of €9 million (negative amount of €23 million in 2015). The finance income has improved with respect to 2015 mainly due to one-off income items relating to the hedging of exchange rate differences between the pound and the euro and a long-running arbitration case with Deutsche Bahn that NS won.

## Income tax

The effective tax rate for the result before corporate income tax is 19%, compared to 18% in 2015. Corporate income tax of €49 million was liable over 2016 (2015: €26 million). Corporate income tax was calculated on the basis of the applicable tax rates, taking the tax rules into account. The valuation of temporary differences was also taken into account. The tax rules include participation exemption, tax compensation of losses and the notional addition for costs that are not deductible in full.

## Other tax information

Payroll tax is a tax that NS, as the employer, withholds from the salaries of employees and then pays to the tax authorities. The figures in 2016 were €402 million for the Netherlands, €5 million for Germany and €158 million for the UK. NS's costs are largely subject to the high VAT rate. NS can set off the VAT that is charged against the VAT that it has to pay on its revenues. Most of NS's revenues are taxed at the lower or zero rates of turnover tax. Taken over the year as a whole, on balance there is a net receipt of VAT (this was €202 million in 2016). In Germany this resulted in net receipts of €20 million; there were net receipts of €179 million in the UK and €3 million in Ireland. Corporate income tax is paid on the tax profit. In the Netherlands in 2016, a net amount of €13 million was refunded in corporate income tax. These receipts were the consequence of the tax authorities paying back excess provisional payments made in previous years and a provisional agreement on offsetting losses. A net sum of €9 million was paid in Ireland in 2016 and €15 million was paid in the United Kingdom. The explanation above only refers to items of €1 million and more.

## Profit for the period under review and profit appropriation

A profit of €212 million was recorded in 2016. A proposal will be made to pay a dividend of €78.7 million, which is 37% of the result for 2016, plus an additional dividend of €4.7 million following an agreement made in the past, and to add the remaining sum of €133.3 million to the reserves.

## Financing

The net cash flow from operating activities was €891 million (€441 million in 2015). Within this, the working capital fell by €287 million (€100 million increase in 2015), mainly due to the advance payment of the student public transport pass in December 2016. The investments required a net outgoing cash flow of €184 million (€509 million in 2015). Within the cash flows from investing activities, €784 million was invested in non-current assets in 2016, compared with €532 million in 2015. The net cash outflow from financing activities was €640 million (€47 million in 2015) due to net repayments totalling €599 million of a number of loans in 2016. In addition, a dividend of €41 million was paid to the State in 2016. This resulted in a positive cash flow of €67 million (negative cash flow of €115 million in 2015).

## Equity

At the end of the year under review, equity was €3,511 million (€3,309 million in 2015). The profit before dividend for the period of €212 million was credited to equity. The return on equity (ROE) was 6.2% in 2016 (3.6% in 2015). Solvency, at 55%, was slightly up on last year (2015: 53%).

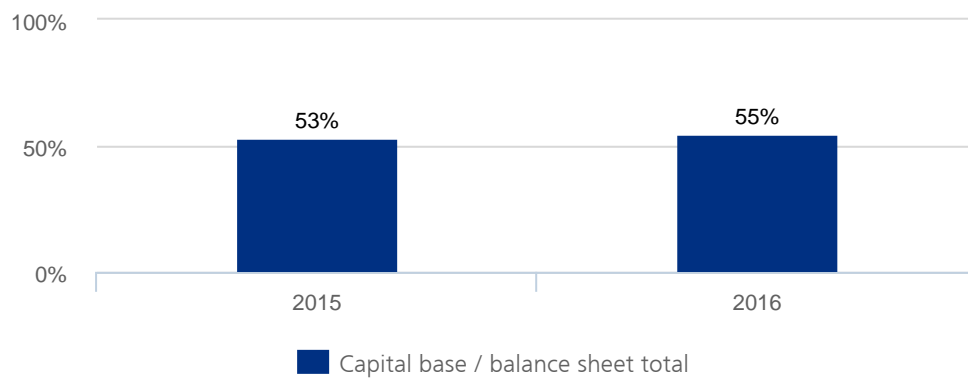
## Financial position

The robustness of NS's financial position is clear from the structure and the composition of its capital, the available cash and cash equivalents and the fact that it has committed credit facilities. Standard & Poor's (S&P), a leading agency that investigates the financial position of companies, has given NS Groep NV a credit rating of AA- with a stable outlook (based on an underlying credit profile of single A, currently raised by two levels in recognition of the relationship with the shareholder, the Dutch State). In part because of the main rail network franchise for 2015-2024, NS is currently investing heavily in trains, stations and systems and will continue to do so over the next few years. Based on the NS business plan and the initiatives it contains for improving results, NS expects that the available cash flows, the financing capacity and the availability of a residual value scheme for the rolling stock will be sufficient to let it carry out its investment programme of approximately €6 billion in the period through to 2024. The realisation of these improvement initiatives will require a substantial effort from everyone at NS over the next few years.

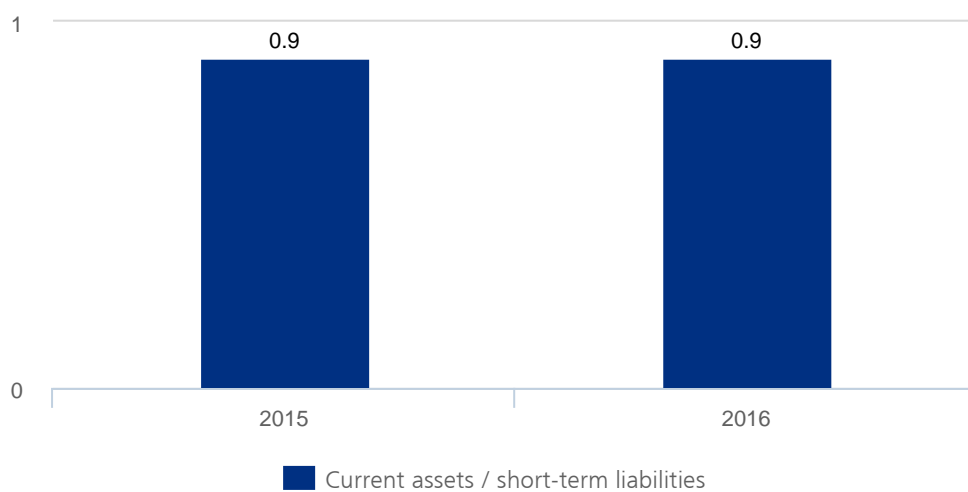
## Investments

NS invested €791 million in 2016 (€536 million in 2015), mainly in trains for implementation of the HSL solution, New Generation intercity trains, New Generation Sprinter trains, Stadler FLIRT trains, the overhaul and modernisation of the VIRM1 and the installation of toilets in the Sprinter Light trains. NS made joint investments with ProRail in the stations of Amsterdam Centraal, Eindhoven and Breda, among others. Investments were also made in ICT systems for managing rolling stock and staff, and in customer systems such as the journey planner, which is aimed at improving the door-to-door journey for passengers.

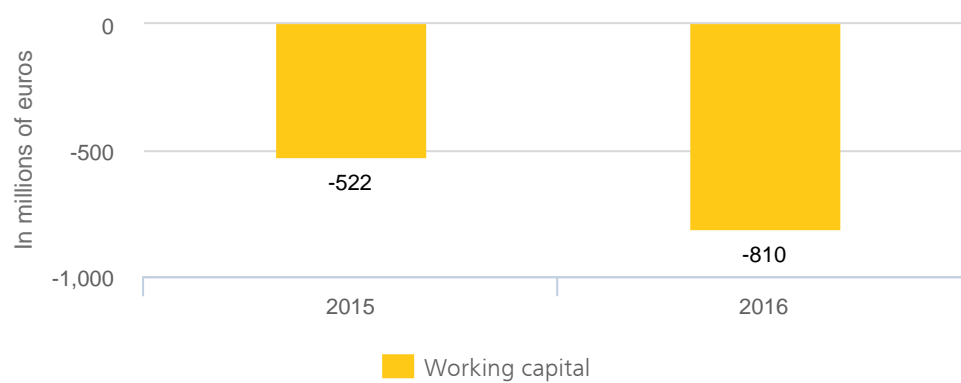
### Capital base/total assets



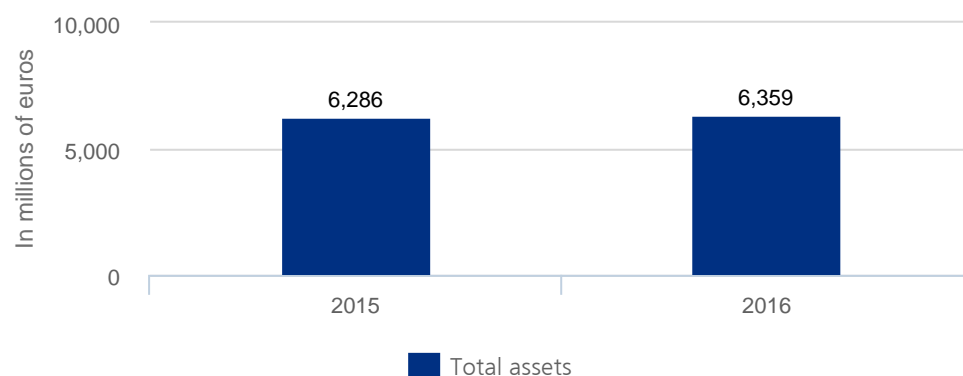
### Assets liabilities



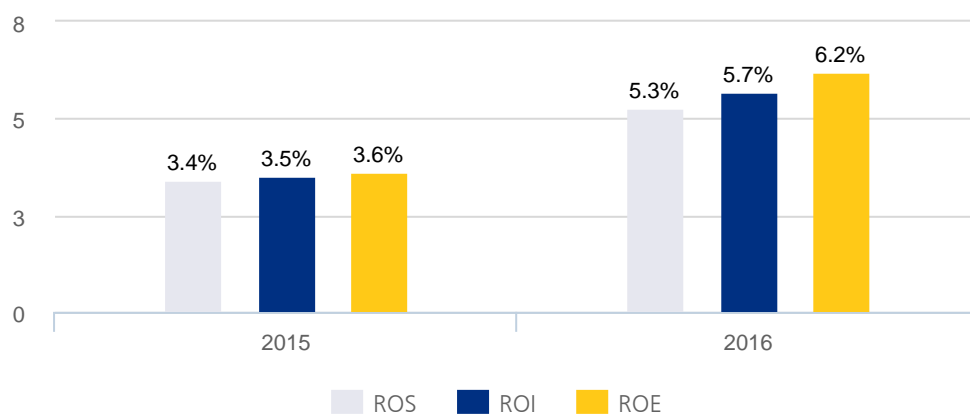
### Working capital



## Total assets



## Profitability



	2016	2015
<b>Relating to the capital position</b>		
Capital base/total assets	55%	53%
Current assets/current liabilities	0.9	0.9
Working capital (in millions of euros)	-810	-522
Total assets (in millions of euros)	6,359	6,286
<b>Relating to profitability</b>		
Result from operating activities/operating income (ROS)	5.3%	3.4%
Result from operating activities/average invested capital (ROI)	5.7%	3.5%
Profit for the period/average equity (ROE)	6.2%	3.6%

# Scope and reporting criteria



NS bases its reporting on the Global Reporting Initiative (GRI) version 4 guidelines. The GRI guidelines are the most widely accepted guidelines worldwide for preparing non-financial annual reports. The guidelines themselves can be found at [www.globalreporting.org](http://www.globalreporting.org). The sustainability information in the 2016 annual report has been given by NS in accordance with the Comprehensive option of the G4 GRI guidelines and internal reporting criteria.



NS commissioned EY to provide the external assurance for the report. You can find the assurance report by EY on page 230 of this PDF. It contains an appraisal (with a reasonable degree of assurance) of a number of selected parameters and a conclusion (with a limited degree of assurance) regarding the chapters 'The Profile of NS', 'Report by the Executive Board', 'Dialogue with our Stakeholders', 'Our Strategy', 'Finances in Brief', 'Scope and Reporting Criteria', 'Activities in the Netherlands' and 'Abellio'. NS feels that external assurance is important because it generates more certainty that the information given is accurate. NS vindt externe assurance belangrijk omdat zo meer zekerheid over de juistheid van de opgenomen informatie wordt geboden.

## Combined report

In the NS 2016 annual report, the performance of NS, the social aspects of that performance and the financial results are presented as an integrated whole. This choice has been made deliberately. NS is at the heart of the community. Passenger transport by train and the commercial operation of stations and their surroundings are intrinsically important to society. Other social aspects, such as care for the natural and social environment, are thus also an integral component of the business operations of NS

## GRI indicators

The selection of the indicators is based on the GRI method, the Transport Plan 2016, the discussions with our stakeholders and the material relevance matrix derived from them. The information that we report is based where possible on measurements and calculations (e.g. for electricity consumption). Other data is taken from central administrative systems (e.g. HR data) or based on information provided by third parties (e.g. waste). If there have been changes in the definitions, measurement methods or the inherent limits in the data or if extrapolations or estimates have been used, this is specified in the report, the definition cards for the performance indicators in the Transport Plan, or the reporting criteria. The last two of these can be found on [www.ns.nl/mvoberekeningen](http://www.ns.nl/mvoberekeningen) and the definition cards for the performance indicators in the Transport Plan 2016.

## Sustainability data

Sustainability has been part of the regular planning and control cycle since 2010. This means that the data is reported in the monthly reports. The processes for collecting and validating the data are described in the CSR Handbook. The internal validation procedures are performed by our auditors. They examine deviations in the data with respect to previous reports, consider the plausibility of the data in the reports and request supporting evidence where necessary.

## Scope

The scope of the report has been determined on the basis of an analysis of material relevance. This means that we are reporting on the materially relevant topics and drawing on the insights given by this analysis when making choices about the amount of detail and limits to our reporting on these topics. The material relevance matrix shows both the theme's importance to stakeholders and the impact or influence NS has. Themes where NS has little impact or that are not seen as so important by stakeholders are not included in the report. Abellio was involved in the Dutch dialogue with stakeholders.

The report covers the 2016 financial year, which ran from 1 January 2016 to 31 December 2016. This report primarily concerns NS's activities in the Netherlands. The activities in the United Kingdom and Germany are also discussed where they involve operations in which NS holds a stake of more than 50%. All data has been measured unless stated otherwise in the methodology. Any estimates are carried out using the prescribed procedures from our Reporting Manual and then checked. An explanation of the margins of uncertainty in the data quantifying our impact can be found at [www.ns.nl/mvoberekeningen](http://www.ns.nl/mvoberekeningen) (Dutch only). We report on the transport chain as a whole where procurement is concerned or where our

process of value creation gives reason to do so. The choices we have made in this regard are specified under value creation. Where information covering the whole transport chain is reported, this is explicitly stated. Generally speaking, the report does not cover subcontractors or suppliers. In those parts of the report where this does occur, this is explained. Acquisitions are included in the data from the date of acquisition, disinvestments are listed until the date of disposal.

# Outlook for 2017



In 2017, NS will continue on the course previously set. There will be a clear focus on performance on the main rail network, including the HSL, the door-to-door journey and world-class stations. Together with our partners, we will continue to improve train travel.

## Better performance

By focusing on the three core activities, we will genuinely be prioritising passengers and we will be further fleshing out our role in society of strengthening sustainable mobility in the Netherlands. The mid-term review of the main rail network franchise is due in 2019, when the government will assess whether NS has achieved the agreed targets for the performance indicators for 2019. In the new strategy, we will be making choices aimed at making real improvements in our performance. These improvements, initiated in 2016 and continued in 2017, should have a noticeable effect for passengers.

## Green trains and new trains

Since 1 January 2017, our electric trains in the Netherlands have been running completely on green power. That is a milestone not just for our company but also for Dutch society. By making mobility greener, we are helping the country achieve the UN's climate targets. The energy used at stations and NS offices in the Netherlands will also be completely 'green' by 2017. Our trains will not only be green in 2017, they will also increasingly be new or modernised. The 58 'Flirt' type Sprinter trains are being introduced in the timetable in phases, starting in December 2016, and are therefore becoming an increasingly familiar sight in the Dutch landscape. This will be followed by the introduction of 118 CAF Sprinter trains. The first modernised VIRM-1 type double-decker trains will start running on Dutch track in 2017 too. A total of 81 trains with 416 coaches are undergoing upgrades. Sustainability is an important aspect here: some elements, such as the cab and vestibule, are reused as much as possible. The upgrades will take until 2020. NS expects to be able to introduce 79 new single-decker Intercity trains as of the 2021 timetable. These trains, with a total of 25,000 seats, can run on both the regular network and the HSL.

## Facilities for passengers

We aim to make travelling with NS a more pleasurable experience not just with new trains but also with new services. For example, in the coming year we will be continuing with the development of travelling on account, we will be testing the improved ticket machines and we will start accepting payments by credit card. We will also be extending the NS Extra programme and offering the option for queries of chatting with an NS employee via ns.nl. In the course of the year, we will be expanding the options for the information screens in trains, for example including specific information on disruptions. NS has carried out a trial at the Bilthoven and Heerenveen stations with self-service bicycle storage facilities including such features as access using your bank card or public transport smartcard and offering public transport bicycles (*OV-fiets*). If the trial is a success, we will roll the concept out at additional stations in 2017 and 2018. We will also be buying at least 1,000 new public transport bicycles a year for the next three years. The refurbished stations of Eindhoven and Tilburg will be reopened in the coming year.

## Engineering work

A great deal of work on the track is planned for 2017, particularly on busy routes in the Randstad conurbation. Unfortunately that results in more disruption for our passengers. The work is necessary because ProRail has to maintain the infrastructure and prepare the track for future demands. NS is talking to ProRail about better and more innovative ways of working on the track that can keep to the disruption for our passengers to a minimum. During work on the track, NS does its best to arrange alternative transport for passengers.

## Operations abroad

A landmark event will take place in spring 2017: Abellio will start operating its first cross-border franchise, from Arnhem to Düsseldorf and Mönchengladbach. 2017 will also be a tense year as we will find out whether we have won the West Midlands franchise in the United Kingdom and we will be submitting our bid for Wales & Borders. We will also continue further with the implementation of the ScotRail Improvement Plan and we will carry out all the preparations for the introduction of new rolling stock in Greater Anglia in 2018.

## Finances

NS expects to make a profit in 2017 as well. Bringing the costs down further will certainly be a challenge, as will increasing revenues, for instance from commercial operation of the main rail network. NS will also continue to invest heavily in programmes that help us achieve the KPIs, customer satisfaction, new rolling stock, cost control in the corporate staff functions and indirect costs, and in productivity. As a Dutch saying goes, you have to spend to make a profit.

## Market regulation

In 2016, the State Secretary of the Ministry of Infrastructure and the Environment announced an investigation into market regulation in the Dutch railways. The investigative committee established for this purpose will probably report on its conclusions in the second half of March 2017. NS is cooperating with this investigation by providing the necessary information and data.

## The future for public transport

In the past year, NS and its partners GVB, RET, HTM and Qbuzz drew up a vision outlining the future for mobility. This vision for the future is based on the use of sustainable forms of different kinds of transport that fit in with the requirements of future passengers. Over the next few years, we will be working with our partners to see how we can flesh out this vision.

## Internal organisation

Since 2016 NS has had a new strategy and a new structure at the most senior level. This lets us focus as a company on the midterm review in 2019, which will assess whether NS has achieved its goals. In 2017, NS will be starting an organisation-wide programme to encourage a culture of openness, taking responsibility and exemplary conduct throughout the organisation.

## II Activities in the Netherlands

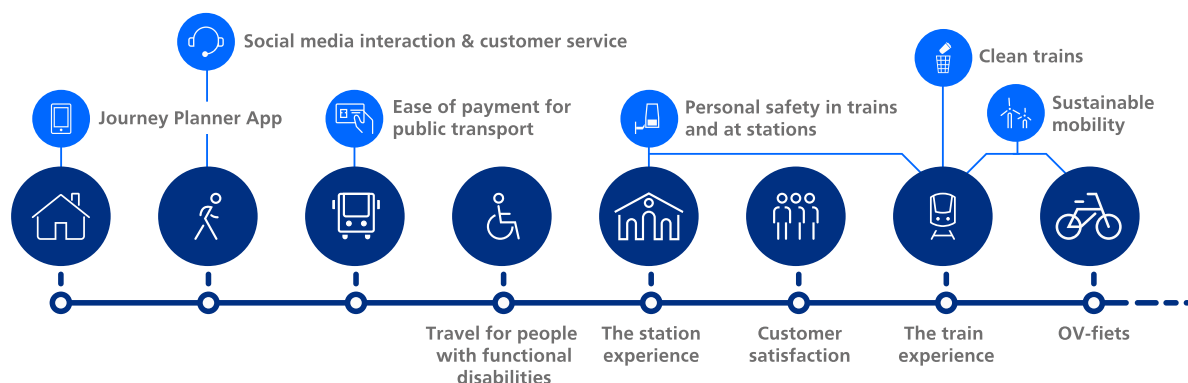


# The train journey experience



Together with our partners in the public transport sector, NS is working on improving all elements of the train journey. Passengers expect excellent service from us. The performance improvements on the main rail network, better customer service and world-class stations contributed to that in 2016. And when we perform less well, we are open about it.

# Customer satisfaction



From 1 January 2016, NS has been aiming to improve the integrated customer satisfaction figures from domestic and international passengers. In 2016, 77% of passengers on the main rail network gave a score of 7 out of 10 or higher for the train journey. Customer satisfaction has been increased by targeting three key passenger needs (control, appreciation and freedom), including nine themes such as punctuality, cleanliness, crowding, hospitality and travelling without barriers. Increased customer satisfaction last year was partly the result of better management of the composition of rolling stock and the absence of major disruptions. Journey information, cleaner trains and the fact that the public transport smartcard was working properly also contributed to customer satisfaction. Ratings for hospitality varied: the addressability of railway staff could have been better, although the assessment of the friendliness of station staff became more positive.

## Cross-border connections

At 85%, general customer satisfaction among international passengers in 2016 was a little bit below target (86%). International passengers did rate their contacts with NS International better than last year.

## Satisfaction with HSL South

78%\* of passengers in the IC direct and the Thalys gave their journey a score of 7 out of 10 or higher. That score was 79%\*\* in 2015. The score for 2016 was not only well above the progression value of 72% but also above the target value of 75% for 2019. This increase is primarily the result of the increased frequency of IC direct – every fifteen minutes between Rotterdam and Amsterdam – and fewer IC direct cancellations. The availability of seats also improved. However, the punctuality of the HSL South failed to meet the target.

\* A new method has been used as of 1 January 2016 to measure general customer satisfaction with HSL South services. The question has been aligned to match the question for general customer satisfaction and is therefore different than in 2015. The break in the trend should be taken into account when comparing the two years.

\*\* The score for 2015 has been calculated based on the first three quarters of the year.

Performance indicator	Realisation in 2016	Realisation in 2015	Target value for 2019	Baseline value for 2016
General customer satisfaction with the domestic main rail network	77%	74%	80%	74%
General customer satisfaction with HSL South services	78%	79%	75%	68%
Customer satisfaction with personal safety on the train and at the station	87%	80%	83%	81%

## Customer service and social media interaction

Customers contacted customer services about 260,000 times a month on average, in particular through social media (51,000), e-mail (27,000) and by phone (171,000). They gave contacts through all these channels an average score of 7.4. Some 76% of passengers gave a score of 7 out of 10 or higher (2015: 77%) and 42% of the passengers gave customer service contact a score of 9 out of 10 or higher (2015: 36%). Because the way the study is carried out was changed last year, the figures are harder to compare to previous years.

### Service through online channels

The number of customers who contacted us online (social media interaction) increased once again in 2016. The social media team had contact with almost 2,000 passengers daily. This form of contact was rated highest with an average of 8.8. @NS\_online on Twitter has more than 192,000 followers (2015: 167,000) and our Facebook page has over 173,000 fans (2015: 138,000). Research firm Coosto did quantitative research on Twitter interaction for the third time through the 100 biggest Dutch advertisers. According to this study, NS excels by being the quickest to react on average as measured over a period of 24 hours. We also sent the most reactions and received the most compliments.

Because cross-border travel is just that little bit more tense for some customers than a train journey in the Netherlands, international rail passengers have been able to contact NS staff through WhatsApp since 2016. We also provide proactive service through a chat feature on the NS International website: if passengers appear to be getting bogged down, they receive an invitation to chat with NS staff. We are investigating if this innovation is also possible on ns.nl.

### Service Forum: passengers help each other

The Service Forum grew to over 30,000 members in 2016 (2015: 23,000). Over half of the questions asked here are answered by other customers. In campaigns and mailshots, we increasingly refer to the Service Forum as a place where passengers can give feedback, ask questions or talk about a certain subject. This valuable input is helping improve our services little by little. Feedback on the Service Forum is sometimes so focused on a particular service, product or campaign that the customer service department gets help from company specialists. When we presented the new timetable, for example, we covered over a hundred topics with questions, tips and comments.

### Professionalisation of the customer service department

Customer Service is easily accessible 24 hours a day, 7 days a week. Merging various centres resulted in a more professional staff department and more efficient processes for help customers more quickly. As a result, the setup has been changed for assistance provided at the station and for lost property. In addition, we listened to 2,500 phone calls to customer service to identify potential improvements.

## Knowledge about the customer

The choices we make when improving the services we provide are largely determined by the effect they have for the customer. The Customer Investment Model helps us monitor, predict and improve customer behaviour and customer satisfaction as a result of our performance. In 2016 we developed a model that gives an overview of the relationships between the KPIs with the greatest customer impact (for example punctuality for passengers) and general customer satisfaction. We linked the customer's three key needs (control, appreciation and freedom) to nine themes that NS focuses on. For control, these themes are punctuality, the chance of getting a seat and journey information. For appreciation, they are hospitality, cleanliness and contact experience. For freedom, they are the stations, travelling without barriers and how time is spent.

## Benefits and service

### Travelling with a discount

Last year we encouraged travel in first class among regular customers. Many customers choose the comfort of the first class during off-peak hours in particular. That is why we offered specially priced upgrades and lowered the rates for the first class Weekend Freedom and Off-Peak Freedom season tickets.

### NS Extra has started

The customer relations programme NS Extra was launched in July. Anyone with a personal OV-chipkaart can join and use the checkout alert service and get personal benefits and small gifts. 182,000 passengers were already signed up by early August and the service had over 300,000 participants by the end of 2016.

### A small gift when there are disruptions

Customers received extensive information in the event of major interruptions to services. Regular customers received a letter and a voucher for a newspaper or a cup of coffee from NS, to thank them for their understanding. In 2016, NS sent customers who suffered multiple disruptions a letter with an explanation and a small gift. Regular customers also received personal messages through an app, as text messages and by e-mail when modified timetables were being run.

## Ease of payment with public transport

Passengers appreciate being able to pay for their train journeys quickly and easily. NS made various improvements to that end.

### Paying later with Travelling on Account

To make train journeys easier to pay for, NS started a 'Travel on Account' trial in 2015 and 2016 throughout public transport in collaboration with ANWB. Passengers paid afterwards and did not need to top up their smartcards. The participants in the trial were ANWB members and a selected group of season ticket holders. 95% of the participants were satisfied with travelling on account. They were particularly satisfied about no longer having to top cards up or needing a starting balance. What we have learned from the trial will be used for further development of Travelling on Account for the consumer market.

### Improved ticket machines

Buying a ticket is becoming easier and quicker thanks to a new ticket machine user interface. Passengers were able to test the first improvements at Utrecht Centraal. More trials will take place in 2017.

### Paying by credit card

Online payment by credit card is not yet possible on ns.nl, but it is possible at the NS International desks and on DiscoverHolland.com, a website for foreign tourists. This site also offers alternative payment methods such as PayPal and Mr.Cash. In the second half of 2016, we investigated how we can make credit card payments possible for our online channels. We will implement these improvements for passengers in 2017.

### Travelling using your mobile phone

Passengers no longer have to print out e-tickets they have purchased. These tickets can also be checked on smartphones as mobile tickets. After a successful introduction, 25% of our e-tickets are now delivered as mobile tickets. NS sells 626 mobile tickets a day on average.

## Creation of the Public Transport Companies Cooperative

On 1 January 2016 a new organisation was started that makes public transport easier through improvements to the public transport payment system. All carriers are represented in this organisation – the Public Transport Companies Cooperative (COV). The COV has acquired the Translink shares of NS, HTM, RET and GVB. Two working groups were created within the COV. A programme board investigates initiatives for new payment methods, such as paying by mobile phone, Travelling on Account and paying with a debit card. Additionally, a working group was created to study cost-effectiveness in order to lower the costs for public transport payments.

## Personal safety

A lot was done in 2016 to increase the safety of passengers and staff. Unfortunately incidents do take place, and each and every incident is one too many. Together with all the public transport parties and the ministries of Infrastructure and the Environment and Security and Justice, we worked on an integral and nationwide action programme with the clear objective of making public transport in the Netherlands even safer. Through this programme, NS is expanding its approach – that started in 2015 – to reducing the numbers of incidents yet further. Following these efforts in 2015, the following measures were implemented in 2016:

- Night-time services and Early Bird trains are double staffed. Trains after 22:00 on Thursdays to Saturdays will follow.
- Permanent cameras were put in place in 30 stations, in addition to the 48 large stations that already had them.
- Passengers see on monitors that they are being filmed as they enter. The increased awareness of CCTV monitoring has not yet led to a decrease in the number of incidents, nor do passengers feel safer yet.
- A trial with bodycams on the clothing of security staff and Safety & Service staff showed that CCTV monitoring has a positive influence on the perception of personal safety.
- After an agreement was made in 2016, access gates were put into use at 15 stations around 8 weeks earlier than planned. At the moment, 68 of the 400-plus stations are protected by access gates. Our goal is for this to reach 82 stations (93% likelihood).
- Every day, there are cases of the district police looking to collaborate with Safety & Services.
- Over a hundred station bans have been issued in the public transport sector.

## Reports of aggression up slightly

NS encourages staff to report all incidents of aggression. We noted that there were more reports last year: 690 (642 in 2015). We have seen a decrease (11%) in the number of injuries as result of aggression. There were 211 injuries in 2015 and 188 in 2016. The 690 reports of aggression were largely cases of “pushing and shoving” (310 times). NS staff were spat at 88 times and threatened with a weapon 15 times. Physical violence was involved in 277 reported incidents.

## Customer satisfaction with personal safety increases again

The customers’ perceptions of safety at stations and in trains improved in 2016, with 87.1% of customers giving a score of 7 out of 10 or higher (as opposed to 80.1% in 2015). A key reason for the increase is staff being deployed at specific locations and times. More stations are also getting gates for controlled access.

## Suicide prevention and handling

Unfortunately, multiple suicides took place on the railways in 2016. NS works with ProRail and partners on measures for preventing these tragic incidents as much as possible. Suicides on the tracks cause prolonged disruptions and are shocking events for train staff. In cooperation with

the Public Prosecution Service, the police and ProRail, NS is working on plans to speed up the handling of suicides on the railways. The objective is to reduce delays for our passengers.

## The train experience

### Train Experience Monitor

NS uses the Train Experience Monitor every year to measure the scores that 24,000 passengers give for the quality of the trains and the journey. This instrument for quantification and steering helps us improve our services to our passengers. The passengers' assessment of the Intercity trains remained stable compared to a year ago. In 2015, 82% of our passengers gave a score of 7 out of 10 or higher for the Intercity; this was 83% in 2016. The assessment of the Sprinter trains saw a rise: from 78% in 2015 to 81% in 2016.

Train Experience Monitor	Train	Train journey
Sprinter	81% (2015: 78%)	82% (2015: 81%)
Intercity	83% (2015: 82%)	85% (2015: 83%)

### Installing environmentally friendly toilets in Sprinter trains

Installing the toilets in Sprinter trains will let us meet the requirements of franchise agreements for 2015-2024 and respond to passengers' complaints about the absence of toilets in the type SLT Sprinter trains. Each SLT train is getting one environmentally friendly toilet with wheelchair access. The design of the toilet and the carriage in which the toilet will be placed was developed in 2016. When the toilets are installed, the trains will also be getting a retractable step that helps wheelchair users or passengers with baggage get on and off the train more easily. The first trains will be converted by 2018. All SLT trains will have a toilet and retractable step by 2021.

### Clean trains

NS wants its passengers to travel in clean trains via clean stations. That is why we clean the trains and stations daily. Last year, 58% of passengers gave the cleanliness of trains a score of 7 out of 10 or higher. That is an increase compared to 2015 (51.1%). This increase is partly the result of the new train washing systems in Leidschendam and The Hague. Moreover, we clean trains on the routes with the poorest performance figures while they are running (Care on Track). Other initiatives that improved satisfaction are extra cleaning of night-time services, better logistical planning for rolling stock cleaning before service, and more effective deployment of cleaning staff. Additionally, we aim to start the scheduled timetable every morning with the right trains in the right places at the right time – and with the right level of quality. We are setting up an improvement project for this, which will run for another year. Intensive cooperation with the cleaning parties makes result-oriented cleaning possible.

## The station experience

We offer passengers various facilities at the stations so that they can spend their time there comfortably and make the most of that time. The station experience weighs in at 25% of the passengers' assessment of their door-to-door journeys.

### Customer satisfaction with stations

We use surveys to ask passengers what they think of a certain station. This is how we monitor the stations, know the points for attention and see which measures do and do not work for the passengers. This year, customer satisfaction with the stations increased from 67.2% in 2015 to 69.9%. 77.1% of passengers give a score of 7 out of 10 or higher to the stations



undergoing renovations, breaking down as 72.1% for large stations and 61.8% for small stations. Last year's trend shows a constant steady growth.

## A hospitable and pleasant stay

NS has worked closely with ProRail to improve the time spent at stations. We improved the waiting areas at 25 stations in 2016 by making them more comfortable, more sheltered and with more seats. In addition, the StationsHuiskamers ('Station Living Rooms') are also having a significant effect on how waiting time is experienced: they offer passengers a pleasant area where they can stay for a while that includes coffee, electricity sockets and a toilet. Four new StationsHuiskamers were built in 2016. In total, 10 stations (7 smaller and 3 larger ones) have a StationsHuiskamer. The aim is to expand the concept of StationsHuiskamers further.

## Toilets at stations

The toilet facilities have been improved at 43 stations: at 25 of those, the outdated toilet areas were converted to modern toilet facilities with an eye for comfort, safety and accessibility. At larger stations, it is important that service staff are always present at the toilets: NS gave these toilets to Sanifair through a franchising tender. In 2016, toilets at 18 stations were converted to the 'Sanifair concept'. Comfort and service at the toilets are key in this.

## Station cleaning and maintenance

Daily cleaning is essential if the aim of 'clean, complete and safe' stations is to be achieved. Commissioned by and in agreement with ProRail, NS signed new cleaning contracts in 2016. These contracts pay extra attention to measuring how passengers perceive the cleanliness of stations and agreements have been made about the basic vocational training course "Station and platform cleaning" that cleaning organisation staff must follow. In addition, we have reduced the number of parties carrying out cleaning work at stations. This has resulted in a more controlled cleaning process and better quality for passengers.

## Stations undergoing renovations

In 2016, rebuilding work was carried out at various major stations. ProRail and NS worked on the station underpass between the north and south sides of Eindhoven station. In Tilburg, the station was given a new passenger underpass and we are working on the bicycle storage, the shops on the city centre side and the old tunnel. The roof, which has listed status, is also being renovated. The second part of the IJ Concourse at Amsterdam Centraal was completed in June. The IJ Concourse is the second main entrance to the station, with shops, accommodation, restaurants and service shops.

Rebuilding work at Groningen, Assen, Ede-Wageningen and Driebergen-Zeist is now being prepared. In addition, the Ministry of Infrastructure and the Environment, Schiphol, the Amsterdam Urban Region, ProRail and NS have started exploring the possibilities of renovating Schiphol Airport station. The start of the realisation is planned for 2021.

## New and refurbished stations

After years of rebuilding work in collaboration with various partners, the refurbished stations at The Hague Centraal, Breda and Utrecht Centraal were opened fully again in 2016.

- In The Hague, the station hall was given a glass roof to let in more light and to provide a better view of the platforms for trams and buses.
- Breda Station offers several functions under one roof, such as public transport services and car parking, facilities for living, working, shopping and spending time in general.
- Completing Utrecht Centraal means that the most important project in the development of the centre of Utrecht and the largest transport hub in the Netherlands is now finished. Improvements in the city centre, the world's largest bicycle storage facility (a total of 12,500 spaces), a new tram and bus station, the square and the neighbouring residential and work locations are still under way. The new Utrecht Vaartsche Rijn station came into

service late in August. This station means that not all rail passengers need to travel via Utrecht Centraal.

- Harderwijk station, which has an important regional function, was opened in September.

## Station heritage

Many stations have historic value. NS, ProRail and Bureau Spoorbouwmeester have determined the historic value of stations, which has been published online on [spoorbeeld.nl](http://spoorbeeld.nl). This so-called value statement gives an picture of the historic use of a station and serves as a starting point for renovations, extensions, management and area development.

## Accessibility for people with functional disabilities

Travelling freely is important for everybody in the Netherlands, including people with functional disabilities. As part of this, NS worked with interest groups and the Ministry of Infrastructure and the Environment in 2016 to make travelling by train more accessible. For example, NS introduced assistance service in 2016 at ten stations, and at five other stations the times when assistance is available for passengers were extended. NS also started providing information in the NS Journey Planner Xtra app about which side to exit the train, including a text-to-speech function. This service is important in particular for people with a visual impairment because they cannot see the platforms. NS also took steps in other areas to improve the level of comfort for passengers with functional disabilities. For example, in collaboration with the Oogvereniging (a lobby group for the visually impaired), NS developed an online booking option for the OV-chip Plus so that people who are both deaf and blind can also use this type of public transport smartcard. Trials with tactile guidance lines for people with a visual impairment and hearing loops for people with auditory impairments took place at OV-service shops. Stations where multiple carriers operate were given tactile plates at the access gates. New Sprinter trains are being introduced that have a retractable step for getting on and off the train more easily. The new Sprinter trains, Flirt, which have been in use since the 2017 timetable, have a retractable step. The Flirt's retractable step was first tested in real life in 2016. Based on these tests it is expected that the step will do its job properly.

## Sustainable mobility

### All trains on green power in 2017

73% of our trains ran on green power in 2016. Because wind farms are being completed more quickly than expected, all electric trains in the Netherlands will run on this clean power from 2017 onwards. The green power comes from new wind farms that are gradually coming on stream in the Netherlands, Belgium, Sweden and Finland. Half the power will come from the Netherlands, the other half from abroad from specifically designated wind farms. This ensures that the supply is traceable. In addition to trains, the energy used at stations and NS offices in the Netherlands will be completely 'green' by 2017. In 2016, the figure was 73%.

The supply of gas for buildings was put out to tender in 2016. Gas will be fully climate-neutral by 2020, as determined by traceability and additionality (added environmental value).

### Sustainable travel

In 2015, on the way to the Climate Conference, fifteen organisations joined forces to encourage sustainable mobility among their employees. In addition to NS, these included banks, insurers and multinationals. The organisations met up several times in 2016 to learn from one another, about both the successes and the bottlenecks. They also discussed cross-organisation topics affecting sustainable mobility, such as fiscal incentives, sustainability through working conditions and cooperation with local authorities. Late in 2016, prior to the National Climate Conference, another fifteen organisations that share this same ambition joined us.

Another aspect of making travel more sustainable, in addition to effective policies, is influencing individual journey patterns. NS allows companies' employees to experience the benefits of sustainable mobility through the behavioural change programme 'MEE!'. Staff of Accenture and Arcadis have already completed the programme with positive results. Use of public transport, bicycles and working from home all increased while the use of cars decreased, resulting in considerable savings in costs and reduced CO<sub>2</sub> emissions. More than half of the respondents said that they found public transport to be a more attractive alternative than it used to be.

## Vision of mobility in the Netherlands

If a densely populated country like the Netherlands is to maintain the quality of life and stay accessible and competitive in future, large investments are needed every year – as well as transport companies and authorities coming up with new ways of looking at and thinking about mobility. NS, Qbuzz, HTM, GVB and RET have sketched out a picture of the future of mobility in the Netherlands. It contains improvements in door-to-door journey times and capacity, flexibility, comfort and sustainability of public transport in the Netherlands. This vision of the future is based on the use of sustainable forms of a variety transport options that meet the requirements of future passengers:

- who want to choose where, when and how they travel
- who no longer want to think in terms of what is supplied and scheduled by the authorities and carriers
- who chose the option that is quickest, easiest and most sustainable, and has a good price-to-quality ratio

In this vision, public transport is so quick and so flexible that it is the obvious choice. This makes the car not so much the primary choice, but merely one of the options. That is why it must be possible to travel between large cities in densely populated areas within one hour, and quieter areas should offer more flexible, demand-driven transport. This needs a different kind of collaboration, with the public authorities playing a different role. This vision is an offer we are making to central and decentralised authorities. As executive bodies, responsible for the mobility of millions of passengers every day, we want to use our experience to make a meaningful contribution to the future debate.

# Operational performance



On average, NS has performed increasingly better over the past few years. We are on time more often, we are taking measures against crowding on the trains and working on better journey information. Nevertheless, we have been unable to do so on all routes and for all passengers in 2016. To us, merely 'good' isn't good enough. That is why we are still aiming for improved performance on the railways.

## Punctuality

NS wants passengers to be confident that they will arrive at their destination at the scheduled time. The performance indicator 'Punctuality for passengers on the main rail network' measures NS passenger arrival punctuality, defined as being within 5 minutes of the scheduled arrival time, at 35 representative stations, taking account of connections not missed and train cancellations. Punctuality for passengers was 91.3 % this year (2015: 91.0% That is above the baseline value (90.0%) but less than the target value (91.2%). The increased punctuality is due to better adjustment and control, in particular in the busy autumn period, plus better weather conditions in 2016. Additionally, the low number of train cancellations at the 10 stations with the most passengers contributed to the positive score. Other than these aspects, the performance was comparable to 2015. There were regional differences, however. Due to diversions of freight trains from the Betuwe Route to the Brabant Route, as well as engineering work and speed limitations at the Moerdijk bridge, punctuality for passengers in Noord-Brabant and Zuid-Holland was under pressure most of the year. On the other hand, each of the 10 stations with the most passengers had fewer train cancellations in 2016 than in 2015. And 8 out of those 10 stations saw an increase in train punctuality. The greatest improvements have been seen at Utrecht Centraal, Arnhem Centraal and Nijmegen stations. The key reason is the updated and improved infrastructure in Utrecht, which stations in all directions benefit from.

### Running on time on the HSL South

With a passenger punctuality rating of 93.7%, the HSL South just failed to meet the baseline value of 94%. This score can largely be explained by a poor first quarter, in which many trains were cancelled (12%). Performance was increasingly better over the course of the year. Cancellations were reduced thanks to a joint improvement programme by NS and ProRail. A measure that NS and ProRail expect to make a major contribution to reducing the number of cancellations is running the InterCity direct in what are known as 'sandwich configurations'. This means having a locomotive at the front and back of the train. It is expected that performance will keep improving. The Ministry of Infrastructure and the Environment had an independent review carried out into the improvement plans of NS and ProRail. The result is that – given the complexity of the HSL corridor in a stable situation – a cancellation rate of 5-7% is attainable.

### Focus routes

The 10 hubs for which there is concern scored a passenger punctuality rating of 94.3% in 2016 (where punctuality is defined to 15 minutes). This is higher than the baseline value of 93.7%, but lower than the target value (95.0%). One of the causes was the long-term blockage of the Moerdijk bridge. There are two routes needing to be focused on here that are extensions of each other, so the lower punctuality of trains counted for both routes.

## Performance indicators for the transport franchise

Performance indicator	Realisation in 2016	Realisation in 2015	Target value for 2019	Baseline value for 2016
Punctuality for passengers* (joint indicator with the infrastructure manager)	91.3%	91.0%	92.3%	90.0%
Focus routes for punctuality for passengers (indicator to be achieved jointly with the infrastructure manager)	94.3%	94.1%	95.6%	93.7%
Punctuality for passengers on the HSL South services (insofar as attributable to NS)	93.7%	94.2%	96.0%	94.0%
Quality of the NS connections to other carriers at the major hubs**	94.3%	--	95.2%	93.7%

\* Number that takes account of not only the punctuality and cancellation of trains, but also connections that were not missed and the number of passengers per train.

\*\* The quality of connections to other carriers shows how well NS makes it possible to change trains to other carriers. The quality of changeovers is measured by determining the punctuality of arrival of NS trains at the 18 most important changeover stations. The result is the percentage of main rail network trains arriving at these stations with delays to arrival of less than five minutes.

## Crowded trains

Passenger numbers are growing, in part because of the upturn in the economy. That is why trains are getting increasingly overcrowded. Passengers are not satisfied with the seating capacity, especially during the traditionally busy autumn period. Trains are often crowded at peak times, which led to many complaints among passengers. NS has been taking measures for some time. From the end of 2015 and during 2016, we took extra measures to handle the problems.

## Transport capacity on the main rail network

The customer satisfaction rating of the transport capacity was 74.8%\* in 2016 (as opposed to 75.4% in 2015). The minimum baseline for the likelihood of being able to get a seat or standing room during peak periods is 98.7%, as agreed with the Ministry of Infrastructure and the Environment. Actual capacity was at just that figure: 98.7%. The actual capacity at peak times on the ten busiest routes was 96.8%.

\* A new method has been used as of 1 January 2016 to measure general customer satisfaction with seating capacity. The question has been aligned to match the question for general customer satisfaction and is therefore different than in 2015. The break in the trend should be taken into account when comparing the two years. After correction, we can see improvement in this customer satisfaction rating.

## Transport capacity on the HSL South

The transport capacity during peak hours for the HSL South services was 87.6% in 2016, 1.9% less than in 2015 (89.5%). As a result, performance was below the minimum baseline. Although twice as many IC direct trains have been running on the Amsterdam to Rotterdam section since the end of 2015, the associated growth in transport capacity was not enough to accommodate the growth in passenger numbers (about 15% per year in 2015 and 2016).



## Measures in 2016

- NS deployed 11 old double-decker trains (type DDM1). These 44 carriages meant 8,700 additional seats and standing places from September onwards.
- Changes to the NS Journey Planner app: passengers can now see what the actual train length is, and whether the train is shorter than planned as the result of a disruption.
- Additionally, an “I could not get on” button was added to the congestion notification in the Journey Planner for feedback to NS on actual crowding.
- On Monday 29 August, NS started using temporary rush-hour buses from Noord-Brabant to Utrecht and from Castricum to the Amsterdam Zuidas area.
- NS created 4,500 seats and standing places by implementing a new working method inspired by Formula 1, which gets trains back into service more quickly.
- The conversion of some first class seating created 1,000 extra second class seats.
- In December, the first new Sprinter trains began operating. An urgent order for a total of 58 trains was placed in December 2014 to let us cope better with the large number of passengers during peak times. These increase the capacity by 16,700 seats and standing places.
- NS staff avoid the peak period on busy routes – if their work lets them.

Consumentenclaim has instituted proceedings against NS on behalf of a passenger, claiming compensation due to overcrowding on trains. A review in April 2016 carried out by an external research firm, commissioned by the Ministry of Infrastructure and the Environment, showed that NS is taking measures to prevent overcrowded trains as much as possible.

## Communication to passengers

NS has improved the information given to passengers about disruptions. An example of this is a new, striking yellow bar with information on the signs on platforms. In addition, we produced a flyer with information about crowding in trains during peak times (and how it varies) on a number of specific busy routes. The Journey Planner app shows how busy a train is. In the run-up to the traditionally busy autumn period, there was extra customer communication and publicity about the expected crowding and the measures NS has taken. The NS seat availability monitor shows that the number of customers who say that their journey experience matches their expectations is up to the benchmark. Almost a third of passengers say they are aware of the measures NS took to increase the likelihood of getting a seat.

### Performance indicators for the transport franchise

Performance indicator	Realisation in 2016	Realisation in 2015	Target value for 2019	Baseline value for 2016
Passenger capacity at peak times (main rail network)	98.7%	98.7%	99.2%	98.7%
Focus routes for passenger capacity at peak times	96.8%	96.7%	97.5%	96.5%
Passenger capacity at peak times on HSL South services (domestic)	87.6%	89.5%	99.2%	97.5%

## Availability of trains

NS withdrew an overall average of 10% of the NS fleet for maintenance, repairs and upgrades on any given day in 2016 (2015: 13%). This means that we performed better than the norm of 12% per year and that we met the target that is needed for the timetable. This gain comes from building ‘pit stop’ lanes in all the maintenance centres during 2016. These ensure that the turnaround times during withdrawals become considerably shorter and trains are available for passengers again more quickly. The structural performance improvements applied to all trains: Sprinters, Intercity trains and international trains.

## Purchase, revisions and upgrades of trains

NS carries 1.2 million people a day in 5,200 Sprinter and Intercity trains. Because passenger numbers are increasing and a proportion of our trains are due for replacement, NS will be investing over the coming years in purchases, revisions and upgrades. Proven technology, sustainability and convenience for passengers have the highest priority.

### Investing in new Sprinters

NS is investing in new Sprinters. NS has ordered 58 new Flirt type trains from supplier Stadler and 118 trains from CAF. The first Stadler Sprinter trains started operation in December. The CAF Sprinter trains will become operational in 2018. This adds around 36,000 seats. Both types of trains meet strict technical requirements, are energy-efficient and are fitted with wide doors. A retractable step makes getting on and off the train easier for people with functional disabilities or luggage. Transparency and more light improve the perception of safety in the train. The Flirt and the CAF trains have separated flows of waste collection in the vestibule. The art is inspired by Mondrian.

Since the 2017 timetable, NS has been running the regional franchise between Gouda and Alphen. NS has had 6 more trains built for this. The inside and outside of the trains match the red-and-grey house style of R-net.

### A new generation of Intercity trains

In July 2016, NS signed a contract with the train manufacturer Alstom for supplying 79 new single-decker Intercity trains. The new trains are planned to come online from the 2021 timetable onwards. These are trains with a total of 25,000 seats that can run on both the regular network and the HSL. These new Intercity trains travel at a maximum speed of 200 km/h and have everything the passenger needs: electricity sockets, Wi-Fi, climate control and wheelchair-accessible toilets. The new train has the ERTMS safety system, which is the European standard.

The introduction of the new trains will also ensure that the HSL is used more efficiently than originally planned, and that the frequency and speed on some routes can be raised.

The design phase with Alstom to finalise the design started in the autumn of 2016. In addition to technical design decisions, one element of the design was the choice of seats. NS places great store on the travel experience of its customers. For that reason, a group of 20 rail passengers tested the seats on 1 November, together with representatives from Rover and LOCOV (the national public transport users' forum). NS staff assessed whether the seats are easy to maintain and clean, and whether they are resistant to damage (vandalism).

### Upgrades of Intercity coaches and double-decker trains

NS is upgrading the VIRM-1 type double-decker trains. This affects 81 trains with 416 coaches. Sustainability is an important factor. Some elements, such as the cab and vestibule, are to be reused as much as possible. LED lighting that adapts to daylight levels will be added. The trains are also getting additional luggage space, an efficient climate conditioning system and a close toilet with a bioreactor. The upper deck will be suitable for reading or working, with seats in twos and business-like decor. The lower deck will be more informal, with seats opposite each other and a lounge seat. The first modernised trains will start running in 2017. The upgrades will take until 2020.

## Influence of the weather on train services

A central question for NS and ProRail is how we can offer reliable transport to passengers, even in extreme weather. The winter of 2015-2016 was fairly mild. Early in January, NS put on ice trains, particularly on the routes to Zwolle, Leeuwarden, Groningen, Deventer and Enschede. These trains scrape ice off of the overhead lines, to reduce the risk of problems with ice accumulation at night. The ice trains are one of the measures taken by NS, ProRail and the other rail companies to enable trains to run according to the timetable during winter weather.

We also took measures in the autumn. For example, we used a special gel (Sandite) again this year to combat slippery tracks. Mechanics at the maintenance locations worked 24 hours a day to repair damage to so-called 'square wheels'. Rolling stock issues meant there were fewer Intercity trains on two routes on a few days in November.

To stay alert after three consecutive mild winters and keep knowledge within NS and ProRail on the effects of weather up to date, three joint exercises were held once again in 2016.

## Hindrance due to engineering work

Along with LOCOV and ProRail, NS collects data about the nuisance from service disruptions caused by engineering work. This reflects the number of passengers experiencing hindrance, the extra journey time and the number of extra changeovers. This lets us compare the degree of hindrance during service disruptions. Compared to 2015, the number of minutes of delays due to service disruptions rose by 35% in 2016. This was because of long-term disruptions due to the renovation of the railway yard at Utrecht and OV-SAAL. As in 2015, 59% of our passengers gave a score of 7 out of 10 or higher for the service during planned work.

A large amount of engineering work is planned for 2017, particularly on busy routes in the Randstad conurbation, leading to disruptions for our passengers. ProRail must of course maintain the infrastructure and prepare the track for future demands. NS is talking to ProRail about better and more innovative ways of working on the track that can reduce the net disruption for our passengers. It might be possible for instance to consider more work at night by splitting up large operations or smartly clustering large operations.

## 2017 timetable

The timetable for 2017 has been completely redesigned and brings a lot of changes. The train journeys of almost all passengers will be affected, ranging from small changes in departure times through to other routes, more or fewer changes and different connections. Partly due to the completion of new infrastructure, NS will be running more trains in 2017 on various routes, utilising the HSL more efficiently, improving connections, resolving bottlenecks and making journey times shorter. Travelling to and from Friesland will be quicker. We also be reducing journey times between Arnhem and Nijmegen and between Noord-Brabant and Rotterdam. Together with our partners, we are working on better international connections to e.g. Düsseldorf, Aachen, Antwerp and Liège. NS has not been able to improve the timetable for all passengers. On some routes, passengers will have longer journeys or extra changeovers. For example, the journey time between Vlissingen and Rotterdam is longer because the Intercity train from Zeeland will wait longer in Roosendaal to gain 10 minutes of journey time for passengers to Brabant.

## International connections

Working with international transport partners, NS connects large cities and regions together in Germany, Belgium and France. Last year, the number of journeys sold fell by 9.3% to somewhat over 3.1 million international journeys. The reason for this fall is partly related to the attacks in Paris and Brussels.

### IC Brussels developments

An agreement has been reached with the (Dutch) Ministry of Infrastructure and the Environment on speeding up the IC Brussels journey. This is done by running 12 of the 16 trains via the HSL to Amsterdam. The time gained is half an hour. The other four trains run to Den Haag HS. This timetable will take effect once the rolling stock has been adapted for running on the HSL. IC Brussels will also run via Breda instead of Roosendaal from that point

on. This ensures that passengers from Noord-Brabant can travel to Belgium more quickly, and vice versa.

## Thalys

Fourteen Thalys trains a day ran in each direction between Amsterdam and Paris all year long in 2016. Two trains run to and from Lille every day: one in the morning, and one in the evening. That makes it possible to travel to Lille and back in one day.

## Travelling from and to Germany

Since 2016, the early ICE from Amsterdam also goes via Cologne. In addition, the early CNL train to the Netherlands has been replaced by a quicker, early ICE from Frankfurt to Amsterdam. The ICE is running in the Amsterdam-Germany direction with an additional train set going to Basel. This provides more seats. Since the 2017 timetable, the Intercity to Berlin only runs in the summer months. In the winter, a later train has been put on as a replacement from Amsterdam to Bad Bentheim, where passengers can change trains.

## Regional connections

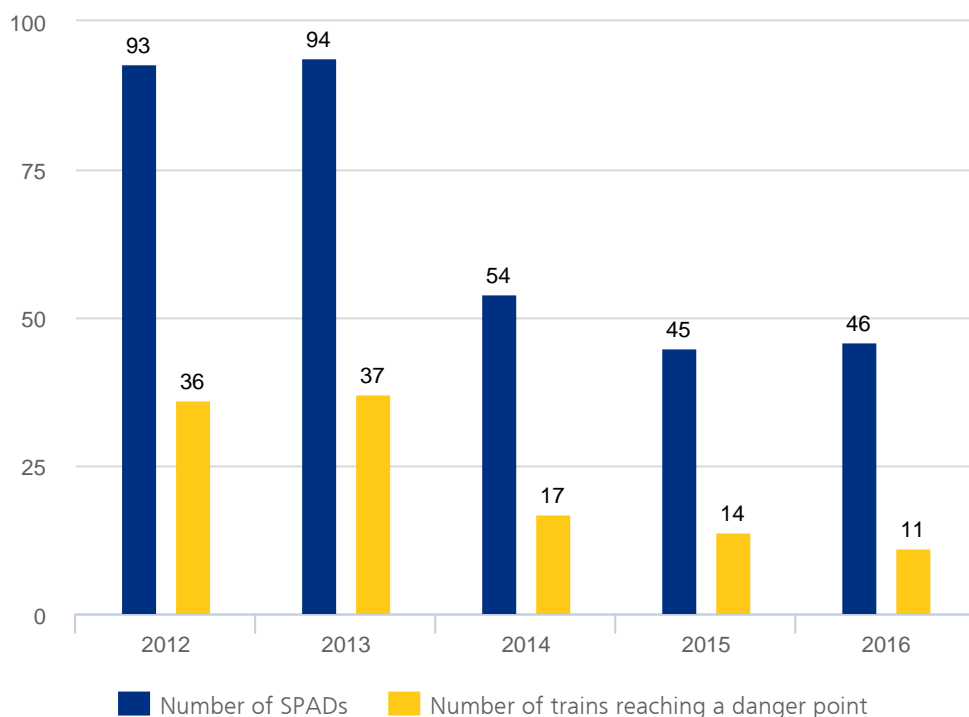
A change in the train services in Germany means that the train from Heerlen to Aachen now terminates at Herzogenrath, where passengers can change for a direct train to Aachen. Additionally, NS participated in studies last year looking at opportunities for running more international trains at various border crossings. The value of the improvements for passengers and the business cases were also studied.

## Railway safety

To improve railway safety, NS is developing a single harmonised safety management system for all business units. This creates clear and simple processes, which improves railway safety. We also pay attention at all times to safe working practices. Specific attention goes to learning from incidents and near misses, and discussions about safety between management and colleagues at work. We have made agreements with ProRail about handling and following up incidents and near-incidents.

## Number of signals passed at danger (SPADs)

The number of non-technical cases of signals being passed at danger (SPADs) – a railway safety indicator along with accidents – remained constant at 46 in 2016 (2015: 45). The number of trains that reached a dangerous position (a place where an incident could occur) fell from 14 to 11. This reduction is partly thanks to the implementation of conflict-free planning, simplifying of rules on shunting yards, further roll-out of the improved version of the ATB automatic train protection system, and open communication with employees about safety, for example on being distracted by smartphones.



## Running with ERTMS

ERTMS is a new European train security system that is being introduced on the Dutch railways. It is intended that all trains and as much of the infrastructure as possible will have ERTMS by 2022. The system improves international interoperability, safety and reliability of the train service. In the first half of 2016, we investigated what impact running with ERTMS and ATB will have, as well as the transitions between them. NS can use the results to improve the training for drivers. Additionally, the rollout strategy for the infrastructure was announced in 2016. The first track sections with ERTMS – Kijfhoek-Roosendaal Grens and the Haarlem area – will become operational in 2024.

## Occupational safety

NS's aim for 2016 was that employees should come home from work just as healthy as when they started, both physically and mentally. We have measured our progress and tested the results using the 'safety culture ladder'. This is how NS is aiming to improve the health and safety culture, making it normal to address each other about unsafe and unhealthy behaviour.

### Lost Time Injury Frequency Rate

The number of accidents at work resulting in over 24 hours' absence from work is expressed as a frequency rate (the Lost Time Injury Frequency Rate, LTIFR). The LTIFR at NS for 2016 increased to 1.4 (2015: 1.0) due to 11 more accidents resulting in absence compared with the previous year. This result says that 1.4 incidents took place that resulted in over 24 hours of absence for every 1 million hours worked. The LTIFR covers all employees working under NS supervision or authority.

### Proactive occupational health policy

In 2016 we were able to assess potential safety risks using risk assessment and evaluation reports. This has contributed greatly to the focus on efforts to help prevent accidents at work and absences caused by illness. Where prevention failed, we investigated how to prevent a

repetition. The approach to integrating processes relating to railway and occupational safety also suits this proactive policy.

## **Willingness to report and demonstrable leadership in safety**

Health and safety levels at work improve greatly if as many employees as possible are willing and able to report unsafe situations. A lot has been done to remove the barriers as much as possible in 2016. For example, a reporting app was made and special safety campaigns made staff aware of the importance of reporting such situations.

To keep a dialogue going about security and to show engagement and leadership with regard to safety, the board and management regularly did so-called 'Safety Walk' rounds at workplaces at locations across the country. They had face-to-face conversations with staff about their health and safety.

## **Safety ambassadors**

Last year, 165 operations staff were trained as safety ambassadors and certified to monitor critical safety processes in their own working environments, as well as comparing them against the safety rankings ladder. They take action to improve and monitor the progress and efficiency of these actions in order to improve health and safety levels.

## **Energy**

NS is one of the biggest electricity consumers in the Netherlands. 90% is for traction – used for running the trains – and 10% is for our buildings. Our aim is to be climate-neutral by 2020. That is why we want to use energy as responsibly as possible. We brought the switch to 100% green power for trains on the main rail network forward to 1 January 2017. This was possible because new wind farms are being completed more quickly than expected. We will also keep investing in new and upgraded trains that are much more efficient in their electricity consumption. We can improve occupancy rates by deploying trains more efficiently and tempting passengers to travel during off-peak hours. We also encourage energy-saving driving and shunting where possible. Incidentally, this resulted in less energy saved in 2016 than the year before, particularly because we deployed extra rolling stock to increase the number of seats available to passengers.

## **Energy consumption**

In 2016, an average of 71.9 Wh of energy was used per passenger-kilometre. That is higher than in 2015 (71.0 Wh/passenger-km). The increase is largely due to the efforts made to provide more seats for passengers (during peak times): we deployed more trains, which led to lower occupancy rates in the trains. We were also deploying older, less efficient rolling stock again.

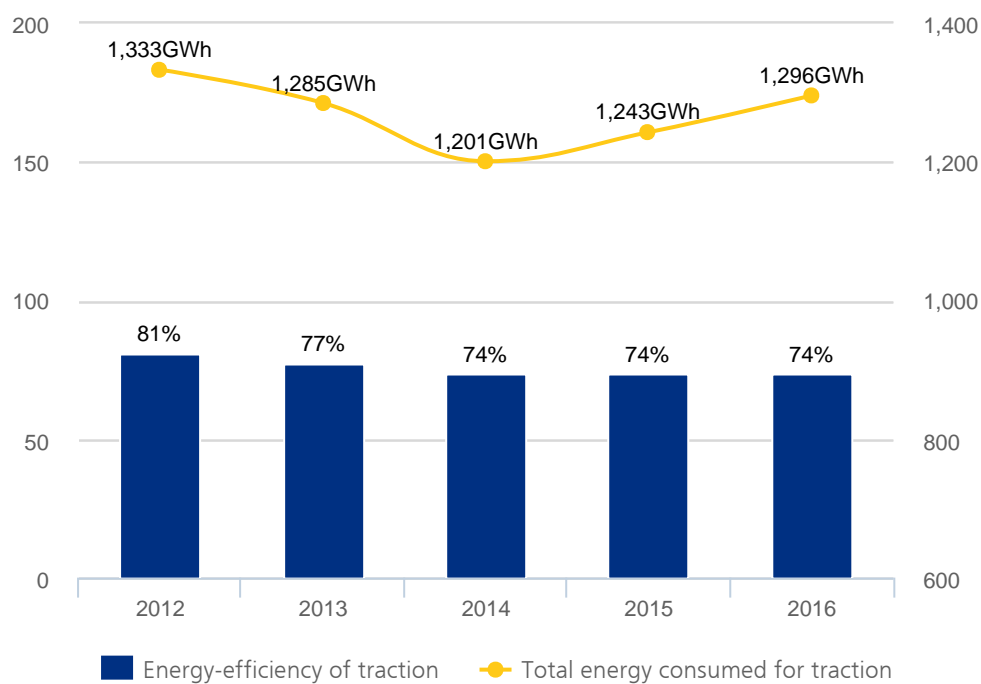
## **Emissions**

CO<sub>2</sub> emissions per passenger-kilometre went down considerably to 9.5 grams compared to 2015 (at 16.0 grams/passenger-km). This is due to the growing proportion of green power. As was the objective, 73% of our trains ran on green power in 2016 (51% in 2015). The designated wind farms that provide us with green power have now all been completed. This was earlier than planned.

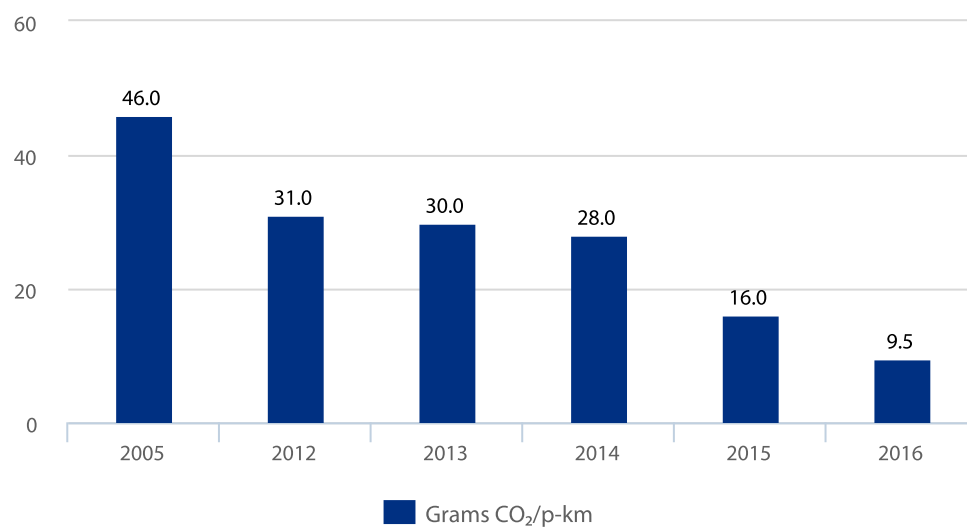
We also measure the emissions of replacement bus transport. The measured emissions include the distance between the fixed parking location and the place at which they are used. In 2016 this resulted in CO<sub>2</sub> emissions of 0.4 grams/passenger-km. As soon as NS trains run fully on green power, these emissions will become even higher compared to the remaining CO<sub>2</sub> emissions. NS is continuing to focus on energy efficiency through purchases of more efficient rolling stock and energy-saving driving and shunting. This was laid down in the MJA3, the third Long-Term Agreement.



### Energy consumption of NS trains in the Netherlands (electricity and diesel, including replacement buses, converted to GWh)



### Grams of CO<sub>2</sub> emissions per passenger-kilometre for train transport by NS in the Netherlands



<b>Our results</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Gram CO <sub>2</sub> /p-km	9.5	16	28
Energy consumption by NS trains in the Netherlands in Wh/passenger-km	71.9	71.0	71.8
Efficiency of trains in the Netherlands	-1.0%	+0.8%	+2.3%
Off-peak occupancy rates	28%	28%	28%
Green electricity for trains	73%	51%	50%
Renewable energy for facilities in total (guarantees of origin for green power)	73%	50%	50%
Efficiency of NS buildings in the Netherlands (compared to previous year)	3.54%	5.53%	5.69%

## Waste reduction

NS produced around 18.5 thousand tons of waste in 2016 in its trains and at its workshops, stations and offices. Our aim is to be more efficient in our use of materials and for new raw materials to be extracted from the waste. When disposing of materials, we look first to see whether the product can be reused, then we consider the reuse of product parts and finally the option of recycling the materials. Because we spend over a billion euros on goods and services every year, our measures can help boost the closed-cycle economy: NS ensures that manufacturers or suppliers can take the products or materials at the end of their useful life or phase of operation and reuse them in a new cycle, thereby not generating any waste.

### Waste: our results in 2016

- 33% of waste separated in offices, workshops, stations and trains
- 2.9% more waste compared with 2015

Staff at our workshops were able to separate over 85% of the waste in 2016. The amount of waste at our workshops went up in comparison to 2015 because the amount of work increased. We were only able to make waste separation possible at stations and in trains by the end of 2016, which is why no improvement can be seen in this year's figures. Compared to last year, a slight decrease (around 1%) was achieved.

### 2020: 80% of waste recycled as raw materials

By 2020, we want 80% of our waste to be recycled as raw materials for new products. We aim to achieve this for example by:

- separating out waste at the source and after use
- putting circular procurement into practice when purchasing materials
- organising process ownership (waste managers) throughout NS in order to achieve waste targets
- collaborating with key stakeholders such as suppliers and ProRail
- Green Deal for circular procurement
- Green Deal for waste reduction and recycling at stations and in trains.

### Green Deal: more separation, less waste

In the second half of 2016, four extra stations were given separate waste bins (Amsterdam CS, Utrecht CS, Alkmaar and Eindhoven). The retail formats also started separating organic waste at Amsterdam Centraal and Eindhoven. The new Flirt trains, which became operational late 2016, have separate waste bins. Since November, passengers have been able to buy a refillable 'smart cup' at the new Kiosks. Using this cup gets you a €0.25 discount on hot beverages at any Kiosk in the Netherlands. Furthermore, to make waste separation easier for passengers, we launched the "sustainability platform for passengers" together with our waste processing company Van Gansewinkel.

## Better and More: developments on and around the tracks

Under the heading '*Better and More*', NS and ProRail are collaborating on improving performance on the tracks. The objective is to make the railways as a transport product more attractive to passengers and freight transporters. This means increasing reliability of the train services ("Better"), making high-frequency services possible ("More"), achieving better customer performance at stations and improving the safety culture. One aspect of *Better and More* is the *Approach to Train Improvement*, in which we are working towards a high-frequency timetable along what is known as the 'A2 corridor' between Eindhoven and Amsterdam. A decision was taken in July to increase the frequency of train services in the 2018 timetable. In 2016 we also worked on:

- training train crews on a more stringent approach to driving and stopping
- preparation for boarding zones
- a customer campaign saying no more boarding after the whistle goes
- realising extra capacity for shunting trains

### Long-Term Rail Agenda and stations

The Long-Term Rail Agenda (LTSA) put forward by the Ministry of Infrastructure and the Environment gives a long-term vision for structurally improving travel by train in collaboration with all the parties involved. A key element is creating attractive and comfortable stations for passengers, carriers and municipalities. In the *Approach to Railway Improvement*, ProRail and NS have set out clear common targets for stations. Although ProRail and NS both have their own roles and responsibilities at stations, we are working together more closely than ever to make stations even more attractive. We are doing that together with our partners in the station zones, such as other carriers or local and other authorities. We already took several steps during 2016:

- We fitted a total of 66 large journey information screens at the four major stations to improve readability.
- We developed a dashboard with joint performance indicators (safety, customer satisfaction, reliability of the assets and sustainability).
- We analysed what quality improvements are possible at the stations along the Merwede-Linge line (compared to the current situation) in terms of customer satisfaction at those stations. This was done in close consultation with the provincial authority.
- Regarding bicycle services, we worked further on the first 24-hour concept with a pilot with self-service storage facilities. An agreement was also concluded with the authorities.
- We have developed a Station Plan that is optimised from the passenger perspective in terms of its visual and graphical elements. This setup will serve as the basis for the station plans for each individual station.

# The door-to-door journey



Passengers travel from door to door, and NS is one connecting element in that journey. That is why we also want to make a contribution to the first and last stages of the journey. We do this with bicycle storage facilities and car parks, new payment methods and better journey information. This puts passengers in control of their journey.

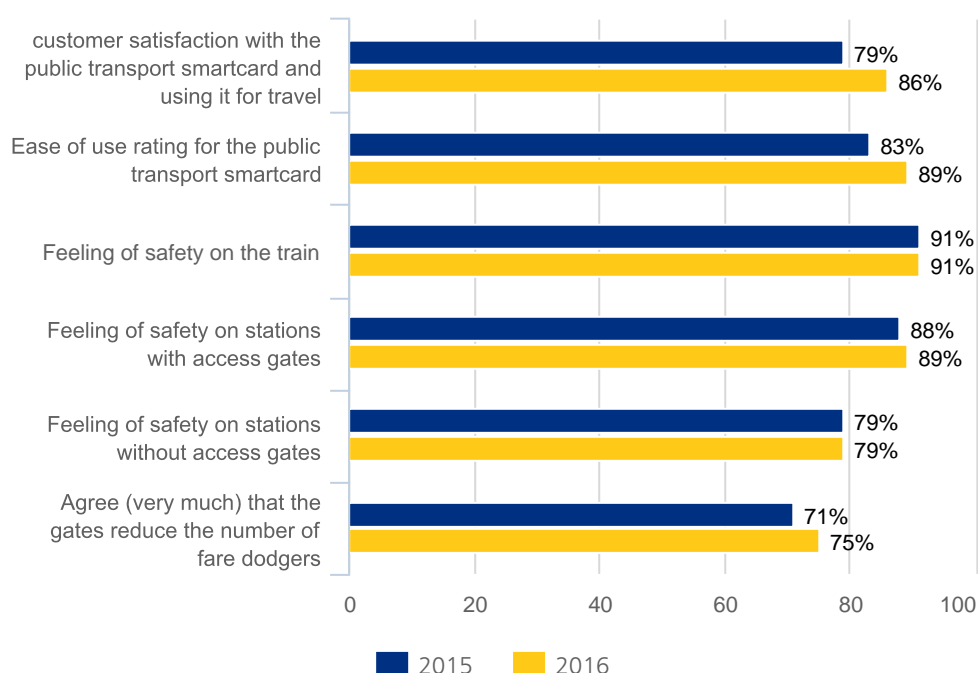
## Use of the public transport smartcard

Around 600,000 passengers daily use their public transport smartcards to check in and out. Satisfaction with travelling with the smartcard grew: 86% of passengers gave a score of 7 out of 10 or higher in 2016 to travelling with the smartcard, as compared to 79% in the previous year. The increase is the result of improved systems, fewer system errors in 2016 and people getting used to the public transport smartcard — even people who only use the train occasionally now know how the public transport smartcard works. We also expanded the number of check-in and check-out posts at 47 stations and put them in more logical positions at the stations. The service improved too: it is now easier for passengers who have forgotten to check out to reclaim their money. The NS Extra service allows passengers to activate a 'check-out alert' and makes it easier to cancel a season ticket.

### More gates in use

In order to improve personal safety for passengers and staff at stations and in the trains, NS is fitting access gates at stations. The number of stations with access gates was 69 at the end of 2016. Passengers say that the access gates make them feel safer. They are more convinced that the gates will mean fewer fare dodgers. The access gates also ensure that passengers do not do forget to check in or out.

### Customer satisfaction in 2016 about the public transport smartcard



## Journey information improvements

Every year, NS issues more than 500 million pieces of journey advice about timetables, engineering work and disruptions. In 2016, we provided advice in good time for over 82.0% of disruptions (2015: 79.4%). The scores for our door-to-door journey information rose slightly and ended up at 83.2% (2015: 78.5%). Correct and timely journey recommendations put passengers more in control and let them make better choices.

## Online Journey Planner improved

On average, passengers ask for 137,000 journey recommendations a day via the journey planner on the Internet. New features were added in 2016:

- Planning the journey from door to door with all forms of public transport, including a route map
- Train combinations so that passengers can allow for the possibility of crowding
- Prices for international journeys
- Simple to order domestic and international train tickets

## Improvements to the Journey Planner Xtra

NS provides 800,000 journey recommendations every day through its Journey Planner Xtra app. The app has now been downloaded 5.6 million times. Some of the improvements to the Journey Planner app:

- Buying a ticket directly using the app
- Train radar: seeing where the train is at the moment
- Planning the journey from door to door with all forms of public transport

### Performance indicators for the transport franchise

Performance indicator	Realisation in 2016*	Realisation in 2015	Target value for 2019	Baseline value for 2016
Journey information throughout the travel chain	85.8%	81.8%	82%	78%

\* The increase with respect to 2015 is partly due to a correction in 2016 as a result of an incorrect system setting. This was rectified, as a result of which the scores are around 3.5% higher than in 2015.

## Information in the event of disruptions

Correct and timely journey recommendations put passengers more in control and let them make better choices. Every year, NS issues more than 500 million pieces of journey advice about timetables, engineering work and disruptions. Passengers are more satisfied with the information during disruptions at the station and on the train than in 2015: 82.0% as opposed to 79.4%. The increased score is mainly attributable to improvements in the information during disruptions at stations. What is more, the journey information system InfoPlus has been extended with automated disruption information. In the course of 2017, we will be further expanding the options for the information screens in trains, for example including specific information on disruptions.

### Performance indicators for the transport franchise

Performance indicator	Realisation in 2016	Realisation in 2015	Target value for 2019	Baseline value for 2016
Information on the train and at the station about disruptions	82.0%	79.9%	80.0%	75.0%

## Bicycle parking

More than 40% of passengers come to the station by bicycle. They are able to use supervised bicycle storage facilities for around 120,000 bicycles, unsupervised facilities for more than



310,000 bicycles and more than 14,000 bicycle lockers at stations. NS is working with partners to develop bicycle storage facilities where passengers can easily and conveniently store their bicycles. Our offering includes 24 hours' free storage (in 16 storage facilities), digital indications of the free storage slots, the option of paying with public transport smartcards, and a high-quality uniform design. In 2016, NS and ProRail agreed with the municipalities to provide this at Amsterdam Amstel and Leeuwarden stations, among others. We also opened new bicycle storage facilities in 2016 at Assen (temporary storage facility), Amsterdam Centraal (on the IJ side), Breda, Amsterdam Zuid (Mahlerplein), Utrecht Vaartsche Rijn and Harderwijk. There are 40 storage facilities where passengers can store their bicycles on account using their OV-fiets subscription. In Breda, Amsterdam Zuid (Mahlerplein), Utrecht Vaartsche Rijn and Harderwijk, passengers can park their bicycles free of charge for the first 24 hours.

### Self-service bicycle storage facilities

At Bilthoven and Heerenveen stations, we ran a trial with self-service storage. Elements of this are an open, spacious entrance, access using your bank card or public transport smartcard and the availability of public transport bicycles (OV-fiets). If the trial is a success, we will roll the concept out at additional stations in 2017 and 2018.

### Bicycle Parking covenant

NS expects the number of cyclists to increase over the years to come. Together with other relevant parties, we seek to tackle and resolve the issues concerning the storage of bicycles in a concerted approach. To this end, NS has signed the national administrative agreement *Fiets* ('bicycle'). In addition to sufficient quality and capacity in the facilities for bicycles at stations, the agreement sets out innovative goals and projects for making optimum use of infrastructure and space, and savings and efficiency improvements.

## Fiets & Service

In 2016 we opened Fiets & Service centres at Deventer, Amsterdam Centraal (IJ side), Amsterdam Amstel, Rotterdam Centraal, Utrecht Centraal (Smakkelaarsveld), Breda, Harderwijk, Leeuwarden, Leiden and Zwolle stations. Fiets & Service is a service format for bicycle repairs, bicycle parts and bicycle accessories. If passengers bring their bicycle before 10:00 for repairs, it will be ready by 16:00. There are 14 Fiets & Service centres in total.

## OV-fiets (public transport bicycle)

In 2016, private individuals and business users taken together used the bicycle for over 2.4 million trips (2015: 1.9 million). From March 2016, passengers across the Netherlands were able to make use of the first 1,000 OV-fiets bicycles of the new type. Growth in the use of the OV-fiets continues unabated. Over the next three years, at least 1,000 new bicycles will be purchased every year on top of the current 8,500 bicycles. Since 2015, the availability of OV-fiets bicycles has been included in the Journey Planner, which means passengers can see in advance whether they can hire an OV-fiets.

## Car parking

13% of rail passengers use the car to get to the station. In 2016, 820 parking spaces were added to the more than 35,000 parking spaces around stations.

## NS Zonetaxi

The NS Zonetaxi can be booked from 137 locations. It takes passengers to and from station for fixed fares. In 2016, there were more than 10,000 new subscribers (making a total of 35,800). Subscribers made a total of more than 18,000 trips last year.

## OV Service Shops: public transport service centres

NS is collaborating with other carriers in providing public transport service centres – ‘OVservicewinkels’ or service shops – at stations. Customers can go there for help with their queries about public transport travel. In 2016 we opened service centres in Tilburg, Utrecht (Jaarbeurs side), Alkmaar and Maastricht. In Venlo and Roermond, Arriva moved into the current Tickets & Service centres as well, turning them into a combined information desk. In Arnhem we extended the collaboration with Breng.

## Retail at the station

NS started developing its own retail solutions in an effort to respond to our passengers’ wishes. Ten years ago, there were no market players capable of doing this. That has changed in recent years. NS will continue to provide retail services itself where this offers benefits to passengers and we can offer distinctive value. This applies to the Kiosk, Railcatering, StationsHuiskamers formats and to the vending machines.

NS has resolved to gradually outsource some of the retail facilities over the coming years through franchising. NS will continue to have a coordinating role so that it can offer passengers a good, varied range in the future too through a franchise model. There will be more room for market players at the station. This should lead to a better service for passengers.

### Improvement to formats

De Broodzaak and Kiosk implemented changes to make them better able to meet passengers’ demand for high-quality, fresh products. There are refurbished shops at Utrecht Centraal, Amersfoort and ‘s-Hertogenbosch stations. The most successful elements of the revamped Broodzaak will be implemented in all the shops. We started that in 2016. For instance, we opened three different variants of the new Kiosk at Den Haag Centraal. We have also improved the signage in the Julia’s shops and changed the product range at Smullers. Railcatering is now present on more routes. At various stations where construction work was being done, 2016 saw a range of shops being reopened such as Julia’s, Kiosk, Smullers and Starbucks at Eindhoven station.

### Retail abroad

NS operated a total of 35 shops in 6 formats at stations in Belgium, France and England. At stations, we focus on the activities that could provide the most added value for passengers in the Netherlands. In line with that focus, NS ended its foreign retail activities in 2016. We have acquired experience in the highly competitive market at the stations and seen how our partners operate commercially at the stations. The shops at stations abroad have thus helped us to tighten up and make further improvements to what we can offer passengers in the Netherlands.

# NS as an employer



Providing good and reliable services to passengers is only possible if we can offer optimum performance operationally with healthy, committed and skilled employees. That is why we invest in the development of employees, support our managers and improve the organisation's effectiveness and ability to change. This also demands effective collaboration with employee participation bodies and trade unions.

## Our employees

- At the end of 2016, the NS workforce comprised 21,488 staff (18,447 FTEs)
- 80% of NS staff have permanent contracts (2015: 82%)
- Women are 34% of the employees at NS (2015: 34%)
- The average age of our employees is 43 (2015: 43)

## Trends in the labour market

The economy is picking up and that is having a noticeable effect: the labour market is becoming tighter, especially in areas such as technology and IT, where qualified personnel were already scarce. NS is taking mitigating measures with targeted recruitment, in-house training, and consideration for staff engagement, the retention of professional skills and the development of talent. We are doing this to keep our leading position in the Dutch labour market.

## Recruitment

In 2016, we filled 3,829 vacancies for people with vocational qualifications and 722 vacancies for graduates (the figures for 2015 were 3,553 and 596 respectively). In addition, 55 trainees and 29 work placement students started with us. We want to provide young people with work experience through work placements, as well as getting them interested in NS. In 2016 the InhuurDesk (hiring desk) filled 792 temporary positions with external employees.

## Diversity and inclusiveness

NS wants to be seen as an attractive employer where everyone can feel at home. This can be done by making the workforce and management reflect the composition of society at large, therefore letting NS ensure it is a diverse and inclusive organisation. We made agreements about this in the collective labour agreement (CAO). We encourage the recruitment and retention of women, employees from migrant communities and people at a disadvantage in the normal labour market. We expect our suppliers to do the same.

### Women at the top

At year-end 2016, women comprised 30% of the senior management at NS (2015: 25%). The percentages of female members of the Supervisory Board and Remuneration Committee were 40% and 33% (2015: 36% and 67% respectively). The Executive Board included two women (50%).

### People with occupational disabilities

In the past year, about 75 people with occupational disabilities gained work experience at NS (40 in 2015). These were people covered by the Invalidity Insurance (Young Disabled Persons) Act or the Sheltered Employment Act, plus our own employees with occupational disabilities. In the CAO, we agreed to create 200 lasting jobs for this target group before 2018 in all the business units. NS has now acquired considerable experience in this area and regularly exchanges its experiences with other employers and ministries. We also collaborate closely with Locus Network and the Employee Insurance Administration Agency in selecting people from the target population for the available vacancies.

### Employees from migrant communities

NS aims to increase the number of staff from migrant communities, particularly in management positions and the higher salary scales. To achieve this, we have been using positive discrimination in the selection process for managers since 2015. Furthermore, the employees in the Recruitment department reflect the composition of Dutch society, which helps make sure that we recruit staff in an inclusive way.

## Former refugees

NS collaborates closely with the UAF foundation and is involved in the Refugee Talent Hub. Together with the UAF foundation, which helps more highly qualified refugees find appropriate positions within society, NS has set up a nine-month paid work experience programme in the form of a traineeship. In view of the large inflow of refugees, we created five extra work experience places in 2016 in addition to the five existing places. Of the group of ten who started in 2016, three ended up with an employment contract with NS. Two former refugees also joined NedTrain through the regular recruitment procedure and one started as an apprentice at TechniekFabriek. We are working intensively with various municipalities and the Employee Insurance Administration Agency to fill standard vacancies at NS from the refugee intake. NS has been sharing the know-how and experience it has acquired with other employers, the Ministry of Social Affairs and municipalities.

## Learning at NS

We continually need to learn new approaches and new knowledge in order to be able to guarantee good operational and financial performance in the future. Changing and learning go hand in hand. NS is prioritising informal learning and learning on the job, with the aim of accelerating the application of new knowledge and skills. NS has invested almost €30 million in training courses and other educational measures. Staff (excluding Retail) went on 78,122 classic training days and took about 20,600 e-learning modules via the NS learning centre (Leercentrum). Moreover, 175 training programmes were created or improved.

## Training drivers and conductors

The professional skills of our drivers, chief guards, safety staff and mechanics remain at the heart of all our learning activities. More than 15,000 of our 20,000 employees received training. The annual nationwide refresher training ensures the continuing employability of more than 6,000 drivers and chief guards. Almost 1,000 new drivers and conductors, including 60 starters from regional training centres, received training in intensive programmes, making them even more highly skilled employees. Drivers used online tools as an aid in their work, such as apps about rolling stock on the HSL and dedicated professional pages.

## NedTrain

NedTrain has an intensive refresher programme for all mechanics aimed at preparing them for the future and letting them specialise in new train technologies and working methods. In the TechniekFabriek ('technology factory'), 89 young people with a talent for technology are taking a two-year apprenticeship in Mechatronics that will give them an MBO-2 vocational qualification in combination with all the internal training courses. In this course, (practical) teachers from NS, ROC Twente and ROC Amsterdam teach them the profession of train mechanic on the job. After they have obtained their qualification, they can start work immediately as a junior mechanic. In September, 23 former apprentices started work. The Dutch parliament is also enthusiastic about the practical approach to training at the TechniekFabriek. The minister has asked the manager of the TechniekFabriek to join the advisory committee on the demand-based funding of upper secondary vocational education.

## Stations

Staff from the station operating company have completed a total of over 3,160 online safety modules. They were also given assistance at work for this.

## Finance, HR and IT

We have set up training curriculums for our Finance and IT specialists. Our HR business partners have completed a personal change programme that combined personal development and the developments within NS.



## Collective labour agreement: irregular hours supplement during holiday periods

In an addition to the collective labour agreement for 2015-2017, NS and the trade unions made an agreement in 2016 on the payment of the irregular hours supplement during holiday. This was necessary because of developments in case law. This agreement applies retroactively for a period of five years.

## Code of Conduct

In the NS Code of Conduct, we have documented what kind of people we want to be. This code specifies what desirable conduct involves within our organisation. These rules apply to everybody who works at NS. The NS Code of Conduct was revised in 2016, and communication about the Code of conduct – including when employees join the company – is one of the measures in the field of Integrity and Compliance.

## Sickness absence

The sickness absence figure for NS in 2016 was 5.1%. That is higher than in 2015 (4.9%). Sickness absence among chief guards can be considered systematically high. As it is not clear what is causing this, we intend investigating the job workload for chief guards in 2017. In 2016, NS worked on increasing the employability of staff, including with plans for a structured approach to tackling absenteeism.

## Tender for trauma aid

NS issued a tender in 2016 for follow-up care after severe shocking incidents. The tender was awarded to HSK. By making use of the services of HSK, NS aims to give its employees maximum support in dealing with (severe) shocking events.

## Mobility

Employment mobility is given a prime position before, during and after organisational changes such as in the 'Journey Information' and 'Adjusting and Controlling the Future' programmes. Agreements from the Social Plan also encourage mobility, as do the statements in the collective labour agreement about long-term employability. For instance, in 2016 NS followed up on the collective labour agreement by implementing the Career Voucher. Employees can use this voucher, worth 750 euros, to take part in individual programmes and group training focused on personal development in their current job or future career.

In addition to assisting its employees in reintegration, when they become surplus to requirements or in outplacement, NS is also helping an increasing number of staff who want to get a better picture of their options for the future. In 2016, more than 750 staff took up the offer of help and advice from the Careers Advice department. We also revamped the products and services on offer in 2016.

Two franchises that used to be operated by NS have been awarded to Arriva and Syntus. Top priority was given to the smooth transition for the NS employees, who had on average been working for NS for some considerable time. The managers and HR staff involved ensured that this went well.



## Leadership at NS

People in leading positions at critical places in NS need to be effective and flexible if they are to be able to improve operational and financial performance. They also need an exemplary moral compass with regard to integrity and ethics. The operational managers are important, as are the 190 senior managers in positions that have a major impact on performance from the perspective of passengers and in operations.

We are investing selectively in developing the current leaders and moving them onwards and upwards, as well as preparing the future leaders. We have a picture of the internal successors for both the longer and shorter term. Of the twelve appointments last year to top-50 positions, 75% have come from the internal succession planning.

### Leadership development

We offer customised support and in-company leadership programmes to help staff with promotion potential to make their next career move. In 2016, the second edition of our international leadership programme Navigator started. Participants in this programme have been appointed to successor positions for a top-50 position.

In 2016, 66 trainees took part in the trainee programme for operational management, IT, procurement, technology and finance. In the sector, our trainee programme has been voted the most appealing traineeship. The number of former trainees now working in a key position is nine. Last year there were five.

### Team development

In 2016, NS trained twelve internal team coaches. They teach teams to work together better and more effectively. These team coaches help us to save considerably on external expenditure, actively learn from and with one another within the organisation and increase the effectiveness of our teams. In 2016, 25 teams worked with a team coach.

## Employee participation

The Executive Board and the Central Works Council (COR) had an intensive dialogue in 2016 in which they worked together on major issues. One important task was to restore confidence within NS and improve operational performance. The COR has been important consultative partner in the strategic decision. The employee participation body formulated this in a vision document entitled '*Vanuit onze kracht*' ('Based on our strength'). It sets out the choices made by the employee participation body with regard to the future of NS. Following on from this, the COR gave its advice on a number of these strategic choices, including increasing the size of the Executive Board from three to five members and the new setup for direct reporting lines to the Executive Board. The NS strategy will be implemented further in the period ahead. The NS employee participation body will have an important role here too.

## Staff engagement

In 2016, NS staff took part in the biennial Employee Engagement Survey. 61% of the employees completed the questionnaire. A striking result is that the satisfaction score has remained the same at 7.3 (2014: 7.3) despite the many affairs within and around NS (2014: 7.3). Work at the employee's business unit scored 7.6. Unfortunately inappropriate behaviour among colleagues increased in 2016. This led to the development of a 'toolbox for inappropriate behaviour', that managers can use to give the worst performing teams aids for interventions. The toolbox was ready for use at the end of the year.

The Employee Engagement Survey report can be used to make specific agreements on targeted improvements down to the level of the individual team.. Managers have since initiated 1,300 actions. In 2017, HR will monitor the extent to which the actions have been carried out.

## Other activities



Innovation and sustainable procurement support and reinforce the NS performance and activities.

## Sustainable procurement

NS purchases over €1 billion of goods and services annually. As the purchasing party, NS can exert an influence on suppliers to get them to make their products and processes more sustainable. This lets them make a major contribution to our sustainability objectives. Our CSR requirements are stated in the procurement governance rules and are also embedded in the General Terms and Conditions of Purchase ([www.nsprocurement.nl](http://www.nsprocurement.nl)). We also work closely with market players and challenge them to submit innovative and sustainable offers. We are using the following initiatives to carry out our steering role:

- Supplier assessments

Since 2014 we have been carrying out Corporate Social Responsibility (CSR) assessments at our biggest suppliers, looking to see how they handle aspects such as the environment, the social and ethical sides, and the supply chain. Scores make it possible to compare suppliers and estimate the risks. Assessments were also used in 2015 for awarding contracts. The CSR assessment is mandatory for parties who are awarded a contract. NS is working together with DB, SNCF, Alstom, Bombardier and Knorr Bremse on the Railsponsible initiative, with the aim of using it as the standard methodology within the rail industry.

- Making procurement more sustainable by using tendering plans and 'circular' purchasing (i.e. looking at recycling etc.)

NS uses a tendering plan for its EU tendering activities. This is an internal document that describes the process steps that are needed when preparing an invitation to tender. The tendering plan uses Socially Responsible Procurement (SRP) for describing the selection and award criteria. These criteria were embedded within the plan in 2015.

- Code of conduct for suppliers with the biggest spend

Every year, suppliers are asked to subscribe to our codes of conduct, if they have not already done so. The code of conduct explicitly states the conditions under which we want to do business with suppliers. One general requirement, for instance, is that suppliers must shoulder their share of responsibility in socially aware business practices and subscribe to the principles encapsulated in relevant standards, as laid down in such documents as the Universal Declaration of Human Rights and organisations such as the ILO, OECD and ICC.

The code became part of the contract for new suppliers in 2015. NS arranges for an independent party to check whether suppliers are complying with the code of conduct. If the code is not observed or if there are infringements, we first assess the risk. Then we start discussions with the supplier and ask for an improvement plan. In cases of serious violations such as corruption, a decision to terminate the relationship may be made. Exclusion criteria also apply to subcontractors used by our suppliers.

NS subscribes to the code of conduct drawn up by NEVI, the Dutch association for purchasing management, which provides guidelines for acting ethically and for fair business practices (Guide to responsible procurement, NEVI 2012). NS has drawn up a policy to prevent bribery and corruption. As part of the implementation, all purchasers are taking an e-learning module on Ethics & Compliance, and attention is being paid to the importance of the proper observance of the policy.

## Innovation

As a nationwide carrier, NS wants to be in the vanguard of sustainable mobility, with an attractive product. This ambition is a driving force behind innovation and something we focus

on together with our staff, sector partners and other stakeholders such as suppliers. We encourage each other to develop new technologies, services and products that will improve the service we provide to passengers. We are introducing innovations both in our existing products, services and processes and in new ones. A few examples of innovations in 2016 are given below.

- The use of virtual reality in maintenance and training
- Mobile maintenance teams for 'Flirt' type Sprinter trains
- Preventative maintenance sensors
- New features in the Journey Planner (online and app) and the NS International app, such as the train radar, train composition and location on the platform
- Travelling with a mobile phone ticket: purchasing tickets, checking in and scanning using a smartphone
- Information on disruptions in a striking yellow bar at the bottom of the screens showing train departures at stations
- First Mini Service Station at Didam station: a unit with toilet, ticket machine, check-in module, journey information and vending machine with confectionary
- Amsterdam Regional Travel Ticket
- Modernised information desks
- First sustainable StationsHuiskamer (Station Living Room) in Baarn
- Anonymised use of Big Data for journey advice

## Innovation fund

NS is encouraging and investing in start-up businesses with smart solutions for mobility in the Netherlands. In 2016, NS organised a Smart Mobility Pitch Event jointly with ANWB (Dutch Automobile and Cyclists' Association) in Delft. We also organised a matchmaking event with ProRail for 100% sustainable stations. That brought us into contact with promising start-ups in the field of mobility. Pilot projects were carried out with a number of start-ups, such as the winner of the event Predict.io on not forgetting to check out. Cooperation between NS and start-ups can take the form of a partnership, financing for the start-up or NS acting as a launching customer. NS set up the NS Innovation Fund to let it invest in these start-ups. In total, the NS Innovation Fund has €8 million available. The NS Innovation Fund already invested €3 million in the Mainport Innovation Fund II (MIF II), a cooperative venture involving NS, the Amsterdam Port Authority, KLM, Schiphol and Delft University of Technology. In 2016, MIF II invested in Viriciti, a monitoring platform aimed at increasing the range of electric buses, for example.

## NS Foundation for Soil Remediation

The NS Foundation for Soil Remediation (SBNS) was set up over 19 years ago to examine NS sites for evidence of soil contamination that dates from before NS became an independent company in 1995. It also arranged soil remediation where necessary. The activities of SBNS came to an end in 2016. The Foundation was discontinued with effect from 1 January 2017: any soil contamination has been identified and all urgent cases of contamination have been dealt with through soil remediation or control measures.











# Our impact on the environment and on society

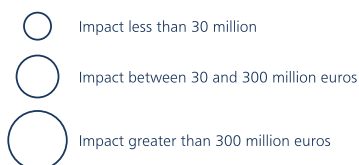


More than 1 million trips by train and bus every day mean that NS has a major impact on society in the Netherlands: in mobility, safety, emissions and expenditure. We express the positive and negative environmental and socioeconomic effects on our surroundings in euros in order to present a transparent picture of the breakdown and scale of this social impact.

## Our impact in a nutshell

The diagram below shows developments over the past two years and the relative scale of the social impact. Our social impact has improved in virtually all areas. Passengers travelled 350 million kilometres more by train in 2016 compared with 2015, which means that our positive social impact on mobility and safe travel with respect to cars has improved once again. Because trains were running on 73% wind energy in 2016, our environmental impact also improved while measures helped reduce the negative impact of time spent travelling in packed trains. Because of a fatal accident involving a railway worker, the negative impact of the safety of travelling by train increased.

	Negative impact			Positive impact				
	Environmental impact	Safety of travel	Occupational safety and personal safety	Journey time and mobility	Safe journeys compared to the car	Indirect expenditure	Environmental impact avoided (w.r.t. cars)	Education and training
Degree of impact								
Development in 2016 wrt 2015	-13%	1%	-25%	3%	1%	4%	5%	11%
Development in 2016 wrt 2014	-29%	7%	-58%	7%	7%	1%	14%	17%



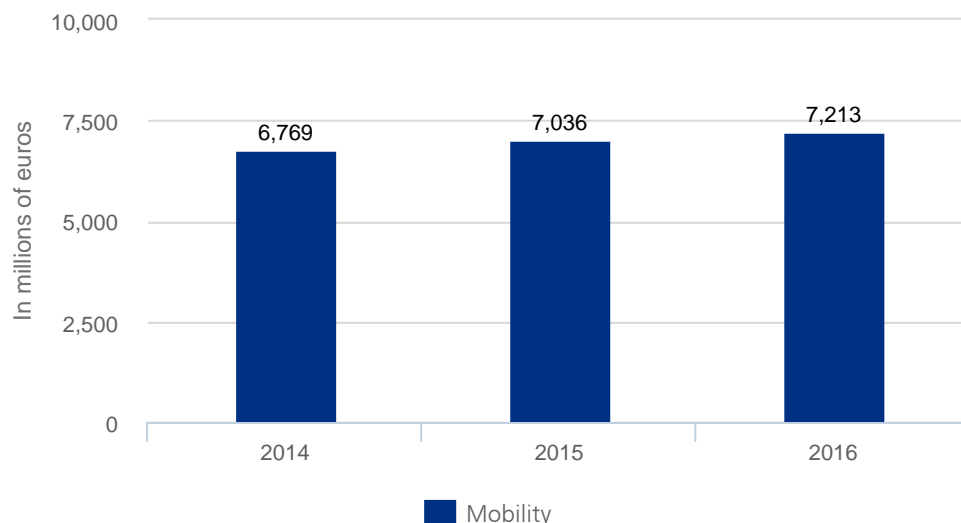
## Key developments in 2016

### Socioeconomic impact of mobility and journey time

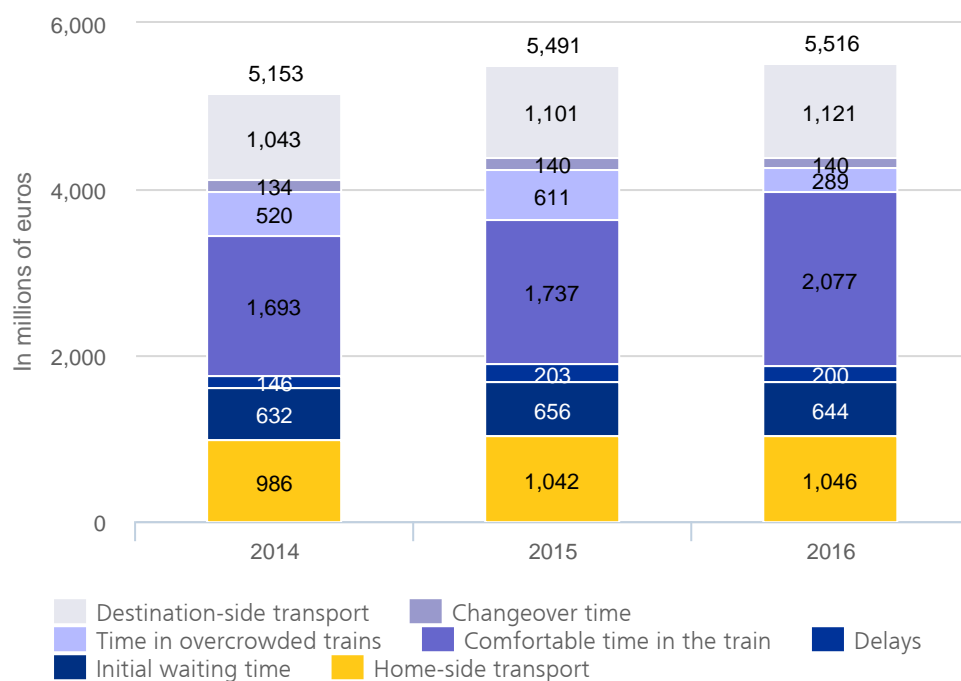
NS and its sector partners are creating a socioeconomic impact by providing mobility and by giving people the opportunity to travel from A to B for work, study or recreation, thereby contributing to the economy. Travelling by train also helps connect people and promotes social inclusiveness. The importance of mobility in the Netherlands has been valued by the Kennis Instituut Mobiliteit (a mobility knowledge centre) at a minimum of €70 billion. At 37 eurocents per passenger-kilometre, €7,213 million of that can be ascribed to NS (€7,036 million in 2015).



## Mobility



## Journey time



The travelling time for the door-to-door journey results in social costs because passengers are not able to utilise their time as they would like. This applies above all to time lost to delays and to time spent in overcrowded trains (for example due to a lack of seating). The negative impact of travelling was €5,516 million in 2016 (€5,491 million in 2015). The increase in the negative impact was due to the fact that there were more train journeys. The impact of time spent travelling in overcrowded trains has improved substantially thanks to measures taken by NS to deal with overcrowding, such as the deployment of more rolling stock.

To improve the social impact of mobility, NS aims to provide accessible and affordable public transport. We are trying to minimise journey times, for example by implementing

improvements in waiting times, punctuality and capacity in the *Better and More* programme. We also seek to reduce journey times by enabling smooth changeovers between the train and other modes of transport and by providing the best possible journey information. In 2016, NS published a joint mobility vision with the city transportation players in the four biggest cities that is all about seamless door-to-door travel. We are also improving access and comfort by a better distribution of passengers during busy periods, by deploying new rolling stock, and by offering facilities such as quiet zones and Wi-Fi in the train. This makes it possible for passengers to utilise their journey time more effectively, reducing the social costs of journey time. To summarise, the impact analysis shows that 'time is money': the time of the entire journey needs to be shortened, and passengers must be able to use time spent in the train efficiently and in comfort.

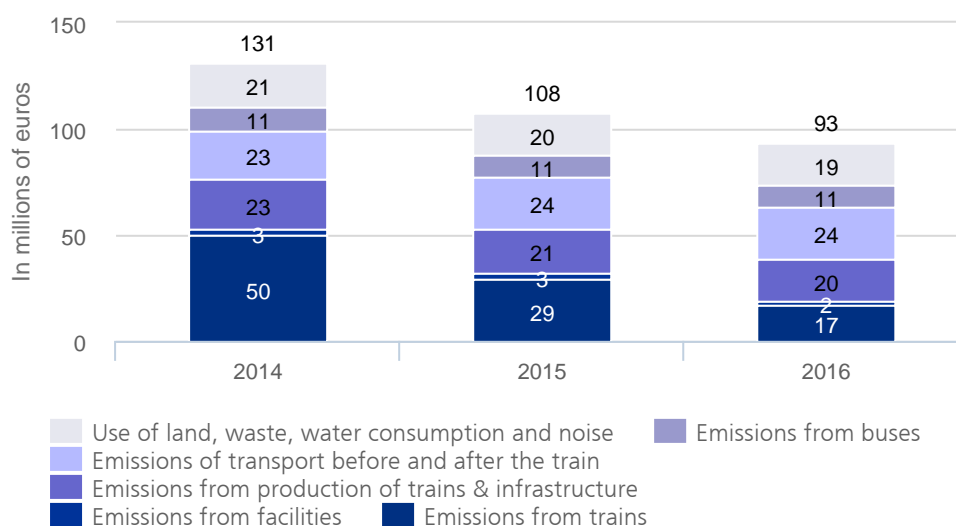
## Environmental impact: emissions, land use, waste, water and noise

The negative environmental impact is mainly the result of using fossil fuels. The use of fossil fuels causes air pollution through emissions of e.g. CO<sub>2</sub>, SO<sub>2</sub>, NO<sub>x</sub> and fine particulates. This has a negative impact on climate, nature and health, resulting in social costs. This negative impact is declining at NS because it is increasingly using green power. Land use, waste, water consumption and noise nuisance also result in negative environmental impacts. Compared with cars, trains have a positive environmental impact. Travelling by train avoids some air pollution in fact, because pollution produced by the train – along with the public transport bicycle – is relatively low compared to car journeys and alternatives for transport to and from the station. The positive impact on noise and land use compared with the car concerns the roads and noise abatement measures that are not required because passengers are opting for the train. We have only calculated the positive environmental impact compared with the car for 'elective passengers', i.e. those who are willing and able to make a choice between the car and the train.

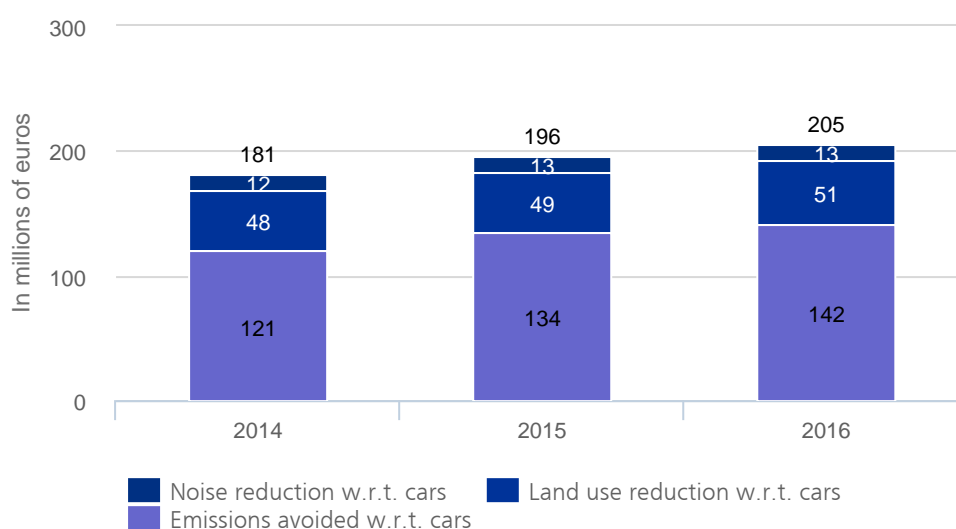
Our negative environmental impact improved by €15 million in 2016, mainly due to the switch to using wind energy from 2015 onward. This meant that 73% of the energy used by our trains and buildings was from new green power sources in 2016; as of 2017 this figure will be 100%. The positive environmental impact of travel with NS compared to using the car rose to €205 million as a result.

The current negative environmental impact was about €93 million (€108 million in 2015), broken down into about €48 million as direct consequences of NS and about €45 million in the chain as a whole including transport to and from the station, the manufacture of the trains, plus electricity and infrastructure.

## Negative environmental impact



## Positive impact with respect to cars

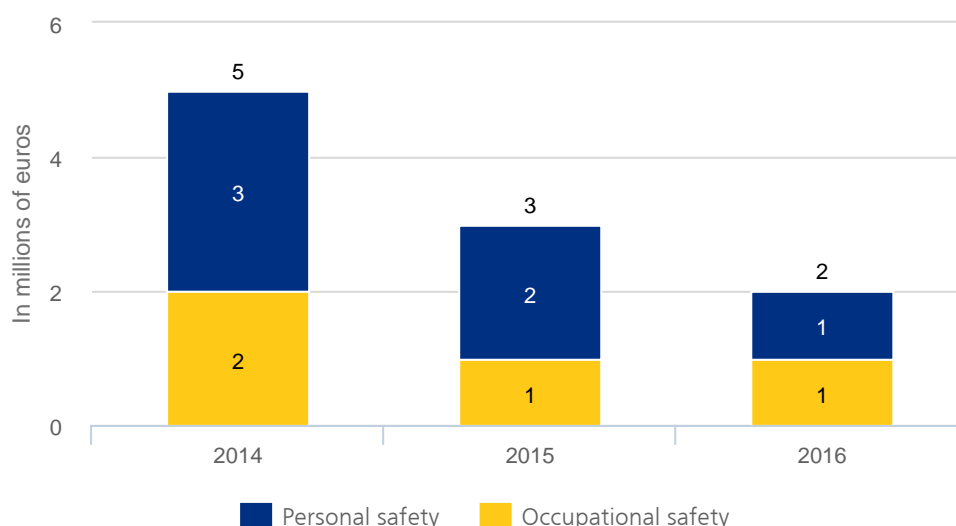


## Socioeconomic impact of safety

NS can promote safety within society by offering safe transport and a safe environment for passengers and staff. At NS, we are working on occupational safety, personal safety and safe travel.

In terms of the occupational safety of our staff, NS is working on preventing physical or mental harm to our employees, for instance as a result of unsafe working conditions, which can mean they are unable to work (or not able to work full-time) or may need care.

## Safety - personal and at work

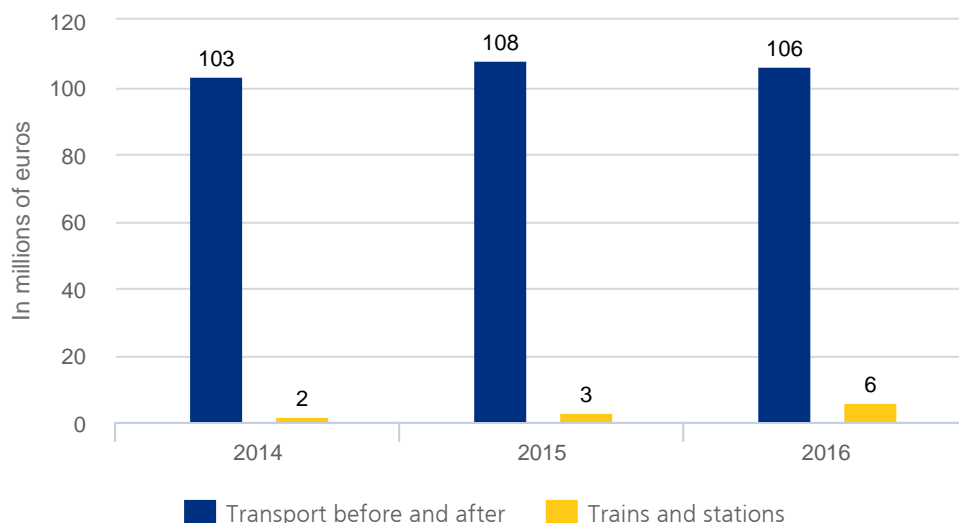


The social costs of occupational safety were about €1 million last year, as in 2015. NS took further steps in 2016 to reduce unsafe working conditions, for instance through risk assessment and evaluation (RAE) reports and by encouraging staff to report unsafe situations.

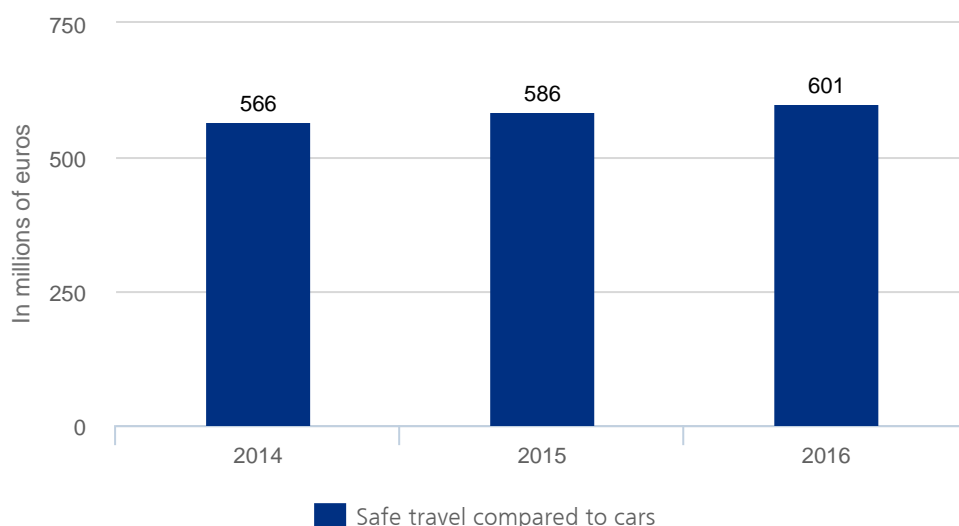
As regards personal safety, NS has paid particular attention since 2015 to preventing aggression against staff and passengers. A range of measures were taken, in cooperation with our partners. We want to improve personal safety by deploying extra staff and a number of camera systems, and reducing the numbers of fare dodgers by bringing forward the planned installation of access gates at stations, as well as through staff training courses. Despite the measures, there were more reported incidents of aggression against our staff, in part because we are encouraging staff to always report incidents. Fortunately the number of cases involving injuries fell, as a result of which the costs of aggression by passengers against staff were about €1 million in 2016, which is less than in 2015.

To provide safe travel, NS is working with its partners on preventing collisions and derailments or unsafe situations at the stations. There were only three incidents with injuries in 2016, compared with 30 in 2015. Unfortunately, in October an Intercity train hit a person working on the track at night, with fatal consequences. That increased the social costs for rail travel safety by €6 million (€3 million in 2015). To further improve safe travel, we are continuing to focus on safety instructions and open communication with staff about improvements. NS is also working with ProRail and other carriers on reducing the number of unsafe situations. The number of traffic accidents in journeys prior and subsequent to the train journey and the impact of these accidents was much higher; the figure was approximately €106 million (€108 million in 2015, after recalculations). Travelling by train is relatively safe compared to transport by car. The positive impact resulting from accidents that are avoided because of people actively choosing the train was only calculated for the 'elective passengers'. The social benefits of safe transport by train were approximately €601 million in 2016 (€586 million in 2015, following recalculation).

## Safe journeys



## Safe journeys by car



## Socioeconomic impact of training, employability of staff and diversity

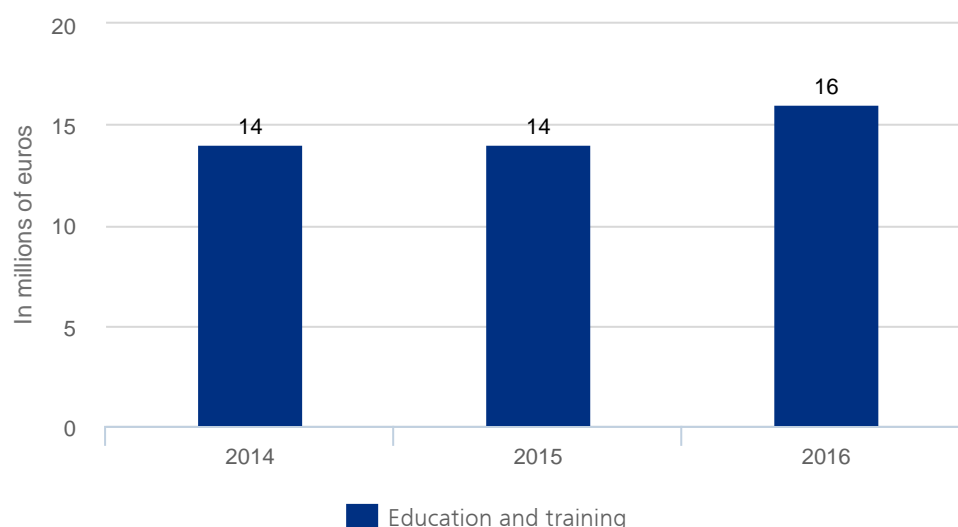
NS exerts a positive socioeconomic impact on society by developing the knowledge, skills and talents of its staff, by aiming to keep them in sustained employment, and by being a diverse and inclusive organisation. The social benefit of training at NS comes from the improvement in the economic value of the potential capacity of its workforce after they have left NS. The social benefits of this in 2016 were approximately €16 million. This is more than in previous years because we are employing more staff.

Incapacity for work limits the employability of employees. This has negative social costs, for example because of higher hospital costs and costs of benefit payments, and the loss of productivity and purchasing power. NS wants to improve that impact.

NS wants to be a diverse and inclusive organisation where everyone feels welcome. Diversity produces social role models and recognition for e.g. women, people with occupational

disabilities and people from migrant communities. In addition, diversity ensures that NS is more aware of what is happening within society, which lets us adjust our policy to suit. We are doing more and more to expand the social benefits of diversity.

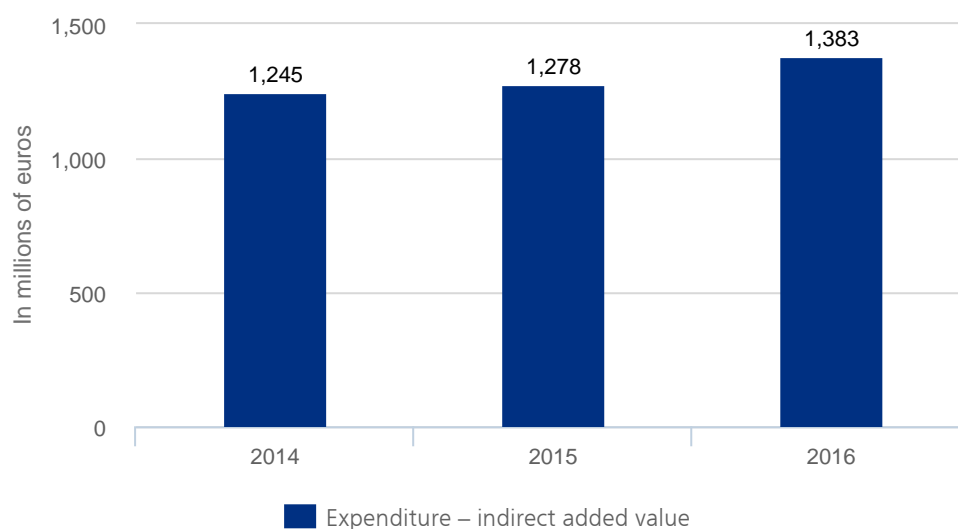
### Education and training



## Socioeconomic impact of expenditure and stations

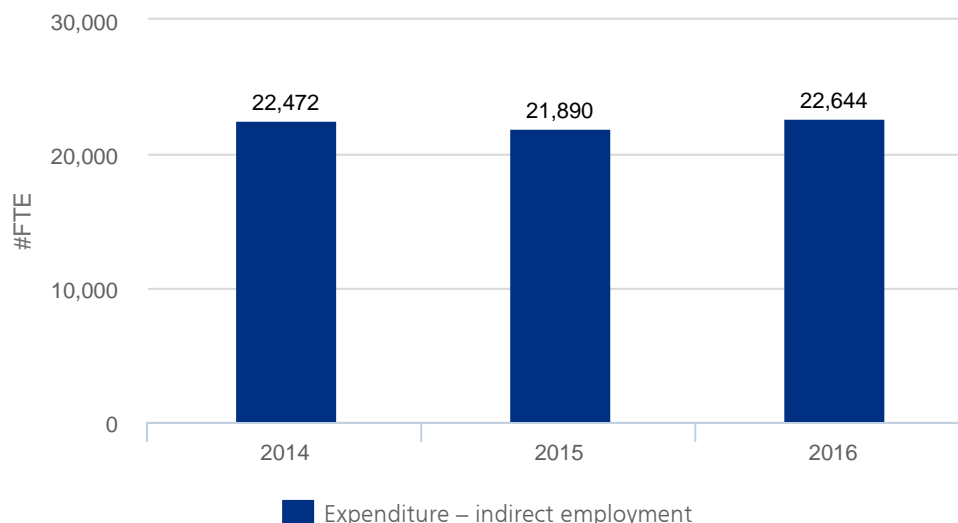
NS has a socioeconomic impact on society through its own expenditure such as procurement, investments and salaries. This means for instance that NS contributes to the added value and employment opportunities at its suppliers. The economic benefits were €1,383 million of added value at suppliers (€1,278 million in 2015), or approximately 22,500 jobs. NS is able to extend its positive social impact yet further through sustainable procurement, e.g. for major categories of purchases such as trains (and their components), buildings and infrastructure, IT and energy. NS undertook a number of sustainable procurement activities in 2016, including participating in Railsponsible, a European sector initiative for improving sustainability.

### Expenditure - indirect added value





## Expenditure - indirect employment



In addition, NS has an impact on the areas surrounding its stations. This consists primarily of enhancing accessibility for local residents (seen in journey times and mobility) and the contribution to improving the living environment, for example through commercial activity around stations.

## Case study: alternatives for Zeeland

NS carried out a market analysis for the future of rail transport in, to and from Zeeland. To give some preliminary insights into possible scenarios for the future, three alternatives were explored in broad terms. A social impact analysis was performed for these alternatives, which provided additional insights.

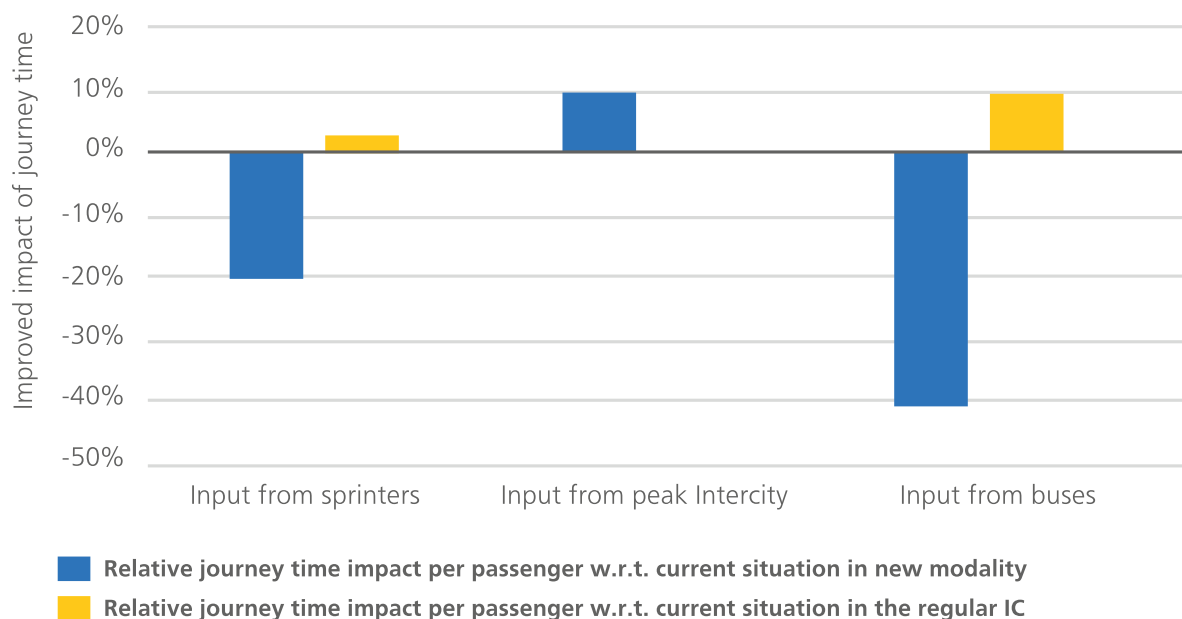
- **Current situation:** there are two Intercity trains an hour that stop at all stations between Vlissingen and Bergen op Zoom.
- **Alternative 1** - extra Sprinter trains: the Intercity service is faster and trains no longer stop at stations between Goes and Bergen op Zoom. We serve those four stations by putting on two extra Sprinters per hour that run between Goes and Roosendaal.
- **Alternative 2** - extra Intercity trains in peak hours: one additional fast Intercity to Amsterdam in the morning rush hour and one extra to Vlissingen in the evening rush hour; in Zeeland, the train only stops in Vlissingen, Middelburg and Goes.
- **Alternative 3** - using buses: the Intercity service is faster and only stops in Vlissingen, Middelburg and Goes, while the stations in between are served by a new fast bus service (twice an hour).

The social impact aspects we quantified were mobility, journey time (subdivided into time on transport, waiting time and changeover time), emissions, noise and safety. All three alternatives add social value compared with the current timetable. The alternative with the greatest social impact is the option in which Sprinter trains are used as that results in the greatest potential increase in passenger numbers. In this case study, we also examined the social effectiveness of investments and the impact on journey times for different categories of passenger. There are also differences between the alternatives in the impact on emissions, noise and safety, but these effects are negligible compared with the other aspects.

A different picture is obtained when the journey time per passenger is considered. In that case, the alternative with extra Intercity trains in peak hours has the most positive impact compared

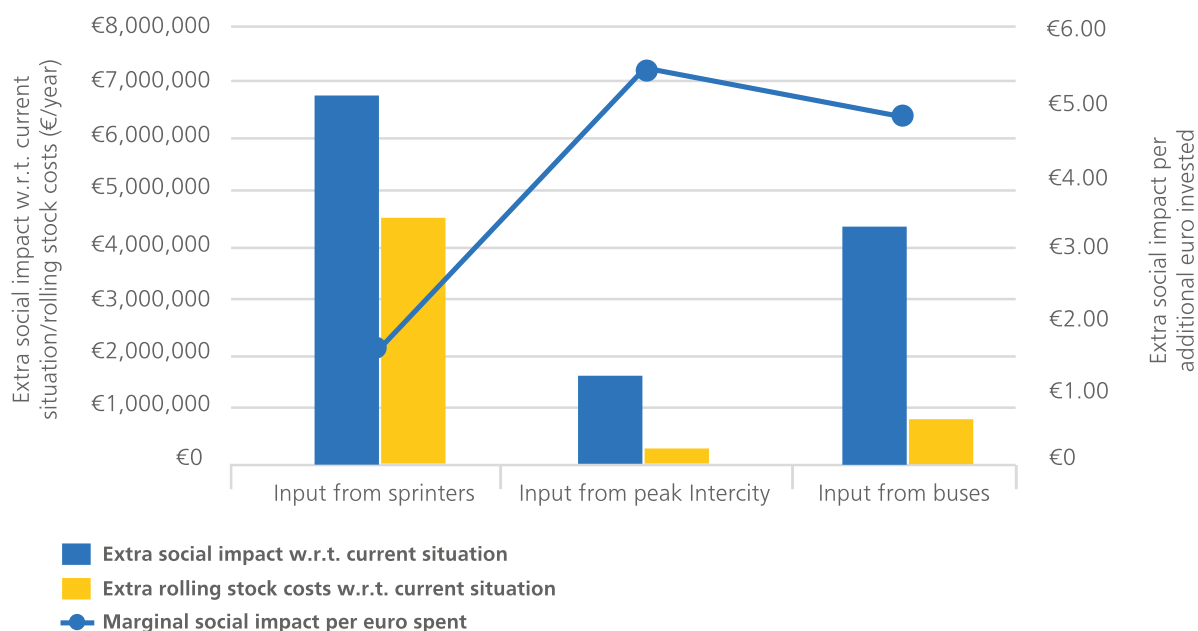
with the current situation, because the journey time improves twice a day without any deterioration during the rest of the day. That will also be the case for some passengers for the alternatives involving additional Sprinters or buses.

#### Relative change in journey time impact per passenger w.r.t. the 2016 situation, broken down by modality



We also calculated the social impact using the expected investment costs per alternative. This gives the rush-hour Intercity trains as the most effective solution. That alternative delivers the most impact per euro invested.

#### Net social impact and rolling stock costs of the three alternatives for the Zeeland connection



The social impact analysis for the different alternatives in Zeeland has given a better understanding of which alternatives are promising in terms of both social and financial returns on investment. The outcomes of this case study gave different options for social impact, which NS used in decision-making and in talks with stakeholders. NS intends introducing the fast rush-hour Intercity trains in Zeeland with effect from December 2017.

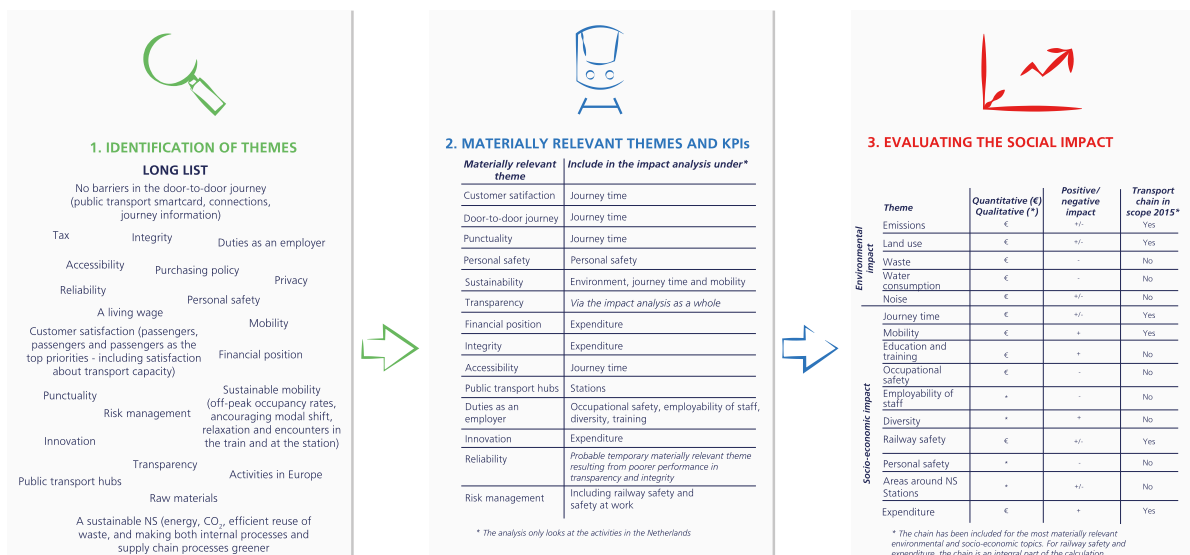
# The purpose of an impact analysis

The social impact analysis underlines the importance of our role as a provider of public transport in Dutch society and shows that the social benefits we generate far exceed our financial result. It also provides us with insights into the social costs of our services in terms of e.g. emissions, safety and journey times, and underscores the importance of continuing our door-to-door strategy.

NS intends to integrate the results of the impact analysis in strategic decision-making and investment decisions. This will not only let us focus on the financial and operational results, but also on increasing the positive sides and lowering the negative sides of the social impact. NS has now worked out several case studies, testing how impact analyses work at the project level, and as a step towards more detailed management information so that we will be better able to provide services for passengers and deploy our resources – including the financial ones – more effectively. One example of such a case study is the one looking at alternatives for the connections in Zeeland (see box).

## Material relevance as the principle for quantifying the scope

### NS SOCIAL IMPACT ANALYSIS 2016



The material topics covered in the material relevance matrix formed the foundations for the scope of the social impact analysis (steps 1 and 2 in the diagram). For each theme (step 3) we show the impact of NS – quantitatively if possible and otherwise qualitatively – including the strategic priorities and the actions to improve this impact.

## Growth process

NS sees the impact calculation as a growth process. In 2016, we did not broaden the transport chain scope or the quantifiable themes. Over the next few years, we will focus on further integration of the social impact calculation into investment decisions.

We are publishing the methodology, the underlying principles and the choices made on [www.ns.nl/mvoberekeningen](http://www.ns.nl/mvoberekeningen) (Dutch only) so that the results can be put in the appropriate context. NS is doing this to inspire other companies and help develop a standard for calculating social impact. In 2016, NS provided a study case on calculating social value as part of the curriculum at Yale. NS is also helping to create a standard for impact analysis, for instance by taking part in 2016 in the 'Social Value Creation' initiative by De Groene Zaak, a Dutch partner of the World Business Council for Sustainable Development.

# Methodology, scope and principles

- An assessment was made of the selected themes to see whether quantifying them is feasible with the available data and the defined parameters for the valuation. If not (e.g. diversity), the theme is included qualitatively. This is an evaluation of the social costs and benefits that are not covered in the financial results. The evaluation uses external (academic) studies as well as our own data.
- Scope: The impact analysis focuses exclusively on the activities of NS in the Netherlands, which are included as fully as possible.
- Reference for the methodology and scope: For a detailed description of the methodology and scope for each theme, please see [www.ns.nl/mvoberekeningen](http://www.ns.nl/mvoberekeningen). (Dutch only)
- Changes: Improvements have been made to the method for measuring delays; this could only be done retrospectively for 2015. The old method was used for 2014. For safety with respect to the car, we made use of a more up-to-date external source and incorporated this in retrospective calculations for 2015 and 2014.
- A corrective factor is applied for inflation for each year.
- In many of the themes, NS works with partners to improve the results and the social impact. Together with ProRail, we are for example improving rail safety, punctuality and journey times. Despite the fact that a share of the impact in many of the themes could be assigned to our partners in the sector, we are not yet going so in the calculations. We are looking at methods for including such a split in subsequent publications. The positive and negative impacts are being presented separately for each topic, given that it is not possible to balance them off against each other (because the positive impact is often expressed as the difference with respect to transport by car).

# III Operations abroad

# Abellio



Abellio is a fully-owned subsidiary of NS and primarily operates in the passenger transport markets in the United Kingdom and Germany. Every day, Abellio people work to deliver safe, accessible and reliable public transport. Abellio aims to build strong relationships with its customers, stakeholders and employees.



## Franchises

Abellio UK currently operates the ScotRail and Greater Anglia rail franchises, and the Merseyrail franchise, in a 50/50 joint venture with Serco. In addition, we operate Abellio London & Surrey, which provides bus services in the centre, south and west of London, as well as in the north of Surrey. Our bus operations give us complementary travel expertise, especially in the form of rail replacement services to our rail franchises.

In Germany, Abellio currently operates in two regions: Abellio Rail Nordrhein-Westfalen and Abellio Rail Mitteldeutschland which had its first full year of operation. Abellio is also setting up operations in southern Germany (Abellio Rail Baden-Württemberg) after winning the Stuttgarter Netz rail franchise and thus adding a third geographical area in Germany to its portfolio. Abellio Germany also won the S-bahn Rhein-Ruhr franchise and retained the Ruhr-Sieg Netz, both in the North Rhine-Westphalia region. Abellio continues to consolidate and grow in these two countries.

NS decided to start the process of selling Qbuzz in 2016, with the implementation of the new NS strategy of 'Spoorslags Beter'. The sale is expected to be completed in 2017. Abellio also decided to discontinue bidding in Scandinavia, and its Abellio Scandinavia bid office was closed down on the 1 April.

## Turnover

In 2015, Abellio achieved a turnover similar to NS's passenger services for the first time. Abellio maintained its position in 2016 with a turnover of €2.1 billion, excluding revenues of €174 million from joint ventures. This was not a given at the start of the year, as two of Abellio's major UK franchises were re-tendered by the British Department for Transport in 2016: Northern Rail and Greater Anglia. While Abellio lost Northern Rail to Arriva in March, it was able to hold on to Greater Anglia, a franchise it first won in 2012.

In the wider political scene, the UK voted to withdraw from the EU. The value of the GBP decreased as a result. Based on the 2015 exchange rate for the GBP, Abellio's turnover would have been €221 million higher.

## Facts & Figures

- 13,280 employees (12,913 FTEs) (excluding joint ventures)
- EBIT €55.6 million
- Revenue €2.1 billion

## Abellio's strategy



Abellio's strategy helps NS to achieve its objectives and has three pillars: prepare, learn and earn, whilst effectively balancing risk and reward.

## Prepare

In the early 2000s, NS decided to enter the deregulated railway market to prepare for the liberalisation of European markets, in line with legislation such as the EU's Fourth Railway Package. Since then, Abellio has built up a strong position in the United Kingdom and Germany. At the same time, other European rail companies such as DB and SNCF are active in the Dutch public transport market. With its clear focus on the key rail markets in Northwest Europe, NS is developing a strong position in the European market through Abellio.

## Learn

NS is learning from Abellio's experience operating in highly competitive and commercial environments. At the same time, Abellio incorporates best practices from the Netherlands in its bids and when running its operations. This means that both NS and Abellio learn from the experience of bidding for tenders and franchises, as well as through operating franchises. By benchmarking ourselves with Abellio in certain business areas, we ensure that we learn from each other. This helps keep our operations competitive in all our markets, including the Core Network in the Netherlands.

In addition, in 2015, ScotRail began procuring the new Hitachi AT200 fleet with a small team of agile fleet procurement specialists. This team shared its learnings with NS at an Abellio UK best practice session, enabling NS to integrate the learnings into its own fleet procurement activities in 2016.

## Earn

Abellio's third strategic priority is to achieve positive, sustainable financial results through effectively managing risks and keeping investments at an acceptable level. The ultimate objective is to create a diversified portfolio of long-term sources of income, and to maintain solid levels of profitability. In 2016, Abellio recorded profits (EBIT) of €55.6 million, of which €36.8m has been achieved abroad. The profits achieved in the Netherlands have been positively impacted by €9.5m following the classification of Qbuzz as 'held for sale', since July 2016. We aim to maintain financial performance at this level in the years ahead, although this will be challenging given the nature of bidding for business.

## Growth strategy

All of Abellio's franchises in the United Kingdom and Germany are expected to be profitable over their contract periods. This is a result of our targeted approach to achieving growth, and effective balancing of risk and reward.

In the UK, passenger railway contracts are tendered as net contracts, meaning that passenger revenue risk is taken by the operator and any subsidy received is calculated on costs net of revenue. In Germany, most passenger railway contracts are tendered as gross contracts, meaning that passenger revenue risk is retained by the tendering Transport Authority and any subsidy received is based on the gross costs of the contract.

In 2016, NS finalised the agreements with its shareholder regarding the overall financial means for its international activities with Abellio. This allows Abellio to continue pursuing its targeted growth strategy in the UK and Germany.

## Abellio UK



Abellio UK is the country's fourth largest rail passenger transport company with revenue (including joint ventures) of €1.9 billion in 2016.

## Description of the UK rail market

The UK rail market has been privatised since 1994, and now operates under a franchise system. This involves companies undertaking a competitive process to win the right to operate individual networks of varying sizes, for a specified period. The majority of the UK's 20 rail franchises are contracted by the Department for Transport, with a combined turnover of approximately £10.9 billion. This is moving to a more devolved model, however, with the constituent nations of the UK and its regions slowly beginning to take more responsibility for awarding franchises. The Department for Transport also renationalised Network Rail, the national infrastructure provider, in late 2015. More structural changes are expected to be made to Network Rail in 2017, including devolved responsibility and decision-making, and the potential for parts of Network Rail to be re-privatised. The UK rail market has a robust tender pipeline, with a number of contracts due to be re-tendered steadily over the coming years. Abellio is expecting to hear the outcome of the West Midlands bid in the course of 2017 and is competing for the Wales & Borders franchise (the decision is due in 2018).

## 2016 in a nutshell

Abellio UK is currently the fourth largest owning group in the UK, with an annual turnover of €1.9 billion in 2016 (including joint ventures). The company's portfolio is on a stable footing for the medium term, with the first potential contract coming to an end in 2022, if ScotRail is not extended.

Abellio UK was delighted to win its bid to continue running the Greater Anglia franchise in October, but was sad to see the loss of its Northern franchise in April, which it had operated since 2004 as a joint venture with Serco. The Merseyrail franchise and Abellio London & Surrey's bus operations continue to be run profitably over their respective contract periods. ScotRail has been through a challenging year following an economic downturn, the UK vote to leave the EU and industrial action, as well as several major infrastructural improvements to prepare the network for the new electrified trains. Abellio UK is working to improve efficiency within the franchise, especially in preparation for the first set of new trains which will begin to be delivered in 2017. The full new fleet will be operational by the end of 2020. This will transform the network completely.

To help with servicing an expanded business portfolio, Abellio UK took over Serco's Fort William Customer Service centre, creating a shared service centre and complementing the existing financial shared service centre in Glasgow. With this takeover, Abellio made sure that over 50 jobs were secured in an area which already has a low employment rate.

In a wider political context, the UK voted to leave the EU in a referendum in June 2016. The effect on the national economy is uncertain, and the UK government has yet to declare its plans for leaving the EU. The long-term effect of Brexit is unknown, although in the short term the effect will be limited and will mainly be reflected in a lower GBP exchange rate. Brexit is likely also to affect the cost of energy in the long term.

## Outlook for 2017

Abellio UK will remain focused on improving operations across its portfolio and driving a step change in the customer experience. This includes continued support from the UK Leadership Team in delivering the ScotRail Improvement Plan and the transformational fleet programme in Greater Anglia.

Abellio UK continues to pursue opportunities to expand its business, and at the end of November 2016 the bid team submitted a bid to operate the West Midlands franchise in a joint venture with JR East and Mitsui. Abellio UK's share of the bid is 70.1%.

Abellio UK has also been shortlisted for the Wales and Borders franchise in a consortium bid with Aecom and Carillion – required as construction partners for light rail scheme and construction projects. Abellio UK's share of the bid is 65%. The contract awards will be announced respectively in 2017 and 2018, and work has already begun on planning for any potential mobilisation associated with a West Midlands franchise win.

Aside from this, Abellio UK will continue to monitor developments in the rail industry and the



wider economy, seeking to proactively shape government policy to its advantage and effectively communicate its work to stakeholders.

## Organisation and staff

Abellio UK empowers its operating companies to manage their own businesses, with oversight and intervention as and when necessary. Abellio UK's head office is based in Glasgow, with a subsidiary office in London, and consists of a number of subject-matter experts as well as a specialist bid team.

### Social responsibility

Abellio UK believes it has a responsibility towards the communities in which it operates. It has strategic and local partnerships with communities, and sponsors numerous charitable organisations and events. In 2016, for example, Abellio UK helped the San Fairy Ann cycling club, sponsored a number of events for the Campaign for Better Transport, and was a lead sponsor for the London Transport Museum and the Railway Benefit Fund for railway staff.

## Abellio Greater Anglia

The Greater Anglia franchise operates in the East Anglia region of England and transports passengers on intercity, commuter and rural networks, including services between Stansted Airport and London Liverpool Street. Abellio UK retained the right to operate the Greater Anglia franchise for a further nine years, from 16 October 2016 until 2025. As of this date Abellio will manage this franchise in a 60/40 joint venture with Mitsui.

The new Greater Anglia franchise will provide new trains for the entire fleet: 660 vehicles will be built by Bombardier in Derby, and 378 vehicles by Stadler in Switzerland. All trains are leased to the operator, meaning there will be no residual value risk for Abellio. These will all be in service by the end of 2020, and will provide 33,000 extra seats for weekday commuters. Additionally, there will be an entire station refresh, a new timetable aimed at improving customer satisfaction, and new facilities and retail outlets. Bike&Go will also be extended to five more locations.

## Abellio London & Surrey

Abellio London & Surrey predominantly operates bus services under contract to Transport for London (TfL) from five leased bus depots located in South and South West London. In addition, the Surrey entity provides both contracted and commercial bus services in North West Surrey from a leased depot in Byfleet.

In its London operations, Abellio is contracted by TfL to operate 47 routes, each on a five-year contract with a potential two-year extension. 2016 has seen heavy bidding activity for AL&S, which now operates 8.4% of the London bus market – up from 5.45% in January 2012; in 2016, AL&S lost five routes and gained a further five. At the end of 2016, AL&S had a fleet of 765 buses.

AL&S is expecting to expand its depot capacity by adding another depot in Southall (West London) in late 2017. This is expected to increase fleet capacity by approximately 130 buses, and will complement the organic growth which AL&S will continue to pursue in 2017 and beyond.

### Performance

Abellio London (West), part of Abellio London and Surrey, came in at the top of TfL's performance league table in 2016.

### Safety

AL&S achieved a Road Traffic Accident rate of 40.2 per million kilometres in 2016.



## Merseyrail

Abellio UK operates Merseyrail on a 50% joint venture basis with Serco, in a franchise agreement with Merseytravel. The contract started in 2003 and will run until 2028. Merseyrail is a suburban metro service in and around Liverpool which runs almost 800 trains per day, carrying over 100,000 passengers on an average weekday. There are 66 stations on the network, four of which are underground in the city centre, providing access to work, study, shopping and leisure destinations for Liverpool residents.

Now that Merseyrail is halfway through its franchise, plans for how to deliver the second half of the franchise were put in place and agreed in 2016. These involve three major transformational programmes: a new fleet, smart card technology rollout, and taking some of its asset management from Network Rail in house. In addition, significant planning has been underway to deal with the closure of the Wirral Loop line at the start of next year. Between January and June 2017, the existing concrete and track between Wirral and Liverpool will be dug out and new concrete and track laid in its place. The new rolling stock has been ordered from Stadler by the franchise holder, Merseytravel, to be running by 2020. Abellio UK is supporting Merseyrail in its transformation activities, bringing lessons learned from its other franchises.

## ScotRail

Abellio UK started operating ScotRail on 1 April 2015. The contract is for ten years, with a seven-year break clause exercisable at year five. ScotRail provides inter-urban services between the seven cities of Scotland; urban services around the Glasgow conurbation, urban services serving Edinburgh, and rural services reaching straight across Scotland. As part of the franchise agreement, Abellio UK entered ScotRail into an alliance with Network Rail, creating a workforce of 7,500 people and providing more than 98 million passenger journeys per year.

The alliance is a commitment from Abellio and from Network Rail – the UK's infrastructure provider – to work together closely to deliver efficient and safe operations every single day. In practice this means combined teams, and the ScotRail Alliance is jointly run by Abellio ScotRail and Network Rail.

Our vision for ScotRail includes initiatives to be delivered over the life of the franchise to improve the passenger experience and customer satisfaction. A number of initiatives were delivered in 2016, which included expanding Customer Information Screens and CCTV sets across the network, providing an additional 800 cycle spaces at stations, transforming retail provisions at eight stations (ToGo retail kiosks), refurbishing ten scenic trains (Class 158), upgrading the underpass at Kilmarnock station (which involved artwork from a local artist) and enabling all season tickets to be held on smart cards. In addition to this, the multimillion pound station redevelopment schemes at Inverness and Aberdeen were commenced in 2016 and the new fleet project is ongoing, with the first Class 385 due to be operational towards the end of 2017.

ScotRail experienced challenges during 2016 due to a significant downturn in the Scottish economy, an oil-related slow-down in North East Scotland, extended industrial action over the proposed implementation of driver-controlled operations, and some further challenges associated with extensive engineering works with in the closure of the Winchburgh Tunnel and the Queens Street Blockade. This meant that ScotRail did not meet its performance targets in 2016.

ScotRail's performance target is to have a moving annual average (MAA) of its public performance measure (PPM) of 91.3% or higher. In October, the MAA figure was 89.6%; this was the fourth month in a row where the target was not met, which caused Transport Scotland to request a performance improvement plan. This has already resulted in an improved punctuality figure of 91.6% for the month of January 2017, however in comparison to other national operators, ScotRail is in the top ten (see table below, which shows the number of trains operated per day per operator and the punctuality figure per operator in UK).

TOC	PPM MAA	Trains per day
1 Merseyrail	95.6%	614
2 c2c	94.7%	400
3 LOROL	94.7%	1356
4 TfL Rail	94.1%	267
5 Chiltern	93.4%	432
6 East Midland Trains	91.8%	476
7 Arriva Trains Wales	91.5%	982
8 Northern	91.2%	2608
9 Heathrow Express	90.8%	144
10 Abellio ScotRail	90.0%	2296
11 CrossCountry	89.6%	297
12 Abellio Greater Anglia	88.9%	1308
13 London Midland	88.9%	1295
14 Great Western	88.6%	1593
15 TPE	88.5%	240
16 Virgin West Coast	88.3%	298
17 Caledonian Sleeper	87.8%	3
18 South West	87.5%	1749
19 South Eastern	85.9%	2002
20 Grand Central	84.4%	18
21 Hull Trains	82.8%	14
22 Virgin East Coast	82.6%	154
23 GTR	74.6%	3514

Abellio UK is helping ScotRail to implement its performance improvement plan. This is partially dependent on the delivery of agreed initiatives from other parties (such as Network Rail). The performance plan includes a series of initiatives and actions which will steer ScotRail towards hitting its performance targets in early 2017. Some of these include:

- The identification, monitoring and protection of the 'Golden Trains' that, if delayed, have the biggest impact on the rest of the rail network;
- A programme of upgrades to trains to rectify the most common causes of faults; and
- An £8-million Asset Improvement Programme to replace or enhance key pieces of critical railway infrastructure in order to ensure that they are working at their absolute best.

Abellio UK is also helping ScotRail to improve its passenger communications initiatives so that passengers are kept informed of any disruptions before and during their travel. In addition to this, the political environment in Scotland remains uncertain and is being closely monitored.

	Greater Anglia	ScotRail	Abellio London & Surrey
Annual turnover 2016 (in millions of €)	€768.6	€745.6	€227.5
Customer satisfaction NRPS	79%	83%	N/A
Punctuality PPM (annual average)	88.9%	90.0%	N/A
SPADs (Signals Passed at Danger)	11	12	N/A
LTIFR (Lost Time Injury Frequency Rate per million hours worked)	6.33	3.95 *	1.40
CO <sub>2</sub> emissions	37.5 grams per passenger kilometre	67.0 grams per passenger kilometre	1.1 grams per bus kilometre
Number of passengers per day	Approximately 354,000	Approximately 227,000	Approximately 326,000

\* Due to a change in systems, the methodology for calculating available hours has changed from 2015. This change affects the LTIFR.

## Abellio Germany



Abellio Germany is the country's fifth largest rail passenger transport company with revenue of €195 million in 2016.

## Description of the German rail market

The German regional railway market has a volume of around €10 billion per year and a network covering roughly 670 million train-kilometres. The market has been deregulated since 2003, with responsibility for its organisation assigned to the 16 federal states of Germany. Each state has its own way of managing its regional market. This has led to the creation of 27 regional transport authorities, each of which has adopted a different tendering regime, with a substantial flow of potential franchises. There is a constant flow of tenders into the market, and this will continue well into 2017.

While the number of players competing with state-owned Deutsche Bahn (DB) AG has continued to grow, and the majority of tenders were awarded to parties other than DB, DB still services 70% of regional rail transport in Germany. It is expected that this number will go down to 60% in 2020.

In Germany, Abellio only has gross contracts with the PTAs, which means that Abellio Germany is paid for its service per train kilometre. The revenue / fare box risk is allocated to the transport authority. On top, inflation risk is hedged by appropriate escalation formulas. Thus, the risk profile of gross contracts is low.

## 2016 in a nutshell

Abellio Germany is currently the fifth largest train operating company in Germany, with an annual turnover of roughly €195 million in 2016. In recent years, Abellio has built up a strong competitive position in the German railway market and won a number of franchises. With these wins, Abellio Germany will boost its revenues to above €500 million in 2020, and will become the third largest operator in Germany based on train kilometres.

Abellio aims for controlled growth. This means we opt for selective and responsible participation in tenders, professional mobilisation and commercial operation.

Abellio Germany strengthened its market position in 2016 by winning three tenders; Abellio Rail Nordrhein-Westfalen will take over six lines of the Rhine-Ruhr S-Bahn between Dortmund, Wuppertal, Oberhausen and Haltern am See in December 2019. 2016 was the first time we had to defend one of our franchises: the Ruhr-Sieg Netz (RSN2). We will continue our service between Essen, Hagen, Iserlohn and Siegen until December 2034. In December 2016, Abellio Rail NRW successfully started the domestic part of the Niederrheinnetz on three lines between Düsseldorf / Mönchengladbach and Bocholt to Emmerich. In April 2017, Abellio will start the remainder of the Niederrheinnetz by connecting Emmerich to Arnhem (NL).

In 2015, a competitor appealed against the decision to award Abellio the largest lot of Stuttgarter Netze (STN). The high court in Karlsruhe (OLG) ruled in favour of Abellio on 9 May 2016. Abellio will operate STN between Tübingen and Mannheim, starting in June 2019. We will run 6.8 million train kilometres per year along the 480-km route network with 114 stations. Around 250 new colleagues will join the Abellio team in the Stuttgart region, and 43 Talent 2 trains from Bombardier will be operated in the southwest of Germany. The new Abellio office in Stuttgart was opened in 2016.

In Mitteldeutschland, the STS franchise went into its first year of operations in 2016. While the overall performance is satisfactory, the many infrastructure works of DB Netz prevented Abellio Rail Mitteldeutschland from reaching its full performance potential.

The Regional Transport Association of Westfalen-Lippe (NWL) awarded Abellio the gold medal for quality leadership this year. For the second year in a row, Abellio was the frontrunner in all three categories of punctuality, service performance and vehicle condition. Abellio also received top marks across all categories in the quality rankings of the Rhine Ruhr Public Transportation Authority (VRR). Punctual journeys, good condition of the vehicles and exceptional service were the decisive factors for our customers according to the VRR report.

An employee of Abellio Deutschland won the 'Eisenbahner mit Herz' [Big-hearted Rail Employee] competition for the first time in the company's history.

## Outlook for 2017

Even after the 2016 wave of tendering procedures, the market is expected to remain buoyant, partly due to the increase in financial support provided for regional rail transport by the federal government. Subsidies were increased from €7.4 to €8.2 billion per year. Abellio will thus continue to bid selectively and responsibly.

As of Spring 2017, Abellio will provide cross-border traffic through the Lower Rhine region for the first time. This operation will link both Düsseldorf and Mönchengladbach with Arnhem. In 2017, we will start with mobilisation of the STN franchise out of our new office in Stuttgart. For this network we plan to build a new workshop in Pforzheim. We will also focus on the mobilisation of our other newly-won franchises, such as Rhein-Ruhr Express (RRX), Diesel Sachsen Anhalt (DISA), S-Bahn Rhein-Ruhr (SBRR) and Ruhr Sieg Netz (RSN2).

## Organisation and staff

In view of the recent growth in our German activities, we have invested in a more robust company infrastructure and a regional substructure with separate directors for each of the three disciplines of bidding, mobilisation and commercial operation.

Our new governance structure underlines these requirements. As part of the implemented process, we are strengthening our management and have hired qualified managers for HS&E, Audit and Risk. We are in discussions with the unions Gewerkschaft Deutscher Lokomotivführer (GDL) and Eisenbahn- und Verkehrsgewerkschaft (EVG) regarding a collective tariff agreement. We hope to be able to fully complete the process in 2017.

## New entity: Abellio Rail Baden-Württemberg

Abellio Rail Baden-Württemberg GmbH (formerly known as Abellio Southwest GmbH) will operate Stuttgarter Netz, starting in June 2019. We will traverse 6.8 million train kilometres per year along the 480-km route network with 114 stations. Around 250 new colleagues will join the Abellio team in Baden-Württemberg.

## New rolling stock

Abellio has ordered new rolling stock via an operational lease arrangement: 43 Bombardier Talent 2 trains for Stuttgarter Netz and 52 Coradia LINTs for DISA. Stadler delivered 21 Flirt EMU 5 trains for the cross-border franchise Niederrheinnetz, running from Düsseldorf and Mönchengladbach to Arnhem in the Netherlands.

## New workshop

A two-track combined servicing and washing hall with a total length of 105 metres has been built at the new Abellio site in Duisburg near the main railway station, covering an area of 5,000 square metres. A three-floor administrative and social wing, as well as a high-bay warehouse construction, will be built alongside the hall. Twenty-one electrical multiple units for the Lower Rhine network will be serviced there. Duisburg was chosen as the location for this site because the city and the main station are important transport hubs, and are particularly significant due to their favourable position within the new network.

For our STN network we are planning to build a new workshop in Pforzheim. The lease contracts with the railway company Albtal Verkehrs Gesellschaft (AVG) have been signed, and the construction work will be finished in time for operation at the beginning of 2019.

## Abellio Rail Nordrhein-Westfalen

At the end of 2016, the Niederrheinnetz (NRN) connected Düsseldorf to Emmerich; this will be extended onwards to Arnhem in Spring 2017. Twenty-one Flirt 3 trains are being built for this service, including seven three-system trains. The Flirt 3 trains need to be able to cope with three different power systems (1500V, 15kV and 25kV) and three train safety systems (ATB, ETCS and PZB) for the 17 kilometres that the route covers in the Netherlands. A new workshop is being built in Duisburg for this purpose.



Abellio NRW put in a successful bid for S-Bahn Rhein-Ruhr in July 2016, and was awarded the largest lot in the franchise. At the end of 2016, Abellio NRW delivered a second successful bid when Abellio was awarded the Ruhr-Sieg-Netz (RSN2) franchise, which it will operate until 2034. RSN2 has already been operated by us for the past 12 years, making this the first time our company had to defend a franchise. This means we will operate the network for 30 years, combining the 18 years ahead of us and the 12 years already completed.

## Abellio Rail Mitteldeutschland

Abellio is expanding its presence in central Germany, since Abellio trains will not only run in the STS electric network, but also in the Sachsen-Anhalt diesel network (DISA) from 2018.

Thousands of passengers will then be able to travel with us in Harz and Börde, as well as between the major cities of Erfurt, Magdeburg, Potsdam and Berlin. The Saale-Thüringen-Südharz electric network and the Sachsen-Anhalt diesel network are the largest networks to have ever been awarded to a regional rail transportation company in Germany. DISA will start operation in 2018 and run until 2032, and will connect Berlin to Sachsen-Anhalt.

2016 was the first full year of operation for Abellio Rail Mitteldeutschland through its operation of the Saale-Thüringen-Südharz network (STS). The large number of construction sites in the network placed a strain on punctuality.

The franchises in the mobilisation phase are:

<b>Rhein-Ruhr-Express (RRX) – RE 1/RE11</b>	<b>S-Bahn Rhein-Ruhr (Lot B)</b>	<b>Stuttgarter Netz / Neckartal</b>	<b>Dieselnetz Sachsen-Anhalt</b>
Start: December 2018 and mid-2020	Start: December 2019	Start: June 2019	Start: December 2018
Finish: December 2033	Finish: December 2034	Finish: December 2032	Finish: December 2032
40,000 passengers per day (expected)	80,000 passengers per day (expected)	25,000 passengers per day (expected)	8,000 passengers per day (expected)
29 trainsets	29 trainsets	43 trainsets	52 trainsets

The franchises that are currently being operated are:

<b>Emscher Ruhrtal-Netz</b>	<b>Ruhr-Sieg-Netz</b>	<b>Der Müngstener (S7)</b>	<b>Saale-Thüringen-Südharz-Netz</b>	<b>Niederrhein Netz</b>
Start: 2005	Start: 2007	Start: 2013	Start: 2015	Start: 2016
End: 2019	End: 2019	End: 2028	End: 2030	End: 2028
approximately 2,000 passengers per day	approximately 22,000 passengers per day	approximately 13,000 passengers per day	approximately 23,000 passengers per day	19,000 passengers per day (estimated, no proven figures available)
96.8% punctuality	91.6% punctuality	94.7% punctuality	91.6% punctuality	No figures available (Start December 2016)
3 trainsets	17 trainsets	9 trainsets	35 trainsets	21 trainsets

## Qbuzz



Qbuzz is the NS-owned, but stand-alone, regional public transport bus and tram operator in the Netherlands. In 2016, Qbuzz operated bus services in the provinces of Utrecht (also tram services), Groningen, Drenthe and Friesland. Qbuzz had a total average of 1,846 FTEs over 2016. Its sickness absence figure for 2016 was 8.2% (7.4% in 2015).

With a turnover of €213 million in 2016, Qbuzz is one of the largest regional public transport companies in the Netherlands. On average, Qbuzz transports approximately 247,000 customers per working day, with 681 buses and 27 trams.

## Divestment of Qbuzz

Qbuzz has been part of the NS organisation in the Netherlands ever since it was founded in 2008. NS owned 49% of the shares until 2013, at which point the remaining shares (51%) were taken over. Following the outcome of its strategic review, NS announced the intended sale of Qbuzz in a press release on 11 July and via notification in the *Staatscourant* (Government Gazette). From that date onwards Qbuzz has been classified as 'held for sale'.

By divesting Qbuzz and discontinuing bids on regional rail franchises in the Netherlands, NS can focus explicitly on its core business in the Netherlands: offering better train services on the core rail network including the HSL, looking after train stations and contributing to a better door-to-door travel experience, in cooperation with all regional public transport operators. This enhanced cooperation is needed to provide a better door-to-door travel experience to all of NS's passengers.

NS organises a thorough and transparent sales process in the interests of all concerned, and the transfer of Qbuzz to its new owner is expected to take place in 2017. Until this process is duly finalised, Qbuzz – with consent from NS – will continue its bidding activities to realise further company growth. Qbuzz therefore prepared a bid on the Amstelland-Meerlanden bus franchise and submitted this in November. Connexxion later won the bus franchise. Qbuzz is a profitable venture (the EBIT for 2016 was €9.2 million).

## Utrecht

### Key figures 2016

955 employees (FTE), 311 buses, 26 trams, 180,000 passengers per working day. Qbuzz passengers rate the service as 7.5 out of 10 (source: *OV-klantenbarometer* 2015, March 2016), which is the same rating as the year before. The franchise covers both bus and tram services, and was awarded to Qbuzz by the Province of Utrecht until 2023.

## Groningen-Drenthe

### Key figures 2016

692 employees (FTE), 303 buses, 67,000 passengers per working day. Qbuzz passengers rate the service as 7.6 out of 10 (source: *OV-klantenbarometer* 2015, March 2016), which is the same rating as the year before. This bus franchise started in December 2009 and will run until December 2019.

## Friesland

### Key figures 2016

166 employees, 67 buses, 10,000 passengers per working day. Qbuzz passengers rate the service as 7.6 out of 10 (source: *OV-klantenbarometer* 2015, March 2016), which is the same rating as the year before. This bus franchise started in December 2008 and moved to Arriva in December 2016.

# IV Financial statements

These financial statements are published both Dutch and English. In the event of any discrepancies between the Dutch and English version, the Dutch version will prevail.

# Consolidated financial statements

## Consolidated income statement for 2016

(in millions of euros)

	2016	2015
<b>1 Revenue</b>	<b>5,093</b>	<b>4,973</b>
2 Personnel expenses	2,039	1,873
3 Depreciation, amortisation and impairments	345	330
4 Use of raw materials, consumables and inventories	508	504
5 Own capitalised production	-128	-115
6 Subcontracted work and other external costs	481	481
7 Infrastructure and concession fees	861	852
8 Other operating expenses	859	951
<b>Total operating expenses</b>	<b>4,965</b>	<b>4,876</b>
14 Share in result of investees recognises using the equity method	142	70
<b>Result from operating activities</b>	<b>270</b>	<b>167</b>
Finance income	22	12
Finance expenses	-31	-35
<b>9 Net finance result</b>	<b>-9</b>	<b>-23</b>
<b>Result before income tax</b>	<b>261</b>	<b>144</b>
10 Income tax	-49	-26
<b>Result for the period</b>	<b>212</b>	<b>118</b>
Attributable to:		
Shareholder of the company	212	118
Minority interests	-	-
<b>Result for the period</b>	<b>212</b>	<b>118</b>

# Consolidated statement of comprehensive income for 2016

(in millions of euros)

	2016	2015
<b>Result for the period</b>	<b>212</b>	<b>118</b>
<b>Other comprehensive income items that are or may be classified to profit and loss</b>		
Currency translation differences on foreign activities	-19	3
Effective portion of changes in fair value of cash flow hedges	46	-4
Income tax	-10	-
Effective portion of changes in fair value of cash flow hedges as a consequence of revaluation of investments in equity accounted investees	2	-4
	<b>19</b>	<b>-5</b>
<b>Other comprehensive income items that never be reclassified to profit and loss</b>		
Actuarial result for defined benefit plans	13	16
Income tax	-1	-3
Actuarial result for defined benefit plans as a consequence of revaluation of investments in equity accounted investees	1	15
	<b>13</b>	<b>28</b>
<b>Other comprehensive income recognised in equity</b>	<b>244</b>	<b>141</b>
Attributable to:		
Shareholder of the company	244	141
Minority interest	-	-
<b>Total comprehensive income</b>	<b>244</b>	<b>141</b>



# Consolidated statement of financial position as at 31 December 2016

before profit appropriation

(in millions of euros)		December 31, 2016	December 31, 2015
<b>Assets</b>			
11	Property, plant and equipment	3,654	3,296
12	Investment property	197	194
13	Intangible assets	257	225
14	Investments recognised using the equity method	39	183
15	Other financial assets, including investments	267	340
16	Deferred tax assets	229	278
	<b>Total non-current assets</b>	<b>4,643</b>	<b>4,516</b>
17	Inventories	139	138
15	Other investments	-	270
18	Trade and other receivables	724	659
	Income tax receivables	4	32
20	Cash and cash equivalents	709	671
19	Assets held for sale	140	-
	<b>Total current assets</b>	<b>1,716</b>	<b>1,770</b>
	<b>Total assets</b>	<b>6,359</b>	<b>6,286</b>
<b>Equity and liabilities</b>			
21	Equity		
	Share capital	1,012	1,012
	Reserves	2,287	2,179
	Unappropriated result	212	118
	<b>Total group equity</b>	<b>3,511</b>	<b>3,309</b>
	Minority interest	-	-
	<b>Total equity</b>	<b>3,511</b>	<b>3,309</b>
22	Deferred credits	328	263
23	Loans and borrowings, including derivatives	293	440
24	Employee benefits	31	30
25	Provisions	100	155
26	Accruals	36	55
16	Deferred tax liabilities	160	168
	<b>Total non-current liabilities</b>	<b>948</b>	<b>1,111</b>
23	Loans and borrowings, including derivatives	77	488
	Corporate tax payable	7	22
27	Trade and other payables	1,023	1,060
28	Deferred income	641	260
25	Provisions	37	36
19	Liabilities held for sale	115	-
	<b>Total current liabilities</b>	<b>1,900</b>	<b>1,866</b>
	<b>Total liabilities</b>	<b>2,848</b>	<b>2,977</b>
	<b>Total equity and liabilities</b>	<b>6,359</b>	<b>6,286</b>

# Consolidated cash flow statement for 2016

(in millions of euros)		2016	2015
	<b>Result for the period</b>	<b>212</b>	<b>118</b>
	<b>Adjustments for:</b>		
	Income tax expenses	49	26
	Results on investments in equity accounted investees	-142	-70
11,13	Depreciation	319	330
	Impairment losses and reversals	26	-
	Net finance result	9	23
	Change in provisions	-54	16
15.16	Change in non current financial assets (including deferred tax positions)	192	-100
	Change in other non cash, non-current liabilities	55	75
	Change in deferred credits	-23	151
		<b>431</b>	<b>451</b>
	Change in inventories	-1	-19
	Change in trade and other receivables	-171	-160
	Change in current liabilities excluding credit institutions	459	79
	<b>Changes working capital</b>	<b>287</b>	<b>-100</b>
	Interest paid	-28	-25
	Income tax paid	-11	-3
		<b>-39</b>	<b>-28</b>
	<b>Net cash from operating activities</b>	<b>891</b>	<b>441</b>
	Interest received	20	9
14	Dividends received and recognised using the equity method	72	47
	Disposal of discontinued operation, net of cash	-	-
11, 13	Acquisition of intangible assets and property, plant and equipment	-784	-532
12	Acquisition of investment properties	-1	-8
	Receipts (payments) other investments	270	-47
	Acquisition of non-current financial assets, including investments	-23	-48
14, 15	Disposal of non-current financial assets, including investments	239	58
11, 13	Disposal of intangible assets, property, plant and equipment and investment properties	23	12
	<b>Net cash flow from investing activities</b>	<b>-184</b>	<b>-509</b>
	<b>Net cash flow from operating and investing activities</b>	<b>707</b>	<b>-68</b>
	Repayments of liabilities	-899	-57
	Non-current liabilities taken out	300	58
	Dividends paid	-41	-48
	<b>Net cash from financing activities</b>	<b>-640</b>	<b>-47</b>
	<b>Net increase in cash and cash equivalents</b>	<b>67</b>	<b>-115</b>
	Cash and cash equivalents as at 1 January	671	775
	Effect of exchange rate fluctuations on cash held	5	11
	Cash and cash equivalents classified as held for sale	-34	-
	<b>Cash and cash equivalents as at 31 December</b>	<b>709</b>	<b>671</b>

# Consolidated statement of changes in equity

(in millions of euros)	Share capital	Other reserves	Retained earnings	Total	Minority interests	Total equity
Revised balance as at 1 January 2015	1,012	-20	2,224	3,216	-	3,216
Profit for the period			118	118	-	118
Other comprehensive income		23		23		23
<b>Total comprehensive income</b>	-	23	118	141	-	141
Dividend paid to shareholder			-48	-48	-	-48
Other		-		-		-
<b>Balance as at 31 December 2014</b>	<b>1,012</b>	<b>3</b>	<b>2,294</b>	<b>3,309</b>	<b>-</b>	<b>3,309</b>
Profit for the period			212	212	-	212
Other comprehensive income		32		32		32
<b>Total comprehensive income</b>	-	32	212	244	-	244
Dividend paid to shareholder			-41	-41	-	-41
Other		-	-1	-1		-1
<b>Balance as at 31 December 2015</b>	<b>1,012</b>	<b>35</b>	<b>2,464</b>	<b>3,511</b>	<b>-</b>	<b>3,511</b>

# Notes to the 2016 consolidated financial statements

## General information

NV Nederlandse Spoorwegen has its registered office in Utrecht, Netherlands. The company's consolidated financial statements for the 2016 financial year include the company and its subsidiaries (hereinafter referred to as the 'Group') and the Group's share in associates and companies that it controls jointly with third parties. NV Nederlandse Spoorwegen is the holding company of NS Groep NV, which in turn is the holding company of the operating companies. The figures for the consolidated financial statements of NS Groep NV are the same as the consolidated figures for NV Nederlandse Spoorwegen. The operating companies of NS Groep NV are listed in note 32. The Group's activities consist mainly of transporting passengers and the management and development of property and station locations.

The consolidated financial statements comply with the International Financial Reporting Standards (IFRS) and their interpretations by the International Accounting Standards Board (IASB), as adopted for use by the European Union. The Executive Board prepared the financial statements on 24 February 2017. In its preliminary report to the General Meeting of Shareholders, the Supervisory Board advised that the financial statements should be adopted unaltered. On 24 February 2017, the Executive Board and Supervisory Board approved the publication of the financial statements. The financial statements are on the agenda of the General Meeting of Shareholders on 27 February 2017.

The accounting policies that have been adopted when drawing up the financial statements are stated in note 33.

## Acquisition and disposal of companies

No participating interests were acquired or sold in 2016.

# Notes to the consolidated income statement for 2016

## 1. Revenue

(in millions of euros)	2016	2015
Netherlands	3,172	3,098
UK	1,727	1,797
Germany	194	78
<b>Total revenue</b>	<b>5,093</b>	<b>4,973</b>

The revenue Netherlands includes a sum of €22 million (2015: €48 million) relating to development activities.

## 2. Personnel expenses

(in millions of euros)	2016	2015
Wages and salaries	1,467	1,409
Social security contributions	215	175
Contributions to defined contributions plans	90	52
Contributions to defined benefit plans	41	44
Other staff costs	75	69
Staff hired	151	124
<b>Total</b>	<b>2,039</b>	<b>1,873</b>

The average staffing level (in fte) was:

(in fte)	2016	2015
Netherlands	19,886	19,411
UK	10,168	8,828
Germany	891	509
<b>Total</b>	<b>30,945</b>	<b>28,748</b>

The increase in the average staffing level in the United Kingdom is in particular the result of the ScotRail concession, which started up per 1 April 2015.

## Remuneration of Executive Board members

(in euro's)	Fixed salary	Alternative for the gap on pension accrual	Various allowances	Pension expenses	Termination benefits (excluding compensation legal costs)	Total 2015
R.H.L.M. van Boxtel	179,167	16,500	2,475	2,354	-	200,496
E.M. Robbe**	434,541	61,408	9,664	10,146	-	515,759
T. Huges***	215,000	23,100	13,619	2,824	175,583	430,126
total	828,708	101,008	25,758	15,324	175,583	1,146,381

(in euro's)	Fixed salary	Alternative for the gap on pension accrual	Various allowances	Pension expenses	Termination benefits (excluding compensation legal costs)	Total 2016
R.H.L.M. van Boxtel	438,600	40,450	4,368	14,171	-	497,588
H.L.L. Groenewegen*	101,289	8,571	5,915	4,169	-	119,943
M.E.F. Rintel*	157,667	14,448	3,278	6,495	-	181,887
S.M. Zijderfeld*	315,333	26,673	18,414	12,990	-	373,410
E.M. Robbe**	176,922	26,251	25,176	5,904	-	234,254
total	1,189,811	116,393	57,151	43,728	-	1,407,083

\* Mr. Groenewegen has been appointed to the Board by September 15, 2016, Ms. Rintel by July 15, 2016 (the pay is included for the period prior to this date in the table remuneration to key management personnel) and Ms. Zijderfeld by February 1, 2016.

\*\* As of June 1, 2016 Mr. Robbe left the company.

\*\*\* Mr Huges' employment contract was terminated with legal effect as of 10 July 2015. Mr Huges waived the dismissal compensation of one year's salary that he would have been entitled to claim under the terms of his employment contract. Mr Huges has voluntarily paid back his variable remuneration of €75,250 received for 2014. The net result is that NS has paid Mr Huges a sum of €175,583 to settle the termination of his employment. In addition, Mr Huges received remuneration for costs relating to his legal assistance in the matter of the termination of his contract of employment, amounting to €65,000.

Mr A. P. Schouws has been hired as statutory director (Director of Finance) for the period from April 18, 2016 until September 15, 2016. For this he received a management fee of EUR 176 515.

For further details, reference is made to the remuneration policy for the Executive Board to chapter Remuneration of the Board of Directors in the Annual Report

## Remuneration to key management personnel (excluding the Executive Board)

(in euro's)	Fixed and variabel remuneration	Pension expenses	Termination benefits (excluding compensation legal expenses)	Total
2015	1,994,323	33,894	249,802	2,278,019
2016	3,013,445	168,129	565,956	3,747,530



In 2016, the group key management has been expanded with IT Director, HR Director and two directors of Abellio.

In 2016 the Group two key managers left through a settlement agreement. This has led to the payment of termination benefits.

## Remuneration Supervisory Board

The remuneration of members of the Supervisory Board for 2016 paid by the company totalled €173,716. In 2015, the remuneration of members of the Supervisory Board paid by the company was €188,965. The remuneration comprises a fixed fee and an allowance for participating in one or more committees. The specification of the amounts for each member of the Supervisory Board is as follows:

(in euro's)	2016	2015
G. van de Aast	37,923	32,519
<i>Chairman Supervisory Board (since August 16, 2016), member auditcommittee, member remuneration and nomination committees</i>		
J.J.M. Kremers	34,994	34,900
<i>Chairman audit committee</i>		
P. Rosenmöller	36,980	32,804
<i>Chairman remuneration and nomination committees, vice chairman Supervisory Board (since August 16, 2016)</i>		
M.E. van Lier Lels	25,942	-
<i>(Since February 3, 2016)</i>		
J.L. Stuijt	11,379	-
<i>(Since August 15, 2016)</i>		
T.M. Lodder	16,750	39,916
<i>Chairman Supervisory Board until June 2, 2016, member remuneration and nomination committees</i>		
I.M.G. Jankovich	9,748	29,900
<i>(until April 28, 2016)</i>		
C.J. van den Driest	-	18,926
<i>(until June 24, 2015)</i>		
<b>Total</b>	<b>173,716</b>	<b>188,965</b>

The company has not extended any loans, advances or guarantees to members of the Executive Board or the Supervisory Board.

All the shares of NV Nederlandse Spoorwegen are held by the State of the Netherlands. Members of the Executive and Supervisory Boards and staff members have not been granted rights to hold or acquire shares in the company.

### 3. Depreciation, amortisation and impairments

(in millions of euros)	2016	2015
Depreciation of property, plant and equipment	270	286
Depreciation of investment property	9	8
Amortisation of intangible assets	40	36
<b>Total depreciation and amortisation</b>	<b>319</b>	<b>330</b>
Impairment (and reversal of impairments) of property, plant and equipment	24	-2
Impairment investment property	2	2
Impairment intangible assets	-	-
<b>Total (reversal of) impairment losses</b>	<b>26</b>	<b>-</b>
<b>Total</b>	<b>345</b>	<b>330</b>

For disclosure on impairment of property, plant and equipment refer to note 11.

### 4. Use of raw materials, consumables and inventories

(in millions of euros)	2016	2015
Materials	309	303
Energy	199	201
<b>Total</b>	<b>508</b>	<b>504</b>

### 5. Own capitalised production

The own capitalised production comprises the directly attributable personnel expenses and costs of materials used in the construction of assets for own use. This was mainly for the overhaul of trains.

### 6. Subcontracted work and other external costs

(in millions of euros)	2016	2015
Subcontracted work	75	72
Cleaning	87	82
Maintenance	149	161
IT costs	170	166
<b>Total</b>	<b>481</b>	<b>481</b>

The costs of subcontracted work are costs related to the execution of assignments to third parties not covered by the other categories in this category.

## 7. Infrastructure and concession fees

(in millions of euros)	2016	2015
Dutch trainconcessions	383	375
English trainconcessions	389	443
German trainconcessions	89	34
<b>Total</b>	<b>861</b>	<b>852</b>

## 8. Other operating expenses

Other operating expenses include insurance, office accommodation and inventory costs, auditor's fees, marketing costs, rental and lease costs for operating assets and additions to provisions.

### Auditor's fees

(in millions of euros)	2016	2015 *)
Statutory audits	2.6	2.3
Other assurance engagements	0.4	0.4
Tax advisory services	-	-
Other services	-	-
<b>Total</b>	<b>3.0</b>	<b>2.7</b>

\* The 2015 comparative figure has been adjusted for charges in relation to additional work in 2015, agreed after the issue of the financial statements 2015.

The auditor's fees comprise the fees both for services in the Netherlands and those for the network abroad.

The fees for the Dutch audit firm for the year amounted to € 2.5 million (2015: € 2.3 million).

## 9. Net finance result

(in millions of euros)	2016	2015
Interest income from available-for-sale financial assets	1	2
Interest income from deposits and banks balances	-	2
Exchange rate differences	9	2
Other interest income from other investments	12	6
<b>Finance income</b>	<b>22</b>	<b>12</b>
Interest expense from financial liabilities measured by amortised cost	-21	-23
Interest expenses from interest rate swaps for cash flow hedging	-13	-15
Financial benefits	4	3
Exchange rate differences	-1	-
Interest expenses from discounting of provisions	-	-
<b>Finance expense</b>	<b>-31</b>	<b>-35</b>
<b>Net finance result included in the income statement</b>	<b>-9</b>	<b>-23</b>

The other financial income in 2016 includes an amount of € 6 million relating to interest rate component of the settlement of a claim from the past.

## 10. Income tax

(in millions of euros)	2016	2015
<b>Included in the income statement</b>		
Current taxes	-22	-17
Deferred taxes	-27	-9
<b>Total income tax</b>	<b>-49</b>	<b>-26</b>
<b>Reconciliation with effective tax rate</b>		
Profit before tax	261	144
Income tax at Dutch tax rate for corporation tax (2016 en 2015: 25%)	-65	-36
Non-deductible costs	-1	-1
Other permanent differences	6	16
Effect of the tax rate in foreign jurisdictions (different rate)	10	16
Effect of non-valuation of deductible losses	-	-23
Settlement previous years	1	2
<b>Total income tax</b>	<b>-49</b>	<b>-26</b>
Income tax on income and expenses recognised directly in equity	-11	-3

Corporate income tax is calculated based on the applicable tax rates in the Netherlands, the UK, Ireland, Belgium, Germany, France and the Scandinavian countries, taking into account the tax rules that produce permanent differences between the result valued for commercial purposes and the result valued for tax purposes. The tax rules include participation exemption and limits to deductible costs.

The effective tax burden for income tax on the result was 19% (18% in 2015). Agreements have been made with the Dutch Tax and Customs Administration about the tax returns up to and including 2012. Finalised assessments for the subsequent years have not yet been received. In the financial statements for this year and previous years, tax is included on the basis of the tax returns submitted and the underlying principles adopted in those tax returns. Refer to note 16 for further details of the tax position.

# Notes to the consolidated statement of financial position at 31 December 2016

## 11. Property, plant and equipment

(in millions of euros)	Land	Building	Other fixed installations	Rolling stock	Parts	Machinery & equipment	Assets under construction	Total
<b>Composition per 1 January, 2015</b>								
Cost	129	557	170	5,966	96	604	405	7,927
Cumulative depreciation and impairments	31	256	129	3,800	66	488	-	4,770
<b>Carrying amount as at 1 January, 2015</b>	<b>98</b>	<b>301</b>	<b>41</b>	<b>2,166</b>	<b>30</b>	<b>116</b>	<b>405</b>	<b>3,157</b>
<b>Changes in 2015</b>								
Additions							463	463
Capitalisations	2	133	7	155	1	52	-351	-1
Depreciation	-1	-21	-8	-224	-3	-29	-	-286
Exchange rate differences	-	1	-	1	-	-	-	2
Divestments	-2	-	-	1	-	-4	-	-5
Impairments	-	-	-1	-	-	-1	-	-2
Reversal impairments	-	-	-	2	-	-	-	2
Other changes	-	-	-7	2	-	-26	-3	-34
<b>Total changes</b>	<b>-1</b>	<b>113</b>	<b>-9</b>	<b>-63</b>	<b>-2</b>	<b>-8</b>	<b>109</b>	<b>139</b>
<b>Composition per 31 December 2015</b>								
Cost	125	688	144	5,860	97	526	514	7,954
Cumulative depreciation and impairment	28	274	112	3,757	69	418	-	4,658
<b>Carrying amount as at 31 December 2015</b>	<b>97</b>	<b>414</b>	<b>32</b>	<b>2,103</b>	<b>28</b>	<b>108</b>	<b>514</b>	<b>3,296</b>



(in millions of euros)	Land	Building	Other fixed installations	Rolling stock	Parts	Machinery & equipment	Assets under construction	Total
<b>Changes in 2016</b>								
Additions							704	704
Capitalisations	47	70	7	406	1	58	-542	47
Depreciation	-2	-25	-7	-206	-3	-27	-	-270
Exchange rate differences	-	-1	-	-2	-	-3	-	-6
Divestments	-4	-1	-3	-6	-	-2	-	-16
Impairments	-	-24	-	-	-	-	-	-24
Reversal impairments	-	-	-	-	-	-	-	-
Other changes	-	-3	1	-62	-	-9	-4	-77
<b>Total changes</b>	<b>41</b>	<b>16</b>	<b>-2</b>	<b>130</b>	<b>-2</b>	<b>17</b>	<b>158</b>	<b>358</b>
<b>Composition per 31 December 2016</b>								
Cost	168	750	144	6,139	97	529	672	8,499
Cumulative depreciation and impairment	30	320	114	3,906	71	404	-	4,845
<b>Carrying amount as at 31 December 2016</b>	<b>138</b>	<b>430</b>	<b>30</b>	<b>2,233</b>	<b>26</b>	<b>125</b>	<b>672</b>	<b>3,654</b>

The other changes in 2016 are mainly due to the transfer of tangible assets to assets held for sale (note 19) of € 76 million. Works and equipment under construction mainly consist of investments in trains and buildings.

Part of the rolling stock included as at the balance sheet date is part of the cross-border lease transactions that were concluded in the past. The book value of rolling stock financed by cross-border leases was €81 million at year-end 2016 (2015: €112 million).

For Eurofima loans that are not part of the cross-border lease finance arrangements, collateral has been provided in the form of pledges on rolling stock (see note 30). The book value for this is €10 million (2015: € 274 million). The decline of the pledge is due to the decrease of the Eurofima loans.

## Impairment and reversals

As a result of developments in the lease portfolio of a station complex in the Netherlands, a review has been performed of the recoverable amount of this complex. The recoverable amount is set at € 78 million. This has resulted in an impairment loss of € 24 million.

The calculations that give rise to the impairments and their reversals are based on a weighted average post-tax discount rate that is between 5.5% and 7% (2015: between 5.5% and 7%).

## 12. Investment property

(in millions of euros)

**Total real estate**

### Composition per 1 January 2015

Cost	292
Cumulative depreciation and impairments	-96
<b>Carrying amount as at 1 January 2015</b>	<b>196</b>

### Changes in 2015

Additions	8
Depreciation	-8
Divestments	-2
Impairment	-
Reversal impairment	-
Other changes	-
<b>Total changes</b>	<b>-2</b>

### Composition per 31 December 2015

Cost	295
Cumulative depreciation and impairment	-101
<b>Carrying amount as at 31 December 2015</b>	<b>194</b>

### Changes in 2016

Additions	1
Depreciation	-9
Divestments	-
Impairments	-2
Reversal impairment	-
Other changes	13
<b>Total changes</b>	<b>3</b>

### Composition per 31 December 2016

Cost	306
Cumulative depreciation and impairments	-109
<b>Carrying amount as at 31 December 2016</b>	<b>197</b>

The other changes in 2016 relate to the transfer from other asset categories to investment property.

Given the nature, diversity and locations (station environments) the fair value of the property portfolio can not be determined reliably. Is expected to be the fair value substantially higher than the book value of the properties.

The properties exist alongside commercial properties also of other real estate properties that are leased to third parties or held as strategic real estate. The leases include a period of several years in which cancellation is not possible. Thereafter, a negotiation about extension with the tenant will take place. The total contractual rent until the end of the leases amounts to approximately € 200 million in 2016. No contingent rents are charged.

The direct rental income was €68 million (2015: €55 million). The direct rental costs are maintenance costs, property taxes and direct management costs, coming to a total of €19 million (2015: €16 million).

## 13. Intangible non-current assets

(in millions of euros)	Goodwill	Software and concessions	Total
<b>Composition per 1 January 2015</b>			
Cost	37	209	246
Cumulative depreciation and impairment	5	67	72
<b>Carrying amount as at 1 January 2015</b>	<b>32</b>	<b>142</b>	<b>174</b>
<b>Changes in 2015</b>			
Additions	-	65	65
Depreciation	-	-36	-36
Divestments	-	-	-
Impairment	-	-	-
Reversal impairment	-	-	-
Other changes	1	19	19
<b>Total changes</b>	<b>1</b>	<b>48</b>	<b>48</b>
<b>Composition per 31 December 2015</b>			
Cost	38	361	404
Cumulative depreciation and impairment	5	169	179
<b>Carrying amount as at 31 December 2015</b>	<b>33</b>	<b>192</b>	<b>225</b>
<b>Changes in 2016</b>			
Additions	-	86	86
Depreciation	-	-40	-40
Divestments	-	-	-
Impairments	-	-	-
Reversal impairment	-	-	-
Other changes	-13	-1	-14
<b>Total changes</b>	<b>-13</b>	<b>45</b>	<b>32</b>
<b>Composition per 31 December 2016</b>			
Cost	20	469	489
Cumulative depreciation and impairment	-	232	232
<b>Carrying amount as at 31 December 2016</b>	<b>20</b>	<b>237</b>	<b>257</b>

The other changes in 2016 mainly due to the transfer of goodwill to assets held for sale. The remaining goodwill relates to our operations in the UK and Germany.

The cash flows that were used for determining the impairments are based on the business plans drawn up by the business unit concerned for a period of at least five years. A weighted average discount rate is determined for each cash-generating unit, in line with those for comparable companies. The calculations that give the impairments and their reversals are

based on a weighted average post-tax discount rate that is between 5.5% and 7% (2015: between 5.5% and 7%). Changes in the assumptions did not lead to a deviation from the amounts calculated.

## 14. Investments recognised using the equity method

The financial data for the investments that are recognised according to the equity method, which have a book value of €39 million (2015: €183 million), are as follows:

Name entity (in millions of euros)	Merseyrail Ltd	Northern Rail Ltd	Vastgoed fondsen	Trans Link Systems BV	Other joint ventures	Total joint ventures	Other associates	Total
<b>Share percentage</b>	<b>50.00%</b>	<b>50.00%</b>	<b>53.00%</b>	<b>68.75%</b>				
<b>2015</b>								
Current assets	54	124	65	-	3		38	
<i>of which cash and cash equivalents</i>	39	61	51	-	-		18	
Non-current assets	12	13	245	-	2		17	
Current liabilities	56	123	15	-	2		16	
<i>of which current financial liabilities</i>	-	2	-	-	-		2	
Non-current liabilities	1	3	-	-	-		15	
<i>of which non-current financial liabilities</i>	1	-	-	-	-		-	
Net equity (based on 100%)	8	12	296		3		22	
Carrying value investments in investees recognised using the equity method	4	6	157	-	1	168	15	183

Name entity (in millions of euros)	Merseyrail Ltd	Northern Rail Ltd	Vastgoed fondsen	Trans Link Systems BV	Other joint ventures	Total joint ventures	Other associates	Total
Revenue	212	777	41	61	29		87	
Depreciation, amortisation and impairment	2	6	-	4	1		5	
Result from operating activities	26	24	20	14	4		2	
Finance income	-	-	-	-	-		-	
Finance expense	-	1	-	-	-		-	
Income tax expense	5	5	-	-	-		1	
Result for the period	21	19	20	14	4		1	
Total comprehensive income over the period	29	33	20	14	4		1	
<b>Share in result of investees recognises using the equity method</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>36</b>	<b>3</b>	<b>69</b>	<b>1</b>	<b>70</b>
Share in other comprehensive income	4	7	-	-	-	11	-	11
<b>Share in total comprehensive income of investees recognised using the equity method</b>	<b>14</b>	<b>17</b>	<b>10</b>	<b>36</b>	<b>3</b>	<b>80</b>	<b>1</b>	<b>81</b>
Dividend received	10	8	8	18	3	47	-	47

Name entity (in millions of euros)	Merseyrail Ltd	Northern Rail Ltd	Vastgoed fondsen	Trans Link Systems BV	Other joint ventures	Total joint ventures	Other associates	Total
<b>Share percentage 2016</b>	<b>50.00%</b>	<b>50.00%</b>	<b>53.00%</b>	<b>0.00%</b>				
Current assets	38	20	38	-	2		42	
<i>of which cash and cash equivalents</i>	24	17	34	-	-		24	
Non-current assets	11	-	-	-	2		21	
Current liabilities	38	15	9	-	1		17	
<i>of which current financial liabilities</i>	-	-	-	-	-	-	1	
Non-current liabilities	1	-	-	-	-		23	
<i>of which non-current financial liabilities</i>	1	-	-	-	-		-	
Net equity (based on 100%)	10	4	28		3		20	
<b>Carrying value investments in investees recognised using the equity method</b>	<b>5</b>	<b>2</b>	<b>15</b>	<b>-</b>	<b>2</b>	<b>24</b>	<b>15</b>	<b>39</b>

Name entity (in millions of euros)	Merseyrail Ltd	Northern Rail Ltd	Vastgoed fondsen	Trans Link Systems BV	Other joint ventures	Total joint ventures	Other associates	Total
Revenue	182	165	483	-	27		89	
Depreciation, amortisation and impairment	2	2	17	-	1		4	
Result from operating activities	23	19	228	-	4		-	
Finance income	-	-	-	-	-		-	
Finance expense	-	-	-	-	-		-	
Income tax expense	5	4	-	-	-		-	
Result for the period	18	15	228	-	4		-	
Total comprehensive income over the period	29	33	-	-	4		1	
<b>Share in result of investees recognises using the equity method</b>	<b>9</b>	<b>7</b>	<b>121</b>	<b>-</b>	<b>3</b>	<b>140</b>	<b>2</b>	<b>142</b>
Share in other comprehensive income	1	2				3	-	3
<b>Share in total comprehensive income of investees recognised using the equity method</b>	<b>10</b>	<b>9</b>	<b>121</b>	<b>-</b>	<b>3</b>	<b>143</b>	<b>2</b>	<b>145</b>
Dividend received	8	12	49		3	72	-	72

## Interests in joint ventures

### Merseyrail Services Holding Company Ltd and Northern Rail Holdings Ltd

The Merseyrail concession and the Northern Rail concession are carried out under 50/50 joint arrangements with Serco, a listed British company. NS and Serco have joint control, each with a 50% financial interest in the holding entities. The concessions are held by independent entities in which the holding company has a 100% interest. The results of the holding companies are distributed 50-50 to NS and Serco.

### Property funds

The Group has direct and indirect interests in the following limited partnerships:

	Percentage holding	Registered office
Stationslocaties OG CV	55.8	Utrecht
Basisfondsen Stationslocaties CV	50.9	Utrecht

The parties with a participating interest in the limited partnerships have raised a joint equity stake that is invested in property at shared costs and risks. The Group is also the controlling partner, investing and managing the equity at the shared costs and risks of the partners, with the managing partner being jointly and severally liable for the debts of the limited partners. The interests in the property funds are classified as joint ventures.

In 2016, the Basisfonds Stationslocaties C.V. sold the office portfolio for an amount of € 455 million (100%). This has led to a result of € 117 million for NS. Furthermore, € 212 million of capital was refunded from the property fund.

As regards the investments that have been recognised according to the equity method, there are no material contingent assets and/or liabilities. As regards the valuation of the interests in the joint ventures, there are no significant estimates or assessments.

Pursuant to Sections 379 and 414 of Book 2 of the Dutch Civil Code, a complete list of the Group's subsidiaries, associates and joint ventures has been filed with the office of the Trade Register in Utrecht.

## 15. Other financial assets, including investments

(in millions of euros)	December 31, 2016	December 31, 2015
<b>Other non-current financial assets, including investments</b>		
Available-for-sale financial assets	89	132
Loans and receivables	127	149
Held-to-maturity investments	-	1
Financial leases	29	32
Other investments	22	26
<b>Total</b>	<b>267</b>	<b>340</b>
<b>Other current financial assets</b>		
Deposits	-	270
<b>Total</b>	<b>-</b>	<b>270</b>

Bonds and term deposits (included in 'Financial assets available for sale') are partly intended for the payment of the investment commitments of approximately €1,428 million (€838 million in 2015), repayments and interest payments on the loans, and long-term provisions and liabilities.

The other financial assets as at December 31, 2015 include a loan granted to HTM Personenvervoer NV in the form of cumulative preference shares, which is divided into fair value of a loan (€ 26 million) and fair value of an option from € 4 million. On 30 June The Group has effectuated the option implemented in cooperation agreement with HTM Beheer B.V. As a result, the share capital of HTM Personenvervoer NV was sold back to HTM Beheer B.V. The resulting claim on HTM consisting of the nominal value less already received return is received at the end of 2016.

At year-end 2016, a receivable of € 136 million on the Ministry of Infrastructure and the Environment has been recorded concerning the correction mechanism concession fee (see note 29), of which € 121 million has been identified as long-term (under the Loans and receivables) and € 15 million has been identified as short-term (note 18).

As of December 31, 2015 The loans and receivables include the non-current part of the receivable (€118 million) payable by the Railway Pensions Fund, which derives from a new agreement between Railway Pensions Fund and NS, as described in note 24 Employee benefits. It is expected that this receivable will be received in full by the end of 2017 and by December 31, 2016 classified as current.

The Group's credit risks, currency risks and interest rate risks associated with the other investments are explained in more detail in note 30.



## 16. Deferred tax assets and liabilities

(in millions of euros)	net balance as at 1 January 2015	Recognised in income statement	Recognised in total result	Other changes	Net position	Deferred tax assets	Deferred tax liabilities
<b>Position as at 31 December 2015</b>							
Property, plant and equipment	-92	-8	-	-9	-109	38	147
Intangible assets	-4	-3	-	-	-7	-	7
Financial fixed assets	-8	-3	-	-	-11	-	11
Receivables	31	-31	-	-	-	-	-
Provisions	1	-1	-	-	-	-	-
Deferred credits	35	38	-	-	73	73	-
Loans and other financial liabilities	14	3	-4	-	13	13	-
Other items	-1	-4	-	4	-1	2	3
Loss compensation	150	-	-	2	152	152	-
<b>Deferred tax assets (liabilities)</b>	<b>126</b>	<b>-9</b>	<b>-4</b>	<b>-3</b>	<b>110</b>	<b>278</b>	<b>168</b>

(in millions of euros)	net balance as at 1 January 2016	Recognised in income statement	Recognised in total result	Other changes	Net position	Deferred tax assets	Deferred tax liabilities
<b>Position as at 31 December 2016</b>							
Property, plant and equipment	-109	-8	-	-1	-118	23	141
Intangible assets	-7	-	-	-2	-9	-	9
Financial fixed assets	-11	9	-2	1	-3	4	7
Receivables	-	-	-	-	-	-	-
Provisions	-	3	-3	1	1	2	1
Deferred credits	73	-9	-	1	65	65	-
Loans and other financial liabilities	13	-1	-6	-2	4	4	-
Other items	-1	-	-	-1	-2	-	2
Loss compensation	152	-21	-	-	131	131	-
<b>Deferred tax assets (liabilities)</b>	<b>110</b>	<b>-27</b>	<b>-11</b>	<b>-3</b>	<b>69</b>	<b>229</b>	<b>160</b>

The 'Other changes' are due to alterations to the fiscal position as a result of submitting the tax return.

Net operational losses that have been categorised as tax losses under Dutch tax law and that arose in the Dutch subsidiaries can in general be settled against future profits achieved during the nine years after the year in which the loss was suffered, and can be settled against profits made in the year preceding the loss-making year. There are comparable rules for the positions in foreign enterprises.

As at 31 December 2016, the Group had deferred tax assets for downward valuations amounting to €272 million for the fiscal unity in the Netherlands. These deferred tax assets are partly covered by deferred tax liabilities that produce taxable profits in the reference period through to 2024 and forecast profits through to 2024, based on the Concern Plan 2017-2021. The forecasts assume the current breakdown of the Group's activities, taking account of the main rail network concession, which started on 1 January 2015. On top of that, the Group has tax planning possibilities that can be implemented if necessary. Because the forecasts through to 2024 have an inherent margin of uncertainty, €67 million of the sum has not been valued (31 December 2015 : €67 million). The net deferred tax assets of the fiscal unity in the Netherlands therefore amount to €205 million (31 December 2015 : €246 million).

A rate of 25% applied in 2016 for Dutch corporate income tax (25% in 2015). For the calculation of the deferred tax position of the Dutch entities, the applicable rate of 25% has been assumed. The Dutch tax authorities are currently investigating the fiscal handling of transactions with the Irish subsidiary, NS Financial Services. The investigation is focusing *inter alia* on the classification of the leasing agreements signed between NS and NS Financial Services; this relates to the years from 2013 onwards. The conduct of NS since these agreements were signed has been consistent in this regard; any other opinion about the eligibility of the lease agreements could have a material impact on the tax burden. On the tax returns up to 2012, there is agreement with the tax authorities.

## 17. Inventories

(in millions of euros)	December 31, 2016	December 31, 2015
Maintenance materials	120	110
Projects under construction, unsold	5	17
Trade goods	14	11
<b>Total</b>	<b>139</b>	<b>138</b>

Inventories of maintenance materials consist of raw materials and materials for the purpose of production and maintenance of semi-finished and finished products of the maintenance department. In 2016, the write-down of inventories to the net realisable value and recognised as an expense amounted to €11 million (€6 million in 2015). The cumulative impairment, after withdrawals, came to €94 million at the end of 2015 (€95 million in 2015).

## 18. Trade and other receivables

(in millions of euros)	December 31, 2016	December 31, 2015
Receivables from clients from projects in progress	1	1
Trade receivables	228	227
Unbilled revenue	202	106
Other taxes and social security charges	23	33
Other receivables	270	292
<b>Total</b>	<b>724</b>	<b>659</b>

'Trade and other receivables' includes an amount of €104 million (€16 million in 2015) that concerns related parties.

The combined credit risk exposure from trade receivables and other receivables (excluding the construction contract work in progress) and the impairment losses are shown in note 30.

The 'Other receivables' show the current part of the receivable (€120 million) payable by the Railway Pensions Fund and the current part of the receivable connected to correction mechanism concession fee (€15 million).

### Work in progress

(in millions of euros)	December 31, 2016	December 31, 2015
Costs of work in progress	10	22
Realised gains and losses	-1	-2
	<b>9</b>	<b>20</b>
Less: billed instalments	12	23
	<b>-3</b>	<b>-3</b>
<b>Presented under:</b>		
Receivables from clients for projects in progress	1	1
Advance payments received for projects in progress	-4	-4

The trade payables and other liabilities are stated in note 27.

## 19. Assets and liabilities held for sale

In accordance with the communicated strategy, the sales process of participation Qbuzz B.V. started on July 11, 2016 and on July 11, 2016 has stopped the depreciation of fixed assets. It is expected that the sale will be completed during 2017. The assets and liabilities held for sale at December 31, 2016 consist of:

(in millions of euros)	December 31, 2016
Property, plant and equipment	76
Intangible assets	13
Other financial assets, including investments	2
Deferred tax assets	1
Trade and other receivables	13
Cash and cash equivalents	35
<b>Assets held for sale</b>	<b>140</b>
Loans and borrowings, including derivatives	62
Provisions	2
Trade and other payables	34
Deferred income	17
<b>Liabilities held for sale</b>	<b>115</b>

The assets and liabilities held for sale are valued at book value, since the fair value less costs to sell is less than the book value.

The loans and other financial liabilities consist of finance lease liabilities the gross liability amounts to € 68 million and employed an average interest rate of 3.8%. An amount of € 68 million (2015: € 83 million) was pledged regarding (leased) assets.

## 20. Cash and cash equivalents

(in millions of euros)	December 31, 2016	December 31, 2015
Cash and bank balances	709	671

The cash and bank balances are excluding € 62 million (December 31, 2015: € 118 million) freely available. The Group's interest rate risk and a sensitivity analysis for financial assets and liabilities are stated in note 30.

## 21. Equity

Please refer to the Consolidated statement of changes in equity.

The authorised capital as at both 31 December 2016 and 31 December 2015 consisted of 4 million ordinary shares with a nominal value of €453.78 (originally NLG 1,000). There are 2,230,738 shares that are issued and fully paid up. All issued shares are held by the State of the Netherlands. The shareholders are entitled to a dividend, as annually declared, based on the resolution of the General Meeting of Shareholders regarding the appropriation of the profit. The shareholders have the right to cast one vote per share at meetings of the company.

The financial statements for 2015 and the profit appropriation were determined in the shareholders' meeting of 3 March 2016. In accordance with the proposal, the profit of €118 million over the reporting period plus a sum of €77 million were allocated to the reserves and a sum of €41 million was paid out as a dividend.

## The movements in the other reserves were as follows:

(in millions of euros)	Translation reserve	Hedging reserve	Fair value reserve	Actuarial reserve	Revaluation reserve for associates	Total other reserves
<b>Balance as at 1 January 2015</b>	<b>5</b>	<b>-39</b>	<b>0</b>	<b>4</b>	<b>10</b>	<b>-20</b>
Other comprehensive income	3	-4		13	11	23
<b>Revised balance as at 31 December 2015</b>	<b>8</b>	<b>-43</b>	<b>0</b>	<b>17</b>	<b>21</b>	<b>3</b>
Other comprehensive income	-19	36		12	3	32
<b>Balance as at 31 December 2016</b>	<b>-11</b>	<b>-7</b>	<b>0</b>	<b>29</b>	<b>24</b>	<b>35</b>

### Translation reserve

This reserve covers all foreign exchange differences arising as a result of the conversion of the financial statements of foreign operations, as well as the conversion of liabilities hedging the company's net investment in an international group company.

### Hedging reserve

The hedging reserve consists of the cumulative change in the fair value of hedging instruments if the hedged transaction has not yet taken place or the hedged position has not yet been settled.

### Fair value reserve

The fair value reserve consists of the cumulative change in the fair value of investments available for sale until such time as the investment is no longer accounted for in the balance sheet.

### Actuarial reserve

The actuarial reserve refers to the actuarial gains and losses, which comprise the difference between the actual and anticipated changes in the pension liabilities and investment returns on pension assets.

### Revaluation reserve for associates

The revaluation reserve for associates comprises the cumulative non-realised results, recognised directly in associates' equity in accordance with the equity method. The change in 2016 is related to changes in the hedging reserve and actuarial reserve recognised by these associates.

### General reserve

The recognition in equity is after deduction of taxes.

## Profit appropriation as stipulated by the Articles of Association

In accordance with Article 21 paragraph 2 of the Articles of Association of NV Nederlandse Spoorwegen, the Annual General Meeting of Shareholders decides on the appropriation of any positive balance in the income statement.

### Profit appropriation proposal

A proposal will be put to the meeting to add €212 million of the net profit of €133.3 million to the general reserves, consisted of €74 million of regular dividend and €4.7 million as a consequence of a agreement from the past.

## 22. Deferred credits

(in millions of euros)	December 31, 2016	December 31, 2015
Financing benefits	-	1
Lump sum payments	249	272
Adjustment mechanism for the main rail network concession	119	-
<b>Deferred credits</b>	<b>368</b>	<b>273</b>
Less: current	-40	-10
<b>Total non-current as at 31 December</b>	<b>328</b>	<b>263</b>

The one-off payments plus the original balance (one-off payment for pay increases resulting from making SPF independent in 1994) are expected to be released in 2035, and be credited to the income statement. The concession fee adjustment mechanism included in HRN concession (see Note 29) and will be released linearly in the income statement during the term of the concession until 2024.

## 23. Loans and other financial liabilities, including derivatives

This note contains information concerning the contractual stipulations for the Group's interest-bearing loans and other financial liabilities, which are measured at amortised cost.

(in millions of euros)	December 31, 2016	December 31, 2015
<b>Non-Current liabilities</b>		
Private loans	240	339
Finance lease liabilities	47	59
Interest rate swaps used for hedging	3	17
Commodity derivatives	3	24
<b>Total</b>	<b>293</b>	<b>439</b>
<b>Current liabilities</b>		
Private loans	74	454
Finance lease liabilities	-	18
Interest rate swaps used for hedging	-	-
Commodity derivatives	3	17
<b>Total</b>	<b>77</b>	<b>489</b>
<b>Total liabilities</b>	<b>370</b>	<b>928</b>

The private loans include a debt owed by NS Reizigers to the Ministry of Infrastructure and the Environment of €246 million (2015: €278 million) associated with the deferred payments of concession fees. Of that sum, € 206 million has been included under non-current liabilities, for the proportion that is due to be paid after 2017. The portion that will be paid in 2017 (€40 million) is recognised in current liabilities. The interest rate is fixed at 3.027%. The terms and conditions of the loan were agreed in more detail as of 1 January 2015 in the new main rail network concession.

The finance lease liabilities have a gross liability of €91 million and a applied discount rate of 2.5%.

The Group's liquidity risks, currency risks and interest rate risks associated with the loans and other financial liabilities are explained in more detail in note 30.

## 24. Employee benefits

The non-current employee benefits comprise:

- other non-current employee benefits, including long-service awards;
- obligations entailed by occupational disability and supplements to social security payments;
- obligations in connection with defined benefit pension plans.

(in millions of euros)	December 31, 2016	December 31, 2015
Defined benefit plans	2	2
Other long-term employee benefits	29	28
<b>Total</b>	<b>31</b>	<b>30</b>

### Pension liabilities

The staff of the NS Group companies are covered by the pension plans of the following pension funds. The table also shows the numbers of active members.

(number participants)	December 31, 2016	December 31, 2015
Railway pensionfund	16,514	16,073
Industry pensionfund Horeca & Catering	2,719	2,835
Industry pensionfund provision company	991	670
Additional pensionfund Servex	149	151
ScotRail	4,665	4,660
Greater Anglia	2,302	2,191
Abellio Transport Holdings	170	78
Abellio London & Surrey	2,120	1,918
Qbuzz	1,829	1,993

In cases where an employee is a member of an industry pension fund, the NS Group companies have no obligation to pay supplementary contributions in the event of a deficit in that industry pension fund, other than payment of future contributions. Equally, the NS group companies have no claim to any surpluses in the funds. Consequently, these pension plans have here been accounted for in these financial statements as defined contribution plans, as required by IFRS.

The total value of the pension contribution payments charged to the income account in 2016 was €131 million (2015: €96 million).

### Spoorwegpensioenfond's pension plan (defined contribution plan)

The pension plan for the railway industry is administered by Spoorwegpensioenfond's. The plan qualifies for recognition in the financial statements as a defined contribution plan. The contribution agreed with SPF is a fixed annual contribution agreed in advance and expressed as a percentage of the pensionable earnings. In 2016 NS paid the nominal pension premium of 24% to the pension fund. Two-thirds of the pension contributions paid to Spoorwegpensioenfond's are at the expense of the company and one-third at the expense of the employees. After payment of the agreed contribution, the company has no obligation to pay additional amounts should there be a deficit in the pension fund. The actuarial risks and



investment risks are borne by the pension fund and its members. The pension costs up to 2035 are partly offset by the release of the lump sum payment for wage increases (see note 22).

At the end of 2015, the Group made new agreements with the pension fund for dealing with the contribution build-up that came into effect from 1 January 2016. This led to a receivable payable by Spoorwegpensioenfondsen of about €240 million that will be paid in two years' time. The employees' part of the contribution build-up (one third of the amount) is included as a debt and will be settled with the employees over the next few years up to and including 2022. The employer's part of the contribution build-up (two thirds of the amount) has been added to the lump sum payment for wage increases and will be credited to the pension costs up to 2035.

There is a defined contribution plan for Abellio London & Surrey, Qbuzz and the Servex supplementary pension scheme.

## Defined benefit plans

Abellio Greater Anglia, Abellio ScotRail and Abellio Transport Holdings have arranged for a pension for their staff through the UK Railways Pension Scheme. The fund in question can be considered as a company pension fund and the pension plan as a defined benefit plan.

Every company is a designated employer for one or more cost-sharing agreements within the Railways Pension Scheme. Such cost-sharing agreements are geared to a lifelong pension. The size of the pension depends on how long an employee was an active member of the pension plan and on their salary when leaving the plan (final-salary plan).

Because of the character of the cost-sharing agreements, the amounts payable to cover both the costs of the accrued pension entitlements and any shortfall between the value of the assets and the value of the pension liabilities are borne jointly by the employer and the contributing members in a ratio of 60% to 40% respectively. As a consequence, the employer recognises 60% of the total pension costs and pension liabilities in the balance sheet. The Railways Pension Scheme is administered by the Trustee, the Railways Pension Trustee Company Limited. The plan's assets are invested in investment funds, each with a different risk and return profile.

The pension liabilities and the pension assets are based on actuarial calculations that were performed for the situation on 31 December. At year-end 2016, the net liabilities of Abellio Transport Holdings Limited were €2 million (€2 million in 2015). The average term for the pension liabilities is about 24 years.

To reflect the nature of the concession, the shortfall between the pension liabilities and the pension assets for Abellio Greater Anglia and Abellio ScotRail have been included in 'Non-current liabilities' to the extent that they concern the concession period. The remaining amount at the end of the concession period is not recognised in the balance sheet because it will constitute part of the debts of the following concession holder. The net liabilities were zero at year-end 2016 (zero at year-end 2015). The average term for both companies' pension liabilities is about 20 years.

## Basic assumptions for defined benefit plans

The following assumptions were used for determining the pension liabilities and the pension assets (based on a weighted average):

	December 31, 2016	December 31, 2015
Discount rate	2.9%	3.8%
Increase of salaries	2.7%	3.4%
Increase of pension benefits	2.1%	2.1%
Inflation	3.2%	3.1%

\* Mortality table: 2013 SFO valuation (Greater Anglia and ScotRail) and S1NA tables with CMI 2013 projections (Abellio Holdings) plus long term expectation + 1.25%.

## Breakdown

The breakdown of the pension liabilities is as follows:

(in millions of euros)	December 31, 2016	December 31, 2015
Fair value of plan assets	1,193	1,221
Defined benefit obligations	1,721	1,700
<b>Deficit</b>	<b>528</b>	<b>479</b>
Members' share of deficit	-211	-192
Deficit at the end of the concessionary	-315	-285
Write-down of pension surplus	-	-
<b>Group's commitments concerning franchise period</b>	<b>2</b>	<b>2</b>

## Sensitivity analysis

Reasonably likely changes in one of the relevant actuarial assumptions on the balance sheet date while keeping all other assumptions constant would have the following effect on the gross liability pursuant to the defined benefit entitlements:

(change of 0.25%) (in millions of euros)	Increase	Decrease
Discount rate	-84	88
Inflation	89	-85
Future salary increase	31	-31

A change in life expectancy of one year would lead to a change in the gross liability of about €43 million (December 31, 2015 : €43 million).

The impact that these changes would have on the Group's net liabilities during the concession period is expected to be limited given the transfer of liabilities at the end of the Greater Anglia concession.

## Movement

The changes in the pension assets and liabilities are as follows:

(in millions of euros)	2016	2015
Plan assets as at 1 January	1,221	460
Addition new fund	437	735
Interest income	40	36
Pension contributions	38	44
Pension benefits paid	-75	-30
Administration expenses	-5	-5
Return on plan assets, excluding interest income	141	-9
Reduction participants in the fund	-437	-36
Exchange rate gains and losses	-167	26
<b>Plan assets as at 31 December</b>	<b>1,193</b>	<b>1,221</b>
Defined benefit obligations as at 1 January	1,700	722
Addition new fund	698	1,048
Pension costs	64	66
Interest expenses	55	54
Pension benefits paid	-75	-30
Net actuarial gain or loss	210	-140
Reduction participants in the fund	-698	-61
Exchange rate gains and losses	-233	41
<b>Defined benefit obligations as at 31 December</b>	<b>1,721</b>	<b>1,700</b>

### Breakdown of plan assets

The breakdown of the plan assets is as follows:

(in millions of euros)	December 31, 2016	December 31, 2015
Shares	722	769
Fixed-income securities	148	80
Property	121	150
Cash	146	134
Other	56	88
<b>Total</b>	<b>1,193</b>	<b>1,221</b>

### Pension costs recognised in the income statement

(in millions of euros)	2016	2015
Pension costs	38	41
Interest expenses	-	-
Administration expenses	3	3
<b>Total</b>	<b>41</b>	<b>44</b>

## Unrealised actuarial gains and losses

(in millions of euros)	2016	2015
Net actuarial gain or loss		
-Demographic assumptions	-	-6
-Financial assumptions	-244	145
-Experience adjustments	35	25
Return on plan assets, excluding interest income	141	-9
Franchise adjustment	58	-78
Changes in members' share	23	-61
<b>Total</b>	<b>13</b>	<b>16</b>

The Group expects to recognise pension costs amounting to €47 million relating the above-mentioned defined benefit plans in 2017.

## Other non-current employee benefits

This includes long-service obligations. The AG2016 mortality table is used for the calculation of the long-service obligations.

The changes in the provision were as follows:

(in millions of euros)	2016	2015
Long-service award obligation as at 1 January	28	31
Payments	-4	-3
Actuarial gains and losses	2	-1
Accrued interest	3	1
<b>Long-service award obligation as at 31 December</b>	<b>29</b>	<b>28</b>

The current portion of this provision is €4 million.

The sensitivities are as follows:

Discounting (-0.5%)	4.4%	4.1%
Total wage increase (-0.5%)	-4.1%	-3.8%
Career opportunities (+25%)	2.8%	2.6%
Resignation probability (+25%)	-4.7%	-4.4%

## 25. Provisions

(in millions of euros)	Reorganisation costs	Provision for soil remediation	Other provisions	Total
<b>Carrying amount as at 1 January 2016</b>	<b>3</b>	<b>66</b>	<b>122</b>	<b>191</b>
Addition	12	9	32	53
Accrued interest	-	-	-	-
Withdrawal	-2	-	-62	-64
Other changes	-	-	-	-
Release	-1	-8	-33	-42
<b>Carrying amount as at 31 December 2016</b>	<b>10</b>	<b>67</b>	<b>59</b>	<b>137</b>
<b>Presented as:</b>				
Non-current	6	50	44	100
Current	4	17	15	37

### Provision for reorganisation costs

The purpose of the provision for reorganisation costs is to cover the costs arising from reorganisation measures. Most of the provision is needed for redundancy schemes, bridging payments and the redeployment of staff whose jobs have disappeared as a result of restructuring.

### Provision for soil remediation

The provision for soil remediation is for managing and remedying environmental damage. The provision is calculated using an average discount rate of 1.5% (1.5% in 2015).

### Other provisions

Other provisions include provisions for losses arising from accidents and fire and provisions for risks deriving from the dissolution of cross-border leasing transactions. The release of the other provisions comprises inter alia a release of the settlement of a provision for personnel expenses that is paid out with retrospective effect.

## 26. Accruals

The accruals include the non-current part € 36 million (December 31, 2015 : € 55 million) of the outstanding pension contributions for employee benefits deriving from the new pensions agreement between SPF and NS as explained in note 24 (Employee benefits). Over the coming years through to 2022, the item will be settled with the employees, based on the discount defined with respect to the nominal contributions in the NS collective labour agreement.

## 27. Trade and other payables

(in millions of euros)	December 31, 2016	December 31, 2015
Advance payments received for work in progress	4	4
Trade payables	239	227
Current portion of deferred credits	40	10
Other taxes and social security charges	83	101
Other liabilities	461	464
Accrued expenses and deferred income	196	254
<b>Total</b>	<b>1,023</b>	<b>1,060</b>

The accrued expenses and deferred income include the monies received in the context of the FENS agreement (fund for one-off contributions). At the end of 2012, NS received a sum from ProRail as a consequence of the addendum to the FENS framework agreement. The total outstanding liability (€30 million) has been allocated through project-related decisions. About €10 million of the amount in this item is expected to have a term of more than one year.

The trade and other payables include an amount of €16 million (€13 million in 2015) that concerns related parties (ProRail and government).

The Group's liquidity risk due to trade and other payables is stated in note 30.

For more detailed information about the sums received in advance for work in progress, see note 18.

## 28. Deferred income

This consists largely of season ticket payments received in advance.

## 29. Off balance sheet commitments

### Irregularities

#### Authority for Consumers and Markets (ACM)

In its judgement of 6 March 2015, the ACM concluded that NS had infringed articles 67 and 71 of the Railways Act by not making a reasonable offer in the Limburg tender for services and their locations at the stations, break locations, emergency stop facilities, check-in/check-out posts, or for energy costs, handling disruptions and journey information (Railways Act, Article 67). In addition, the ACM concluded that NS shared sensitive competitive information about Veolia and others with Abellio and Qbuzz (Railways Act, Article 71).

The ACM then carried out further investigations into the possible misuse by NS and its subsidiaries of their position of economic strength in the Limburg tender, based on the Competitive Trading Act and the European tendering regulations. At the start of July 2016, the ACM sent a report on the investigations to NS. NS has accordingly presented its views. ACM will now assess whether there is a violation of the Competitive Trading Act or the Railway Act has taken place and if so, whether a penalty or fine imposed by means of a decree.

The decision taken by the ACM may include imposing a penalty on NS. Any such penalty imposed by the ACM would be based on a percentage of the turnover involved, with a legal maximum of 10% of the consolidated turnover. The bandwidth for any such fine is this from

zero to the said legal maximum. At this stage, NS is not in a position to make a reliable estimate of the size of any penalty and no provision has therefore been made for it. It is possible to object to a decision to impose a fine, to appeal against it and to take it to the higher appeals court.

### Veolia

NS and five associated companies are summoned on July 22 2016 by Veolia Transport Netherlands Holding B.V. and four of its affiliated companies in relation tot the tender in Limburg. Veolia seeks mainly a number of statements privilege that NS is liable for damage Veolia claims to have suffered in connection with the tender in Limburg. The basis and extent of the damage allegedly suffered by Veolia, are not sufficiently concrete. The outcome of the legal procedure (and thereby any potentially allowable claims for damages) cannot currently be estimated with certainty or reliably and has therefore not included.

### Public Prosecution Service

The Public Prosecution Service (specifically, the Office for Financial, Economic and Environmental Offences in s'-Hertogenbosch) started an investigation in 2015 into possible criminal acts in connection with the tendering process for public transport in Limburg. The investigation is focusing on the actions and circumstances surrounding an alleged arrangement regarding the disclosure of business secrets. The suspected parties include the companies NS Groep N.V., Qbuzz BV, Abellio Transport Holding BV and Abellio Nederland BV. In February 2016, NS Groep N.V. received the final report of the criminal investigation. The prosecution has already decided to sue NS Groep N.V. afterwards. On December 13, 2016 a pre-trial review took place. The trial is expected to occur in the second part of 2017. How this will be done and what the financial consequences will be (level of penalties imposed, transaction, etc.) cannot be determined reliably at this point in time. As a result, no provision has been included.

### Other

There is an inherent risk that additional claims will follow as a result of the irregularities that have been observed. The claims mentioned above could have a material impact on the results and equity position of NS. Because the outcome cannot be reliably estimated at this point in time, no provisions have been included for it.

## Long-term contracts

There were a number of long-term financial commitments to third parties at year-end 2016. These mainly concern operating lease agreements for trains, company cars and copiers. Secondly, there are long-term contracts for services by third parties in the areas of IT, employee health and safety, maintenance and cleaning.

## Operational lease agreements

The lease amounts payable for operational lease agreements (including rental agreements for offices) that cannot be cancelled fall due as follows:

(in millions of euros)	December 31, 2016	December 31, 2015
< 1 year	366	181
1-5 years	1,215	808
>5 years	536	896
<b>Total</b>	<b>2,117</b>	<b>1,885</b>

\* The figures of December 31, 2015 have been corrected for the usage fees for use of rail. These were misidentified as lease.



In 2016 an amount of approximately € 350 million as an expense for operating leases.

The amounts recorded above include amounts which relate to a number of concessions in Germany which will be 1 on 1 covered by the concession grantors. These amounts are due as follows:

(in millions of euros)	December 31, 2016	December 31, 2015
< 1 year	19	8
1-5 years	63	52
>5 years	91	72
<b>Total</b>	<b>173</b>	<b>132</b>

## Energy contracts

As at the end of 2016, the purchase obligations under the energy contract in the Netherlands for the volumes already covered and the payments for the programme of responsibilities and the surcharge for green electricity over the period 2016-2024 (the remainder of the 10-year contract) came to €231 million (as opposed to €207 million at the end of 2015). The volume expected to be required for 2017 is fully covered. Transport costs and energy tax are not included in the purchase obligations shown. If the difference between the market values and the contract value exceeds a given threshold, the Group or Eneco does then have to give the other party guarantees or provide cash collateral. Any payments and liabilities are netted as they are both inextricably linked. At the end of 2016 no collateral has been granted.

With respect to the forward contracts that are used for covering fuel costs abroad, Abellio has given guarantees for a sum of €3 million.

For more detailed information about the energy contracts, please refer to note 30.

## Tax group

For the purpose of income tax, all the Dutch subsidiaries belonging to the Group (with the exception of Qbuzz) are part of the NS tax group. As a result, the Group is ultimately liable for all tax liabilities of the subsidiaries included in the tax group.

## Investment commitments

At the end of 2016, the Group had outstanding investment commitments of €1,428 million (2015: approximately €838 million), primarily for purchasing and upgrading trains and investments in the areas around the stations.

## Contingent liabilities

The Group has paid €28 million (after conversion) into its share in the issued share capital of Eurofima AG (a sum of €112 million after conversion). The Group has a liability for full payment on demand of the shares and other guarantee commitments totalling €252 million. Payment of the liability can be demanded if Eurofima AG's own equity position gives reason to do so. For Eurofima loans that are not part of the cross-border lease finance arrangements, collateral has been provided in the form of pledges on rolling stock.

The IC Brussels is part of agreements within the context of the entire HRN concession. Operating results from IC Brussels are settled upon agreement with the Belgian carrier. The size of the result is to be settled, depending on the realised operational result on this route.

A number of investigations are ongoing and various claims have been submitted against NS and/or its group companies, which NS is contesting. Although the outcome cannot be

predicted with certainty, it is expected that these will not have negative financial consequences of any material significance.

## Guarantees

The Group has provided for an amount of € 869 million of guarantees for the implementation of the various concessions.

## Concessions

The Group has the following concessions:

Concessions in 2016	Expiry date	Type contract
<b>Netherlands</b>		
Hoofdrailnet/ HSL-Zuid	December 31, 2024	net
Regional train concessions	see hereafter	net
Groningen-Drenthe (bus)	December 13, 2019	net
Bestuursregio Utrecht (bus)	December 16, 2023	mixed
<b>Great Britain</b>		
Merseyrail-concession surrounding Liverpool	July 20, 2028	mixed
Greater Anglia-concession (East Anglia)	October 12, 2015	mixed
Abellio London-concession (bus)	see hereafter	gross
ScotRail-concessie in Scotland (from 1 April 2015)	March 31, 2022	mixed
<b>Germany</b>		
Emscher Ruhrtal	December 1, 2019	gross
Ruhr Sieg Netz	December 1, 2034	gross
Der Mungstener	December 1, 2028	gross
Saale-Thüringen-Südharz (vanaf december 2015)	December 1, 2030	gross
Niederrhein-Netz	December 1, 2028	gross
Rhine-Ruhr-Express (start of the operation in two steps; December 2018 and December 2020)	December 1, 2033	gross
Stuttgarter Netze (start of the operation in June 2019)	December 1, 2032	gross
Dieselnetz Sachsen-Anhalt (start of the operation in December 2018)	December 1, 2032	gross
S-Bahn Rhein-Ruhr (start of the operation in December 2019)	December 1, 2034	gross

## Explanation

A net contract is a contract with a revenue risk in respect of passenger revenues.

A gross contract is a contract without revenue risk in respect of passenger revenues.

A mixed contract is a net contract with certain anti-takeover measures in respect of passenger revenues.

## Main rail network

The main rail network concession is awarded by the Ministry of Infrastructure and the Environment and it covers passenger transport by rail on the main rail network in the Netherlands. The old main rail network concession and the HSL concession (see next paragraph) ended in 2014 and the ministry decided in December 2014 to award a new integrated main rail network concession to NS for the period from 1 January 2015 to 31 December 2024. The train services on the HSL South are also covered by this concession from 1 January 2015 onwards. It has been stipulated in the concession that performance must improve during the term of the concession. The interim evaluation and final evaluation will take place in 2019 and 2024 respectively. If NS does not achieve the target values for 2019 or 2024 respectively, NS will be obliged to pay a sum from €1.5 million up to a maximum of €19.5 million for each performance indicator not attained at each evaluation moment. If NS does meet the conditions, a maximum bonus of €10 million can be earned for each evaluation. In addition, the ministry can impose a fine of a maximum of €6.5 million a year if NS does not achieve the baseline minimum values for the concession performance indicators. In 2014, that maximum was still €2.75 million. The performance indicators are measured for the following performance areas: general (customer satisfaction), the door-to-door journey, comfortable journeys (transport capacity at peak times), journey information (in the event of disruptions), safety (including personal safety) and reliability (punctuality for passengers). In 2016, NS received a fine from the Ministry of Infrastructure and the Environment for an amount of €0.5 million.

The agreements made with the governmental authorities include ones on the production resources (rolling stock in particular) that are to be used for operating the main rail network concession. Depending on the ownership details and the form of tendering, the production resources may be leased in the event of complete or partial loss of the main rail network concession to a subsequent concession holder, sold at book value and/or their leases may be transferred unchanged to the subsequent concession holder.

The overall fees for track use and the concession for the integrated main rail network/HSL South concession were €314 million in 2016. The negotiation agreement of 2011 included an adjustment mechanism for avoiding the liquidation of HSA. This adjustment mechanism has been included in the implementation agreement for the concession. It essentially means the following: if the average return on investment for the concession holder over a fixed period turns out to be lower than the threshold value (4%), then the holder will be entitled to an adjustment to the concession price (equal to the difference between the actual return and 4%, with the adjustment over the entire duration of the concession being capped at the equivalent of €144 million at 2010 prices). There is no entitlement to any such adjustment over 2015. Any entitlement to an adjustment is first calculated over 2016 over the average return on investment for 2015 and 2016, and thereafter on a rolling basis over the previous three years. An entitlement to an adjustment to the concession price deriving from the implementation agreement will not then lapse if at any moment in subsequent years the return on investment is higher than the threshold value. Payment of any entitlement that may have arisen to an adjustment to the concession fee will be spread in instalments, as per the implementation agreement.

The concession also includes an adjustment mechanism for a settlement of any windfalls in energy price changes over the concession period. This adjustment will be calculated cumulatively, with NS owing the Ministry of Infrastructure and the Environment 75% of the difference between the actual energy prices and the forecast energy prices according to the business case, with no adjustment being made at times when the cumulative actual return on investment falls below the cumulative norm return. Separately from the calculation outlined above, NS is liable for an unconditional one-off sum of €56 million to the ministry for 2015; this payment is being amortised linearly over the entire term of the concession. This arrangement is capped at €290 million (including the one-off sum) and will never result in a

payment to NS by the Ministry of Infrastructure and the Environment. No energy cost adjustment is owed for 2016.

## Regional rail concessions

This concerns passenger transport by rail on the routes listed below. The concessions specify the conditions with respect to frequency, accessibility, level of service, etc.

During 2016, NS operated the following four concessions, which will run for the periods stated:

- Gouda – Alphen aan den Rijn until 11 December 2031
- Zwolle – Kampen until 9 December 2017
- Zwolle – Enschede until 9 December 2017
- Rotterdam – Hoek van Holland Strand until 31 March 2017

The concessions have been awarded by the provinces or metropolitan regions in question. For the operation of the concessions, a fee is received from the authority granting the concession.

## Merseyrail concession

This concession is operated as a 50-50 joint venture with Serco, a listed British company. It concerns passenger transport on the rail network in the region around Liverpool. There is an obligation to operate defined services (timetable, quality of the service) for a fixed fee paid by the regional authorities. Every five years there is an evaluation that includes checking whether the operations are still 'efficient'. Merseyrail have completed 2 successful reviews with the third due in 2018. The concession runs for 25 years (through to 20 July 2028). There is an option for a five-year extension. The annual payment received from the authorities (grant) is determined in the contract and is index-linked annually.

## Greater Anglia concession (East Anglia)

Abellio was the operator of the previous Greater Anglia concession, which expired in October 2016, and won the new Greater Anglia concession in August 2016. This concession is operated by the full subsidiary Abellio East Anglia Ltd. It has recently been announced that a 40% share of the concession is proposed to be sold to Mitsui. The concession operates passenger transport on the rail network in the Anglia region in the east of England. The number of train-kilometres for this concession is around 29 million per annum. The concession started operation on 16 October 2016 and runs to 12 October 2025, with an option for a further extension of a year. There is an obligation for the replacement of the entire current fleet, with 1,043 new vehicles by September 2020 to run on the Rural, Intercity, Stansted Express, West Anglia and Great Eastern routes. This will increase the number of seats into London in the peak by 55%. Other obligations include a commitment to invest £120m in depot facilities, £60m in station upgrades and £115 million in other expenses and investments.

## ScotRail concession

Abellio won the ScotRail concession in October 2014. The concession started on 1 April 2015 and will run for a minimum of 7 years. An extension to 31 March 2025 is possible by mutual consent after an evaluation in Year 5, with an option for a further extension of 2 years through to 31 March 2027. The ScotRail concession was awarded by Transport Scotland and is operated by the fully-owned subsidiary Abellio ScotRail Ltd, providing intercity, regional and provincial passenger transport by train on the Scottish national rail network. There is an obligation to provide the specified services (timetable, quality of the services) for a predetermined fee paid by the government (grant), which is index-linked on an annual basis.

## Concessions in Germany

Abellio currently operates various train services in the North Rhine-Westphalia (NRW) and Central Germany regions for a fixed payment by the government, which is index-linked on an

annual basis. The concessions run for periods that end at various points between 2019 and 2030.

In December 2016, the Niederrhein-Netz rail concession started the German part of operations. From April 2017 onwards trains will also commute between the Netherlands and Germany.

In June 2015, Abellio won two routes of the Rhine-Ruhr-Express (RRX) with a two-step start of operations; the first will run from Münster to Dortmund, Düsseldorf, Cologne and Aachen in 2018 and the second from Düsseldorf to Essen, Dortmund, Paderborn and Kassel in 2020.

In November 2015, Abellio won the Stuttgarter Netze concession. From June 2019 onwards, Abellio will be running 43 new trains in the Baden-Württemberg region.

In addition, Abellio won the Saxony-Anhalt diesel network (DISA) concession in December 2015. From December 2018 onwards, Abellio will be running 12 routes in the Saxony-Anhalt region.

In July 2016, Abellio won the S-Bahn Rhein-Ruhr concession. From December 2019 onwards, Abellio will be running 6 routes in the NRW region.

In December 2016, Abellio successfully defended the Ruhr Sieg Netz concession. From 2019 on, Abellio will operate the concession with 18 trains.

## Concessions in London

Abellio London operates 49 bus routes in London from 5 depots representing 8% of the market, and 21 bus routes in Surrey from one depot. The concessions in London have terms of 5 years on average with an option for an extension of 2 years, depending on the attainment of various performance criteria.

## Qbuzz concessions

Qbuzz operates regional bus concessions in Friesland (until December 2016, after which the concession was handed over to Arriva), Groningen-Drenthe (until December 2019) and Utrecht (December 2014 until December 2023).

# 30. Financial instruments – Risk management and fair value

Because financial instruments are used, the Group is exposed to the following risks:

- Market risks consisting of:
  - Interest rate risk
  - Currency risk
  - Price risk for energy
- Credit risk
- Liquidity risk
- Insurance risks
- Risks deriving from cross-border transactions

## Risk management framework

The Executive Board bears the final responsibility for setting up monitoring of the Group's risk management framework. The Risk & Audit Committee and the Supervisory Board make sure that the risk management framework is sufficient in view of the risks to which the Group is exposed. The Group's Risk & Audit Committee is supported in its supervisory role by NS Audit and the Group's Control & Expertise department. NS Audit provides additional assurance concerning the proper control of all the NS business processes by performing regular and occasional evaluations. The findings of NS Audit are reported to the Risk & Audit Committee.

The Group's risk policy aims to identify and analyse the risks confronting the group, establish suitable risk limits and controls, and monitor compliance with the limits. Policy and systems for financial risk management are regularly assessed and, where necessary, adjusted to allow for changes in the market conditions and the Group's activities. Financial risk management is one element of the NS risk framework.

In order to ensure appropriate risk management, additional policies have been defined for a number of business units. For instance, NS Insurance, Abellio and NSFSC have specific risk controls compared to other business units, given the nature of the businesses, for which Corporate Treasury determines the substantive content of the financial risk management.

The Group is also involved through Abellio in transport concessions abroad. These activities are mainly in the UK, largely independent and with the remainder in a joint venture with the partner Serco in which the two parties have equal representation. Abellio also has companies in the Netherlands and in Germany. The financial risk management of Abellio is part of the Abellio risk framework and therewith part of the NS risk framework.

## **Market risks**

Market risk is the risk that the Group's income and expenditure, or the value of investments in financial instruments, will be negatively affected by changes in market prices, such as commodity prices, currency exchange rates and interest rates. The management of market risk has the goal of keeping the market risk position within acceptable limits with the best possible return on investment. The market risk comprises three types of risk: interest rate risks, currency risks and price risks.

### **Interest rate risk**

The Group's policy is aimed at ensuring that at least 50% of the interest rate risk on loans taken out is based on a fixed rate of interest. When determining the interest rate risk on the loans taken out, the Group can take account of the available liquidity that can neutralise the interest rate risk of loans at variable rates. The Group uses derivatives such as interest rate swaps to limit the interest rate risks.

Interest rate risks are predominantly managed centrally. Retaining interest rate positions relating to foreign parts of the concern is subject to regulations and the positions adopted are restricted to defined limits. No speculative positions are held.

### **Exposure to interest rate risks**

The interest rate profile of the interest-bearing financial instruments is as follows:

(in millions of euros)	December 31, 2016	December 31, 2015
<b>Liabilities with a variable interest rate</b>		
Financial liabilities	-59	-449
Effects interestswaps	28	358
	<b>-31</b>	<b>-91</b>
<b>Liabilities with a fixed interest rate</b>		
Financial liabilities	-255	-421
Effects interestswaps	-28	-358
	<b>-283</b>	<b>-779</b>
<b>Financial assets</b>		
Financial assets with a fixed interest rate	209	277
Financial assets with a variable interest rate	709	923

### Cash flow interest rate risk

The cash flow interest rate risk is the risk that future cash flows of a financial instrument with a variable interest rate will fluctuate as a consequence of movements in market rates.

A reasonably feasible change of 0.5% in the interest rate as of the reporting date could mean that the equity and the result could increase or decrease by the amounts stated below. This analysis assumes that all other variables, particularly the exchange rates, remain constant.

### Interest rate sensitivity of the result/equity after tax to variable rates

(in millions of euros)	Results, after taxes		Equity after taxes	
	Increase of 0.5%	Decrease of 0.5%	Increase of 0.5%	Decrease of 0.5%
<b>December 31, 2015</b>				
Financial instruments with a variable interest	4	-4	-	-
Interestswaps	1	-1	-1	1
<b>Sensitivity of cash flows (net)</b>	<b>2</b>	<b>-2</b>	<b>-1</b>	<b>1</b>
<b>December 31, 2016</b>				
Financial instruments with a variable interest	3	-3	-	-
Interestswaps	-	-	-	-
<b>Sensitivity of cash flows (net)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

As at the reporting date, the percentage of loans with variable rates after hedging using interest rate swaps was 47% of the overall portfolio. The term of the interest rate swap is equal to the term of the loan. The hedging of the interest rate risk using cash flow hedge accounting is as follows:



(in millions of euros)	December 31, 2016	December 31, 2015
<i>Cashflow hedge accounting</i>		
Hedged value of the underlying private loans	28	417
Underlying value of the interest rate swaps	28	417
<b>Hedge effectiveness</b>	<b>100%</b>	<b>100%</b>

In 2016, the Group has entered into a forward contract to hedge the interest rate risk on future financing of equipment on behalf of a foreign concession (cash flow hedge accounting). The underlying value of the forward contract amounts to €126 million. The book value of this instrument as at December 31, 2016 is €3 million.

#### **Fair value interest rate risk**

The interest rate risk for part of the financial fixed assets available for sale is hedged by means of a fair value hedge making use of interest rate swaps. These interest rate swaps had a nominal value of €60 million at the end of 2016 (2015: €60 million). The book value of these derivatives was nihil at the end of 2016 (2015: €0.5 million).

### **Currency risk**

The Group is exposed to currency risks on purchases, trading activities, liquid assets, loans taken out, other balance-sheet positions and liabilities not included in the balance sheet denominated in currencies other than the euro. Because of its business activities, the Group mainly has currency positions in sterling (GBP), Norwegian krone (NOK) and Swiss francs (CHF).

The risk of fluctuations in exchange rates is hedged using forward exchange contract, spot and forward purchases and sales and swaps, thereby hedging one or more of the risks to which the primary financial instruments are exposed. Buying and selling, investment and financing commitments, and settling accounts with foreign railway companies that are denominated in a currency other than the functional currency of the Group's business units take place in euros (EUR) and pounds sterling (GBP).

Only if the Group expects to end the operations, currency risks relating to the translation differences of both the underlying balance sheet items, and participation value, where the functional currency differ from the Euro, are capped. The currency risk of these regular balance sheet items and participation value by means of the legal translation reserve recognized in equity.

At year end of 2016 and 2015, no material items were held in other than the functional currency of the relevant business.

At the end of 2016, the Group entered into a number of forward contracts in order to cover specific currency positions. The nominal position of the hedged positions amount at the end of 2016 €30 million. (end of 2015: €125 million). The fair value of these currency derivatives at the end of 2016 was €1 million (year-end 2015: €1 million).

#### **Sensitivity analysis for foreign currencies**

Given that no materially significant items of financial instruments held in foreign currencies were held at the end of 2016 or the end of 2015, a change in the value of the euro with respect to a foreign currency at the yearend will not have any material effect on the equity and the profits over the reporting period.

## Price risk for energy

### Netherlands

The Group is affected by market fluctuations in the price of energy. In 2014, the Group signed a ten-year contract (2014-2024) with Eneco for the supply of green traction electricity for the rolling stock fleet in the Netherlands. From 2015 onwards, 50% of the trains in the Netherlands will be running on renewable 'green' electricity, and by 2017 the Group's traction will be entirely green. The contract covers the following risks (entirely or in part) as follows:

- Price risk: the fees for the Programme for Responsibility and Guaranteed Origins are fixed for the entire contractual period. The contract offers the possibility of purchasing the requisite electricity in future years based on a hedging strategy, which will limit the exposure to market prices.
- Credit risk: the credit risk is limited to the thresholds that depend on the credit rating. If the so-called exposure (which allows for aspects such as the difference between market values and contract values of electricity covered using a hedging strategy) turns out to be above a certain threshold (that depends on the credit rating), the Group or Eneco does then have to give the other party guarantees or provide cash collateral.
- Volume risk: the volume risk is limited because the volume for the previous year is given as the volume required in each new year. Within the year in question, in addition to the above, there is also a bandwidth for the volume within which a greater or smaller consumption figure does not affect the price.
- Image risk: the contract provides for an evaluation in 2019 to assess whether the traction energy is sufficiently 'green' by then. Should this not be the case, which we neither expect nor want, then the Group is entitled to terminate the contract as of 2020.

The contract complies with the 'own use' criteria and is not classified as a derivative.

### United Kingdom

Abellio has entered into fuel hedging contracts for a number of subsidiaries to cover movements in fuel prices and the associated currency risks. To do that, monthly forward contracts are used for a proportion of its fuel costs for a future period (ranging from January 2016 to March 2020) in order to cover the risks relating to the fuel costs and the associated currency risks. The guarantees given with these hedging contracts are included in note 29.

### Sensitivity of commodity (fuel) derivatives

The sensitivity of the commodity derivatives with a book value as at 31 December 2016 of €6 million (€41 million on 31 December 2015) is as follows: A rise of €0.10 in the fuel price would cause a reduction in the negative value of the commodity derivatives of approximately €15 million (31 December 2015: €19 million) and equity would increase by €12 million (31 December 2015: €15 million). If the fuel price fell, an opposite effect would be seen.

## Credit Risk

Credit risk is the risk of financial loss by the Group if a customer or counterparty to a financial instrument does not meet its contractual obligations. Credit risks mainly arise from receivables from customers and from investments. There was no significant concentration of credit risks as at the balance sheet date.

The book value of the financial assets represents the maximum credit risk. For details of the credit risk regarding Eurofima, please refer to note 29. The maximum exposure to credit risk at the reporting date was as follows:

(in millions of euros)	Disclosure	December 31, 2016	December 31, 2015
Available-for-sale financial assets	15	89	132
Loans and receivables	15	127	149
Held-to-maturity investments	15	-	1
Finance leases	15	29	32
Other financial assets	15	22	26
Deposits	15	-	252
Trade and other receivables	18	498	519
Cash and cash equivalents	20	709	671
<b>Total</b>		<b>1,474</b>	<b>1,782</b>

## Investments

The Group limits its credit risk in its investments by only investing with other parties that comply with the policy drawn up by the company. There are regular checks to see if the contractual parties still comply with the policy or whether further actions are needed.

Given the creditworthiness of the counterparties, the Group expects that those counterparties will fulfil their obligations. No impairment losses were suffered on the investments, bonds and deposits in 2016 or 2015. Investments are in principle made with counterparties with a long-term credit rating of at least A- from Standard & Poor's and a long-term credit rating of at least A3 from Moody's, or with a number of Dutch municipalities. If a counterparty only has a single credit rating, it must fulfil the rating requirements stated above from Standard & Poor's or Moody's. Investments that no longer comply with this policy are either permissible as exceptions and monitored frequently or reduced (generally through normal progression), which may mean they persist for some time after the balance sheet date. The Group's foreign companies do not have significant long-term cash surpluses, unless this is the result of their normal business activities (monies received in advance).

## Trade and other receivables

The Group's credit risk relating to trade and other receivables is mainly determined by the individual characteristics of the separate customers. The demographic features of the customer base, the risk of non-payment in the sector and the country in which the customers are active, have less impact on the credit risk. About 9% (2015: 9%) of the Group's revenues are realised through sales transactions with the Dutch Education Executive Agency (DUO).

As part of the credit policy used by the business units, the individual creditworthiness of each new customer is assessed before standard payment and delivery conditions are offered to the customer. In the case of contract extensions, figures from the business unit's own experience are also used in assessing the customer's creditworthiness. In the assessment of the credit risk, customers are divided into groups based on credit characteristics, including government, companies, private individuals and customers with possible financial problems in the past. Deliveries to customers with a high risk profile are only made after approval by the Executive Board. Business has been conducted with the majority of customers for many years, with only occasional (non-material) losses having been incurred.

The Group has formed a provision for impairment for the amount of the estimated losses from trade and other receivables. The most important elements of this provision are a specific loss provision for significant individual positions and a group loss provision for groups of comparable assets concerning losses that have been incurred but not yet identified. The group loss provision is determined on the basis of historic payment data for comparable financial assets.

The ageing of trade receivables as at the reporting date was as follows:

	December 31, 2016		December 31, 2015	
	Gross	Provided for	Gross	Provided for
(in millions of euros)				
Not past due	137	-	170	-
Past due 0-30 days	78	-	29	-
Past due 31-120 days	7	1	6	1
Past due 121-180 days	4	1	11	2
Past due 181-360 days	6	2	10	1
Past due more than one year	2	2	9	4
<b>Total</b>	<b>234</b>	<b>6</b>	<b>235</b>	<b>8</b>

### Impairment losses

The movement in the provision for impairments of trade receivables during the year was as follows:

(in millions of euros)	2016	2015
Balance as at 1 January	8	8
Additions	2	3
Use	-3	-2
Release	-1	-1
<b>Balance as at 31 December</b>	<b>6</b>	<b>8</b>

Provisions relating to debtors are made in the case of an impairment, unless the Group is certain that it will not be possible to recover the sum owed. In that case, the amount is considered irrecoverable and is written off directly against the financial asset.

### Liquidity risk

The liquidity risk is the risk that the Group will have difficulty meeting its financial obligations that need to be settled using cash or other financial assets. The principles underlying liquidity risk management are that sufficient liquid assets must be retained, as far as possible, to be able to meet the current and future financial obligations in the short term, under normal and difficult circumstances, without any unacceptable losses being sustained or the Group's reputation being jeopardised. The risk that the Group cannot meet its financial obligations is limited as the Group has sufficient cash or assets that can be swiftly cashed in. In addition, the Group has a committed credit facility at its disposal through which €345 million can be withdrawn and with a term up to 2021, as well as a project credit facility for a sum of €426 million.

At the end of 2016, the cash and cash equivalents (that is, resources that can quickly be made liquid) comprised €1,434 million (2015: €1,600 million). The contractual financial liabilities due within one year are €788 million (2015: €1,197 million).

The Group manages the cash and cash equivalents on the basis of regular cash forecasts using a bottom-up approach. On the basis of this forecast, financing limits are set for the business units that are clients of the In-House Bank of Corporate Treasury. The bank monitors these limits and they cannot be exceeded unless authorisation has been obtained. This gives Corporate Treasury an early warning system. The cash forecast, together with the financing limits mentioned above, enables Corporate Treasury to manage the cash and cash equivalents by lending and withdrawing funds.

The following table shows the contractual maturities of the financial liabilities, including the estimated interest payments. The sums are gross amounts and have not been converted to present values.

December 31, 2015

(in millions of euros)	Carrying amount	Contractual cash flows	< 6 mth	6-12 mth	1-2 yr	2- 5 yr	> 5 yr
<b>Non-derivative financial liabilities</b>							
Private loans	793	797	56	398	85	174	84
Finance lease liabilities	77	78	9	9	23	21	16
Trade and other payables	691	691	691	-	-	-	-
<b>Trade and other payables</b>							
Interest rate swaps used for cash flow hedging	17	17	8	9	-	-	-
Interest rate swaps used for fair value hedging	-	-	-	-	-	-	-
Commodity derivatives	41	41	9	8	10	14	-
<b>Total</b>	<b>1,619</b>	<b>1,624</b>	<b>773</b>	<b>424</b>	<b>118</b>	<b>209</b>	<b>100</b>

December 31, 2016

(in millions of euros)	Carrying amount	Contractual cash flows	< 6 mth	6-12 mth	1-2 yr	2- 5 yr	> 5 yr
<b>Non-derivative financial liabilities</b>							
Private loans	314	314	29	44	71	114	56
Finance lease liabilities	47	47	-	1	1	2	43
Trade and other payables	702	702	702	-	-	-	-
<b>Trade and other payables</b>							
Interest rate swaps used for cash flow hedging	3	3	-	-	-	1	2
Interest rate swaps used for fair value hedging	-	-	-	-	-	-	-
Commodity derivatives	6	11	1	1	2	1	6
<b>Total</b>	<b>1,072</b>	<b>1,077</b>	<b>732</b>	<b>46</b>	<b>74</b>	<b>118</b>	<b>107</b>

The above items have been netted off, because the contract requires the hedging transactions to be netted on settlement. When calculating the future cash flows, it is assumed that the future variable interest rates are identical to the last known variable interest rates.

As regards the risks relating to capital, the Group has an agreed dividend policy with the shareholder.

## Insurance risks

As part of the operational activities, the Group is exposed to risks against which insurance can be taken out. Risks beyond the scope of the business units are managed by the subsidiary NS Insurance. This refers to the risk of claims due to collisions, fire, accident and liability. The maximum size of these claims are calculated by external specialists once every three years, or more often if changed circumstances make this necessary. The subsidiary, NS Insurance, insures the above risks for the business units. It does not insure third parties. If the total claim burden in any year exceeds NS Insurance's own internal cover, the additional cover required is provided by reinsurance. The Group's loss claims are paid from the premium income and investment income of NS Insurance. If the total costs, including claim costs are higher than revenues, these costs are paid from the freely distributable reserve of NS Insurance, if this is sufficient.

NS Insurance is reinsured by means of stop-loss reinsurance contracts. MPL (*maximum possible loss*) studies are carried out regularly to determine the insured limits. Provided market conditions allow, NS Insurance only takes out reinsurance with parties that have at least an A-rating and a stable outlook. If the rating drops below A-, it has the option of cancelling the reinsurance agreement. This has as yet never happened. The reinsurers of NS Insurance have ratings of at least A- as at the end of 2016.

NS Insurance is an insurance company that is supervised by De Nederlandsche Bank and the Netherlands Authority for the Financial Markets (AFM). Insurers must maintain a minimum equity of the solvency requirement of Solvency II (SCR or Solvency Capital Requirement). Insurers are expected to define their own standard solvency. NS Insurance has adopted her normsolvency as such that upon the occurrence of the stressscenario still to meet the SCR. The standard solvency amounts to € 41 million. NS Insurance complies generously. NS Insurance is 100% consolidated within the Group.

### **Risks deriving from so-called 'cross-border lease transactions'**

Up until 1998, the Group entered into cross-border lease transactions with the object of reducing financing costs. These cross-border leases relate only to rolling stock. Economic ownership remains with the Group, so the assets concerned are included on the balance sheet. The book value of rolling stock financed by cross-border leases was €102 million at year-end 2016 (2015: €112 million). The financial benefit from the cross-border leases has been deducted from the financing costs, spread over the terms of the transactions concerned in the income statement. A sum of €8 million has been provided for the financial risks deriving from dissolution of cross-border lease transactions. Measured against the realistic risk, the Group believes that that provision amount to be sufficient. A proportion of the positions involved in these leases are off balance sheet positions. The currency risk in these contracts is covered, unforeseen risks notwithstanding.

### **Fair value**

#### **Fair value versus book value**

The book values of the financial assets and liabilities recognised in the balance sheet are materially the same as the fair values.

#### **Determining the value of investments included under the financial assets**

For bonds, the fair value is calculated using the available current market prices/closing prices.

#### **Valuation of derivatives**

When determining the value of interest rate swaps and currency derivatives, the Group uses valuation methods in which all the significant items of information required are derived from visible market data (Level 2).

The valuation of the HTM option for 2015 (see note 15) is based on data that is in turn based on market data that is not observable (non-observable input, Level 3).

## **31. Events after the balance sheet date**

### **Sale of 40% interest Greater Anglia**

On January 17, 2017 the Group has signed a contract under which it will sell 40% of its interest in Greater Anglia to Mitsui & Co., Ltd., pending final regulatory approvals. It is expected that the interest in Greater Anglia will continue to be consolidated for 100%, the minority interest will be recognised as a financial instrument.

## 32. Related parties

The transactions with related parties are done on an arm's-length basis.

All issued shares are held by the State of the Netherlands. One significant transaction with an enterprise that has a relationship with the State (DUO, the Dutch Education Executive Agency) is the remuneration received for student railcards (2016: €466 million, 2015: €459 million).

Furthermore, the Group received a sum of €30 million in grants from the State in 2016 through various schemes (2015: €30 million). Of these grants, €29 million (€29 million in 2015) was recognised as 'Other revenue' and €1 million (€1 million in 2015) was deducted from the related costs.

The following transactions took place with ProRail BV, a company with links to the State:

- The payment of the access charges for the rail infrastructure in the Netherlands. This is explained under note 7;
- For the financial of commercial facilities in New Key Projects (Nieuwe Sleutel Projecten) at stations, €8 million was agreed to be paid to ProRail BV as at 31 December 2016 (€11 million as at 31 December 2015). In 2016, €10 million (2015: €19 million) was paid to ProRail BV.

The transactions with the Executive Board and the Supervisory Board members are explained under note 2.

There were no significant transactions in 2016 and 2015 with joint ventures and other participating interests.

The Group has a 5.8% participating interest in Eurofima. Eurofima is a European company that was set up for financing railway rolling stock. It is a supranational organisation that is headquartered in Basel, Switzerland. The following transactions and balance sheet positions apply for this party:

(in millions of euros)	2016	2015
Interest expenses	-	1

(in millions of euros)	December 31, 2016	December 31, 2015
Private loans	59	449

### Group companies

The main companies included in the consolidated financial statements are:



	Percentage interest		Statutory Seat
	2016	2015	
<b>Operating companies</b>			
NS Reizigers BV*	100.0	100.0	Utrecht
Abellio Transport Holding BV	100.0	100.0	Utrecht
NedTrain BV*	100.0	100.0	Utrecht
NS Financial Services (Holdings) Ltd	100.0	100.0	Dublin
NS Stations BV*	100.0	100.0	Utrecht
NS Vastgoed BV*	100.0	100.0	Utrecht
NS Insurance NV	100.0	100.0	Utrecht
NS Opleidingen BV*	100.0	100.0	Utrecht
NS Lease BV*	100.0	100.0	Utrecht
<b>Subsidiaries of operating companies</b>			
Thalys Nederland NV*	100.0	100.0	Utrecht
NS Internationaal BV*	100.0	100.0	Utrecht
NedTrain Ematech BV	100.0	100.0	Utrecht
NS Stations Retailbedrijf BV*	100.0	100.0	Utrecht
NS Fiets BV	100.0	100.0	Utrecht
NS-OV Fiets BV	100.0	100.0	Utrecht
Qbuzz BV	100.0	100.0	Amersfoort
Stationsfoodstore BV*	100.0	100.0	Utrecht
NS Poort Ontwikkeling BV	100.0	100.0	Utrecht
NS Financial Services Company	100.0	100.0	Dublin
DISA Assets Ltd	100.0	100.0	Dublin
Abellio Nederland BV	100.0	100.0	Utrecht
Abellio Transport Group Ltd	100.0	100.0	Glasgow
Abellio Transport Holdings Ltd	100.0	100.0	London
Abellio Greater Anglia Ltd	100.0	100.0	London
Abellio Rail Baden-Württemberg GmbH	100.0	100.0	Stuttgart
Abellio Rail Mitteldeutschland GmbH	100.0	100.0	Halle
Abellio Rail NRW GmbH	100.0	100.0	Essen
Abellio GmbH	100.0	100.0	Essen
Abellio ScotRail Ltd	100.0	100.0	Glasgow
Abellio West London Ltd	100.0	100.0	London
Abellio London Ltd	100.0	100.0	London
<b>Joint ventures</b>			
Stationslocaties OG CV	55.8	55.8	Utrecht
Basisfonds Stationslocaties CV	50.9	50.9	Utrecht
Merseyrail Services Holding Company Ltd	50.0	50.0	Hampshire
Northern Rail Holdings Ltd	50.0	50.0	Hampshire
<b>Joint operations</b>			
Stationsdrogisterijen CV	50.0	50.0	Zaandam
<b>Other interests</b>			
WestfalenBahn GmbH	25.0	25.0	Bielefeld
Eurofima	5.8	5.8	Basel

\* Pursuant to the provisions of Section 403, Book 2 of the Dutch Civil Code, NS Groep NV has assumed liability in respect of the debts arising from legal acts.

Pursuant to Sections 379 and 414, Book 2 of the Dutch Civil Code, a complete list of the Group's subsidiaries, associates and joint ventures has been filed with the office of the Trade Register in Utrecht.

## 33. Significant accounting policies

The section below gives details of the important accounting policies used for consolidation, valuation of assets and liabilities, and determining the Group's result.

These principles have been applied consistently for all the periods presented in these consolidated financial statements, unless otherwise indicated.

Pursuant to Section 402, paragraph 1, Part 9, Book 2 of the Dutch Civil Code, an abridged income statement is included in the company financial statements of NV Nederlandse Spoorwegen.

The financial statements are presented in euros (the functional currency), rounded to the nearest million. The financial statements have been prepared on the basis of historical cost, unless reported differently. The figures for the previous year have been adjusted in order to make comparison possible.

The Group has applied the accounting policies for financial reporting as explained below consistently for 2016 in these consolidated financial statements.

As of 1 January 2016, the Group has adopted the following new standards and amendments to standards, including all consequent changes deriving from them in other standards. These new standards have not resulted in important changes in the way the accounting policies are applied.

- Equity method in company financial statements (amendment to IAS 27)
- Disclosure initiative (amendments to IAS 1)
- Annual IFRS improvement cycles 2012-2014
- Clarification of accepted methods for depreciation and amortisation (amendments to IAS 16 and IAS 38)
- Processing the acquisition of interests in joint operations (amendment to IFRS 11)

### New standards and amendments to standards that are mandatory from 2017 or later

The Group has not voluntarily opted for the early adoption of any new standards or amendments to existing standards or interpretations that are only mandatory with effect from the financial statements for 2017 or later.

The Group is currently investigating the consequences of the following new standards, interpretations and amendments to existing standards, the application of which is mandatory with effect from the financial statements for 2017, or later where specified:

#### IFRS 9 — Financial instruments

IFRS 9, published in July 2015, replaces the current regulations of IAS 39, *Financial instruments: Inclusion and Valuation*. IFRS 9 contains revised regulations relating to the classification and valuation of financial instruments, including a new anticipated credit loss model for calculating impairments of financial assets, plus new general hedge accounting

requirements. The stipulations of IAS 39 relating to including and dropping financial instruments have been taken on board in the new guideline. IFRS 9 is coming into effect for financial years starting on or after 1 January 2018, with the option of implementing the guideline earlier than that. The Group will analyse the potential impact on the consolidated financial statements as a result of the application of IFRS 9. It is expected that this guideline will be approved by the EU.

#### **IFRS 15 — Revenue from contracts with clients**

IFRS 15 defines an all-embracing framework for determining whether, to what extent and when revenues have to be included. It replaces the existing regulations relating to the recognition of revenue, including *IAS 18 Revenue*, *IAS 11 Construction Contracts* and *IFRIC 13 Customer Loyalty Programmes*.

IFRS 15 is coming into effect for financial years starting on or after 1 January 2018, with the option of implementing the guideline earlier than that. The Group is analysing the potential impact on the consolidated financial statements as a result of the application of IFRS 15. It is expected that the impact of this guideline will be limited.

#### **IFRS 16 — Leases**

A new guideline IFRS 16 (Leases) was published on 13 January 2016. Applying this guideline is mandatory as of 1 January 2019. The way lease contracts are dealt with in the accounts will change fundamentally. IFRS 16 eliminates the current recognition method, in which a distinction is made between financial leasing (on balance) and operational leasing (off balance). Instead of that, there will be a single model for recognition, comparable to the current financial lease accounting. The Group has started with the assessment of the impact of this guideline. It is expected that this guideline will have a major impact on the Group's balance sheet. This guideline has not yet been approved by the EU.

#### **Other**

The following new or amended standards have no significant impact on the consolidated financial statements of the Group:

- Recognition of deferred tax assets for unrealized losses (Amendments to IAS 12)
- Disclosure Initiative (Amendments to IAS 7)
- Clarifications IFRS 15 Revenue from contracts with customers
- Classification and valuation of share-based payment transactions (Amendments to IFRS 2)
- The application of IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts (Amendments to IFRS 4)
- Annual IFRS improvements cycl2014-2016
- Foreign currency transactions and processing of payments (IFRIC 22)
- Transfer of Property (Amendment to IAS 40)

### **Estimates and assessments**

The preparation of the financial statements requires the Executive Board to make judgements, estimates and assumptions that affect the application of accounting policies and the reported value of assets and liabilities, and income and expenses. The estimates and corresponding assumptions are based on experiences from the past and various other factors that could be considered reasonable under the circumstances. The actual outcomes may differ from these estimates.

The estimates and underlying assumptions are reviewed on a regular basis. Revisions of estimates are recognised in the period in which the estimate is revised or in future periods if the revision has consequences for these periods.

The key estimates and evaluations involve (largely) estimates of provisions/claims relating to irregularities (note 25 and note 29) and valuation of deferred tax receivables (note 16).

The accounting policies described below have been applied consistently to the periods presented in these consolidated financial statements.

## Principles of consolidation

### Subsidiaries

The Group has control over an entity if its involvement with that entity means that the Group is exposed to or is entitled to variable returns and that it has the power to influence those returns by virtue of its say in that entity. The financial statements of the subsidiaries are incorporated in the consolidated financial statements as from the date on which control commences until the date on which control ceases.

In the event of a loss of control over the subsidiary, the subsidiary's assets and liabilities, any minority interests and other equity components associated with the subsidiary are no longer recognised in the balance sheet. Any excess or shortfall is included in the income statement. If the Group maintains an interest in the former subsidiary, that interest is recognised at the fair value on the date on which the Group ceased to exercise control.

### Interests in investments are recognised according to the equity method.

The Group's interests in investments accounted for using the equity method consist of interests in associates and joint ventures.

Associates are entities in which the Group has significant influence on the financial and operational policy, but which it does not control. A joint venture is an agreement whereby the Group has a share of the control and in which the Group has rights with respect to the net assets of the venture rather than rights with respect to the (gross) assets and obligations with respect to the liabilities.

Associates and joint ventures over which control is exercised jointly are accounted for using the equity method and valued at cost price upon initial recognition. The cost price of the investment includes the transaction costs. Subsequent to initial recognition, the consolidated financial statements contain the Group's share in the realised and unrealised results of the investments, accounted for according to the equity method, through to the date on which the significant influence ceases.

### Acquisition of subsidiaries

Business combinations are recognised according to the acquisition method as at the date on which control is transferred to the Group. The remuneration for the acquisition is generally assessed at its fair value, as are the net identifiable assets that are acquired. Any goodwill deriving from this is assessed annually for impairments. Any recognised gain from a beneficial sale will be recognised directly in the income statement. Transaction costs are recognised at the time when they are incurred.

### Elimination of transactions on consolidation

Intra-group balances and transactions plus any unrealised gains and losses on transactions within the Group or income and expenses from similar transactions are eliminated. Unrealised gains and losses arising from transactions with investments that are recognised according to the equity method are eliminated in proportion to the Group's interest in the investment. Unrealised losses are eliminated in the same way as unrealised profits, but only insofar as there are no indications that they should be treated as an impairment.

## Currency translation

### Foreign currency transactions

Transactions denominated in foreign currency are translated to the respective functional currency of the Group entities at the exchange rate applying on the transaction date. Foreign currency monetary assets and liabilities are translated into the functional currency at the exchange rate applying on the balance sheet date. Non-monetary assets denominated in foreign currencies and liabilities that are assessed at fair value are converted to the functional currency using the exchange rates that applied on the dates when the fair values were determined. Non-monetary assets denominated in foreign currencies and liabilities that are assessed using historical costs will not be recalculated.

The exchange rate differences on monetary items concern the difference between the amortised costs in the functional currency at the start of the period, adjusted for effective interest and payments during the period, and the amortised costs in foreign currency translated at the exchange rate at the end of the period. Exchange rate differences arising when the following items are converted are recognised in the unrealised results:

- financial liabilities that are designated as a hedge of the net investment in a foreign operation
- qualifying cash flow hedges, insofar as the hedging is effective

### Foreign operations

The assets and liabilities of foreign operations, including goodwill and fair value adjustments arising on consolidation, are translated into euros at the exchange rates applying at the reporting date. The revenues and costs of foreign operations are converted into euros at an average exchange rate that approximates to the exchange rate on the transaction date.

Currency conversion differences are included in the unrealised results and recognised in the reserve for foreign exchange differences. If the sale of a foreign activity means that the Group loses control, significant influence or joint control, then the cumulative amount from the foreign exchange differences reserve associated with that foreign activity will be transferred to the income statement when the profit or loss from the sale is recognised. If the Group only sells part of its interest in a subsidiary, while retaining control, then a proportionate share of the cumulative amount will be reassigned to the minority holding. If the Group only sells part of its interest in an associate or joint venture, while retaining significant influence or joint control, then a proportionate share of the cumulative amount will be transferred to the income statement.

## Property, plant and equipment

Property, plant and equipment are measured at cost, less cumulative depreciation and cumulative impairment losses. The cost of self-produced assets includes the cost of materials, direct labour costs, a reasonable portion of the indirect production costs, and - if relevant - the estimated costs of dismantling and removing the asset and the costs of restoring the site where the asset was located.

Computer software that is an integral part of the computer equipment is capitalised as part of the equipment in question.

Assets of which the Group is merely the economic owner are accounted for in the balance sheet.

Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the book value of the asset and are recognised net within 'Other revenue' in the income statement.

## Investment property

Investment property includes property held in order to earn rental income or an appreciation in value, or both. Investment property is measured at cost, less cumulative depreciation and cumulative impairment losses. The cost of self-produced assets includes the cost of materials, direct labour costs, a reasonable portion of the indirect production costs, and - if relevant - the estimated costs of dismantling and removing the asset and the costs of restoring the site where the asset was located.

The following policies apply equally to property, plant and equipment and to investment property.

### Components

If property, plant and equipment or investment property consist of categories with differing economic lives, these categories are listed separately under property, plant and equipment or investment property.

The book value of property, plant and equipment or investment property is adjusted for the cost of replacing all or part of that asset when such costs are incurred and if it is likely that the replacement will deliver future economic benefits. All other costs of maintaining the asset are charged to the income statement as and when they are incurred.

### Depreciation/amortisation/impairment

Depreciation of property, plant and equipment is linear, after deducting the residual value, based on the estimated operational lifespan of each individual item of property, plant and equipment. Depreciation is charged to the income statement.

Except where it is reasonably certain that the Group will be taking over the ownership of a leased asset at the end of the lease period, leased assets are depreciated over the period of the leasing agreement or the operational lifespan (whichever is the shorter). Land is not depreciated with the exception of paving. The estimated economic service life for property, plant and equipment is as follows:

Asset type	Depreciation terms
Buildings	broken down into components (15 to 100 years); average 40 years
Other fixed plant	10 to 25 years
Trains	20 years
Buses	6 to 15 years
Plant and equipments	3 to 10 years
And for investment property:	
Foundations and underlying land	100 years
Structure and core	50 years
Facades and outer walls	33 years
Roofing	15 years
Interior finish	15 years
Technical equipment	15 years

The indicated service life is an average for the assets concerned and for the components of which the assets are made up.

The depreciation method, remaining useful life and residual value are assessed each year.

If a change in use causes an item of property, plant and equipment to be treated as investment property or if an investment property is intended for the company's own use, it is transferred to investment property or property, plant and equipment respectively. Because the valuation of both categories of fixed assets is the same, they are transferred at the book value.

## **Intangible non-current assets**

### **Goodwill**

All business combinations are accounted for using the acquisition method. Goodwill is the sum deriving from the acquisition of subsidiaries, associates and joint ventures. Goodwill equals the difference between the cost of the acquisition and the fair value of the identifiable assets and liabilities on the date on which they are acquired. Goodwill is carried at cost less impairment.

Negative goodwill from an acquisition is taken directly to the statement of income.

### **Other intangible non-current assets.**

Other intangible non-current assets with a limited lifespan acquired or produced by the Group are recognised in the balance sheet at cost less cumulative amortisation and cumulative impairment.

Subsequent to initial recognition, expenditure on capitalised intangible fixed assets is only capitalised when this causes an increase in the future economic rewards associated with the specific asset involved. All other expenditure, including internally generated goodwill and trademarks, is charged to the statement of income when it is incurred.

Amortisation is charged to the statement of income on a straight-line basis over the estimated useful lives of the intangible assets, with the exception of goodwill, from the date on which they become available for use. The estimated useful economic lives are as follows:

- Software 3 - 10 years
- Contracts 5 - 10 years

## **Inventories**

Inventories are stated at the lower of cost and the net realisable value. The net realisable value is the estimated sales price in the normal conduct of business, less the estimated cost of completion and the cost of sales.

The cost of the inventories is based on the average purchase price or cost price and includes expenditure incurred in acquiring the inventories and the associated costs of purchase. The cost of inventories of finished goods and work in progress includes a reasonable portion of the indirect costs based on normal production capacity.

## **Projects in progress commissioned by third parties**

Projects in progress commissioned by third parties (construction contracts) are carried at cost plus profit as at the balance sheet date, less a provision for anticipated losses and less invoiced instalments pro rata to the progress of the project. The cost encompasses all expenditure relating directly to specific projects and an attributable portion of the fixed and variable indirect costs incurred in connection with the contract activities, based on normal production capacity.

A receivable is created if the amount of the expenses incurred (including the recognised result) exceeds the amount of the invoiced instalments. If the amount of the costs incurred (including the result recognised) is less than the invoiced instalments, the item is classed as a liability.



## Financial instruments

On initial recognition, loans, receivables and deposits included by the Group from the date on which they first arose. All other financial assets are first included on the transaction date. The Group ceases recognition of a financial asset in the balance sheet once the contractual rights to the cash flows from the asset expire, or if the Group transfers the contractual rights to the cash flows from the financial asset by means of a transaction in which virtually all risks and benefits associated with ownership of the asset are transferred.

The Group ceases recognition of a financial asset in the balance sheet once the contractual rights to the cash flows from the asset expire, or if the Group transfers the contractual rights to the cash flows from the financial asset by means of a transaction in which virtually all risks and benefits associated with ownership of the asset are transferred, or whereby virtually all risks and benefits associated with ownership of the asset are neither transferred nor retained and control of the asset transferred is not retained either. If the Group retains or creates an interests in the financial assets being transferred, then that interest is included as a separate asset or liability.

The Group ceases recognition of a financial liability in the balance sheet once the contractual obligations have been fulfilled or cancelled or have expired.

Financial assets and liabilities are included as net values, and the resulting net amount is presented on the balance sheet only if the Group has a legally enforceable entitlement to that net value and if it intends to show the balance as a net item or to realise the asset and the liability simultaneously.

The Group uses the following financial instruments:

### Non-derivative financial instruments

Non-derivative financial instruments include investments in equity securities, deposits and bonds, trade and other receivables, cash and cash equivalents, loans and other financial liabilities, and trade and other payables.

Non-derivative financial instruments are initially recognised at fair value. Subsequent to initial recognition, non-derivative financial instruments are measured as described below.

#### Held-to-maturity financial assets

If the Group has the positive intent and ability to hold financial assets to maturity, they are measured at amortised cost plus any directly attributable transaction charges, using the effective interest method, less any impairment losses.

#### Available-for-sale financial assets

The Group's investments in certain bonds and deposits are classified as available-for-sale financial assets. Subsequent to initial recognition, these assets are measured at fair value, and any changes in the fair value, other than impairment losses and exchange rate gains and losses on available-for-sale monetary items, are recognised directly in equity via the comprehensive income. Attributable transaction costs are included in the income statement as a charge at the moment when they are incurred. When an investment is derecognised, the cumulative gain or loss in equity is transferred to the income statement.

If no information is available for determining the fair value, the assets will be valued at cost price.

#### Other non-derivative financial instruments

These instruments are valued at fair value (plus any directly attributable transaction costs) when first recognised. Subsequent to initial recognition, loans and receivables are valued at an amortised cost price using the effective interest method.

## Derivative financial instruments

The Group holds derivative financial instruments to hedge its foreign currency and interest rate or commodity risks. Derivative financial instruments are valued on initial recognition at fair value, which is the same as the cost price applicable at the time. Attributable transaction costs are included in the income statement as a charge at the moment when they are incurred. Subsequent to initial recognition, derivatives are measured at fair value and any changes are accounted for as described below.

### Hedge accounting

The accounting method in the result depends on the question of whether hedge accounting is used and if so, whether the hedging relationship is effective. If the hedging relationship is effective, then hedge accounting is used for these derivatives. When a hedging transaction is entered into, the hedging relationship is documented. Checks are made regularly to see if the hedging transaction has been effective over the period just completed and whether it is expected that the hedging transaction will be effective over the coming period. If the hedging instrument expires, is sold, terminated or exercised or no longer complies with the criteria that allow hedge accounting to be applied, then its application will be halted immediately.

### Cash-flow hedges

If a derivative financial instrument is designated as a hedge for fluctuations in cash flows ensuing from a certain risk associated with a recognised asset or liability, or because an extremely likely expected transaction could affect the profit or loss, then the effective portion of the changes in the fair value of the derivative financial instrument is recognised in the unrealised results and presented in equity in the hedging reserve. Any ineffective portion of the changes in the fair value of the derivative financial instrument is recognised directly in the income statement. The accrued amount is transferred to the income statement in the same period in which the hedged position affects the income statement.

### Fair value of hedges

Changes in the fair value of a derivative hedging instrument that is designated as a fair-value hedge are charged or credited to the income statement together with the changes in the fair value of the (group of) assets and liabilities insofar as they are attributable to the hedged risk.

If a hedge instrument no longer qualifies for hedge accounting, expires or is sold, then hedge accounting is discontinued prospectively. The cumulative profit or cumulative loss that was previously recognised in equity remains part of the equity until the expected transaction has taken place. The amount recognised in equity is transferred to the income statement (with the net change in the fair value of the cash-flow hedges transferred from equity) in the same period in which the hedging instrument affects the income statement.

### Economic hedges

Hedge accounting is not applied to derivative instruments that are used as economic hedges of assets and liabilities denominated in foreign currencies. Changes in the fair value of such derivatives are recognised in the income statement as part of the exchange rate gains and losses.

### Hedging energy costs

The Group uses 'accrual accounting' for commodity derivatives intended for its own use, claiming the exception allowed by IAS 39.5, insofar as the stipulations of IAS 39.5 are met. This is applicable to purchases of diesel and fuel oil and energy in the Netherlands and is explained in the risks section and in 'Off balance sheet liabilities'. The other commodity derivatives that do not meet the criterion of being intended for the Group's own use are valued at fair value and hedge accounting is used where possible.

## Impairments

### Financial assets

Financial assets are assessed at each reporting date to determine whether there is objective evidence of any impairment. A financial asset is considered to be impaired if there is objective evidence indicating that one or more events has had a negative effect on the projected future cash flows of that asset.

An impairment loss for a financial asset carried at amortised cost is calculated as the difference between the book value and the present value of the projected future cash flows, discounted at the original effective interest rate. Any impairment loss on an available-for-sale financial asset is calculated using the fair value.

Significant financial assets are individually tested for impairment. The remaining financial assets are grouped into comparable credit risk classes and assessed collectively.

All impairment losses are charged to the statement of income. Any cumulative loss on an available-for-sale financial asset that was recognised previously in equity is transferred to the income statement.

An impairment loss is reversed if the reversal can be related objectively to an event occurring after the impairment loss was recognised. For financial assets measured at amortised cost and available-for-sale financial assets that are debt securities, the reversal is recognised as income in the income statement.

### Non-financial assets

The book value of the Group's non-financial assets, except for inventories and deferred tax receivables (where specific guidelines are applicable), are reviewed at each reporting date to determine whether there is any indication of impairment. If there are such indications, an estimate is made of the recoverable amount of the asset in question. For goodwill and intangible fixed assets that are not yet available for use, the recoverable amount is estimated at each reporting date.

The recoverable amount of an asset or a cash generating unit equals the higher of the value in use and the fair value net of selling costs. In assessing the value in use, the present value of the estimated future pre-tax cash flows is calculated using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For the purpose of impairment testing, assets are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the 'cash-generating unit'). For the purpose of impairment assessments, the goodwill acquired in a business combination is allocated to the cash-generating units that are expected to benefit from the synergies of the combination.

An impairment loss is recognised if the book value of an asset or its cash-generating unit exceeds its estimated recoverable amount. Impairment losses are recognised in the statement of income. Impairment losses recognised in respect of cash-generating units are first deducted from the book value of any goodwill allocated to units, and then deducted from the book value of the other assets in the unit or group of units on a pro rata basis.

An impairment loss in respect of goodwill is not reversed. In respect of other assets, impairment losses recognised in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's book value does not exceed the book value that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

## Equity

Dividends are included in the period over which the appropriation of profits is decided upon and the dividends are declared.

## Deferred credits

These credits relate to amounts received in one go under agreements with terms extending to future years. The proceeds are credited to the income statement over the term of the agreements to which they relate. The proceeds are measured at amortised cost.

## Employee benefits

Employee benefits includes pension liabilities for pension plans and other obligations relating to employee benefits, consisting of long-service awards, early retirement payments and obligations due to employees' occupational disability.

Defined contribution plans are plans under which the Group has no obligations other than to pay the contractual contributions. These contributions are included in the income statement in the period for which the contribution is payable.

Defined benefit plans are those in which the Group's obligations extend beyond payment of the mandatory, contractually agreed contribution to pension funds or insurance companies. The Group's net liability is determined individually for each plan by estimating the pension benefits that employees have accrued in the reporting period and the preceding years. The net present value of these pension benefits is determined, netted off against the fair value of the pension assets. The discount rate is the interest rate as at the balance sheet date for high-value fixed income securities for which the maturity period is approximately the same as that of the pension liabilities. The calculation takes account of elements such as future wage increases resulting from general developments in wage levels and career opportunities, inflation, and current life expectancies. The calculation is performed annually by a qualified actuary using the projected unit credit method. If the calculation results in a benefit to the Group, the recognised asset cannot exceed the net value of any unrecognised past service pension costs and the present value of any future refunds from the plan or reductions in future contributions to the plan. The employee's part is deducted from the liability.

The pension liabilities relating to parts of the group that are established in the UK have been included for the period during which the transport concessions operate.

The change in pension liabilities and investment returns anticipated at the start of the year, based on the actuarial calculations, is included as a change in the net liabilities and in the income statement. Contributions paid by employers and employees are deducted from the net liabilities. The actuarial gains and losses, which comprise the difference between the actual and anticipated changes in the pension liabilities and investment returns, are recognised in comprehensive income.

Obligations relating to long-service awards and early retirement are calculated actuarially and carried at net present value. This takes account of developments in wages and prices, recent mortality tables and estimates of the employment duration. Any actuarial gains or losses are recognised in the statement of income in the period in which they occur.

The obligations due to occupational disability are determined in a similar fashion.

### Short-term employee benefits

Any entitlements to time off that have not been taken are turned into cash values, taking account of future salary increases.

Other short-term employee benefits are valued without being converted into the present values and recognised when the service associated with them is rendered.

## Provisions

A provision is recognised in the balance sheet whenever the Group has a legally enforceable or *de facto* liability as a consequence of a past event and it is probable that the settlement of that liability will entail an outflow of funds.

Provisions are determined by calculating the net present value of expected future cash flows based on a pre-tax discount rate that reflects both the current market valuations of the time value of money and, where necessary, the specific risks relating to the commitment.

### Reorganisation costs and non-activity arrangements

Provisions are made in connection with restructurings if a formal, detailed plan has been drawn up for the reorganisation, and the reorganisation is either under way or has been announced. No provision is made for future operating expenses. Provisions for reorganisations relate mainly to redundancy schemes, bridging payments and the redeployment of redundant staff.

### Provision for soil remediation

The provision for soil remediation work is intended to cover the costs incurred for the upkeep or repair of operational resources. In line with the Group's published environmental policy and the applicable legal requirements, provisions for the control and remediation of environmental contamination are formed when the pollution occurs or when it is discovered to have occurred.

### Onerous contracts

A provision for onerous contracts is included in the balance sheet if the financial benefits that the Group expects to derive from a contract are less than the unavoidable costs of satisfying the contractual commitments.

The provision is accounted for at the present value of the anticipated net costs for continuation of the contract or, where this is lower, the present value of the anticipated costs for termination, being any compensation or fine entailed by the breach of contract. Before the provision is formed, an impairment loss is applied to the assets to which the contract relates.

### Other provisions

Provisions are formed for losses arising from fire, accidents, guarantees issued, claims and other risks.

### Leases

Assets where the company or its subsidiaries have beneficial ownership by virtue of a lease agreement are classified as financial leases. The company or its subsidiaries have beneficial ownership if almost all the risks and benefits associated with ownership have been transferred to it. Contracts where the beneficial ownership is in the hands of third parties are classified as operating leases. The substance according to IFRS is the determining factor in the classification of lease agreements as operating or financial leases (rather than the legal form of the contract).

### Revenues

Revenue covers revenue from passenger services and from other activities, less discounts and turnover tax.

### Services rendered and goods sold

Revenue from services rendered is accounted for in the income statement in the period in which the services are rendered. For delivery contracts that extend beyond the balance sheet date, calculation of the revenue is attributed to the individual years in proportion to the stage of completion of the transaction on the balance sheet date. The stage of completion is assessed by reference to surveys of work performed.

Revenue from the sale of goods is processed in the statement of income when the significant risks and rewards of ownership have been transferred to the buyer, collection of the amount payable is likely, the associated costs or return of goods, where applicable, can be estimated reliably and when the management has no ongoing involvement in the goods and the scale of the revenues can be estimated reliably.

Payments from the government under passenger transport agreements or transport concessions are recognised in the income statement in the period to which the payment relates.

#### **Work in progress commissioned by third parties**

Contractual revenue and expenses arising from projects in progress commissioned by third parties are accounted for in the income statement in proportion to the stage of completion of the project. The stage of completion is determined by ascertaining the costs of the work done in relation to total expected cost. As soon as the result can be reliably estimated, a proportional part of the profit is credited to the income statement. Expected losses on projects are immediately accounted for, in full, in the income statement.

#### **Rental income**

Rental income from investment property is credited to the income statement on a straight-line basis over the duration of the rental agreement. The costs of undertakings given to encourage tenants to enter into leases are accounted for as an integral component of total rental income.

#### **Other revenue**

This item includes incidental revenue and coverage by third parties of the costs of sideline activities and other activities that are not part of the company's operating activities. The difference between the sales value and the book value of items of property, plant and equipment that have been sold is also recognised under 'Other revenue'.

### **Operating expenses**

Operating expenses are assigned to the year to which they relate or in which the goods and services are delivered to customers.

### **Adjustment mechanisms for the main rail network concession**

The implementation agreement with the Ministry of Infrastructure and the Environment includes a number of adjustment mechanisms for determining the franchise price. The correction relating to the average return for the concession is recognized as a receivable at the time the right on the correction exist in accordance with the calculation method laid down in the implementation on-contract. As a consequence of further insights, the adjustment mechanism relating to the average profitability over the franchise period will be included linearly over the term of the franchise instead of being accounted for at the moment that it becomes applicable. This is consistent with other (one-off) payments relating to the agreements. This change has no effect on the comparative figures, as no adjustment was accounted for in 2015.

Other (non-recurring) payments under the contract will be included linear basis over the concession period.

### **Capitalised production for own use**

The capitalised production for own use comprises the directly attributable personnel expenses and costs of materials used in the construction of assets for own use. This is mainly for the overhaul of trains.

## Finance income and finance expenses

Finance income includes the interest income from monies invested, including that for financial assets available for sale, leasing income, gains from the sale of financial assets available for sale, and gains from the hedging instruments that are recognised in the income statement. Interest income is recognised in the income statement as it accrues, using the effective interest rate method. Dividend income is recognised in the income statement when the right to the dividend payment occurs.

Finance expenses include the interest expenses on borrowed monies, lease contracts, accrued interest on provisions and losses on hedging instruments that are recognised in the income statement. All finance costs that are not directly attributable to the acquisition, construction or production of a qualifying asset are included in the income statement using the effective interest method. No financing costs were capitalised in 2015 or 2016.

Financial benefits released from cross-border leasing agreements are deducted from the interest charges. Exchange rate gains or losses are included in the finance income or expenses.

## Government grants

Government grants are recognised if there is reasonable assurance that the entity will comply with the conditions attached to them and that the grants will be received. The government grants are deducted from the costs and assets to which they relate.

## Lease payments

Payments made under operating leases are recognised as operating expenses in the statement of income on a straight-line basis over the term of the lease.

## Corporate income tax

Tax on the profit or loss for the financial year comprises the income tax that is payable or can be offset in the reporting period and deferred income taxes. The income tax is recognised in the income statement, except if it relates to items recognised directly in equity via the comprehensive income, in which case the tax is recognised in equity via the comprehensive income.

All taxes are stated at nominal value.

The tax to be paid or offset for the financial year is the expected tax charge on taxable profit for the financial year, calculated using the tax rates in force on the balance sheet date, and includes adjustments to tax payable for prior years.

For the purpose of income tax, nearly all the subsidiaries belonging to the Group are part of the NS tax group, with the exception of the foreign corporate units.

Deferred tax assets and deferred tax liabilities arise from temporary differences between the book value of assets and liabilities in the financial reporting and the book value for tax purposes. These are calculated on the basis of the tax rates that are expected to apply at the reversal of the temporary differences, using tax rates enacted or substantively enacted as at the balance sheet date.

Deferred tax assets, including those deriving from tax loss carry-forwards, are valued if it is probably that sufficient tax profits will be available for compensating for the losses and if possibilities for offsetting losses can be utilised.

Deferred tax assets and deferred tax liabilities are only netted if there is a formal netting right and the company intends to settle deferred tax positions simultaneously. Deferred tax positions are stated at nominal value.



## Determination of fair value

A number of the Group's accounting policies and disclosures require the determination of fair value, for both financial and non-financial assets and liabilities. Fair values have been determined for measurement and/or disclosure purposes based on the following methods.

### Property, plant and equipment

The fair value of property, plant and equipment recognised as a result of a business combination is based on market values. The fair value is calculated on the basis of an up-to-date purchase price, or is determined by the historic cost with the aid of index figures to bring it up to the current price level.

### Investment property

Given the nature, diversity and locations (station environments) the fair value of the property portfolio can not be determined reliably. Is expected to be the fair value substantially higher than the book value of the properties. The fair value of investment property is only determined for the purpose of the disclosures.

### Investments in bonds and deposits

The fair value of held-to-maturity financial assets and available-for-sale financial assets is determined by reference to their price as at the reporting date. The fair value of held-to-maturity investments is determined for disclosure purposes only.

### Derivatives

The fair value of derivatives is based on derived market prices, taking account of the current interest rate and current creditworthiness of the counterparties to the contract.

### Non-derivative financial liabilities

The fair value of non-derivative financial liabilities is determined for disclosure purposes and is calculated based on the present value of future repayments and interest payments, discounted at the market interest rate as at the reporting date. For financial leases, the market interest rate is determined by reference to similar lease agreements.

### Segmented information

The Group is not obliged to comply with the requirements of IFRS 8 on the grounds that the absence of a stock exchange listing. To meet the requirements of the Dutch legislation segment information by geographical area regarding sales and FTEs is included.

### Accounting policies for the consolidated statement of cash flows

The statement of cash flows is drawn up using the indirect method, using a comparison between the initial and final balances for the period in question. The result is then adjusted for changes that did not generate income or expenses during the financial year.

# Company financial statements

## Company statement of financial position as at 31 December 2016

(before profit appropriation)

(in millions of euros)	31 December 2016	31 December 2015
Non-current financial assets	3,511	3,309
<b>Total assets</b>	<b>3,511</b>	<b>3,309</b>
Equity		
Share capital	1,012	1,012
Other reserves	2,120	2,058
Legal reserve development costs	167	121
Result for the period	212	118
	<b>3,511</b>	<b>3,309</b>
<b>Total equity and liabilities</b>	<b>3,511</b>	<b>3,309</b>

## Company statement of income 2016

(in millions of euros)	2016	2015
Other result	-	-
Result of group companies after tax	212	118
<b>Nett result</b>	<b>212</b>	<b>118</b>

## Accounting policies applied for the financial statements

### General

For determining the accounting policies for the valuation of assets and liabilities and determining the result for the company financial statements, NV Nederlandse Spoorwegen makes use of the option provided by paragraph 8, Section 362, Book 2 of the Dutch Civil Code. This means that the principles for the valuation of assets and liabilities and determination of the result (hereinafter the 'accounting policies') for the company financial statements of NV Nederlandse Spoorwegen are the same as those used for the consolidated financial statements. The associates over which significant influence is exercised are valued using the equity method.

### Participating interests in group companies

The participating interests in group companies are valued using the equity method, with losses only being considered insofar as the shareholder is obliged to settle them.

## Result for group companies

The result for group companies consists of the result after income tax.

# Notes to the company balance sheet and income statement

The amounts included in the explanatory notes are in millions of euros, unless stated otherwise.

## Financial non-current assets

### Participating interests in group companies

(in millions of euros)	2016	2015
Balance as at 1 January	3,309	3,216
Share in result	212	118
Dividend distributed for the previous reporting year	-41	-48
Other changes	31	23
<b>Balance as at 31 December</b>	<b>3,511</b>	<b>3,309</b>

## Equity

### Revaluation reserve

The revaluation reserve includes a sum of €6 million that arose as the consequence of a revaluation to fair value of an extension to an existing interest in 2012.

### Other reserves

(in millions euros)	Translation reserve	Hedging reserve	Fair value reserve	Actuarial reserve	Revaluation reserve for associates	General reserve	Total other reserves	Legal reserve development costs
<b>Balance as at 1 January 2015</b>	<b>5</b>	<b>-39</b>	<b>-</b>	<b>4</b>	<b>16</b>	<b>1,946</b>	<b>1,932</b>	<b>92</b>
Movements revaluation reserves	3	-4	-	13	11		23	
Dividend paid						-48	-48	
Result previous year						180	180	
Other movements						-29	-29	29
	<b>3</b>	<b>-4</b>	<b>-</b>	<b>13</b>	<b>11</b>	<b>103</b>	<b>126</b>	<b>29</b>
<b>Balance as at 31 December 2015</b>	<b>8</b>	<b>-43</b>	<b>-</b>	<b>17</b>	<b>27</b>	<b>2,049</b>	<b>2,058</b>	<b>121</b>
Movements revaluation reserves	-19	36	-	12	3		32	
Dividend paid						-41	-41	
Result previous year						118	118	
Other movements						-47	-47	46
	<b>-19</b>	<b>36</b>	<b>-</b>	<b>12</b>	<b>3</b>	<b>30</b>	<b>62</b>	<b>46</b>
<b>Balance as at 31 December 2015</b>	<b>-11</b>	<b>-7</b>	<b>-</b>	<b>29</b>	<b>30</b>	<b>2,079</b>	<b>2,120</b>	<b>167</b>

The legal reserves has been created for development costs. Because of the nature of the activities of NS Insurance, a sum of €41 million (2015 : €41 million) is not freely disposable.

### Off balance sheet commitments

No claims have been brought against NV Nederlandse Spoorwegen and the consolidated participating interests, other than as indicated in note 29, that have not been recognised appropriately in the balance sheet.

For the purpose of income tax, all the Dutch subsidiaries belonging to the Group (with the exception of Qbuzz) are part of the NV Nederlandse Spoorwegen tax group, with the exception of the foreign corporate units. Consequently NV Nederlandse Spoorwegen is jointly and severally liable for the tax liabilities of the subsidiaries included in the tax group.

## Key participating interests

NV Nederlandse Spoorwegen is the holding company of NS Groep NV. NS Groep NV is the sole subsidiary of NV Nederlandse Spoorwegen. Please refer to note 32 for an overview of the associates.

Utrecht, 24 February 2017

### Supervisory Board

Mr. G. van de Aast  
*Chairman*

Ms. M. van Liers Lels

Mr. J.J.M. Kremers

Mr. P. Rosenmöller

Ms. J. Stuijt

### Board of Directors

Mr. R.H.L.M. van Bortel  
*CEO*

Mr. H.L.L. Groenewegen  
*CFO*

Ms. S. Zijdeveld  
*CGRC*

Ms. W.E.F. Rintel  
*COO*

# Other information

# Combined independent auditor's report and assurance report

To: the shareholder and supervisory board of N.V. Nederlandse Spoorwegen

## Our conclusions

We have audited the 2016 financial statements of N.V. Nederlandse Spoorwegen based in Utrecht. The financial statements include the consolidated and the company financial statements.

In our opinion:

- The accompanying consolidated financial statements give a true and fair view of the financial position of N.V. Nederlandse Spoorwegen as at 31 December 2016 and of its result and its cash flows for 2016 in accordance with International Financial Reporting Standards as adopted by the European Union (EU-IFRS) and with Part 9 of Book 2 of the Dutch Civil Code.
- The accompanying company financial statements give a true and fair view of the financial position of N.V. Nederlandse Spoorwegen as at 31 December 2016 and of its result for 2016 in accordance with Part 9 of Book 2 of the Dutch Civil Code.

We have reviewed the non-financial information in the NS Annual Report 2016 of N.V. Nederlandse Spoorwegen based in Utrecht over 2016. A review engagement is aimed at obtaining limited assurance. In addition, we have audited the Selected Information included in this NS Annual Report 2016. An audit engagement is aimed at obtaining reasonable assurance. The scope of our assurance engagement is described in the section "Our Scope".

Based on our review procedures performed, nothing has come to our attention that causes us to conclude that the non-financial information, in all material respects, does not present, a reliable and adequate view of:

- The policy and business operations with regard to corporate social responsibility / sustainability; and
- The events and achievements relating to these aspects in 2016

in accordance with the reporting criteria (as disclosed in the chapter "Scope and reporting criteria" of the NS Annual Report 2016).

Based on our audit procedures performed, in our opinion the Selected Information in the NS Annual Report 2016 has been prepared, in all material respects, in accordance with the reporting criteria (as disclosed in the chapter "Scope and reporting criteria" of the NS Annual Report 2016).

## Basis for our conclusions

We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. Our responsibilities under those standards are further described in the section "Our Responsibilities" in this report.

We have conducted our review regarding the non-financial information and our audit regarding the Selected Information in accordance with Dutch law, including the Dutch Standard 3810N: "Assurance engagements relating to sustainability reports". Our responsibilities hereunder are further described in the section "Our Responsibilities" in this report.

We believe the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our conclusions.



## Our independence

We are independent of N.V. Nederlandse Spoorwegen in accordance with the “Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten (ViO)” and other relevant independence regulations in the Netherlands. This includes that we do not perform any activities that could result in a conflict of interest with our independent assurance engagements. Furthermore, we have complied with the Code of Conduct and Professional Practice for Accountants Regulation (Verordening gedrags- en beroepsregels accountants, VGBA).

## Our scope

The consolidated financial statements comprise:

- The consolidated statement of financial position as at 31 December 2016.
- The following statements for 2016: the consolidated income statement, the consolidated statement of comprehensive income, the consolidated statement of changes in equity, and the consolidated cash flow statement.
- The notes comprising a summary of the significant accounting policies and other explanatory information.

The company financial statements comprise:

- The company statement of financial position as at 31 December 2016.
- The company income statement for 2016.
- The notes comprising a summary of accounting policies applied and other explanatory information.

The non-financial information comprises the chapters Company Profile, Report by the Executive Board, Dialogue with our stakeholders, Our strategy, Finances in brief, Scope and reporting criteria, Activities in The Netherlands and Abellio, in the NS Annual Report 2016 of N.V. Nederlandse Spoorwegen.

The Selected Information consists of the following parameters as listed in the NS Annual Report 2016 of N.V. Nederlandse Spoorwegen:

- CO<sub>2</sub> emissions per passenger-kilometer of NS Reizigers, NS HiSpeed and the Abellio Greater Anglia concession;
- CO<sub>2</sub> emissions per bus-kilometer of Abellio London Bus & Surrey;
- Tonnage industrial, office and consumer waste from the stations and trains of NS Netherlands and the percentage of waste that NS Netherlands offers separated to its waste processors.

The non-financial information contains prospective information relating to ambitions, strategy, targets, expectations and projections, and risk assessments. Inherent to this information is that actual future results may differ and are therefore uncertain. We do not provide any assurance on the achievability and feasibility of the prospective information included in the non-financial information.

## Scope of the group audit

N.V. Nederlandse Spoorwegen is at the head of a group of entities. The financial information of this group is included in the consolidated financial statements of N.V. Nederlandse Spoorwegen.

Our group audit mainly focused on significant group entities: NS Operatie, NS Commercie & Ontwikkeling, and Abellio. Based on the full scope and specific scope procedures, we have

obtained audit assurance on 98% of assets, 92% of revenues and 98% of result before income tax. At other group entities, we performed procedures with a limited scope.

We have performed audit procedures ourselves at Dutch group entities. We used the work of other auditors in our international network for the foreign group entities.

By performing the procedures mentioned above at group entities, together with additional procedures at group level, we have been able to obtain sufficient and appropriate audit evidence about the group's financial information to provide an opinion about the consolidated financial statements.

## Reporting Criteria

The consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards as adopted within the European Union (EU-IFRS) and Part 9 of Book 2 of the Dutch Civil Code.

The company financial statements have been prepared in accordance with Part 9 of Book 2 of the Dutch Civil Code.

N.V. Nederlandse Spoorwegen uses version G4 ("Comprehensive") of the Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI) and the supplemental internally applied reporting criteria as disclosed in chapter Scope and reporting criteria of the NS Annual Report 2016 as a framework for reporting on corporate social responsibility and sustainability.

We consider the reporting criteria used relevant and suitable for our review and audit.

## Materiality

### General

The scope of our assurance procedures is influenced by the application of materiality. Our assurance engagements aim to provide assurance about whether the financial statements, the non-financial information, and the Selected Information are free from material misstatement. Misstatements may arise due to fraud or error. They are considered to be material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements and the non-financial information. Materiality affects the nature, timing and extent of our assurance and review procedures and the evaluation of the effect of identified misstatements on our conclusions.

### Financial statements

For the audit of the financial statements our considerations regarding materiality are as follows:

Materiality	€ 40 million
Benchmark used	0.8% of revenue
Additional explanation	Given the nature of NS, its objectives, and the importance of its operating performance in the Netherlands and abroad, its revenue activity base is considered the most relevant basis for materiality.

We have also taken into account misstatements and/or possible misstatements that in our opinion are material for the users of the financial statements for qualitative reasons.

We agreed with the supervisory board that misstatements in excess of € 2 million, which are identified during the audit, would be reported to them, as well as smaller misstatements that in our view must be reported on qualitative grounds.

## Non-financial Information and Selected Information

Based on our professional judgment, we determined specific materiality levels for the non-financial information and the Selected Information as a whole and for each part of the non-financial information and the Selected Information. When evaluating our materiality levels, we have considered the relevance of information for the intended users of the non-financial information and the Selected Information, based on the materiality analysis performed by N.V. Nederlandse Spoorwegen.

## Our key audit and review matters

Key audit and review matters are those matters that, in our professional judgment, were of most significance during our audit of the financial statements and the Selected Information, and for our review of the non-financial information. We have communicated the key audit and review matters to the supervisory board. The key audit and review matters are not a comprehensive reflection of all matters discussed.

These matters were addressed in the context of the audit of the financial statements, the review of the non-financial information and audit of the Selected Information as a whole and to conclude thereon, and we do not provide a separate conclusion on these matters.

For the audit of the financial statements, we identified the following key audit matters:

### Irregularities identified in the bid for the Limburg franchise

Key Matter	How our audit addressed the matter
In 2015, following the tender in Limburg and a complaint received from Veolia, the Netherlands Authority for Consumers and Markets (ACM) launched an investigation.	We have verified that the actions taken by NS are sufficient to determine the nature and extent of the identified irregularities. NS furthermore received the support of various legal advisers.
The ACM concluded that NS had violated the Railways Act (Spoorwegwet) in certain aspects in the preparation of the tender in Limburg. ACM concluded that NS had prejudiced Veolia in doing so. In 2016, NS presented its views to ACM. A final ruling, or possible decision by the ACM to impose a penalty, has not yet been received.	We assessed the independence and expertise of the external investigators. Where necessary, we have performed additional procedures to mitigate risks identified for our audit.
The Public Prosecution Service also stated that a number of NS Group companies were deemed to be suspects in this case.	The disclosure related to the financial reporting on the identified irregularities is included in note 29 of the financial statements.

### Revenue recognition relating to passenger services

Key Matter	How our audit addressed the matter
Revenue of € 4.5 billion from passenger services is included in the account "Revenue". These passenger revenues include revenues out of the sales of various ticket types entitling their holder to transport as well as, government contributions. In order to determine these revenues, management must make assumptions regarding the allocation to periods, and other conditions as stated in the various concession agreements. The diversity in ticket types, combined with the high volume of transactions, require high standards of reliability and continuity of transaction-processing systems in order to guarantee that individual transactions will result in correct and complete revenue recognition.	In 2016, NS followed up on various findings we reported and is gradually improving their control over revenue recognition. Our activities include the assessment of internal controls and the IT environment, performing data analysis procedures such as trend analyses and inspection of manual journal entries, performing partial observations on correct and complete transaction processing, and a review of management's estimates with regard to revenue allocation.  The disclosures relating to revenue recognition with regard to passenger services are included in note 1 and 29 of the financial statements.

## Tax position and fiscal risks

Key Matter	How our audit addressed the matter
<p>The key issues regarding the tax position are the Group's relationship with the Irish subsidiary NS Financial Services, which operates as a leasing company for the other NS business units, the recognition of the impairment loss on the V250 rolling stock and the valuation of the deferred tax assets.</p> <p>In certain circumstances, estimation differences or disputes may occur with the various national tax authorities.</p>	<p>Where applicable, we took note of the relevant discussions and verified that tax assets and liabilities have been recorded in accordance with IFRS in the financial statements.</p>
<p>The Dutch tax authorities (Belastingdienst) is currently investigating the fiscal treatment of the transactions with the Irish subsidiary NS Financial Services.</p>	<p>We have performed procedures on the estimation process and tested the acceptability and adequacy of the recorded deferred tax assets and liabilities. We have included our internal tax experts in our team. We reviewed the assumptions underlying the estimates and discussed them with management taking into consideration local tax regulations. We concur with the assumptions used by management.</p> <p>The disclosures relating to the tax position and tax risks are included in note 10 and 16 of the financial statements.</p>

## Sale and valuation of real estate

Key Matter	How our audit addressed the matter
<p>Focus areas relating to the NS Real Estate concern the valuation at year-end, as well as governance of real estate transactions during the year.</p>	<p>We have performed procedures on the estimation process supporting the valuation of the real estate. We have examined the appropriateness of the assumptions used. To this end, we added real estate experts to our team.</p>
<p>If indications of impairment are present, NS examines whether an impairment to a lower net realizable value is required. In this examination, important assumptions are made that support the valuation. If deemed necessary by NS, the assistance of independent external appraiser is used.</p>	<p>We also assessed the independence and expertise of the external appraisers used by NS.</p>
<p>In 2016, NS sold its real estate portfolio, which was held jointly with other participants in a real estate fund. Strict governance procedures have been agreed with regard to the sales process with these participants.</p>	<p>We concur with the assumptions used by management.</p> <p>Regarding the sale of the real estate portfolio, we assessed the governance agreed upon between the participants, and subsequently audited compliance. Furthermore, we have performed substantive procedures in relation to sales transactions.</p> <p>The disclosures related to property, plant and equipment, investment property and investments recognized using the equity method are included in note 11, 12 and 14 of the financial statements.</p>

## Reliability and continuity of the automated data processing system

Key Matter	How our audit addressed the matter
To a considerable extent, NS depends on its IT infrastructure for the continuity of its business operations. In recent years, NS has invested in the improvement of IT hardware, systems and processes focusing on increasing the IT infrastructure effectiveness and the reliability and continuity of automated data processing.	<p>We reviewed the reliability and continuity of the automated data processing only insofar as necessary within the scope of the audit of the financial statements. For this purpose, we included specialized IT auditors in our audit team.</p> <p>Our procedures consisted of the assessment of the developments in the IT infrastructure and testing of the internal control procedures relating to IT systems and processes.</p> <p>In our management letter, we reported on identified risks and recommendations for improvements in this area. As a result of our procedures we note that NS has again improved the quality of its IT management by following up on some of the findings reported in 2015. The findings that still require attention have been highlighted again. Furthermore a number of new attention areas have been identified.</p> <p>We refer to the paragraph Managing risks included in the NS Annual Report.</p>

For the review of the non-financial information and the audit of the Selected Information in the NS Annual Report 2016, we identified the following key review matters:

## Reliability of the creation of and reporting on main rail network concession performance indicators

Key Matter	How our review addressed the matter
NS measures its progress in achieving its strategy through the main railway network concession performance indicators. The progress of these performance indicators is also an important part of the mid-term review and final evaluation in 2019 or 2024 respectively regarding to the possible concession extension. Given their relevance we have identified this set of performance indicators as a whole as a key review matter.	<p>As part of our procedures, we gained insight into the reporting process, and reviewed the quality of this process (including controls) in design and implementation. We furthermore reviewed the degree of consistency with the public definitions in the "Vervoerplan 2016" (Transport Plan 2016), and reconciled these with what was reported by NS to the Ministry of Infrastructure and Environment (IenM).</p> <p>We reviewed the disclosures in the chapter Activities in the Netherlands in respect of the performance indicators.</p>

## Impact Model Regarding Social Impact

Key Matter	How our review addressed the matter
NS measures its impact on society by means of an impact model. Inherent to the nature of this impact model is that the information used in the model is largely based on external sources, estimates and underlying assumptions.	<p>As part of our review procedures we have taken note of the design of the impact model. We assessed the reasonableness of the assumptions and estimates applied. We also reviewed the correctness of the calculations. Where applicable, we reconciled the applied assumptions to external sources. We reviewed the disclosures in the chapter Our impact on the environment and on society and in the methodology document.</p>

## Other information included in the NS Annual Report 2016

In addition to the financial statements and our combined auditor's report thereon, the NS Annual Report 2016 contains other information, which consists of:

- The NS Management Report, which is included in chapters I, II, and III;
- The Report by the Supervisory Board, which is included as part of chapter I; and

- The other information pursuant to Part 9 of Book 2 of the Dutch Civil Code.

Based on the following procedures performed, we conclude that the other information:

- Is consistent with the financial statements and does not contain material misstatements.
- Contains the information as required by Part 9 of Book 2 of the Dutch Civil Code.

We have read the other information. Based on our knowledge and understanding obtained through our audit of the financial statements or otherwise, we have considered whether the other information contains material misstatements. By performing these procedures, we comply with the requirements of Part 9 of Book 2 of the Dutch Civil Code and the Dutch Standard 720. The scope of the procedures performed is less than the scope of those performed in our audit of the financial statements and the Selected Information or in our review of the non-financial information.

Management is responsible for the preparation of the other information, including the NS Management Report in accordance with Part 9 of Book 2 of the Dutch Civil Code and other information pursuant to Part 9 of Book 2 of the Dutch Civil Code.

## Report on other legal and regulatory requirements

### Engagement

We were engaged by the shareholder as auditor of N.V. Nederlandse Spoorwegen on 3 September 2013 as of the audit for the financial year 2014, and have acted as external auditor since that date.

## Responsibilities

### Responsibilities of management and the supervisory board

Management is responsible for the preparation and fair presentation of the financial statements in accordance with EU-IFRS and Part 9 of Book 2 of the Dutch Civil Code.

Management is also responsible for the preparation of the non-financial information and the Selected Information in accordance with version G4 ("Comprehensive") of the Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI) and the supplemental internally applied reporting criteria as disclosed in the chapter Scope and Reporting Criteria of the NS Annual Report 2016, including the identification of stakeholders and the determination of material issues. The choices made by management with respect to the scope of the non-financial information and the reporting policy are included in the chapter "Scope and reporting criteria".

Furthermore, management is responsible for such internal control as management determines is necessary to enable the preparation of the financial statements, the non-financial information and the Selected Information that are free from material misstatement, whether due to fraud or error.

As part of the preparation of the financial statements, management is responsible for assessing the company's ability to continue as a going concern. Based on the financial reporting frameworks mentioned, management should prepare the financial statements using the going concern principle of accounting unless management either intends to liquidate the company or to cease operations, or has no realistic alternative but to do so. Management should disclose events and circumstances that may cast significant doubt on the company's ability to continue as a going concern in the financial statements.

The supervisory board is responsible for overseeing the company's reporting process.

## **Our responsibilities**

Our objective is to plan and perform the assurance engagements in a manner that allows us to obtain sufficient and appropriate assurance evidence for our conclusions.

Our audit of the financial statements has been performed with a high, but not absolute, level of assurance, which means we may not have detected all material errors and fraud.

We apply the 'Nadere voorschriften accountantskantoren ter zake van assurance opdrachten RA' and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and other relevant regulatory requirements.

Our review of the non-financial information is aimed at obtaining limited assurance. The procedures performed in obtaining limited assurance are focused on the plausibility of information which does not require exhaustive gathering of evidence as in engagements focused on reasonable assurance. The procedures performed consisted primarily of making inquiries of management and others within the entity, as appropriate, applying analytical procedures and evaluating the evidence obtained. The level of assurance obtained in review engagements is therefore substantially less than the assurance obtained in an audit engagement.

Our audit of the Selected Information is aimed at obtaining reasonable assurance. Reasonable assurance provides a high, but not absolute, level of assurance, which means we may not have detected all material errors and fraud.

Rotterdam, 24 February 2017

Ernst & Young Accountants LLP

Signed by J. Hetebrij



## Appendix to the combined independent auditor's report and assurance report

### Work performed

We have exercised professional judgment and have maintained professional skepticism throughout the assurance engagements, in accordance with the Dutch Standards on Auditing and the Dutch standard 3810N, ethical requirements, and independence requirements.

Our audit to obtain reasonable assurance about the financial statements included the following:

- Identifying and assessing the risks of material misstatement of the financial statements, whether due to fraud or error, designing and performing audit procedures responsive to those risks, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtaining an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Concluding on the appropriateness of management's use of the going concern basis of accounting, and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the company to cease to continue as a going concern.
- Evaluating the overall presentation, structure and content of the financial statements, including the disclosures.
- Evaluating whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Our review to obtain limited assurance about the non-financial information in the NS Annual Report 2016 included the following:

- Performing an external environment analysis and obtaining insight into relevant social themes and issues, and the characteristics of the organization.
- Evaluating the appropriateness of the reporting policy and its consistent application, including the evaluation of the results of the stakeholders' dialogue and the reasonableness of management's estimates.
- Evaluating the design and implementation of the reporting systems and processes related to the non-financial information in the NS Annual Report 2016.
- Interviewing management responsible for the sustainability strategy, policies, and performance.
- Interviewing relevant staff responsible for providing the information for the Report, carrying out internal control procedures on the data and consolidating of data in the non-financial information in the NS Annual Report 2016.
- Various site visits to Abellio Greater Anglia, Abellio London & Surrey and Abellio ScotRail in the UK to evaluate the source data and to evaluate the design and implementation of control and validation procedures at local level.
- Performing analytical review of the data and trend explanations submitted for consolidation at group level.

For our audit to obtain reasonable assurance about the Selected Information in the NS Annual Report 2016, we performed the procedures above with more depth, and additionally performed the following additional procedures, among others:

- Evaluating the underlying transactions and events.
- Auditing source documents during site visits to Abellio Greater Anglia, Abellio London & Surrey and Abellio ScotRail in the UK;
- Assessing relevant data and internal and external documentation, on a test basis, to determine the reliability of the Selected Information.

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Because we are ultimately responsible for the opinion, we are also responsible for directing, supervising and performing the group audit. In this respect we have determined the nature and extent of the audit procedures to be carried out for group entities. Decisive were the size and/or the risk profile of the group entities or operations. On this basis, we selected group entities for which an audit or review had to be carried out on the complete set of financial information or specific items.

We communicate with the supervisory board regarding, among other matters, the planned scope and timing of the assurance procedures and significant findings, including any significant findings in internal control that we identify during our assurance procedures.

We provide the supervisory board with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

We determine the key matters of our assurance engagement on the NS Annual Report 2016 of N.V. Nederlandse Spoorwegen on the basis of all matters discussed with the supervisory board of N.V. Nederlandse Spoorwegen.

We describe these matters in our combined auditor's report and assurance report, unless laws or regulations precludes public disclosure about the matter or when, in extremely rare circumstances, not communicating the matter is in the public interest.

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# NS ten-year summary

(in million euros)	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>Balance sheet</b>										
<b>Assets</b>										
Property, plant and equipment	3,654	3,296	3,157	3,115	3,405	3,433	3,272	3,150	2,844	2,710
Investment property	197	194	196	169	314	315	309	317	319	307
Intangible assets	257	225	174	125	117	76	64	157	149	115
Investments recognised using the equity method	39	183	185	197	14	14	14	40	33	27
Other financial assets, including investments	267	340	226	205	176	150	146	305	274	263
Deferred tax assets	229	278	295	385	346	392	407	438	455	524
<b>Total non-current assets</b>	<b>4,643</b>	<b>4,516</b>	<b>4,233</b>	<b>4,196</b>	<b>4,372</b>	<b>4,380</b>	<b>4,212</b>	<b>4,407</b>	<b>4,074</b>	<b>3,946</b>
Inventories	139	138	119	109	134	80	95	132	133	133
Other investments	-	270	223	231	279	362	209	150	1,454	1,815
Trade and other receivables	724	659	499	545	509	680	892	1,245	1,377	1,243
Income tax receivables	4	32	32	30	11	14	-	34	154	116
Cash and cash equivalents	709	671	775	759	948	534	386	546	571	291
Assets held for sale	140	-	-	-	-	-	-	-	-	-
<b>Total assets</b>	<b>1,716</b>	<b>1,770</b>	<b>1,648</b>	<b>1,674</b>	<b>1,881</b>	<b>1,670</b>	<b>1,582</b>	<b>2,107</b>	<b>3,689</b>	<b>3,598</b>
<b>Total assets</b>	<b>6,359</b>	<b>6,286</b>	<b>5,881</b>	<b>5,870</b>	<b>6,253</b>	<b>6,050</b>	<b>5,794</b>	<b>6,514</b>	<b>7,763</b>	<b>7,544</b>
<b>Equity and liabilities</b>										
<b>Equity</b>	<b>3,511</b>	<b>3,402</b>	<b>3,216</b>	<b>3,044</b>	<b>3,168</b>	<b>2,977</b>	<b>2,831</b>	<b>2,871</b>	<b>4,249</b>	<b>4,109</b>
Deferred credits	328	263	112	122	134	170	213	229	238	251
Loans and borrowings, including derivatives	293	440	867	730	577	180	315	785	839	794
Employee benefits	31	30	33	33	35	31	34	34	34	40
Provisions	100	155	140	182	277	349	175	233	162	147
Accruals	36	55	1	23	39	239	103	29	8	22
Deferred tax liabilities	160	168	169	158	153	136	103	88	66	51
<b>Total non-current liabilities</b>	<b>948</b>	<b>1,111</b>	<b>1,322</b>	<b>1,248</b>	<b>1,215</b>	<b>1,105</b>	<b>943</b>	<b>1,398</b>	<b>1,347</b>	<b>1,305</b>
Bank overdrafts	-	-	-	-	-	-	-	18	42	46
Loans and borrowings, including derivatives	77	488	60	57	48	365	387	292	244	232
Corporate tax payables	7	22	8	8	12	17	7	-	1	84
Trade and other payables	1,023	1,060	868	1,003	1,248	784	794	1,210	1,226	1,101

(in million euros)	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Deferred income	641	260	372	314	387	754	751	707	639	616
Provisions	37	36	35	196	175	48	81	18	15	51
Liabilities held for sale	115	-	-	-	-	-	-	-	-	-
<b>Total current liabilities</b>	<b>1,900</b>	<b>1,866</b>	<b>1,343</b>	<b>1,578</b>	<b>1,870</b>	<b>1,968</b>	<b>2,020</b>	<b>2,245</b>	<b>2,167</b>	<b>2,130</b>
<b>Total equity and liabilities</b>	<b>6,359</b>	<b>6,379</b>	<b>5,881</b>	<b>5,870</b>	<b>6,253</b>	<b>6,050</b>	<b>5,794</b>	<b>6,514</b>	<b>7,763</b>	<b>7,544</b>

#### Consolidated income statement

Revenue	5,093	4,973	4,144	3,873	4,638	3,628	3,520	3,271	4,253	4,040
Total operating expenses	4,965	4,876	3,863	3,990	4,284	3,356	3,286	3,121	3,925	3,685
Share in result of investees recognises using the equity method	142	70	40	47	-	-	-	-	-	-
<b>Result from operating activities</b>	<b>270</b>	<b>167</b>	<b>321</b>	<b>-70</b>	<b>354</b>	<b>272</b>	<b>234</b>	<b>150</b>	<b>328</b>	<b>355</b>
Net finance result	-9	-23	-35	-26	-25	-12	-22	4	67	56
Share in result of investees recognises using the equity method	-	-	-	-	1	1	1	-	4	5
<b>Result before income tax</b>	<b>261</b>	<b>144</b>	<b>286</b>	<b>-96</b>	<b>330</b>	<b>261</b>	<b>213</b>	<b>154</b>	<b>399</b>	<b>416</b>
Income tax	-49	-26	-106	53	-67	-50	-53	-37	-118	-79
<b>Result for the period</b>	<b>212</b>	<b>118</b>	<b>180</b>	<b>-43</b>	<b>263</b>	<b>211</b>	<b>160</b>	<b>117</b>	<b>281</b>	<b>337</b>

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NS Groep NV has its registered office in Utrecht.  
Trade register no. 301224358

**Visiting address**

Laan van Puntenburg 100  
3511 ER Utrecht

**Concept and realisation**

F19 Digital Reporting, Eindhoven

**Photography**

NS Beeldbank

**Illustrations**

Melissa Klarenbeek, Nico van de Weerd

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The annual report is published in both Dutch and English. In the event of any discrepancies between the Dutch and English version, the Dutch version will prevail.

