

A man with dark skin and short dark hair is wearing a red quilted jacket over a grey t-shirt and a blue fabric face mask. He is holding a yellow disposable coffee cup with a white lid in his left hand and gesturing with his right hand. A brown leather bag is slung over his shoulder. The background is a blurred yellow and blue train.

NS Annual report 2020

See
www.nsannualreport.nl
for the online version

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In Brief

Adjusted timetables

From March through June and from October through December



Highest and lowest number of train journeys in 2020:

16 January 2020 – 1,352,667
29 March 2020 – 48,304



3.1 million rides by public transport bicycles

(2019: 5.3 million)



Launch of VIRM2/3 modernisation project

45 double-deckers to be upgraded



New Generation Intercity trains tested in the Netherlands



Treinwijzer introduced in the NS App

Better view of crowdedness on trains



Punctuality remains high: 93.5%



Fewer incidents involving aggression: 661

Decrease is disappointing relative to the huge drop in passenger numbers



19,305 employees in the Netherlands



Revenue of €6,601 million

(2019: €6,661 million)



Investments of €548 million

(2019: €769 million)



Net loss - €2,581 million

Including impairments of €2.3 billion



Revenues from Abellio

UK €3,100 million
(2019: €2,919 million)
Germany €744 million
(2019: €534 million)



Reuse of materials

99% of materials in upgraded trains reused



Lower energy consumption: 1,198 GWh



Foreword by the CEO

Over the past year, NS has proved to be a healthy company that is able to keep the Netherlands moving despite huge setbacks. Due to the COVID-19 crisis, we are facing a stiff challenge for the years ahead. However, we will continue to invest the accessibility of the Netherlands and build on the excellent results achieved in the period before COVID-19. Thanks in part to those good results, the government intends to award the main rail network franchise to NS from 2025.

The pandemic hit NS extremely hard. Colleagues fell ill and while many recovered, others have died. This has caused immense grief to us all. Right from day one, however, all NS colleagues have done everything it takes to keep our trains running and provide passenger transport services, despite the considerable uncertainties in the environment in which we operate. I am grateful to them all, and we are very proud of this achievement.

NS has received major blows both in an operational and a financial sense. At the low point of the crisis, we carried only 10% of the normal number of passengers and our trains, our stations and the shops at the stations were empty. By taking a host of measures at the stations and on the trains, we ensured that those who depended on the train could still travel safely. Thanks to the efforts and flexibility of all our NS colleagues, we have been able to keep the Netherlands moving throughout the year. We have worked in strong partnership with all other carriers, ProRail and the Ministry of Infrastructure and Water Management throughout the crisis. However, the pandemic is not over yet; it has merely entered a new phase. Despite the start of the vaccination programme, we are aware that it may take until 2025 at the earliest before we return to the passenger volumes seen in 2019. Uncertainties as regards the economy and passenger behaviour have increased. For example, working from home is a trend that will remain, and people will more often take their e-bike or car instead of the train.

Towards financial health

The loss of passengers has a major impact on our income from passenger transport and station retail activities. Without the availability payment (*beschikbaarheidsvergoeding*) we receive from the government, we incurred a severe loss of revenue in the Netherlands over 2020 amounting to €1.3 billion. There is no doubt that we will also need the availability payment in 2021. In order to maintain the timetable set for this year, and the new timetable for 2022 and thereafter, we will need to make new financial agreements in light of the reduced passenger numbers. Over the period up to and including 2024, the loss of income in the Netherlands could increase to approximately €4.7 billion. To regain our financial health and keep train fares affordable, NS will adapt to the new situation. We will do so by scaling down both our organisation and our investments, in view of the expected fall in passenger numbers. This should permanently reduce our costs by €250 million a year from 2024. The organisational changes entail a great deal of uncertainty for all colleagues. In consultation with, and reaching out to, the employee participation bodies, we aim to absorb most of the shock through natural wastage, by guiding our people to a new job and by offering an employment guarantee until 2025 as agreed in the new CLA. At the same time, we will continue to invest in ensuring sustainable accessibility for the Netherlands in the future, maintaining high-quality services for passengers and guaranteeing safe travel. We also urge the government to use part of the National Growth Fund resources (which total €20 billion) to strengthen the Dutch infrastructure.

Safety

Safe travel is our top priority. Tragically, three serious accidents happened in the past year. One of our train drivers died in a collision at an uncontrolled level crossing at Hooghalen, the Netherlands. In an accident in Scotland three people died, including two of our colleagues at Abellio ScotRail. These were shocking events for the surviving relatives, for colleagues and for the passengers who witnessed it.

Railway safety and personal safety of passengers and staff will remain top priorities for us going forward. Every incident is one too many and is, and will remain, unacceptable.

Unfortunately, last year the fall in passenger numbers was not accompanied by a proportional drop in the number of reported cases of aggression. There were protests in the Netherlands on 24 January 2021, including in Eindhoven, where the station building was severely damaged and shops at the station were looted – a terrible and unacceptable situation. Stations must be a safe place for our colleagues and our passengers.

Regaining passengers

The Netherlands is beginning to prepare for the period of recovery that will follow the COVID-19 pandemic. For NS, our first task is to get our passengers back into the train as soon as the COVID-19 measures allow. In addition, we will have to attract new passengers. A broad range of mobility options allows us to do just that, by making public transport attractive to a large group of people. Our strategy is to ensure maximum convenience for customers throughout their journey from door to door, for example by simplifying season ticket options, introducing new payment methods and facilitating the 'first and last mile' to and from the station. Our stations are important hubs in this strategy. By spreading passenger numbers more evenly during the day and the week, we have an opportunity to ensure optimum deployment of rolling stock while also ending super-peak congestion.

Sustainable travel

Our contribution to the climate policy targets and ensuring high-quality accessibility to support the housing construction challenge in the Netherlands will remain major pillars of our sustainability strategy. To secure our position as a front runner in sustainable mobility, we aim for zero-emission, circular and green growth. This philosophy also underlies our international ambitions.

Together with our partners, we work to improve cross-border rail traffic, in the border regions but also on longer-distance routes to major cities in Europe. On routes of up to 700 km, rail has excellent opportunities to develop into a sustainable alternative to air travel. However, this calls for significant investments in infrastructure. One example is the direct Eurostar service from Amsterdam to London, which was launched at the end of October. We are also developing a proposal for a high-quality connection between The Hague and Aachen. We already provide high-speed links to Frankfurt, Brussels, Paris and London and are also committed to offering faster services to Berlin to connect with the further European network. As 2021 is the European Year of Rail, we intend to seize this opportunity and make a joint effort with all parties involved to move rail travel higher up the European agenda.

Foreign operations

The operations of our subsidiary Abellio must serve the interests of passengers in the Netherlands, by contributing to higher-quality international and regional cross-border connections and to a positive financial result. Our subsidiaries Abellio UK and Abellio Germany are likewise suffering from the COVID-19 crisis, which has resulted in financial losses due to impairments of assets and provisions for potential termination payments. In Germany, the financial consequences have remained limited as the public transport authorities compensate us for the loss of income. We expect to receive the full details of

these compensatory payments from our clients in the near future. These payments are essential for us to continue our operations in Germany. Over the next few years, we expect to be able expand and improve cross-border traffic between the Netherlands and Germany, thanks to the strong position of Abellio Germany in North-Rhine Westphalia and Lower Saxony and with obvious benefits for Dutch passengers.

Abellio UK is facing a different set of challenges. In response to a study into the privatised British railway system and urged by the COVID-19 pandemic, the UK government has decided to end the current fragmented franchise system. In the new contract system which is to replace it (and which has already been implemented temporarily due to COVID-19), the Department for Transport (DfT) will take over the turnover and cost risks because they have become prohibitive for the carriers. In 2020, DfT disbursed €1.5 billion to Abellio in compensation for lost revenues from passengers. In the past year, DfT launched the process that is to result in termination of the existing contracts. In this connection, a termination fee may be due to DfT, which has been factored into Abellio's overall net loss for 2020 of €554 million (NS's share). NS's share in the termination fee will not exceed the maximum guarantees that NS has provided. The definitive amount will probably be determined in the course of in 2021.

Ongoing contributions to Dutch society

The Dutch government has decided to also award the main rail network franchise to NS for the period after 2024. We are proud and grateful for the trust that passengers and politicians have placed in us. We are also looking forward to the New Generation Intercity trains, which will become available starting in late 2021.

The Netherlands has barely begun recovering from the COVID-19 pandemic. In this difficult period, NS is being called upon to fulfil its social role of keeping the Netherlands accessible. It is thanks to the tremendous commitment, creativity and expertise of our staff and our partners that we are able to take on that task. Indeed, that is our mission. 'Together, we are making the Netherlands accessible in a sustainable manner – for everyone.'

Last year we said good-bye to Roger van Boxtel, our former Chair and CEO. We are grateful to him for his deep commitment to the company over the past years. From 1 March 2021, Eelco van Asch will join the Executive Board as our Director of Operations. We look forward to collaborating with him.

Also on behalf of my fellow members of the Executive Board, I would like to take this opportunity to thank all NS colleagues, employee participation bodies and partners for their outstanding efforts and commitment. Finally, we would like to express our gratitude to the Supervisory Board and our shareholder for their dedication in 2020 and for the trust that they have shown in us.

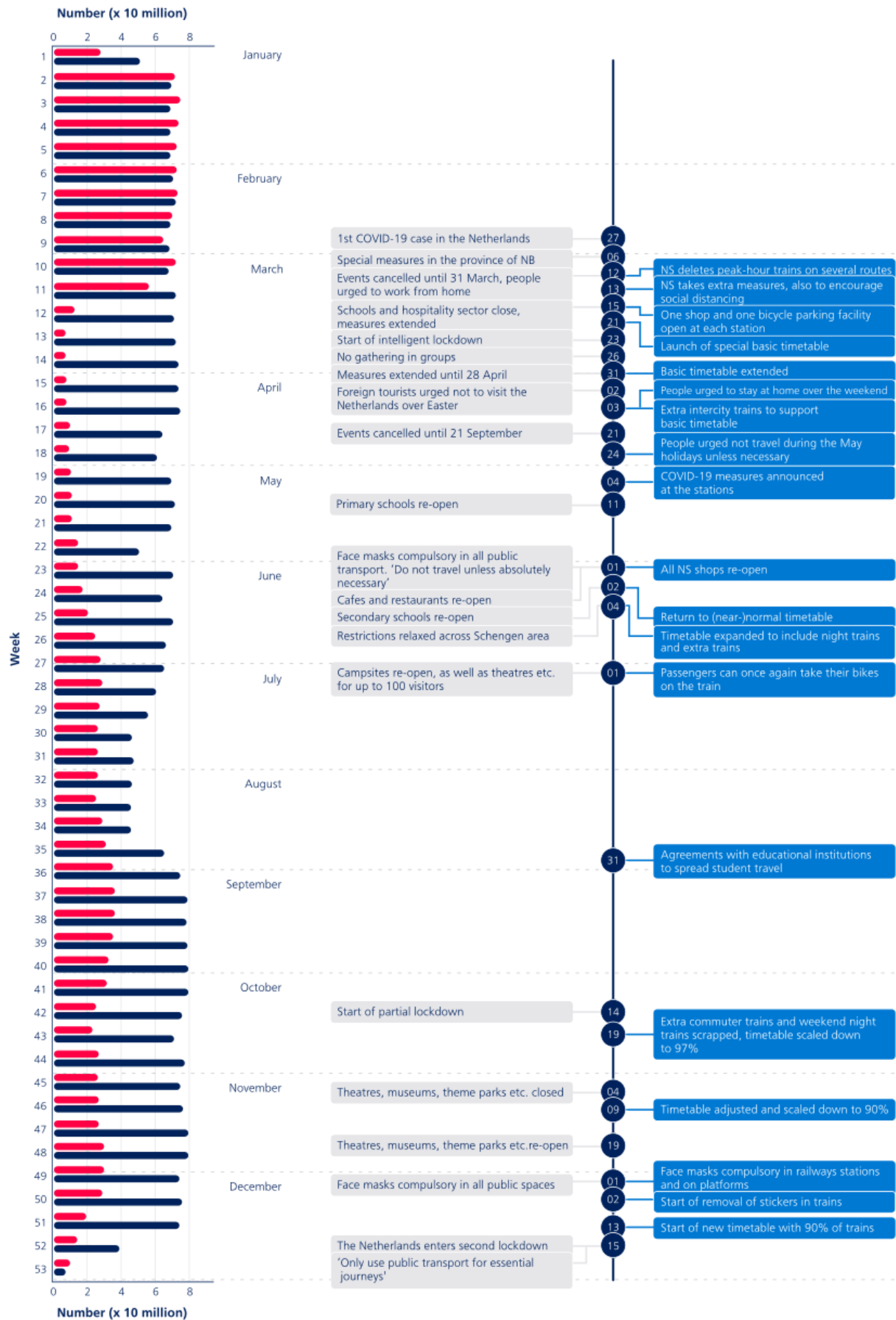
Marjan Rintel, Chair and CEO



2020: A year dominated by COVID-19



NS has been hit hard by the COVID-19 crisis, both from an operational and a financial perspective. We were confronted with a dramatic decline in passenger numbers and in the use of our door-to-door services and the shops and services at our stations. The public transport sector has taken a range of measures to keep the travel industry safe, both for our passengers and our staff. Ever since the pandemic struck, one objective has continued to guide all our efforts: to keep the Netherlands moving.



Timetable: flexible adjustments

In March, during the first days of the COVID-19 crisis, we developed a basic timetable in an extremely short period of time. This enabled us to serve all stations in the country with two trains an hour in both directions, allowing doctors, nurses and other people in crucial professions to continue commuting by train. At the same time, the lean timetable ensured that enough NS employees remained available for train services even amid high levels of absenteeism due to illness or COVID-19 symptoms.

From the beginning of June we scaled up operations whenever necessary, with due regard for the existing COVID-19 measures. Starting 19 October, we gradually scaled down the timetable again, to 90% of our regular capacity. At the end of August, NS and other public transport companies, local authorities and provinces made timetabling agreements with universities, institutions for higher professional and vocational education and secondary schools to avoid daily peaks in student travel. These agreements will remain in force until August 2021.

International train travel

Effective mid-March, international train services from the Netherlands to Germany, Belgium, France, the United Kingdom and Switzerland switched to a very limited timetable. Again, the objective was to continue services for passengers in crucial professions and for repatriation purposes. During this period, NS maintained sixteen daily services between Rotterdam and Antwerp and four daily services between Amsterdam and Frankfurt, with one service extending to Basel. At the beginning of June the international timetable was resumed, with IC Brussels, IC Berlin, ICE services and regional cross-border routes to Belgium all returning back to normal. Thalys and Eurostar maintained one daily train to Paris and London, and are planning to further scale up services in 2021. The number of Thalys and Eurostar tickets sold (-75% and -85% respectively) remained far below pre-COVID-19 figures. Both Eurostar and Thalys suffered huge financial losses due to the ongoing crisis, causing severe pressure on their passenger services.

From discouraging passengers to winning them back

During the first months of the COVID-19 crisis we were forced to do the last thing a carrier would want to do: asking the public not to travel unless strictly necessary. The government encouraged people to work from home; schools, universities and higher education institutions closed their doors and leisure travel was declared undesirable from mid-March. Right from the start of the crisis, NS took a lenient attitude towards requests from passengers – both consumers and business travellers – to cancel, suspend or modify their season tickets. To further limit crowding, NS temporarily discontinued ticket formats that are meant to make train travel more attractive, such as joint journey discounts and elective days.

On 11 November 2020, NS launched the *Treinwijzer* (Train Indicator). Passengers who register their journey online are given an idea of how crowded the train will be, and are warned if their chosen train is cancelled or likely to be more crowded than expected. In this way, the *Treinwijzer* helps passengers decide when to travel if they want to avoid a crowded train.

Surveys: less travel after COVID-19

NS and Delft University of Technology conducted four NS Panel surveys, starting in April 2020. According to the December survey among 23,202 passengers, one in six expected to travel less frequently by train after the COVID-19 crisis. Passengers expect to be working from home more often or have bought an alternative means of transport (such as a car). Commuters expect to be travelling to and from work on three days a week, on average, when the crisis is over. Of all commuters in the survey, 8% even think they will no longer travel to work at all. This is significant, as commuters account for half of our total income. If

all commuters decide to work from home on just one day a week, this will reduce our turnover by 10%. Of all leisure travellers in the survey, around 75% expect to resume their former travel behaviour after the crisis.

Among commuters, Tuesdays and Thursdays look set to become the most popular travel days once things have returned to normal. NS faces the challenge of preventing overcrowding on such peak days. We attach great importance, therefore, to agreements with companies, educational institutions and other organisations on measures to prevent commuters and students all travelling on the same days.

Measures

Measures in the train

We have taken various measures to ensure the safety of passengers and staff.

- The government made face masks compulsory with effect from 1 June. Public transport was the first public space (and, for a long time, remained one of the few public spaces) in the Netherlands where people were required to wear a face mask.
- Inside our trains, we used green stickers to indicate the places where passengers could take a seat. All seats have been available again since 1 July. The stickers were meant as an aid for people to keep 1.5 metres apart as much as possible. To protect our train guards, most of the stickers pointed to window seats. We started removing the stickers in December, making the passengers themselves responsible again and giving them more freedom to choose a seat.
- We also ask passengers to hold their tickets in front of the main guard's scanner themselves.
- During regular cleaning we devote special attention to contact points such as door handles and headrests.
- Train toilets now have an extra supply of soap and paper towels.
- The NS Travel Assistance process has been adapted in a number of respects, including the use of lifts and special walking routes for persons with reduced mobility.
- From 12 June to 1 July, passengers could not take their bikes on our trains. Passengers who intend to do so are now asked to register their journey in the *Treinwijzer* in advance.

Measures at the stations

In collaboration with ProRail, we also took measures at the stations to ensure they remained clean and safe for passengers and staff alike.

- In the stations, on the platforms, in the waiting areas etc. everybody is required to observe social distancing.
- At the stations, stickers with pictograms indicate prescribed routes and show passengers how to keep a safe distance from others. We use the 'nudging' method, stimulating passengers to follow the desired route automatically.
- We show video clips with the coronavirus rules based on RIVM guidelines on 8 large and 15 smaller screens at 16 stations. The clips were also shown on the displays inside the trains. This was supported by audio messages at the railway stations and in the trains.
- Staff were specially tasked with welcoming passengers at the station and reminding them of the coronavirus rules.
- We installed mobile disinfection stands at several stations and in station shops, and coughing screens in shops and OV Service Shops.
- We deployed crowd-control staff at several stations to encourage passengers to spread and social distance.
- During regular cleaning there was a special focus on contact surfaces.

- In line with the nationwide obligation to wear face masks in public spaces, since 1 December face masks have been compulsory at the stations and on the platforms. Before that date, we already urgently advised passengers and staff to wear face masks.
- We joined and supported our tenants in the effort to keep shops at the station open for as long as possible, given their important contribution to the atmosphere at the station.

Code of conduct for NS employees

Our first-line staff, including guards, Safety & Service officials, train drivers, mechanics, retail staff and service staff, have been on the front line of the pandemic from day one. Since then, work procedures in our trains, stations and workshops have changed. For several jobs we have drawn up 'perspectives for action', with job-specific instructions on such things as the use of personal protective equipment, what to do in the event of an incident and advice on work procedures in light of COVID-19. The perspectives for action are regularly updated. In addition to support tools and tips on working from home and how to stay fit mentally and physically, NS offers a range of other practical facilities. These include COVID-19 fast-track tests for colleagues who work on the trains, in rolling stock management, at the stations or in our workshops. Our priority here is to safeguard the health and well-being of our people. In principle, all NS office staff have been working from home since March 2020. While our offices have been adapted to the new '1.5 metre distance society', working from home will, for the time being, remain the norm. By providing screens, office chairs, ICT facilities and the like, NS does whatever it can to support working from home. At the same time, we have developed a range of initiatives to maintain a strong sense of community among all our staff.

Studies: rail travel is safe

Studies by Deutsche Bahn, the Rail Safety & Standards Board and the International Union of Railways (UIC) have shown that thanks to the measures taken, rail travel is safe. For example, the studies have revealed that trains are not sources of contamination, and that the risk of infection for on-board staff who have many contacts with passengers is not demonstrably higher than average.

Collaboration from a sense of social responsibility

From the start of the COVID-19 crisis, NS has always, from a sense of social responsibility, endeavoured to keep providing transport services for people in crucial professions and essential journeys. We collaborated with parties including the Ministry of Infrastructure and Water Management, regional authorities, ProRail, other carriers and consumer associations to keep public transport services running in a responsible manner. During the 'intelligent lockdown', NS managed to keep one AH To Go store or Kiosk open at each station, enabling passengers and staff to buy snacks and drinks at the station.

From day one we decided to join forces with other carriers in the Dutch public transport sector. In the second half of March, NS established the CMO, its internal crisis management organisation. We arranged and maintained external contacts through the CMO, while the NS Corona Expert Team, part of the CMO, elaborated the measures into scenarios for implementation by the various business units. Consultation platforms in which NS participates include:

NOVB+

In this platform, coordinated by the Ministry of Infrastructure and Water Management, NS collaborates with regional carriers, municipal and regional public transport organisations, passengers' association ROVER, non-central public transport authorities and others. NOVB+ deals with issues such as scaling down and scaling up train services, measures at the stations and in the trains, face mask requirements, enforcement, bike on the train policy, and adjusted timetables at schools and universities to help students avoid peak hours in public transport. The government has drawn up a 'Protocol for Continued Responsible Travel in Public Transport'.

OV-NL

NS is a member of OV-NL, a Dutch public transport sector association that looks after the interests of carriers. During the COVID-19 crisis, OV-NL serves as an important centre of information for media and other parties, for example on COVID-19 measures and safe travel.

OV-NL Security Working Group

The OV-NL Security Working Group focuses mainly on enforcement and regulatory aspects of new measures and scenarios, and the associated coordination policies. In addition, it accommodates structural consultation with the police, the Ministry of Infrastructure and Water Management and, sometimes, the Ministry of Justice and Security. For example, this working group arranged the exemption from obligatory face masks for public transport employees: they can also wear a facial screen.

Creativity during the COVID-19 crisis

Despite its devastating effects, the COVID-19 crisis also generated a great deal of energy and creativity. For example, NS produced 80 feeder systems for emergency artificial respiration equipment in hospitals. We did so at our workshop in Haarlem, which is normally used for upgrading trains. Where catering outlets at the stations had to be closed down, we donated food and drink to local charities such as food banks.

Consequences of corona

Consequences for station projects and shop rental

The COVID-19 crisis had little or no negative impact on station renovation projects. Indeed, in several projects the decrease in passenger numbers actually had positive consequences. For example, it enabled us to carry out far more construction work during the day rather than at night, with less nuisance for local residents. The fall in passenger numbers also allowed us to carry out relatively small repair works in less time, bringing the costs down. One example is the entrance to Utrecht CS on the Jaarbeurs side.

COVID-19 has had a huge impact though on the turnover of retail tenants at the stations. Where necessary, we entered into special agreements with them tailored to their needs. Our aim was to prevent vacancy of retail spaces as much as possible.

Financial consequences

At the low point of the crisis, we carried only 10% of the normal number of passengers. The figure for the other months of the year was not much better, at 40%. We sold fewer train tickets, many passengers suspended their season tickets and retail sales at the stations also plummeted. We do not expect to see the first modest recovery in passenger numbers until 2022, and are aware that some changes in passenger behaviour may well be permanent. For example, we expect that people will continue to work more from home, be more likely to commute by bike (or e-bike) and less keen on international travel than before the crisis.

These changes will result in a downward adjustment of our passenger volume forecasts. In addition, the expected economic downturn will also affect railway travel. And as passengers who will continue to travel by train are more likely to do so outside of peak hours and at reduced rates, the impact on NS's income will be all the greater. As a result, financially we will continue to feel the pressure in the years to come. We expect to lose approximately €4.7 billion in revenue between 2020 and 2024.

To mitigate the huge loss of income for 2020 and 2021, the government has pledged an availability payment (*beschikbaarheidsvergoeding*) for the period until October 2021, amounting to €818 million. This payment, which will cover up to 93% of our costs on the main rail network (after deduction of passenger revenues), is an important short-term solution. Along with the Temporary Emergency Bridging Measure for Sustained Employment (NOW) of €24 million claimed by NS Stations, it will reduce the financial deficit in this year's operating result by €842 million. However, the availability payment offers no long-term solution. To recover our financial health, we will have to economise and adapt our business. That is the only way to keep train fares affordable and to keep the country accessible in the future. Up until 2025, NS will implement cost-saving measures worth €1.4 billion so as to permanently reduce the level of costs and investments in light of the adjusted passenger volume forecasts. The measures will affect all business units and initiatives of NS. We have also taken a critical look at our investments and have decided, for instance, to order fewer new extra trains. All projects will also be reviewed in this light.

To regain our financial health, we will have to slim down and become more agile and effective as a business. We will have to carry out more work with fewer people: 2,300 jobs will disappear over the next few years, both among internal and external staff. This will bring our head office costs down by 25%. We aim to improve results, digitise faster and respond more flexibly to changes in our environment. To achieve that, we are transforming NS into a smaller and more agile organisation that will enable smarter and more effective collaboration, strengthen our self-confidence and fuel our willingness to change. Over the next few years, approximately 2,500 NS employees will retire. However, the jobs that will be lost or changed cannot be offset against those that will become available due to retirement, as they do not always concern the same positions.

Consequences for our foreign operations

In the United Kingdom, the COVID-19 pandemic caused a sharp fall in passenger revenues from the Abellio franchises. Except for Merseyrail, all existing franchise agreements in the United Kingdom were amended effective 1 March 2020 by temporary emergency agreements, in which the British government pledged to take over all revenue and cost risks and offered carriers the prospect of a 1% to 2% management and performance fee. In 2020, Abellio received an additional grant of €1.5 billion from the British government in return for the continued provision of railway services.

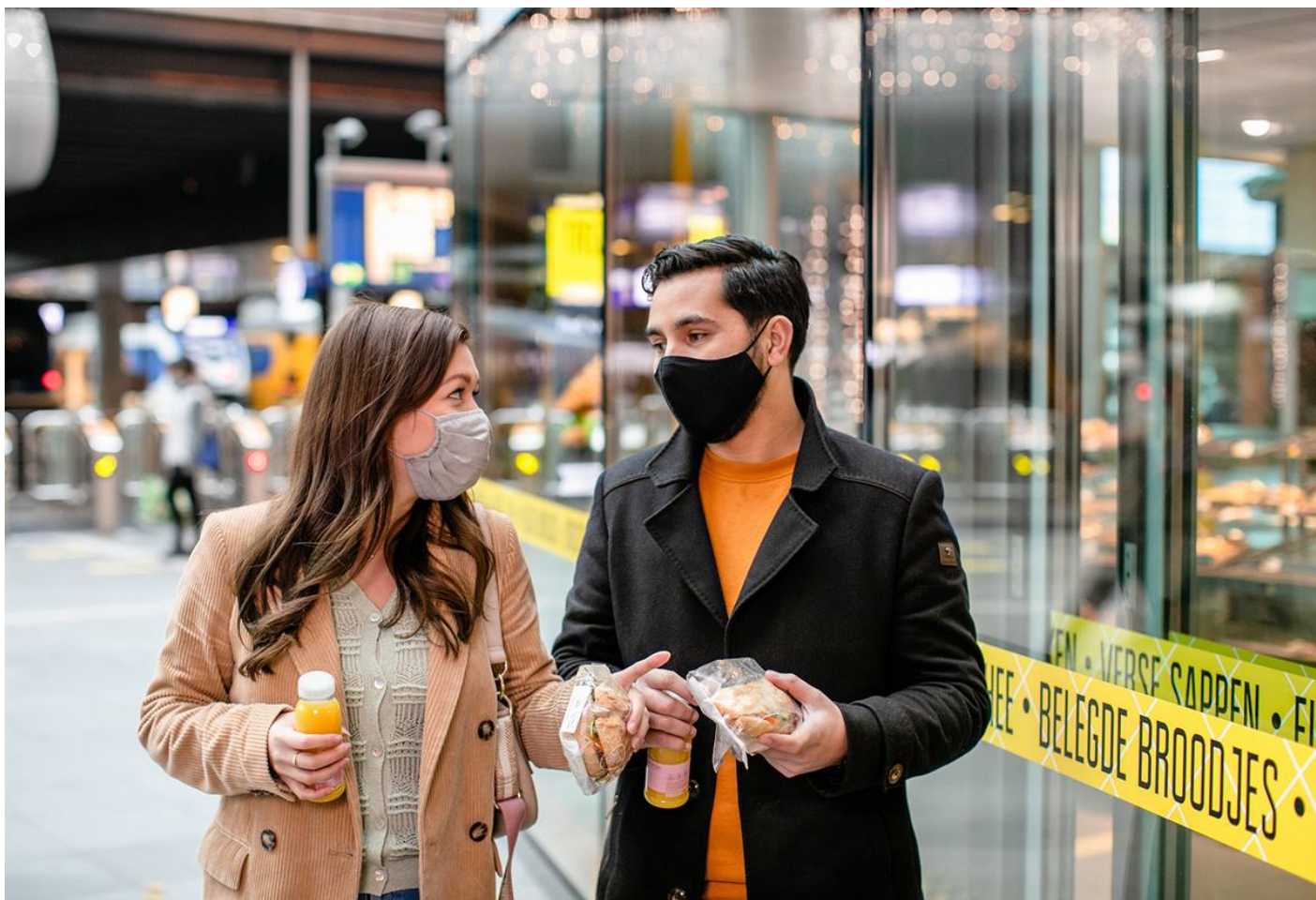
In Germany, the direct financial impact of COVID-19 on our franchises remained limited. This is because the public transport authorities in Germany, which are Abellio's client, bear the loss-of-income risk.

The influence of COVID-19 on the annual report

As a result of COVID-19, 2020 was completely different for NS than other years. Obviously, this is also reflected in the results. KPIs such as seat availability and customer satisfaction have suddenly acquired a different dimension. For example, several franchise KPIs have lost all relevance, albeit temporarily, while other results can no longer be compared with those of previous years. This is why we have decided not to report on a number of results in this

annual report, or to report less extensively or differently compared with previous annual reports. Where results have changed significantly, we only provide explanatory notes if the changes are attributable to causes other than COVID-19. By avoiding such repeated references to COVID-19 as the cause of major changes, we have been able to produce a report that is still pleasant to read.

Our strategy



In February 2020, NS presented its strategy for the 2020-2025 period. However, the projected consequences of the COVID-19 pandemic for NS over the next few years have caused us to adapt the implementation of that strategy.

COVID-19 has encouraged companies, including NS, to reconsider their strategies, postpone programmes, accelerate other activities and identify new areas of focus. Our primary objective is to ensure that passengers opt for the train again. Despite the pandemic, we are as committed as ever to our vision, mission and ambition.

Our mission and vision

Our vision was born from the wish to offer solutions for the transport challenges that the Netherlands is facing. It serves as the foundation of our strategy. That vision for the future of NS and for our role in the Dutch mobility sector was conceived in part on the basis of a broad dialogue with internal and external stakeholders. Travelling where and whenever you wish, in a manner that suits you best and with maximum comfort: we want this to be a sustainable reality for every person in the Netherlands. Our mission is also to serve all of the Netherlands: the big cities, all other regions and connections to other countries.

// *Together, we are making the Netherlands accessible in a sustainable manner – for everyone.*

That is our mission. It is not just our trains that help to create that accessibility. We also, emphatically, consider contributions from other modes of travel for passengers, from the first to the last mile of their door-to-door journey, and with stations serving as attractive hubs for transfer passengers.

Our ambition

Despite the huge impact of the pandemic, over the period up to 2025 we will continue to develop value for our customers and for society at large while ensuring a healthy financial return. Going forward, this will enable us to keep train fares affordable while continuing to invest in meeting the country's mobility needs.

// *We and our partners deliver world-class mobility with a sense of responsibility towards our local environment. Always accessible, always affordable and always sustainable.*

That is our ambition. As such, we are proactively contributing to the economic and spatial development of the Netherlands. What we aim to offer all passengers is optimised accessibility, including for passengers with a disability and for the next generation. This is why we operate as sustainably as possible.

We also seek to provide our passengers with a broad range of mobility services, with seamless transitions between regional, urban, national and international travel. Collaboration is the key to achieving this. So we are joining forces with the Ministry of Infrastructure and Water Management (the franchising authority), ProRail, stakeholders, other carriers and partners. Internally we also operate as a single, united NS wherever that is possible.

Strategic themes for 2020-2025 and beyond

Our strategy focuses on NS's ambitions in the Netherlands, with detailed plans for the period up to 2025 and in outline for the subsequent period. Our main priority remains 'passengers, passengers and passengers': on our trains, at the stations and from door to door. We want to develop from a train company into a mobility company, with the train serving as the backbone of our business. Within this strategy, stations are hubs for mobility and quality of life. It is important for us to continue investing in mobility in the Netherlands.

To get the Netherlands moving again in a responsible and comfortable manner, we need to balance the supply of mobility with the demand for mobility. In this context, the COVID-19 crisis has made agility, efficiency and effectiveness more important than ever. NS's financial position forces us to make even more careful choices as to the things we should and should not do. This will enable us to continue supplying high-quality services for passengers at affordable rates. For extensive information about the future course of NS, visit www.ns.nl.

Recovering passenger numbers by offering reliable travel services

Our primary objective is to ensure a responsible and comfortable journey for our passengers, inspiring confidence that our trains and stations are a safe environment. More than ever before, it is essential for us to respond to changes in our customers' needs: lower levels of crowdedness, more service, flexibility at all times and more control of the journey from door to door. Once passenger numbers start rising again, we will need to spread them more evenly across peak and off-peak hours to ensure optimum deployment of rolling stock. This is why NS remains focused on developing a range of flexible mobility options geared towards recovery and renewed growth. NS aims for permanent improvement in balancing passenger supply and demand (spread). This should help to both optimise the capacity utilisation rate and achieve a healthier business model.

Comprehensive mobility services and world-class stations

Rail travel is and will remain the backbone of our operations, within the broader scope of mobility services. Passengers increasingly demand personalised and tailored advice, and a reliable range of services to travel from A to B. The focus for NS, therefore, is on further developing both the range of mobility options and personalised digital passenger services. After all, passengers have to make the full door-to-door journey and arrange all the various stages: planning and booking the trip, paying the fares, travelling to the station, changing trains at another station, moving on to their final destination, using P+R facilities – and finding alternatives when the train is not a suitable option.

In collaboration with ProRail, we develop and operate world-class railway stations where people can do far more than just catch a train. By linking all these stages in a seamless chain, physically and digitally, we can give every individual traveller a convenient and comfortable experience and a broader choice of options.

NS has the capability and the ambition to act as a link between the various parties involved to eliminate the current fragmentation of transport services. After all, the best solution will be achieved by treating the Dutch mobility network as a single entity. In doing so, we join forces with other parties so as to be able to provide the best options for our passengers across the country. We are involved in area development projects aimed at enhancing the potential of station districts for residential and other functions.

Sustainable accessibility, nationally and internationally

NS continues to lead by example in the field of sustainability, which is one aspect of its social role. In this way, we contribute to the sustainable accessibility of towns and cities within and outside the Netherlands. This also encompasses our ambition to connect the Netherlands with the countries around us in the short and medium term. Together with our European partners we are creating a joint sustainable mobility sector. For example, we intend to

develop railway travel into the logical preferred option for short international journeys (up to around 700 kilometres). That will benefit both the environment and the economy. Our foreign operations will have to contribute to our ambitions and, as such, serve the interests of Dutch passengers. For example, we expect to be able to expand and enhance cross-border connections in Germany, with obvious benefits for Dutch passengers.

An agile organisation

The world around us is changing at a speed that forces us to develop into an agile, digital and data-driven organisation. Accelerating the digitisation process and the move towards data-driven operations will make us more agile and ensure optimum customer experience in the future. This will help us achieve the level of efficiency and effectiveness we need to become more flexible and improve our financial results. Going forward, this will enable us to keep train fares affordable while continuing to invest in the country's mobility needs.

Main rail network franchise from 2025

In June, the Dutch government decided – and the Lower House of Parliament has since agreed – that NS should continue to serve the main rail network beyond 2024. This concerns rail transport using Sprinter trains and Intercity trains. Domestic services on the high-speed line will also remain part of the main rail network franchise. The term of the new franchise has not been determined yet. As NS is eager to continue serving its passengers in the future, it welcomes the government's decision as a sign of confidence based on our performance in recent years.

Decentralisation

According to the coalition agreement, one or more of the four Sprinter services that are currently part of the main rail network were to be transferred. The government's plan is to cut the Zwolle–Leeuwarden (currently: Meppel–Leeuwarden) Sprinter service from the new franchise and decentralise it. The relevant arrangements have yet to be agreed with the provincial authorities of Friesland, Drenthe and Overijssel. The Zwolle–Groningen and Apeldoorn–Enschede Sprinter services may follow suit at a later stage, and move from the main rail network to regional franchises. The franchises concerned will expire in 2032 (Apeldoorn–Enschede) and 2035 (Zwolle–Groningen). According to NS, this further fragmentation of rail transport in the Netherlands does little to serve the interests of passengers. On the contrary, it will result in longer travel times, more points where passengers have to change trains, and more uncertainty about rail fares.

International connections

The government intends to conduct a market exploration to study the extent to which international connections would benefit from more deregulation ('open access', allowing carriers to operate without a franchise). NS is concerned about this study and the 'open access' principle involved. Over the past five years, we have operated more international trains than in the preceding fifteen years, and we have ambitious plans for even better and faster international rail connections for the Netherlands. The study into the possibility of totally reorganising international rail transport will create uncertainty and will have a negative impact on the ambitions to further improve the international accessibility of the Netherlands.

Demands for the future

The government expects us to further enhance our performance, including further improvements in punctuality figures, better travel information services and continued responsiveness to changes in passenger numbers and other developments. While all of this is in line with our ambitions, at this point in time NS's financial position is an urgent priority if we are to keep the Netherlands accessible in a sustainable and affordable manner. In addition, all carriers operating under a franchise will be legally obliged to provide public transport utilisation data. Pursuant to the General Data Protection Regulation, that information will be fully anonymised so that it cannot be traced to individuals.

Expected developments in the long term

The world is changing rapidly. Due to the coronavirus, however, some developments are accelerating while others are slowing down. The significant uncertainties involved make it difficult to predict those developments, which has made it all the more important to monitor them carefully over the period ahead.

Urbanisation, new construction and a regional tailor-made approach

Before the outbreak of the COVID-19 pandemic, it was expected that by 2030 most Dutch municipalities, and especially the big cities, would be grappling with housing shortages.

According to the CPB Netherlands Bureau for Economic Policy Analysis, the impact of COVID-19 on the housing market has so far remained limited. Despite CPB figures indicating a temporary decrease in the demand for homes, the economic consequences for the housing market have remained small and the severe housing shortage continues. Indeed, overall the demand for homes is not expected to decrease over the period until 2035.

The acute need for more houses is accompanied by major challenges in spatial planning and calls for a vision on mobility. For example, area development projects include a focus on mobility issues to ensure that new housing estates are accessible. Over the past few years, continuing urbanisation has fuelled strong growth in passenger numbers in urban areas. In contrast, sparsely populated regions saw passenger volumes decline further, which has made it difficult to maintain the existing level of public transport services in those regions.

However, the COVID-19 pandemic has generated a counter movement, with people attaching more value to space in their living environment. Due to its limited scale, the impact of this trend is relatively small, and it also remains to be seen how long the trend will last.

We are carefully monitoring this, especially in order to gain a better understanding of regional demand for transport and specific needs. The strong growth in passenger numbers in urban areas, combined with the drop of passenger numbers in sparsely populated areas, could potentially raise the pressure on the existing public transport system. Given the considerable regional differences in developments, tailored solutions are essential.

The growing importance of sustainable mobility

Climate change is high on the political agenda. From the Dutch Climate Agreement to the European Green Deal: sustainability is increasingly being integrated in everything we do and in the requirements that the EU, the Dutch government and society impose on our services, products and rolling stock. This is driving change in the type of travel services society requires, with a growing preference for rail rather than air or road transport. The CPB expects that the growth of sustainable mobility will accelerate.³ Both within the Netherlands and internationally, rail travel is part of the solution to the climate problem. All NS operated trains are 100% electrically powered. This is one of our contributions to a more sustainable society. Monitoring other developments such as self-driving, electric transport facilities will also remain important. They offer great additional potential to help keep the Netherlands accessible, also in areas where currently there are no train services.

Evolving customer wishes

The world is changing, and so are the wishes of our passengers. They want to be able to travel to all parts of the country, fast and conveniently. The Netherlands needs an integrated mobility system with a strong public transport component. Key elements are a faster and more convenient door-to-door journey and better international connections to and from the Netherlands.

Most of us now plan our journeys digitally. At the same time, we should no longer take for granted that people, especially young urban dwellers, own a car or bicycle. As for the chosen means of transport, availability and convenience are key. Passengers want to be able to choose the means of transport that suits them best for each individual journey. In the future,

all forms of mobility will be linked both physically and digitally, to enable the most suitable choices at each stage of the door-to-door journey. This concept is known as Mobility-as-a-Service (MaaS). Shared-bicycle concepts such as the public transport bicycle (OV-fiets) are now firmly established as part of a transformation that is also being fuelled by Swapfiets, Felyx (electric scooters) and shared-car concepts such as SnappCar and Greenwheels. NS is making significant efforts in this area, in collaboration with its partners. We do so, among other things, by optimising the physical and digital connections between the various modes of transport, and also by improving travel options for the first and last mile. For example, we are developing a platform covering all transport modes and improving our NS App by continually enhancing the travel planner information it offers.

Technological developments

Technological developments are crucial if we are to realise our ambitions for a safe, sustainable and smart public transport and mobility system. Given the projected mobility trends and sustainability targets, even during the current crisis period NS will continue to focus, with its partners, on innovation to prepare the railway network and the NS organisation for the future. For example, technical innovations enable us to operate more trains, further raise safety levels and reduce the number and length of stops, thus also cutting journey times, resulting in better services for passengers. *Toekomstbeeld OV 4* (Vision for the Future of Public Transport, TBOV) highlights the need for innovations in digitisation and quantum leaps in technology, such as Automatic Train Operation (ATO) and the European Rail Traffic Management System (ERTMS).⁵ In addition, developments such as artificial intelligence and the Internet of Things, coupled with the ever growing quantity and diversity of data, will help us further improve our services and provide seamless door-to-door journeys in the future. The COVID-19 crisis is further accelerating the rate of digitisation and technological development, creating new opportunities.

How NS adds value to society

Each year, NS provides sustainable mobility to millions of passengers in the Netherlands. In doing so, we contribute to the accessibility and economic development of cities and regions, and to the country's climate goals. In our annual report, we report on the subjects that our internal and external stakeholders feel to be relevant and that enable us to create value for Dutch society. The value creation model determines the structure of our report. In 2020, we recalibrated our material relevance analysis to bring it more in line with our value creation model. In this chapter we will identify the social, economic and environmental resources we use, how we add value to them and which topics our stakeholders hold to be of material relevance for our organisation.

How NS adds value to society



Input

To make our business model work as effectively as possible, we depend on key inputs such as people, trains and technology. As a carrier, we could not for instance function without our people and their knowledge. But other inputs are important too, such as energy (e.g. from wind) for powering our trains.

Business model

The main foundation of the value creation model is our business model. Our mission, ambition and underlying core activities serve as the input for our [strategy](#).

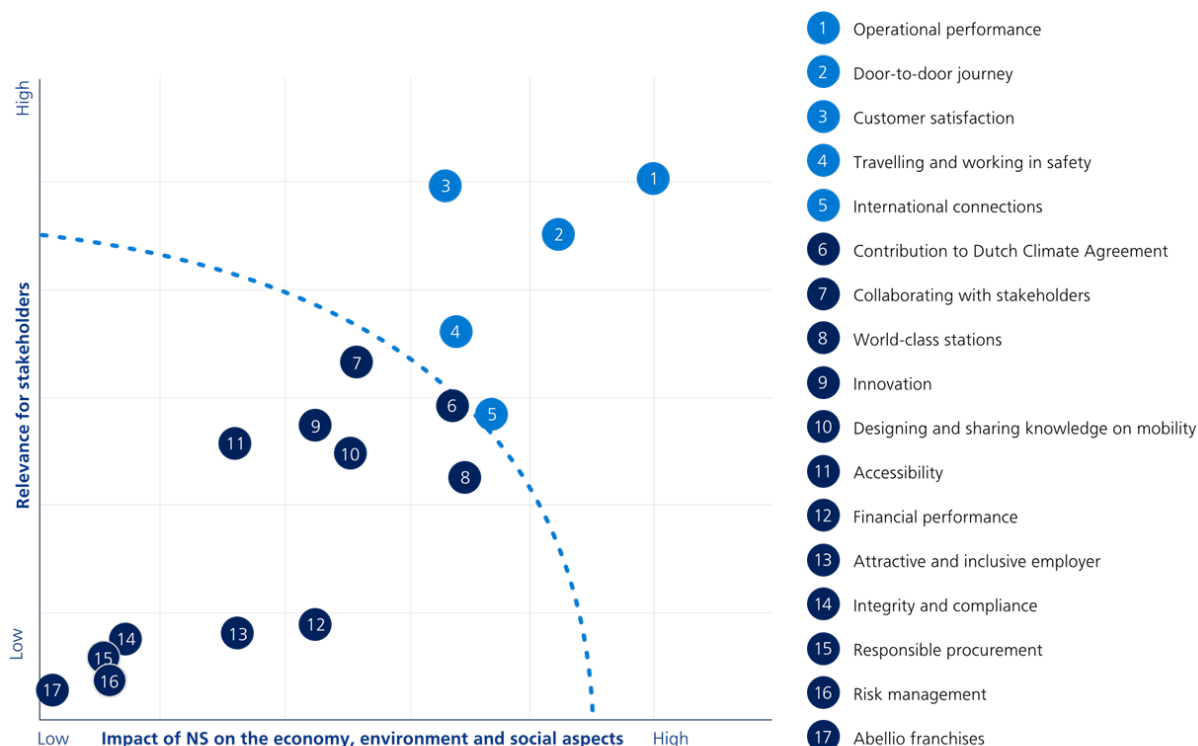
Output

The activities in our business model have a variety of internal and external outcomes. These include our financial results, for example. We also provided an average of 1.3 million train journeys a day (before the COVID-19 outbreak). We have high employee satisfaction scores and most of our trains run on time.

Our impact

Our impact on our environment is considerable, given the fact that mobility generates huge economic and social benefits for the Netherlands. At the same time, however, we also have a considerable ecological footprint, as we use space and raw materials. In addition, travelling takes time. If we are to continue facilitating travel in future and keep the Netherlands mobile, it is important for us to understand the effects of our business model on society and to keep using that knowledge as a control parameter. We know, for instance, that the social costs of a train journey are lower than those of a trip by car or plane. Where the environment or safety are involved, we will be able to improve our social return by increasing the share of rail travel in overall mobility growth.

Material relevance matrix



The Y-axis shows the material relevance of topics for NS according to our external stakeholders. The X-axis shows the material topics which, according to NS's senior management, offer the best potential for NS to make a positive contribution to the economy, the environment and social aspects in the Netherlands.

Once every two years, NS recalibrates the definitions underlying the material relevance matrix, on the basis of the NS strategy comparison with peers and relevant developments in society at large. The material relevance matrix for 2020 has also been recalibrated in this way. We do this in order to highlight the topics that are of material significance for our organisation and, as such, determine our strategy and the content of our reporting. An independent study and internal consultations have yielded a total of 17 themes that are materially relevant for NS. These are largely the same as the themes in our previous material relevance matrix. However, their wording and definitions have been adapted to bring them in line with our revised strategy and our value creation model. Two new themes have been added. We added 'Designing and sharing knowledge on mobility' because it fits in with the role of NS within several alliances and its new strategy, and 'Responsible procurement' because our peers also recognise this as a material topic.

To help us identify crucial policy priorities, we asked our Dutch stakeholders to list the themes they believe are the most relevant to NS. The stakeholder groups we consulted are administrative stakeholders, sector associations and collaboration partners, consumer associations, partners in the chain, suppliers, NGOs, political stakeholders, ProRail, trade unions and academic experts. In addition, in an internal round of consultations we examined the impact of NS on each of those themes. The results of this study are reflected in the above material relevance matrix, with the most important themes for NS shown top right. The matrix has been submitted to and validated by the Executive Board.

Our impact on the Netherlands



Until the first quarter of 2020, many people in the Netherlands used our trains almost every day. And even while passenger numbers have plummeted, our social impact remains huge. This is reflected in areas such as mobility, safety, the environment and our expenditure. We present a transparent picture of our social impact by expressing our positive and negative socio-economic and environmental effects in euros. In this chapter we have tried to do so as objectively as possible, and to express some of those effects in monetary terms.

In a nutshell

In 2020, passengers travelled over 8 billion kilometres by train. This is considerably less than in 2019. The drop in kilometres travelled has also reduced the positive impact of NS-generated mobility. At the same time, the negative impact has also decreased as people spent less time travelling and the environmental impacts of first- and last-mile transport have diminished. On balance, NS's positive social impact amounted to €2,146 million in 2020 (compared with €3,250 million in 2019).

As in previous years, rail travel had only a very small impact on the environment compared with travel by car. However, the overall positive impact of rail as opposed to car travel decreased in 2020, caused by the drop in passenger-kilometres compared with 2019.

Social impact of NS

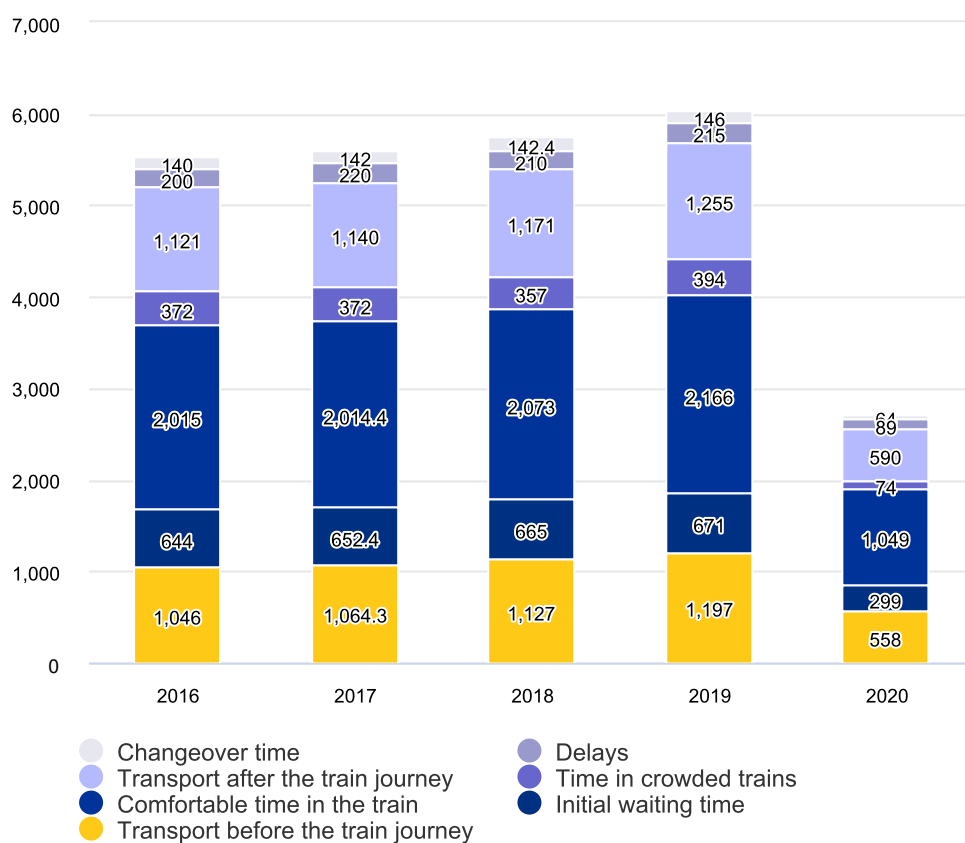
Social impact of NS	Impact in 2020	% relative to 2019	% relative to 2014	Impact compared with cars	% relative to 2019	% relative to 2014
	(in € million)	(in € million)	(in € million)	(in € million)	(in € million)	(in € million)
mobility	3,616	-56%	-49%		n/a	
expenditure	1,377	1%	11%		n/a	
training	11	-15%	15%		n/a	
journey time	-2,722	-55%	-47%		n/a	
environment	-53	-31%	-63%	€ 137	-55%	-41%
health and safety	-84	-75%	n/a	€ 278	-56%	-49%
Total	2,145					

For further information about the terminology, the principles applied and the valuations and sources used, consult the [NS 2020 Handbook on socio-economic impact analysis](#) (only available in Dutch).

Socio-economic impact of mobility and travel time

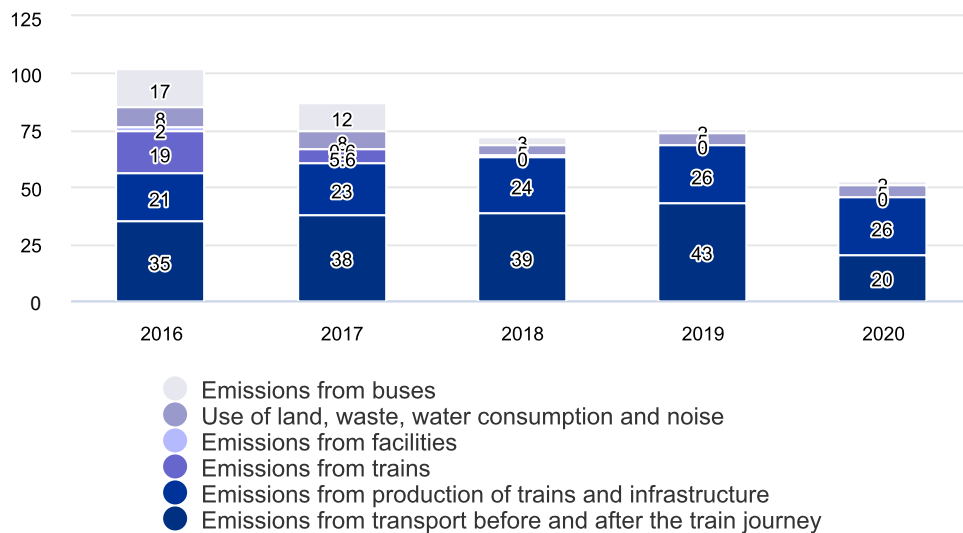
The Kennis Instituut Mobiliteit, a knowledge centre for mobility issues, has valued the importance of mobility in the Netherlands at €76 billion. NS used the results of that study to attach a certain value to each kilometre travelled by our passengers on our trains. We then multiplied the value per kilometre travelled by the total number of NS passenger kilometres in 2020, which yielded a total value of €3,616 million (compared with €8,128 million in 2019).

At the same time however, to the extent that passengers cannot entirely spend the time they need to travel from A to B in other useful ways, the total door-to-door travel time also generates social costs. This applies above all to time lost due to delays and to time spent in overcrowded trains (for example due to a lack of seating). This negative impact of time spent travelling amounted to €2,722 million in 2020 (compared with €6,045 million in 2019).



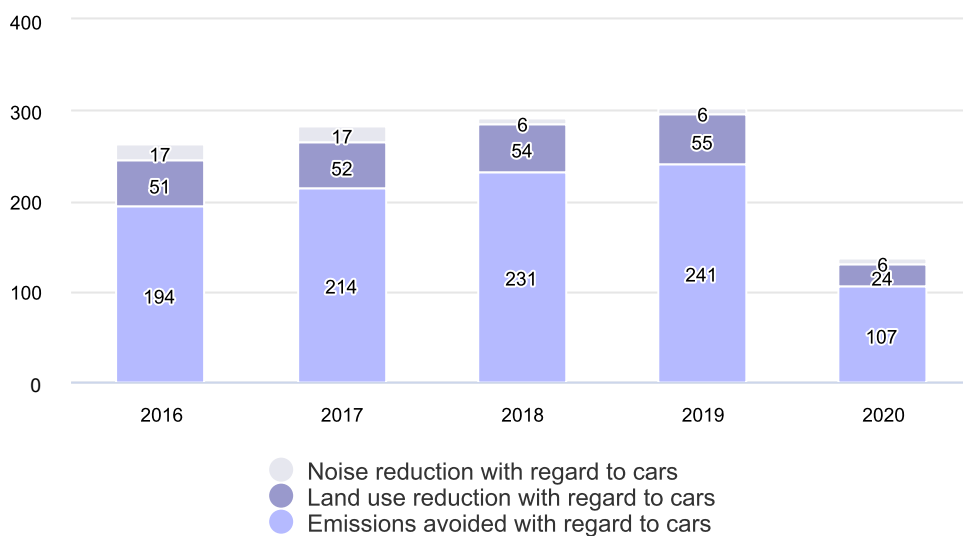
Environmental impact: emissions, land use, waste, water and noise

Our negative environmental impact results, among other things, from the use of fossil fuels. Fossil fuels cause air pollution due to emissions of substances such as CO₂, SO₂, NO_x and particulate matter. This has a negative impact on climate, nature and health and generates social costs. The use of 100% green power for our trains and buildings has considerably reduced our negative impact over the past few years, even by more than 50% compared with 2014. Land use, waste, water consumption and noise nuisance also have negative environmental impacts.



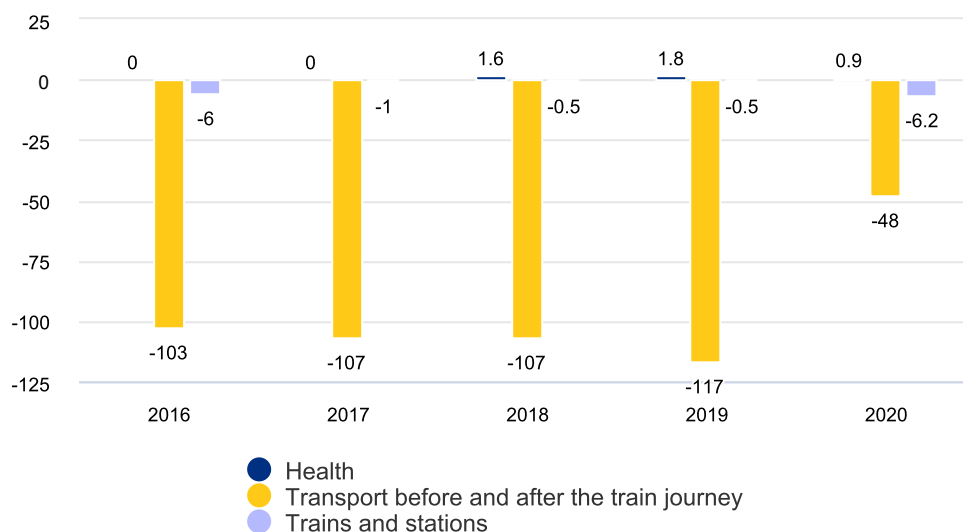
This negative environmental impact was €53 million in 2020 (2019: €76 million), of which approximately €7 million as a direct consequence of NS operations and approximately €46 million in the transport sector as a whole including the first and last mile, the building of trains, plus electricity and infrastructure. The decrease compared with 2019 was caused by the fall in the number of journeys made and the resulting drop in the consumption of resources for the first and last mile.

Compared with the use of cars, travelling by train has a positive environmental impact. Travelling by train avoids a certain amount of the impact of air pollution because pollution produced by trains – including public transport bicycles – is low compared to car journeys and alternatives for the first and last mile. The positive impact of train travel on noise and land use compared with cars consists in the roads and the noise abatement measures that are *not* required because passengers are opting for the train. The positive environmental impact compared with car use was only calculated for 'elective passengers', i.e. those who are willing and able to make a choice between the car and the train.



Socio-economic impact through safety

NS contributes to safety in society by providing safe transport and a safe environment for its passengers and employees. We constantly work to guarantee occupational safety, personal safety and safe travel.



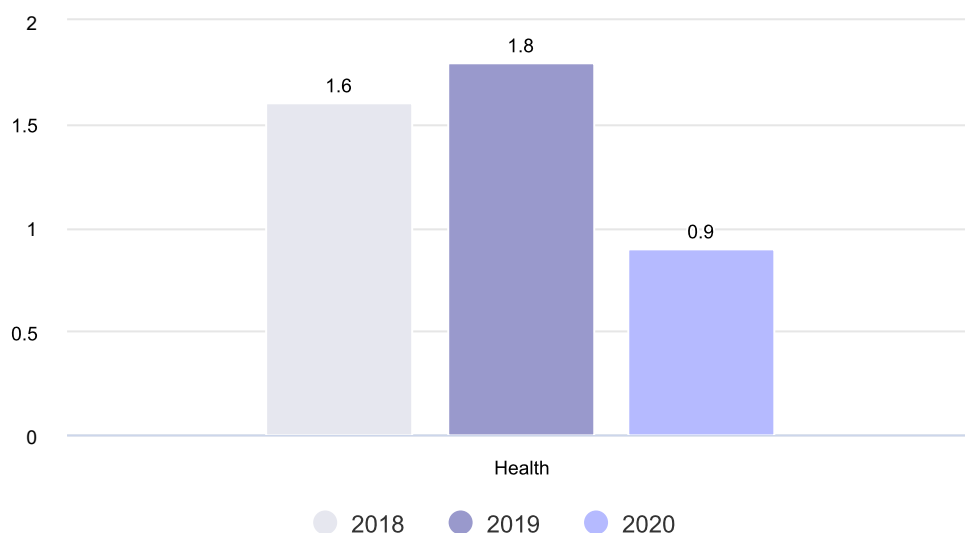
The social costs of occupational safety (accidents at work) in 2020 were €20 million (2019: €15 million). The social costs of personal safety (or lack of personal safety) in 2020 were approximately €10 million, more or less the same as in 2019.

To provide safe travel, NS is working with its partners on preventing collisions, derailments and unsafe situations at the stations. In 2020, the social costs of unsafe situations amounted to approximately €6 million. The number of traffic accidents in the first and last mile is much higher, and so is their impact, which in 2020 amounted to approximately €48 million (2019: €117 million).

Rail travel train is relatively safe compared to transport by car. We calculate this positive impact by determining the number of avoided accidents. To that end, we calculate how many more accidents would have happened if all our elective passengers had travelled by car instead of by train. In 2020, the social benefits of safe transport by train were approximately €278 million (2019: €629 million).

Socio-economic impact on health through a more active lifestyle

Passengers who use our services become more active than they would be if they opted for a different mode of transport. We calculated this socio-economic impact for the first time in 2018. Moving to and from the train or bus station makes a certain percentage of otherwise inactive people become active. On average, NS passengers get 16 minutes of extra exercise every day. Due to this extra exercise, one sixth of rail passengers move to the group of people with an active lifestyle. Such a lifestyle can avoid costs associated with an inactive lifestyle, including medical costs and loss of productivity. The positive impact of this in 2020 was €0.9 million (2019: approximately €1.8 million).



Socio-economic impact from staff training and employability

NS exerts a positive socio-economic impact by developing the knowledge, skills and talents of its employees, by aiming to keep them in sustained employment, and by being a diverse and inclusive organisation. Training programmes at NS increase the economic value of our people and improve their potential on the labour market after they have left NS. The social benefits of this in 2020 amounted to approximately €11 million.

Incapacity for work limits the employability of employees. This entails negative social costs of approximately €20 million, for example because of higher medical costs and costs of benefit payments, and loss of productivity and purchasing power.

Socio-economic impact through expenditure

We also have a socio-economic impact through our own expenditure, such as procurement, investments and salaries. This means for instance that we contribute to added value and employment opportunities at our suppliers. The economic benefits were €1,377 million of added value at suppliers (2019: €1,370 million), in the form of approximately 20,358 jobs.

The profile of NS



NS in the Netherlands and Europe

NS provides a broad range of services that go beyond train services. The focus in all our activities is on passengers, passengers and passengers. Our approximately 39,000 colleagues in the Netherlands and abroad work hard every day to achieve this. Together with our partners in public transport, we continuously work to further improve our service and performance levels.

Ever since NS was founded – in 1837, as NV Hollandsche IJzeren Spoorweg-Maatschappij (HIJSM) – we have been contributing to mobility and progress in the Netherlands, and the company still plays a very significant social role in its domestic market. Since 2002, NS subsidiary Abellio has been providing rail transport in parts of the United Kingdom and bus services in London, and since 2009 it has also been providing regional rail services in Germany. In addition, we provide international rail connections through our partners Thalys, Eurostar, Deutsche Bahn and NMBS.

Our organisation

NV Nederlandse Spoorwegen heads the group that includes the business units NS Operations (approximately 13,700 staff, on average, in 2020), Commerce & Development (approx. 700), NS Stations (approx. 3,100 including retail), Abellio UK (over 16,000), Abellio Germany (approx. 3,000) plus shared staff departments and central departments such as HR, Finance and IT.

NS Operations is responsible for rail transport on the Dutch main rail network, including HSL South. This is where the colleagues work who enable our trains to travel from A to B in the Netherlands and across the border. The train drivers, guards, mechanics and service staff, as well as the colleagues who, behind the screens, help implement our timetables and manage operations during unexpected events, are all part of NS Operations.

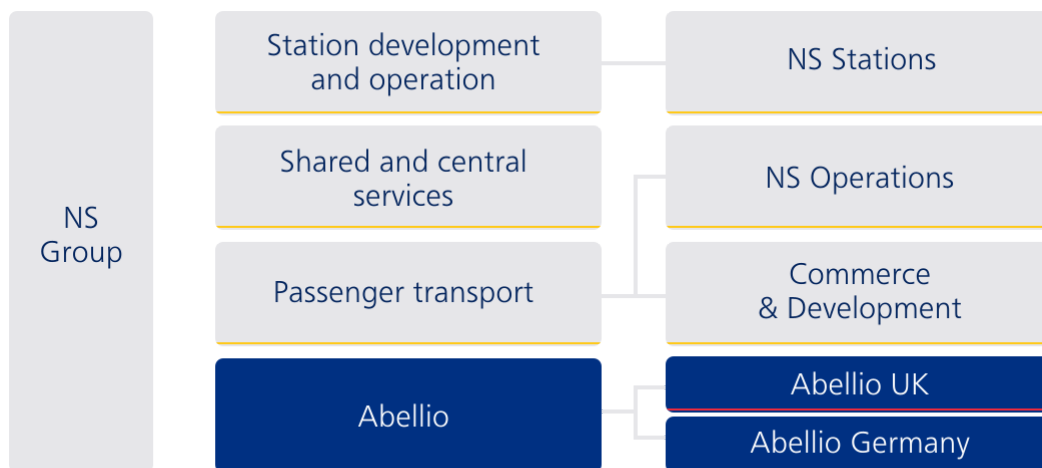
Commerce & Development is a unit where colleagues design new timetables, think up train formulas, run the Customer Service department, provide stakeholder management, launch marketing campaigns, carry out strategic innovative projects and make the company more sustainable. Commerce & Development is also responsible for ticket and season ticket sales and for NS International. In addition, it conducts appreciation surveys among passengers and identifies areas for improvement.

NS Stations works on a high-quality network of 400 large and smaller stations and promotes area development initiatives around the stations. Together with ProRail, public authorities and carriers, NS Stations seeks to make passenger journeys and the time spent in and around stations as convenient and pleasurable as possible. Stations are hubs for various forms of mobility, including public transport bicycles and bicycle parking. In recent years, NS Stations has worked with ProRail and various municipalities to renovate major stations, with a focus on the need to ensure that stations are 'clean, intact and safe'. In collaboration with local authorities, citizens and social entrepreneurs, we seek effective integration of our facilities in the station environment. All activities are designed to improve the passenger experience of the station and the journey.

Abellio UK bids for and operates rail franchises in the United Kingdom (Greater Anglia, Merseyrail, ScotRail, West Midlands, East Midlands) and operates bus franchises in London.

Abellio Germany bids for and operates rail franchises in the regional rail transport market only. In 2020, Abellio Germany operated nine franchises in four regions.

Organisation chart



Rail franchises in Europe

NS, inclusief HSL
Intercity direct



Railconcessies in Europa



WestfalenBahn



Abellio Mitteldeutschland



Abellio Nordrhein-Westfalen



Abellio Baden-Württemberg

Merseyrail
(50% joint venture)

West Midlands Trains



East Midlands Railway



Greater Anglia



Our trains

NS invests in the purchase, overhaul and upgrading of trains. Proven technology, sustainability and convenience for passengers have the highest priority.

Number of trains as at 31 December 2020		Number of coaches/carriages		Seating capacity	
Sprinter trains:					
	SGM	52	142	10,396	
	SLT	131	648	33,070	
	SNG	122	417	20,901	
	Flirt (excl. TAG)	58	199	11,990	
Intercity trains:					
	ICRmh	38	294	23,747	
	VIRM	176	860	87,367	
	ICMm	134	452	33,884	
	DDZ*	49	238	23,087	
	ICNG	0	(National)	0	78 trains ordered
	(inflow 2021-2022)	0	(International)	0	21 trains ordered
Total		760	3.250	244.442	

* On 3 December, NS temporarily decommissioned all 49 DDZ trains. NS took this decision following a study in response to reports from employees on operational instability of DDZ rolling stock when run at higher speed. NS is currently conducting follow-up studies.

New and upgraded rolling stock

New Generation Intercity

Early June 2020 saw the first New Generation Intercity test train being taken into operation for test runs in the Netherlands. These fast single-decker trains (maximum speed 200 km/h) are suitable both for the high-speed line and the main rail network. In total, NS ordered 79 trains of this type, providing 25,000 seats. These trains offer a range of conveniences for passengers, including wheelchair-accessible toilets, Wi-Fi, journey information displays, LED lighting with Intelligent Light Control, USB and electricity sockets both in 1st and 2nd class, retractable steps for improved accessibility, comfortable seats and extra baggage space. Following a test period abroad, Alstom, ProRail and NS started the test, admission and training phases for these trains and their staff in the Netherlands. The objective is to ensure the safe introduction of this new generation of trains for our passengers. Due in part to the

COVID-19 crisis and the resulting closure of manufacturing plants and national borders, both the testing schedule and building schedule for these trains have been adapted. We are doing everything we can do introduce the New Generation intercity trains in the regular schedule from the end of 2021.

The first of these trains will be deployed on the Amsterdam-Rotterdam-Breda route currently served by IC Direct trains. The The Hague-Eindhoven route will follow in the subsequent phase. In the future, NS also intends to use these new Intercity trains on a new direct rail connection from Breda and Rotterdam, via Amsterdam-Zuid to Zwolle, Leeuwarden, Assen and Groningen in the north of the country. This is part of our plans to increase the number of destinations that benefit from direct connections within the high-speed line. For a subsequent phase, we have already ordered a series of 20 Intercity trains that can be operated on the route to Brussels as well as on the domestic network.

New generation of double-decker trains with improved accessibility

In April 2020, NS launched a European tendering procedure for a new generation of double-decker trains with improved accessibility and suitable for speeds of up to 160 km/h. NS is interested in a train type that includes both single and double-decker carriages and is able to fill the need for both high capacity and excellent accessibility. The trains are meant to replace older trains, such as the double-decker trains of the DDZ model, which will reach the end of their service life within a few years. This will also enable us to meet our need for double-decker trains in the longer run.

The process of purchasing a new train takes around seven years in all, which is why NS decided to launch the tendering procedure this year. The basic order is for a capacity of around 30,000 seats with several options for additional orders, plus the option of ordering similar trains for cross-border services. After the first phase of the tendering procedure, a final decision will be made as to the exact scope of the order. NS intends to sign the contract with the supplier at some point in 2022. According to current insights, this means that the first trains of this type will be taken into operation in 2027.

Upgrading Intercity trains

Up to and including 2020, NS has upgraded a total of 80 double-decker trains (VIRMm1, comprising 415 carriages) by installing comfortable seats, modern lighting, charging points for mobile equipment (1st class) and art. All upgraded trains have since been taken into operation. The Haarlem workshop has now begun upgrading 45 double-decker trains of the VIRM2/3 type. This involves 242 carriages with 24,500 seats. The first upgraded trains from this series will start running in 2021.

New Sprinter trains

The first of the 206 new Sprinters (type SNG) ordered from Spanish train manufacturer CAF started running on 9 December 2018. There are now over a hundred of these Sprinter trains in operation in the Dutch rail network. The new Sprinter trains have everything it takes to ensure a pleasant and comfortable journey. They are transparent, open, attractive and energy-efficient, featuring Wi-Fi, wheelchair-accessible toilets, wall sockets, USB connections, leather seats, areas designated for bicycles and a floor-level entrance.

Upgraded Sprinter trains

NS has by now upgraded more than half of its 131 SLT trains. The upgraded Sprinter trains feature wheelchair-accessible toilets, retractable steps, two designated sites for wheelchairs, a special emergency button, as well as tactile information for the visually impaired. We expect to complete the SLT upgrading project by the end of 2021.

Compensation for victims of WWII transports

Between 5 August 2019 and 5 August 2020, the Committee on Individual Compensation for Victims of WWII Transports made available a scheme, commissioned by NS, for victims of transports carried out by NS during the Second World War. The Committee is considering all the requests it received before the closing date, 5 August 2020, and is expected to publish its final report in the second quarter of 2021. In addition, and in line with the Committee's recommendation, NS has provided a total of €5 million in financial support for the remembrance centres in Westerbork, Vught, Amersfoort and Oranjestad. NS has made this gesture in recognition of the suffering and fate of the large group of transported prisoners who were not eligible for individual compensation. They include members of the Jewish, Sinti and Roma communities who did not survive the war and had no surviving relatives, as well as resistance fighters, political prisoners and people sentenced to forced labour. The role of NS during the war has been the subject of a great many publications and extensive research. However, the Committee stated that historical research had so far failed to cover the full scope of 'war-time transports', and recommended further in-depth research into this topic. The NIOD then assumed this mandate by initiating preliminary research, which it expects to be able to complete in 2021.

Our activities and
achievements in the
Netherlands

Our performance on the main rail network and the high-speed line



NS uses a range of indicators to measure the quality of its services on the main rail network and the high-speed line. However, this year the value of these indicators in terms of reflecting our actual efforts and performance is limited. This is because there is not much point in comparing this year's figures with those for 'normal' years. For example, the indicators for customer satisfaction and information during disruptions are not available for 2020 as a whole, because of restrictions on the fieldwork required to produce them.

We do have the figures for the first two months of 2020 (before the outbreak of COVID-19). We have decided not to publish our performance on targets for 2020. In the explanatory notes we will only discuss the factors other than COVID-19 that have influenced our results. The indicators that we did monitor reflect good performance and show that we met the quality requirements. This means that our passengers who depended on the train even during the COVID-19 crisis could still count on us to provide a reliable service.

Performance	Realisation in 2020	Minimum value for 2020
General customer satisfaction with the domestic main rail network	--	74%
Overall customer assessment HSL services	--	68%
Customer satisfaction with personal safety	--	81%
Punctuality for passengers (to 5 minutes) on the main rail network	93.5%	88.9%
Punctuality for passengers (to 15 minutes) on the main rail network	97.9%	96.7%
Punctuality for passengers (to 5 minutes) on the HSL	85.2%	82.1%
Quality of connections to other carriers	96.7%	94.0%
Seat availability at peak times (main rail network)	97.3%	94.3%
Seat availability on HSL at peak times	98.1%	91.2%
Top 10 most crowded trains	1.4%	4.9%
Travel information during the train journey	85.0%	81.4%
Information on the train and at stations about delays	--	75.0%

Effective 15 December 2019, the HSL South Improvement Programme is subject to a new governance approach aimed at continuous performance improvements on HSL South and securing those improvements in the management structure. For 2020, the process of embedding operational control in the Product Platform for HSL-Domestic / IC Brussels and the Process Platform has proved quite effective.

Main rail network franchise for 2015-2024

The State Secretary for Infrastructure and Water Management awarded the rail transport franchise for the main rail network to NS in December 2014. The franchise runs from 1 January 2015 for a term of ten years. Whereas the transport franchise focuses on the longer term, NS also draws up an annual transport plan for the coming year. In the transport plan, we link our aims and objectives to specific actions and performance indicators for the coming year, ensuring that the goals will be achieved over the course of the franchise. The definitions of the KPIs and the descriptions of the measurement methods used can be found in the [2020 Transport Franchise Definitions](#).

Minimum values

Minimum value: Value for the yearly minimum level of performance required for a performance indicator.

Changed indicators

Every month, NS reports on its performance with regard to well-defined and established KPIs. The annual review of the definitions has not resulted in any substantive changes.

Customer satisfaction with the main rail network and the high-speed line



To provide a high-quality passenger experience, three core needs of passengers must be satisfied: planning control, the freedom to make their own choices, and a feeling of being appreciated. We meet these core needs by providing high-value and personal services.

Customer satisfaction

In the first months of 2020, passengers were more satisfied with our services on the main rail network and the high-speed line than they were in the same period last year. More specifically, on the main rail network customers gave higher scores for the cleanliness of train interiors. On the high-speed line, travel information and train punctuality attracted higher scores than last year, when software issues resulted in lower punctuality figures. We stopped gathering customer satisfaction data in March 2020.

Clean trains

Passengers expect our trains to be clean. Train cleaning serves two main purposes: ensuring a positive experience of train cleanliness among passengers and colleagues, and ensuring that all materials in our trains reach their envisaged service life thanks to effective cleaning maintenance. Over the past three years, passengers' assessment of train cleanliness has improved. The COVID-19 crisis urged us to devote extra attention to cleaning. In February, we started preparing detailed scenarios for cleaning operations during the pandemic, and we have updated those scenarios continually in consultation with our cleaning partners. For example, we have increased the frequency of cleaning for parts of our trains with contact surfaces, such as door knobs and handles. In addition, we have adapted cleaning operations to changes in the timetable, logistics and passenger numbers. In 2020, we implemented our new contract with Hago Rail Services for the cleaning of train interiors. Going forward, our ambition is to maintain effective collaboration and adapt cleaning operations to data input with maximum flexibility.

Customer service and social media interaction

Customers are highly satisfied with our Customer Service department. In 2020, 75% of customers gave this department a score of 7 out of 10 or higher; the same figure as in 2019. NS's willingness to suspend season tickets was one aspect that had a positive impact on satisfaction scores. In 2020 we observed a shift in the channels used by customers to contact Customer Service. During the last months of the year, telephone contacts steadily decreased while more and more customers began using the chat option. We expect that this trend will continue in 2021.

Number of contacts per month	Social media	Email	Chat	Telephone
	58,082	12,845	100,654	157,870

Accessibility

It is one of NS's ambitions to offer equal travel opportunities to passengers with reduced mobility. This means expanding their options to travel independently, and offering assistance where necessary.

NS Platform Indicator App

In 2020, NS launched the NS Platform Indicator App, in collaboration with Eye Association Netherlands. Passengers who are unable to read the signs over the platforms can use the app for information about the next departure from the platform concerned, including departure time, final destination, train type (Sprinter or Intercity) and other particulars such as whether the train is delayed or should not be boarded.

Independently accessible Sprinter trains

In 2020 the number of type SNG and SLT Sprinter trains with improved accessibility increased. A high percentage of Sprinter trains are now also accessible for persons with reduced mobility.

Travel assistance

The number of stations where travel assistance is available increased by 25. In all, 168 (68%) of all stations served by NS trains now offer travel assistance. In addition, passengers requiring travel assistance now have the opportunity to meet their assistance provider at the platform of departure. This has reduced the time required for passengers to report. Since September, when this option was introduced, the share of passengers travelling with travel assistance who use the assistance provider has risen to 93%.

Preparing for the journey

Prior to departure, passengers with reduced mobility can plan their journey using the [accessibility pages on NS.nl](#). We revamped these pages at the beginning of 2020, in consultation with the relevant users' associations. Following the outbreak of the COVID-19 crisis, we posted special video clips illustrating the travel possibilities for people with reduced mobility during the pandemic. The clips cater to specific target groups, for example with sign language for the deaf and hard of hearing.

Innovations

Innovations are required to strengthen NS's strategy. This means they should contribute to at least one of the following aspects: winning back passengers, efficient train operations, development of sustainable hubs, expanding and balancing supply and demand, a digitally driven business, and enhanced sustainable mobility, also internationally. Over the past year we have been working on seven innovations, some of which are long-term projects whose development spans several years. Between them, these seven innovations make five contributions to 'efficient train operations', three contributions to 'a digitally driven business' and supply, and three contributions to 'balancing supply and demand'.

Automatic Train Operation (ATO)

Following the first, successful experiments with ATO on the Hanze Line in late 2019, we continued the ATO programme in 2020. The first half of the year saw experiments with ATO in the context of ERTMS, with a train being operated automatically, section by section, between Zwolle and Lelystad. We also ran experiments with object detection technology. Using machine learning and an advanced camera, we trained a model in recognising a variety of objects, including cars and cyclists, and estimating their distance to the tracks. We also did some successful experiments with ATO and the ATB First Generation system between Haarlem and The Hague. These experiments included a specific focus on the interaction between people (train driver) and machine (train equipped with ATO) so as to combine and maximise their respective strengths. With a view to ATO experiments in the shunting process, we launched a market consultation in late 2020, inviting market parties to join forces in promoting innovation.

Innovation train

In the second half of 2020, we made a train available for innovation testing purposes. For example, we used this 'innovation train' for tests involving AI-based image recognition. We also tested new technologies for exact position monitoring of trains. We need to know exactly where a train is at any given moment in order to be able to make a train come to a halt at the right location using ATO, as well as to determine the speed it needs to arrive at the scheduled time.

Technical inspections using cameras

Many of our trains are required to undergo a technical inspection every 48 hours. We currently perform those inspections at night, when the trains are not being used, at crammed shunting yards. We will adapt the inspection method, for example by using automated cameras that take pictures of crucial components. Service engineers assess the photos during the day, allowing us to schedule repairs more efficiently and minimise the time the train is out of service. We are now also exploring the possibilities for automated assessment of the photos using image recognition technology.

Treinwijzer

In November, NS launched a new tool for passengers: the *Treinwijzer* (Train Indicator). Passengers can register their intended train journey in the *Treinwijzer* to get an idea of how crowded the train is likely to be. They will then be alerted if the train is cancelled or likely to be more crowded than expected. The passenger input thus obtained allows us to predict levels of crowdedness even more accurately and help passengers select the best train in a period in which travel behaviour is changing.

3D objects

NS has launched an initiative to make high-resolution images of stations and station sections in 3D, using drones and LiDAR laser technology. Such images enable us to assess the current condition of station sections and other relevant objects faster and more accurately. This technology also results in more efficient management of our assets.

5G

5G has made it possible to transmit huge data volumes with minimum delay. This has created opportunities for new automation concepts and services in our trains, on the tracks, at the station and in our workshops. In 2020, we explored the opportunities available and launched our first experiments with the development of 5G technology applications.

Hyperloop

Hyperloop is a concept for a vacuum tube train. To create the conditions that would allow the commercial operation of this concept, several fundamental research questions will need to be answered. The purpose of the three-year Hyperloop Development Programme is to demonstrate that Hyperloop is a feasible and safe means of transport for which the technology is available. NS is participating in the programme as a member of a coalition to promote the development of the concept and examine the extent to which it might offer a future role for NS that is in line with our strategy. NS has created a multidisciplinary team that focuses in particular on operational scenarios, safety aspects and passenger needs.

Performance on the main rail network and the high-speed line



Solid performance is the basis for customer satisfaction and healthy financial results. These are crucial to keep train fares affordable and enable us to finance the necessary investments to accommodate the growth in mobility.

Punctuality

In January and February, NS did well in terms of punctuality with a 5-minute and a 15-minute margin for passengers on the main rail network (at 93.5% and 97.6% respectively). In February, punctuality rates suffered from the effects of two storms and a prolonged breakdown in Rotterdam's Willemsspoortunnel. Since the moment we introduced a basic timetable, the scores for punctuality for passengers have been relatively high. With fewer trains running in the network, it was easier to make up for any delays and prevent them from accumulating. Peak-hour congestion and the attendant performance dips also decreased. After rail services were scaled up again in the second half of 2020, punctuality figures remained high, despite a number of further dips due to a heat wave in August, several major incidents and a number of stormy days.

In 2020, despite the reduced timetable and lower passenger numbers, we continued improving our punctuality rate by providing our train drivers and guards with more and better operational information, including exact departure times and real-time route information. We also conducted pilots with coasting time and speed advice, and better-quality boarding information for passengers aimed at reducing halt times at the stations. In addition, we further developed TimTim, a tablet with apps for train drivers. For example, TimTim shows information about train timetables, temporary speed limits and issues with slippery tracks.

Punctuality for passengers on the high-speed line

In 2020, punctuality with a 5-minute margin for passengers on the high-speed line was 85.2% (2019: 83.4%), due in part to the moderate scores for January and February. Those were caused by infrastructure defects, for example at Zuidweg and in the Willemsspoortunnel, and storms in February resulting in cancelled trains, delays and missed transfers. Punctuality rates recovered consistently for a time in the second half of the year, thanks to the lower numbers of international trains on this normally busy route and to additional measures to maintain services during periods of extremely hot weather.

The timetable was scaled down once again in November. In that month, windscreens were installed on the railway bridge across Hollandsch Diep to allow trains on the high-speed line to cross the bridge at normal speed even in strong winds. This is an important measure from the package for infrastructural improvements to the high-speed line made available by the Ministry of Infrastructure and Water Management.

Seat availability

Main rail network

Peak-time seat availability scores on the main rail network were relatively high in January. In February, works at peak hours on weekdays resulted in limited seat availability on several routes and more passengers than usual on the alternative routes. Combined with the effects of several major disruptions, this reduced seat availability during this period.

Peak times on the high-speed line

In early 2020, peak-time seat availability figures on the high-speed line were comparable to those for the same period in 2019. Capacity expansions in 2019 helped to accommodate the strong growth in passenger numbers at the beginning of 2020. From mid-March, in the basic timetable no domestic trains used the high-speed line, and on alternative routes Sprinter trains were used to transport passengers between Amsterdam Airport Schiphol and Rotterdam and between Rotterdam and Breda. In all cases, seat availability remained 100%, thanks to the considerable overcapacity of trains due to decreased passenger numbers.

Top 10 most crowded trains

The top 10 of most crowded trains saw several changes in 2020, including in particular routes in the Leiden area. Trains there were extended to accommodate passenger volumes, resulting in significantly higher scores at the beginning of 2020. However, works on the tracks reduced transport capacity and generated disruptions, causing the score to fall once again in February. The rate for the year as a whole was 1.4% (2019: 2.1%). This percentage reflects the probability of a passenger being unable to board a train at peak hours.

Travel information

NS wants to give passengers more control over their door-to-door journey and more freedom of choice, irrespective of the means of transport or the carrier. High-quality travel information plays a key role in this, especially when an unexpected event changes the scheduled course of the journey. Travel information has to be correct, frequent, in time, consistent and up-to-date so that passengers can make better choices both before and during their journey. Every year, NS sends millions of travel advice messages about connections, works on the tracks and disruptions. In January and February 2020, we gave timely information - on the train and at the station - about disruptions in 86.1% of cases. One improvement in travel advice services in 2020 is that we more prominently include other means of transport than the train, such as bus and metro services. The advice issued is based on the shortest travel time. Alternative options are particularly relevant when passengers have to schedule or adjust their travel plans in the event of a disruption.

Travel information during the train journey

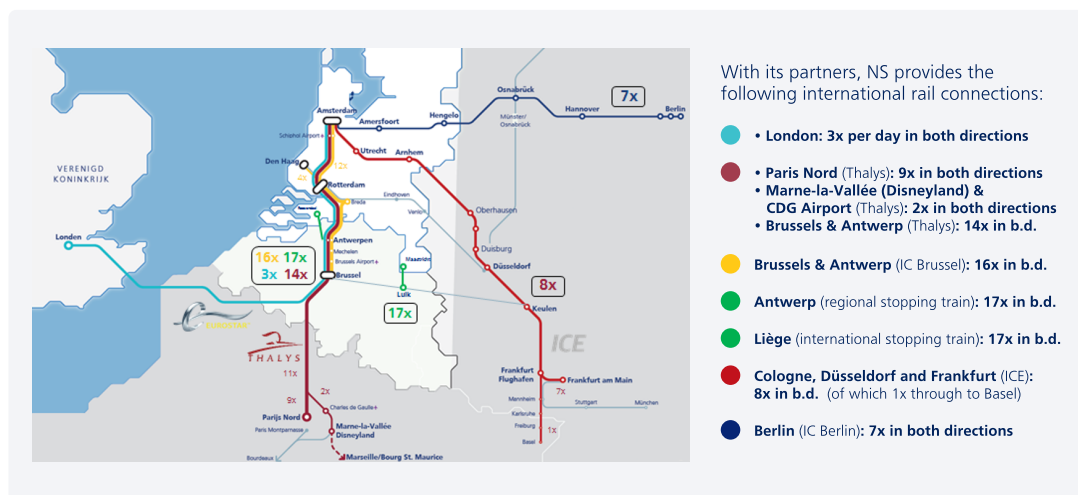
The 'Travel information during the train journey' performance indicator states whether the travel information provided five minutes before the actual departure of the train was correct in cases of delayed departure or a platform change. In 2020, the score for this indicator was 85.0%. In the second quarter the score dropped, due to the reduced number of Intercity trains in the basic timetable. Delays and platform changes are easier to predict for Intercity trains than for Sprinters, given the short times between successive stops of Sprinters.

International connections

NS International has partnered with Deutsche Bahn, Eurostar, NMBS, ÖBB and Thalys, connecting the Netherlands with major cities and regions in Belgium, Germany, France and the United Kingdom. Our aim is to make the train the logical preferred choice for distances of up to approximately 700 kilometres. This will benefit the environment and the economy, as high-quality rail connections will attract investments to the Netherlands and create a favourable climate for international businesses and trade. We promote this by providing fast connections for Dutch passengers to the high-speed rail network in Germany, reducing travel times to Berlin, increasing the frequency of our services between Amsterdam and London / Paris, providing faster connections to Belgium and adding new destinations.

Market demand plummeted due to the COVID-19 crisis and the resulting measures in the Netherlands and neighbouring countries. As a result, international services were cancelled or their frequency was strongly reduced.

International rail connections – reference date January 2020



Shorter travel time to Berlin

By 2024, timetable adjustments, improvements to the Dutch and German infrastructure and new, faster DB trains will combine to reduce the travel time to Berlin by thirty minutes, to less than six hours. The first gains were already seen in December 2020, with several trains to and from Berlin cutting travel times by ten minutes.

More frequent services between London and Amsterdam

NS had everything in place to provide a direct service between Amsterdam and London (via Rotterdam) starting on 30 April 2020. Due to the COVID-19 measures, the launch of this service was postponed to 26 October of that year. Since then, passport and luggage checks have been carried out at Amsterdam CS and Rotterdam CS, and the travel time to London has dropped to well below four hours.

Adding new destinations

In 2020, NS and ÖBB, its Austrian counterpart, had prepared to launch a daily night-time connection from Amsterdam (via Munich) to Innsbruck and Vienna starting 13 December. However, due to urgent negative travel advice by the Dutch, German and Austrian authorities, demand was practically nil. The partners decided therefore to start the night train connection in 2021, as soon as travel between these countries returns to normal. Since October, passengers have been able to book the night train (changing in Düsseldorf) online via nsinternational.nl.

In 2020, NSInternational.nl was given a .com extension to improve findability outside the Netherlands. Furthermore, 3,000 German destinations were added to the booking module on these websites, bringing the total of destinations available online to approximately 7,500. Groups of up to nine individuals can book a journey to Germany online. Passengers can also use the app to book ICT Brussels tickets, and now receive customised travel information before setting out on their journey.

Intercity service between Randstad and Aachen

In 2020, in collaboration with ProRail and the Ministry of Infrastructure and Water Management, NS initiated a study into the possibilities for introducing an Intercity service between the Randstad conurbation and the German city of Aachen in 2025.

ICE

In 2020, the ICE between the Netherlands and Germany celebrated its twentieth anniversary. Since its launch, over 23 million passengers have used this connection.

Train-Plane Action Agenda

The Train-Plane Action Agenda was presented to the Lower House of Dutch Parliament in November 2020. The agenda, drawn up by the Ministry of Infrastructure and Water Management, KLM, ProRail, Amsterdam Airport Schiphol and NS, concerns measures aimed at strengthening international train services as an alternative and supplement to air travel to Paris, Brussels, London, Düsseldorf, Frankfurt and Berlin.

Collaboration in the context of scheduled and unscheduled withdrawals

Large sections of rail are due for replacement over the next few years. Together with ProRail, we will make every effort to minimise inconvenience for passengers. In 2020, several projects could not go ahead or had to be modified. Even so, the timing was right given the basic timetable in force and the lower than usual passenger numbers, which meant that relatively few passengers were inconvenienced. The Geldermalsen area saw a 38-day withdrawal of track sections in 2020. In addition, there were several major disruptions in 2020, such as the Willemspoortunnel outage at the end of January and a storm during the night from 9 to 10 February that caused malfunctions in overhead contact lines. These events prompted thorough consultation with ProRail and stakeholders on measures to ensure reliable and safe transport for our passengers. In the second half of 2020, withdrawal figures were more stable than in the first half.

Timetable for 2021

NS launched the timetable for 2021 on Sunday 13 December 2020. For 99% of passengers, the new timetable involved few surprises, with many connections continuing unchanged. On a few routes, both travel times and changeover times were reduced. The new timetable also includes some minor adjustments to departure and arrival times. Some of the changes:

- Passengers travelling from the direction of Soest / Den Dolder now have several minutes to change trains, compared with half an hour in 2020, in the morning peak to Amsterdam and in the evening peak back in the direction of Soest / Den Dolder. Several minutes however have been added to the travel time between Baarn and Utrecht.
- On Sundays, there are two Sprinter services per hour (instead of just one) between Nijmegen and Den Bosch for most of the day.
- Travel times on several trains to Berlin will be reduced by ten minutes.

Door-to-door journey



Passengers usually set out by bicycle, sometimes on foot, or by car or another form of public transport. The end station is seldom their final destination. In collaboration with our partners, we want to offer passengers facilities that meet their need for a seamless and reliable door-to-door journey.

Quality of NS connections to other carriers

In January and February, the quality of our connections to other transport providers was good, even though the February storms did depress the figures somewhat. During the months in which the basic timetable was in force, the number of trains that count towards the score fell by 40%. The good scores for that period only have a limited effect on the annual score though, given that the monthly figures are weighted in proportion to the number of passenger arrivals. Train punctuality scores were good and in line with punctuality for passengers.

Travelling without barriers

To keep rail travel attractive, we are investing in forms of transport that complement the train. This helps us ensure a pleasant journey to and from the station and make the door-to-door journey more convenient.

Bicycle parking

Around 45% of rail passengers cycle to the station. They are able to use supervised parking facilities for 193,500 bicycles, unsupervised facilities for more than 306,000 bicycles and 11,400 bicycle lockers at stations. ProRail and NS Stations are working with partners to develop bicycle parking facilities where rail passengers can store their bikes easily and conveniently. Our offering includes free storage for every first 24-hour period (at 64 parking facilities), digital pointers to the free storage slots, the option of paying with the OV-chipkaart, and a uniform design. In 2020 we opened eight new bicycle parking facilities, including at Den Haag CS (7,000 spaces), Tilburg Noordzijde (3,900 spaces) and Zwolle (5,800 spaces).

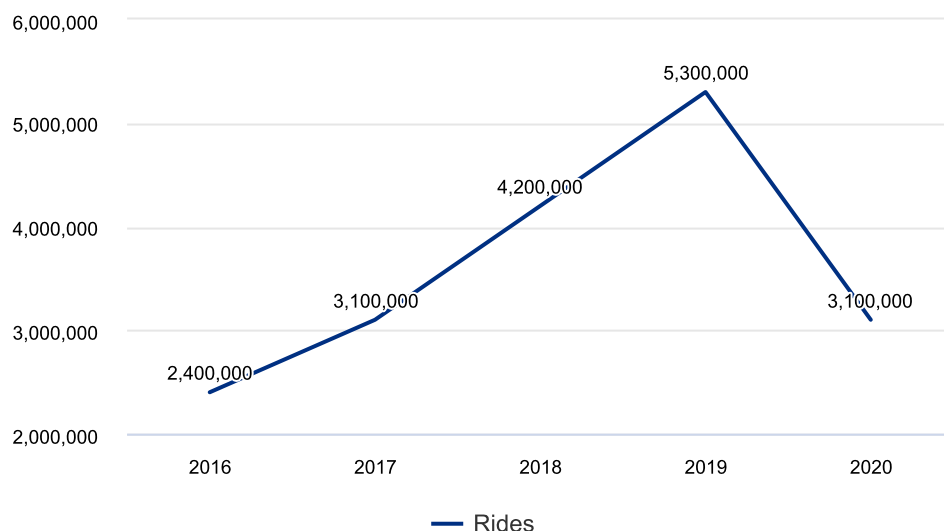
Bicycle lanes and check-in/check-out posts

In 2020, NS Stations ran a pilot project in the bicycle parking facilities stations in Breda and Harderwijk, introducing an entrance system featuring bicycle lanes and check-in/check-out posts. The new system enables passengers to park their bicycles even faster and more conveniently than before, using their OV-chipkaart or a chip on the bike. There is a customer-friendly contactless payment option for bicycles parked for more than 24 hours. The evaluation of the pilot has shown that passengers greatly appreciate this service. The intention is to build bicycle lanes and install check-in/check-out posts at ten bicycle parking facilities in 2021.

Fiets & Service

Fiets & Service is a service format for bicycle repairs, parts and accessories. At the end of 2020, 28 stations had a total of 32 Fiets & Service centres.

OV-fiets



In 2020, passengers made 3.1 million rides by OV-fiets (public transport bicycles), compared with 5.3 million in 2019. In all, over 21,700 public transport bicycles are available at 305 locations throughout the country; around 1,700 more bicycles than in 2019. Customer satisfaction scores with OV-fiets stabilised around an average of 8.1 out of 10 (2019: 8.1). We continued consultations with public authorities and ProRail on the space required for OV-fiets in bicycle parking facilities.

2020 saw a successful pilot project with a new lock for public transport bicycles that can be opened and closed using the OV-chipkaart. The rental period starts the moment the bicycle is unlocked, and ends the moment the user returns the bicycle to the facility and locks it. In 2021, passengers will find public transport bicycles with this new lock at all staffed OV-fiets distribution points. The development of new unstaffed OV-fiets distribution points is currently under way.

Car parking

Over 5% of rail passengers travel to the station by car and park there. In 2020, NS Stations itself expanded P+R capacity at two stations, namely at Brummen (total overhaul, 50 parking spaces) and Zwolle (new, 209 parking spaces). We also invested in equipment at another nine locations. In addition, 2020 saw the installation of a new parking system based on number plate recognition at P+R locations with barriers. Users appreciate the speed and the extra convenience. Rail passengers benefit from a discount on the parking rate. Following this successful pilot, the nationwide roll-out of the new system started in September. We expect to be able to install the new system at all 54 P+R locations with a barrier in 2021.

NS Zonetaxi

Passengers could make use of NS Zonetaxi at a total of 328 stations in 2020. Online booking and prepayment facilities (with iDEAL) have made it even easier to arrange a zone taxi.

Pilot in NS Lab App involving other forms of transport

In 2020, NS started facilitating other forms of transport (electric scooters, electric cars etc.) in Rotterdam, aimed at developing seamless door-to-door journeys for passengers. In this pilot, the NS Lab App is used to offer passengers a choice from several means of transport.

Passengers who register and book their journey via this app qualify for a discount for those additional options. The pilot, which is continuing in 2021, is being conducted in cooperation with four providers. It is a way for us to assess the potential of new forms of transport as part of an integrated door-to-door journey, and gain technical experience with connecting different parties and processes such as planning, booking and payment.

Mobility policy for employers

On 3 December, NS took over a Belgian IT company named Vaigo. As a result, before long business clients of NS will have access to a new platform for pursuing a sustainable and flexible staff mobility policy. The platform can be linked to their payroll records systems and offers easy tools to set and manage travel budgets for staff members, who will be able to choose their preferred public transport options.

Ease of payment in public transport

NS is participating in the OV Payment programme launched by the NOVB (National Public Transport Council). The programme was set up to offer easier and additional payment options for public transport passengers. In future, passengers will be able to check in and check out using their bank cards, credit cards, mobile phones, smartwatches etc. as well as the regular OV-chipkaart (public transport smart card). Over the next few years we will be running pilot projects among our passengers with a view to the possible introduction of three initiatives:

- paying for your journey using your bank card or credit card, possibly linked to your mobile phone or smartwatch. Much of the effort in 2020 was devoted to the technology required to make this possible, including investments in software and hardware for a new payment system;
- rail travel based on GPS positioning using your mobile phone;
- a new OV-chipkaart that removes the need for customers to physically go to an NS ticket machine to top up their balance or buy products.

Stations and their environment








Hospitable stations are crucial assets in NS's strategy. Our stations are mobility hubs that contribute to the local environment and, as such, play a significant role in urban development. In recent years, NS and ProRail joined forces to upgrade the range of basic services at our stations in the Netherlands, ensuring a pleasant, comfortable and safe environment for passengers.

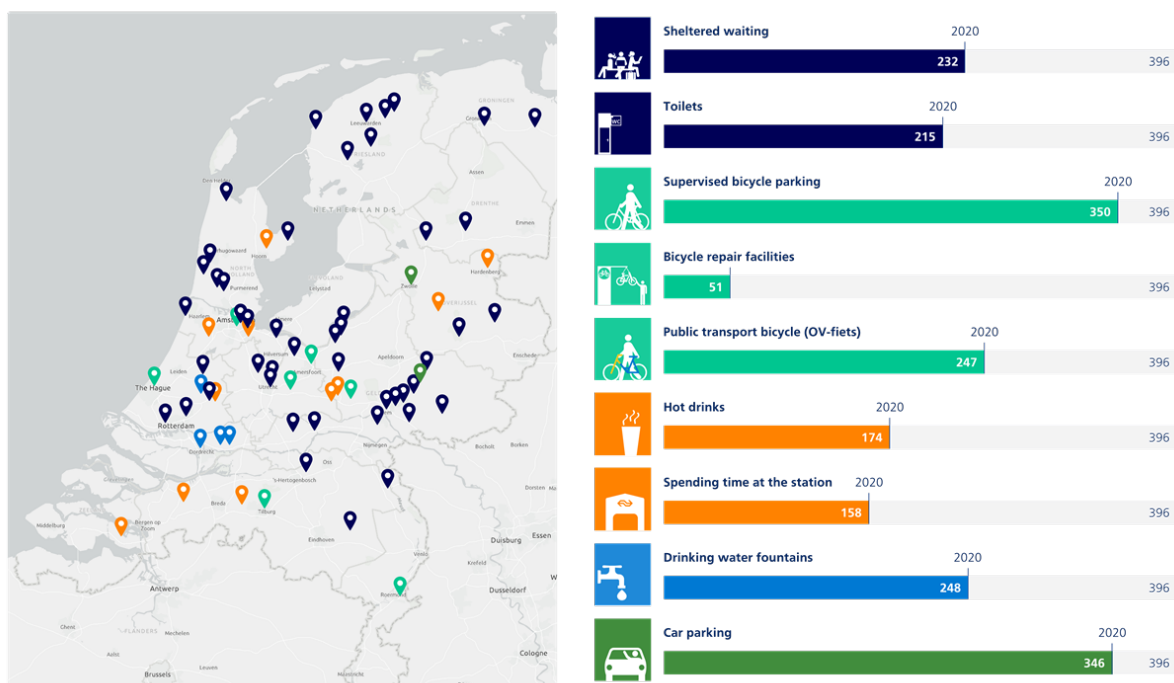
NS Stations is responsible for daily operations at all stations in the Netherlands, comprising management (clean, intact and safe), services (bicycle and car parking, toilets, waiting facilities) and commercial operation (lease of property and own retail space). In doing so, we focus on the additional facilities that make the time passengers spend on our trains and at our stations more enjoyable, with due regard for the size of the station and the number of passengers. In addition, in cooperation with ProRail NS contributes to the development and realisation of renovation and new construction projects for stations. Finally, we also contribute to area development with our partners.

Facilities and services

We distinguish between different types of stations with the associated facilities, depending on station size and the number of passengers served. We strive to realise a specific number of services for each station type.

Station type	Number	Boarding and disembarking per day	Provisions
Cathedral			
(Amsterdam Centraal The Hague Centraal Utrecht Centraal Rotterdam Centraal Amsterdam Airport Schiphol Leiden Centraal)	6	>75,000	
Mega			
(including Arnhem Centraal Eindhoven Centraal Zwolle Groningen Dordrecht)	21	25,000-75,000	
Plus			
(including Enschede Leeuwarden Roermond Duivendrecht Ede-Wageningen)	27	10,000-25,000	
Basic*			
(including Baarn, Geldermalsen Kampen)	230	1,000-10,000	
Stop*			
	117	<1,000	

- * The station types Basic and Stop include stations with and stations without a station building. At stations with a station building, multiple facilities can be realised. This is not possible at the stations without a station building. Another factor that determines the availability of (specific) facilities is the number of passengers getting on and off the trains.



Station management

The government has decided that the roles, responsibilities and ownership arrangements regarding the stations will remain unchanged. Within these existing frameworks, ProRail and NS Stations have outlined the preliminary contours of an enhanced partnership model. It has also been decided to draw up a 'station agenda'.

The station experience

NS Stations offers a range of services at the stations, depending on their size, to ensure visitors have a pleasant stay and can make the most of their time. In 2020, 79% of customers gave a score of 7 or more out of 10 for our stations. The score was particularly high in the third quarter, when the measures taken at the stations and the lower passenger volumes resulted in an enjoyable travel experience. In addition, there was a higher share of passengers who travelled for social or recreational purposes; among this group, satisfaction with the stations is generally higher. Extra cleaning activities also helped to increase satisfaction scores. There was no measurement in the second quarter.

	2020	2019	2018	2017	2016
Customer satisfaction survey on stations	79%	77%	76%	73%	70%

Hospitable atmosphere at the stations

In 2020, NS Stations and its partners including ProRail once again made improvements to various stations. We invested in facilities that add to a hospitable atmosphere, also at the smaller stations, such as toilet facilities, drinking water fountains and improved parking facilities for cars and bicycles. We are looking for suitable solutions for vacant premises at the stations to improve the atmosphere and personal safety while retaining the distinctive character of the property concerned and taking proper care of our heritage. The results of a survey on waiting areas conducted in cooperation with ProRail, the University of Amsterdam and the Weekend of Science initiative will serve as input for the design of new waiting facilities.

No smoking at NS stations

The last facilities for smokers, such as smokers' columns and ashtray tiles, were removed from the platforms in September. Since October, smoking has been banned from all NS stations and platforms as part of NS's and ProRail's contribution to a smoke-free generation. Since 1 April 2020, moreover, we have banned all tobacco and other smokers' products from our own shops (Kiosk and the StationsHuiskamer). Effective 1 January 2021, our AH To Go outlets also stopped selling such products. Since 2020, we no longer enter into contracts with new or existing lessees that want to sell tobacco at the station.

AEDs at the stations: launch of tendering procedure

In 2020, NS launched a tendering procedure inviting bids for the installation of AEDs (automated external defibrillators) at all stations. In this way, we and ProRail aim to contribute to a nationwide AED network. A person who suffers a cardiac arrest has the best chance of survival if reanimation using an AED is started within six minutes.

Increasing social and local engagement

In 2020, NS Stations launched an action plan aimed at promoting social initiatives at the stations. One example is Restaurant Buitensporig at Tiel station, whose staff members include people with a mental or physical handicap. Another example is Zuivere Koffie in Zaandijk (Zaanse Schans), where former prisoners are trained in traditional crafts. These initiatives serve to strengthen the connections between our stations and the surrounding urban or village environment, as part of our effort to ensure, together with our partners, that stations are more than just a place for people to catch a train. Want to know more about these initiatives? Visit www.oponsstation.nl.

Clean stations

The COVID-19 crisis prevented us from measuring our customers' satisfaction with cleanliness at our stations. The drop in passenger numbers in 2020 did however create space to devote more attention to the cleaning of contact surfaces, perform activities earlier than scheduled and increase the overall cleanliness of our stations, in consultation with our clients (including ProRail and municipalities). We have also extensively tested several innovations or already put them into practice, such as graffiti detection sensors. In addition, in an innovation platform we are partnering with our cleaning services provider on the use of sensors in garbage bins.

Station renovations

In 2020, in close collaboration with ProRail and municipal authorities we completed and opened four stations, with another fifteen stations undergoing renovations. These projects also included the realisation of 6,900 bicycle parking spaces in total, as well as new shops and a range of facilities at the stations concerned.

- Driebergen-Zeist station is now part of an entirely revamped station area featuring a new bus station, a parking garage for 600 cars and a supervised bicycle parking facility for 3,000 bikes with a public transport bicycle rental point. The number of platforms has been increased to four, which will make it possible to increase the frequency of trains between Arnhem and Amsterdam Airport Schiphol.
- In July, the opening of the renovated Rotterdam Alexander station was transmitted live on YouTube. Thanks to this project, Rotterdam now has an extra combined train and metro station with a contemporary and inviting atmosphere.
- In Zaandam a modern structure in the distinctive local style was built over the tracks, with a new entrance area and a bicycle parking facility for 1,400 bikes. A bicycle route connects the city centre with the western part of Zaandam.
- The new entrance area of Den Haag Hollands Spoor station now features a new bicycle parking facility for 2,500 bikes, as well as new shops inside the station and on the square in front. All platforms are accessible by lift.
- The projects at Maastricht station and Amsterdam Amstel station are approaching completion; both will be officially delivered in 2021.

Retail at the station

In 2020 we began leasing newly built retail spaces and found tenants for vacant shops at several stations. Leasing retail space has a considerable influence on the liveability and personal safety at our stations. Together with new and existing tenants, we are exploring opportunities to expand the range of facilities at smaller stations such as tea & coffee outlets, heated waiting areas and toilets.

Responsible range of products

NS Stations aims to make it easier for customers to make responsible food choices at our stations. The share of products that are regarded as 'more responsible choices' ranges from 29% at Kiosk and 31% at the vending machines to 53% at Julia's. To promote responsible choices, we are exploring ways of including more responsible products in the range available in our stores.

Improvements to formats

Over the past year, through Foodsy and Thuisbezorgd.nl, Julia's rolled out its pick-up service at all of its outlets in our stations. Other entrepreneurs at the stations also use Foodsy and Thuisbezorgd.nl.

In 2020, fifteen Kiosk shops were converted to fit this new concept, with its emphasis on a varying range of products over the course of the day, its attention for sustainability in shop furnishing and its focus on promoting responsible choices. Self-scan checkouts are the next step.

In June 2020, NS (Stationsfoodstore B.V.) and Albert Heijn signed a new contract to continue their collaboration at the stations.

Development of station areas

A world-class station requires a world-class environment: an area that accommodates passengers and their need for transport before and after the train journey, as well as urban functions for residents, employees, leisure visitors and students. Redevelopment and densification of station areas will help to promote the use of public transport as a logical choice, thereby relieving pressure on other infrastructure.

In Utrecht, the 'Cartesiusdriehoek phases 2-6' zoning plan was submitted for public inspection last summer. This city district near Utrecht CS is being developed into a future-oriented, inclusive urban community featuring 2,800 homes and space for nature and leisure activities, offering every opportunity for residents to live long, happy and healthy lives. We have also made agreements with the municipality of Utrecht about Tweede Daalsedijk, a road on the other side of the tracks. An agreement has been signed with the municipality of Den Bosch, land owners PostNL and NS Stations, and property developer SDK with a view to the development of EKP site Noord in the Spoorzone district of Den Bosch. The site will be transformed into a lively and creative district combining residential, work and educational functions, including an art academy and more than 800 homes.

The urban development plan for the Spoorzone district (Hanzeland side) in Zwolle is now ready for implementation.

In 2020, a study was launched into the further development of the Alkmaar station area, which will also include housing construction. NS Stations and the municipality of Alkmaar signed a declaration of intent for this project.

Building over the tracks

The technique of building over the railway tracks offers an opportunity to alleviate the shortage of urban space while also creating accessible residential areas near the railway stations. In partnership with the municipality of The Hague and ProRail, we launched a study into possibilities for building over the tracks in the Den Haag CS station area. The objective of the municipality is to improve the connection between the two parts of the city on both sides of the tracks. In addition, we are exploring the feasibility of similar projects in the station areas around Utrecht CS and Amsterdam Sloterdijk, in collaboration with local authorities and ProRail.

Travelling and working in safety



Personal safety

Over the past year, we have taken various measures that should help us maintain and if possible further improve personal safety. One example is the social distancing measures taken in 2020, such as required walking routes at the stations and inside shops. We also installed cameras and deployed Safety & Service staff and private security guards at stations where passengers feel unsafe and where crime and nuisance are a reality. Due to the COVID-19 measures and the drop in passenger numbers, the presence of tramps, loitering youths etc. was more conspicuous than usual. This was reflected, for example, in the willingness among our staff to report incidents. We continuously monitor nuisance levels and address issues where necessary. Creating an open and proactive safety culture requires a permanent effort from NS. We have made agreements with local safety partners to combat nuisance.

Incidents involving aggression

Incidents involving aggression have a considerable impact on the lives of the people who witness them. That is why NS encourages staff to report all such incidents. Within NS as a whole, 661 incidents of category A aggression (the most serious type) against staff were reported in the past year, which is 2.5% less than in 2019 (678). Many incidents involved some form of threat (231), and 158 qualified as 'resisting a public servant'. There were also cases of physical violence (158), spitting (102), threatening with a weapon (9) and indecent assault (3).

Despite the smaller number of passengers, no significant drop in the number of incidents has been reported for the year as whole. This may be attributed to the return to the full timetable on 1 June, with an increase in visible staff and active enforcement of COVID-19 measures and the obligatory wearing of face-masks. Since 1 June, NS also registers whether an incident can be linked to COVID-19 measures. This was the case for 83 category A incidents. Of our uniformed staff, 714 were involved in some form of physical aggression (2019: 744).

The number of category A incidents involving aggression on our trains dropped by 18.6%: 197 in 2020 compared with 242 in the same period in 2019. The number of incidents in this category at the stations increased by 7.2% (to 461, compared with 430 in 2019). At stations it is easier to respond to incidents. Support from Safety & Service staff, the police and/or emergency services can arrive on site sooner than on a moving train.

The number of injuries increased by 1.8%: in 2020, 171 injuries as a result of aggression against staff were recorded (2019: 168). These were mostly minor injuries (88.3%). In 162 cases, this involved uniformed NS staff (2019: 153 cases), of whom 119 were Safety & Service staff.

Occupational safety

NS reports on physical accidents using the Total Recordable Rate (TRR). This covers all occupational accidents resulting in absenteeism or otherwise, per million of hours worked. The TRR fell from 4.5 in 2019 to 3.4 in 2020. This decrease can be attributed to NS's occupational safety policy, with its management focus on risk inventory and evaluation, a top 5 of risks plus improvement action plans, critical occupational safety processes, periodic consultation between management and staff and among staff members themselves, reporting and dealing with hazardous situations, and accident investigation. The NS Executive Board and management are closely involved in the company's occupational safety policy, and have periodic meetings to discuss progress based on the occupational safety dashboard.

Hazardous materials

In the past year, as part of the hazardous materials programme the National Institute for Public Health and the Environment (RIVM) conducted research into working conditions related to the use of Chromium-6 in the past. The results of this study will become available in 2021.

Railway safety

On 2 January, a DDZ train derailed in The Hague. In the incident, a guard and one passenger were slightly injured, and the tracks were seriously damaged. On 22 May, a collision took place at a level crossing near Hooghalen; a terrible accident in which a train driver died. This was a shocking event, first and foremost for the victim's relatives and close colleagues. Both events have been thoroughly investigated, and improvement measures are being taken. NS has once again urged the State Secretary for Infrastructure and Water Management to take measures at all uncontrolled level crossings as soon as possible.

The investigation into the derailment in The Hague revealed that the accident was caused by an exceptional combination of factors. The investigation report has been shared with the Human Environment and Transport Inspectorate, the Dutch Safety Board and the Ministry for Infrastructure and Water Management. Based on the findings, NS has taken a range of measures to guarantee the safety of passengers and staff. For example, the maintenance regime and the monitoring of the shoe brake system have been modified, and internally we will take steps to further strengthen our safety culture.

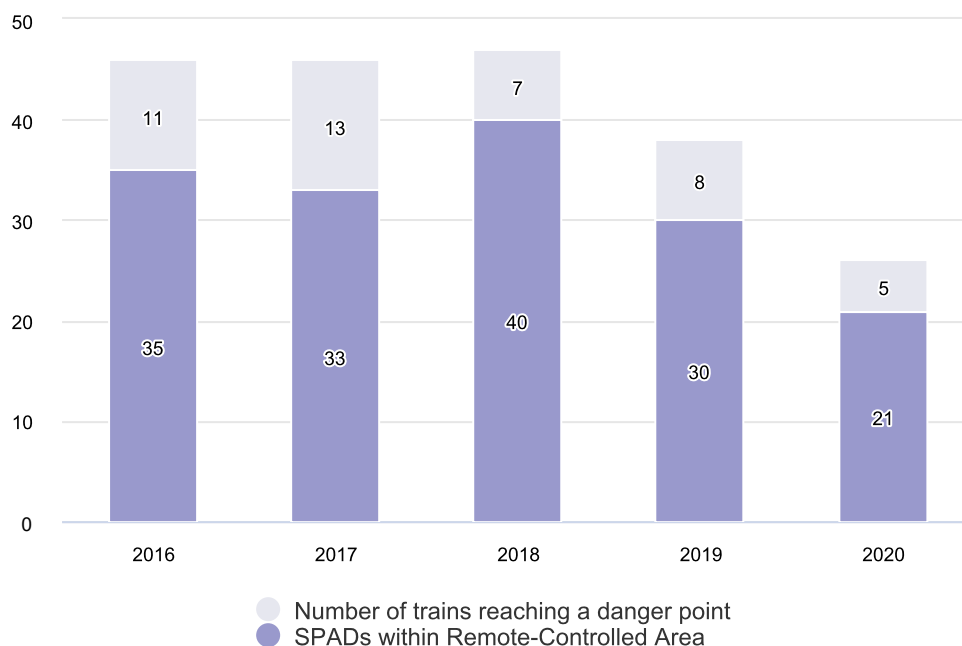
DDZ trains decommissioned

On 3 December, NS decommissioned all 49 DDZ trains for an indefinite period of time. This decision was motivated by the results of a study into unstable behaviour of DDZ rolling stock when operated at high speeds. NS is currently conducting follow-up studies.

Signals passed at danger (SPAD)

In 2020, a total of 32 SPAD incidents were registered, though none occurred at high speed (over 40 km/h). This number is lower than in 2019 (58). Of these 32 incidents, 21 took place within the Remote-Controlled Area (CBG) (2019: 38). In 5 cases this involved a train reaching a 'danger point', such as a switch (2019: 8). NS strives to reduce high-speed SPADs to zero and has taken various measures to achieve that. It is difficult however to determine the extent to which the decrease can be attributed to the reduced timetable and the introduction of the ORBIT train safety system.

Five-year trend in SPADs within Remote-Controlled Area



ORBIT

ORBIT has now been installed in 70% of all trains. The system warns drivers when they are approaching a red signal too fast, and can prevent SPADs. In 2020, NS also started installing ORBIT in the Flirt and SNG rolling stock series. This project is scheduled for completion in the course of 2021. By then, 90% of our rolling stock will have ORBIT.

STM ATB

In 2020, the Ministry of Infrastructure and Water Management, NS and ProRail discussed the issue of added functionality in STM ATB, a system that uses transponders between the rails to gather and transmit train data. NS and ProRail together supplied analyses and substantiated case studies. The Ministry of Infrastructure and Water Management is now assessing these in the relevant policy context with a view to adding the functionality concerned.

Braking criterion

In 2017, NS decided in principle to impose a stricter braking criterion (technically enforcing more powerful braking when approaching a red signal) in IC rolling stock, starting with VIRM rolling stock. The conversion of VIRM to a more stringent braking criterion is currently in progress as scheduled. So far, half of all VIRM trains have been converted.

Fit-to-Drive

In recent years, we have carried out a qualitative study into the impact of new ICT tools in the cabin on the driver's workload and concentration. In 2020, we used the recommendations from the study to set up a driver's workload monitoring programme. We will also continue the Fit-to-Drive programme, which focuses on promoting awareness among train drivers of their fitness to drive.

Performance on sustainability



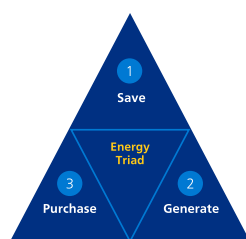
'Together, we are making the Netherlands accessible in a sustainable manner – for everyone.' That is our mission. It explains our choice to become a fully circular, zero-emission and green business. In addition, we are working to make our product truly accessible and make NS a truly diverse and inclusive organisation. We contribute to the Paris Agreement on Climate Change (CO₂ reduction), the UN Convention on the Rights of Persons with Disabilities and the UN Sustainable Development Goals. We do so on behalf of our passengers, our current and future employees, our partners and future generations.



Zero-emission enterprise

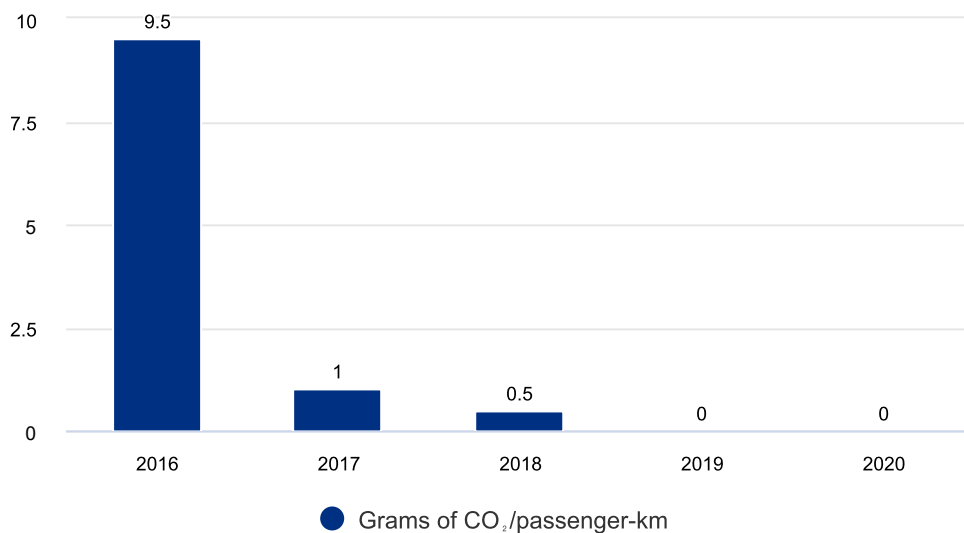
In order to remain a leader in providing sustainable mobility, NS has set itself the target of 2040 as the year in which it becomes a zero-emission business. We will qualify as such once we are able to use green energy at any moment without depending on energy from fossil sources at times when there is no wind or when the sun is not shining. Our main strategies to achieve that are reducing energy consumption where possible and using our land and buildings to generate sustainable energy. We already purchase most of our energy requirements from zero-emission sources.

CO₂ emissions down to zero: climate neutrality



NS is one of the largest electricity consumers in the Netherlands. We use 90% of that energy for running our trains and 10% for our stations, offices and workshops. We have offered climate-neutral rail transport services since 2017. We achieved this by purchasing as much new green electricity from wind farms for our trains as we consume, over the year as a whole. In 2019 we launched the effort to offer climate-neutral replacement bus services using renewable fuel based on waste and residual flows.

All replacement bus services performed for NS in 2020 were 100% climate neutral. In addition, we had planned to eliminate an 11% deficit resulting from start-up problems in 2019. However, in 2020 part of the deficit evaporated as demand for touring car services plummeted due to the COVID-19 measures. We will eliminate the remainder in 2021. For our buildings, too, we purchase as much green electricity as we consume on an annual basis. Since 2020, we have purchased all gas for our buildings from fully sustainable sources. This means that in that year, NS buildings no longer generated any direct emissions (scope 1). Indirect CO₂ emissions (scope 2) as a result of the consumption of heat in our buildings amounted to 0.4 kilotonnes (2019: 0.6 kilotonnes). At the start of the franchise in 2014, we emitted 77 kilotonnes (scope 1) and 487 kilotonnes (scope 2) of CO₂. Compared with 2015, in 2020 we avoided over 0.6 megatonnes of CO₂ emissions by saving energy and by purchasing green energy. Since the start of the franchise we have been able to avoid a total of 2.7 megatonnes of CO₂ emissions up to and including 2020.

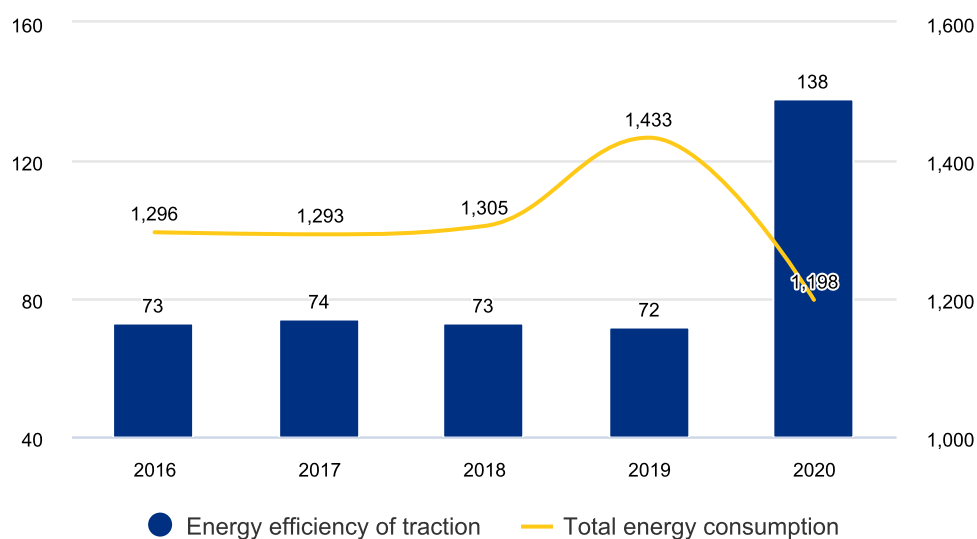


Saving energy

Over the past few years, NS has taken measures to become more energy efficient. For example,

- we have turned energy efficiency into a management focus for the replacement and modernisation of rolling stock;
- we have improved capacity utilisation rates of our trains and buildings;
- we have taken energy-saving measures at the stations, in collaboration with tenants;
- we have provided train drivers and guards with technical tools to promote energy-efficient driving.

The combined result of these measures is that at the end of 2019, NS was 30.8% more energy efficient relative to 2005. However, given the fact that we ran our trains for several months with hardly any passengers, energy consumption *per passenger-kilometre* increased. In 2020, NS used an average of 141.3 Wh of energy per passenger-kilometre for passenger transport (2019: 67.7 Wh/pkm). This means we have not met our target of 2% efficiency improvement per year.



Total energy consumption by NS in 2020 was lower than the figure for 2019. NS consumes electricity (1,198 GWh), diesel (2.03 million litres), heat (24.8 TJ) and gas (5.6 million m³) for trains, buses, stations, workshops and offices. This works out at a total of 1,275 GWh of energy. Of this amount, 1,268 GWh is green energy. With our thermal storage system, we generate the equivalent of 17 GWh of heat and cold at six stations.

Sustainable generation of energy

NS contributes to the energy transition by using its buildings and land for sustainable energy generation. For example, in Amsterdam we have made land available to help realise the Nieuwe Hemweg wind farm. Built in 2020, this wind farm will be taken into operation in 2021 and provide an installed capacity of 13.2 MW. We are also developing a solar carport at the P+R site of Culemborg train station, and upgraded the energy label for our Utrecht offices from D to A (in collaboration with the owner, ASR Real Estate).

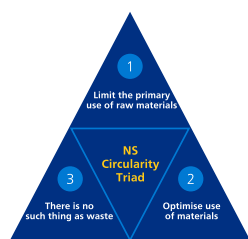
Purchasing zero-emission energy

NS wants to be able to use sustainable energy at any moment of the day without having to rely on fossil sources as a back-up. Currently, we still depend on fossil fuel back-up capacity for 40% of the time that our trains operate. NS is working hard to reduce this percentage, and uses several tools to achieve that (demand-side management, generation management and storage). Together with our energy partner Eneco, in 2020 we explored the most promising measures to boost this effort. We are now planning a pilot project to determine the potential contribution of solar energy to our zero-emission transport objective.

Circular enterprise

NS aspires to full circularity in 2030 in terms of procurement, maximum reuse of materials and zero waste in offices, workshops and trains. To achieve that, we apply the following guiding principles: limit the primary use of raw materials, optimise material efficiency and 'there is no such thing as waste'.

Limit the primary use of raw materials



Applying circularity principles in design and procurement will enable us to become even smarter in the use of materials and in reducing the use of primary raw materials. In tendering procedures for materials, we include circularity as a criterion in the selection and award phase. This enables us to quantify and manage the degree of circularity in tenders for new trains or business uniforms, by issuing material passports that clearly identify the raw materials used and enable their reuse.

The renovation of the NS office buildings in Utrecht involved the reuse of as many existing items and train materials as possible. Examples include furniture made from old train floors, partition walls made from glass train doors and desks made from train ceiling panels. NS is encouraging its employees and its tenants, suppliers and passengers to reduce material waste. It does so, for example, by offering discounts for passengers who bring their own cups for hot drinks and by installing drinking water fountains at the stations. In early 2020 ProRail, Bureau Spoorbouwmeester, the Dutch Design Foundation and NS Stations launched a design competition for converting small stations into circular businesses. The three winning designs, which were presented during an online Dutch Design Week exhibition, share a focus on the use of natural materials and effective integration in the landscape.

Optimum use of materials

We take good care of our materials by focusing on effective maintenance and timely repairs so as to extend their service life. After twenty years of service, our double-decker trains are upgraded so that they can serve another twenty years. 2020 saw the completion of the modernisation project for the VIRM1 series and the start of serial production for modernisation of the VIRM2/3 series. Once again, the focus in these projects is on the optimum use and reuse of materials. We have succeeded in upgrading 86% of old VIRM1 train components, reintegrating them in the trains as good as new. Of all materials, 13% is put to new uses elsewhere. In total, 99% of each VIRM2/3 train is given a new lease of life (2019: VIRM1 99%). This allows us to keep 40 million kilogrammes of materials in the cycle.

Starting this year, the 45-year-old SGM trains will gradually be decommissioned. Mechanics will remove all valuable parts and materials, some of which will be reused in SGM trains which are still running. Other parts will be adapted for reuse in other train series. For example, following a minor modification the wheel sets can be fitted under our ICM trains.

There is no such thing as waste

If we have no further use for products and cannot reuse them, we still want to keep them in the cycle as high-value materials. We first try to find a new destination for the product as a whole. If that proves impossible, we find a new destination for separate components. Take our trains, for example, which have a service life of over forty years. After that period, we offer them for sale. In this way, in 2020 we were able to give eleven locomotives (type 1700) and two carriages (type DDM) a second lease of life. We also offer train components to parties that process them into entirely new products. For example, 45-year-old public announcement speakers from our trains are turned into bluetooth living-room speakers. Old floorboards, seats and ceiling panels from our trains are converted into items of furniture.

In 2020, we opened our fourth Upcycle Pop Up store at Utrecht CS, which sells new products made from old NS materials. The range includes notebooks and trays made from yellow departure displays, and bags, shoes and meditation pillows made from fabrics from old trains. Not all types of material are currently suitable for reuse or recycling. In collaboration with Windesheim Zwolle, we are exploring alternative uses for old composite side panels from our trains. This year, the first sleeper made from such composite panels was presented. Our next challenge is to roll out such applications systematically and on a large scale.

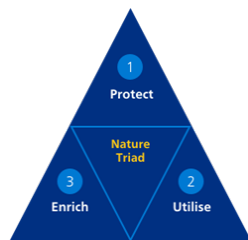
Reducing residual waste

If materials cannot be reused, we separate them for recycling purposes. In late 2020, we joined forces with waste processing company Renewi on a project to reduce residual waste. We analyse the composition of residual waste flows at NS locations, decide which are suitable for recycling and how this could be implemented in practice by our staff. In 2020, NS disposed of a total of approximately 14 million kg of waste from its offices, workshops and stations (2019: approximately 21 million kg). We separated 55% of our waste and offered it for recycling. Ultimately, 46% was actually recycled and 47% was incinerated for energy recovery. This year we introduced the requirement that reporting on scrap trains should focus on reuse as well as on recycling. We managed to reduce this waste by 7%. A mere 0.2% of all NS waste ended up on a rubbish tip. Of our waste, 4% is removed as hazardous waste annually (2019: 4%).

Waste separation

In 2020, staff at our workshops were able to separate 83% of the waste (2019: 81%). Of all our office waste, 29% was separated (2019: 26%). And of all consumer waste produced at our stations, in shops and in trains we recycled 31% (2019: 18%). This increase can be attributed to the larger quantities of organic waste collected at our stations and the greater volume of post-separation waste from which valuable raw materials have been recovered. The Green Deal on waste reduction and recycling signed by NS, ProRail and the Ministry of Infrastructure and Water Management expires at the end of 2020. Early in 2021 we plan to gather and share the lessons learned.

Green enterprise



2020 was the first year in which Green Enterprise was highlighted as a priority within the context of sustainable business practices. A strategy and a range of targets have been set which are aimed at further 'greening' NS over the coming decades. The overall objective is to make a positive contribution to biodiversity, health, climate change, climate change adaptation and inner-city land development initiatives. This will make NS more attractive and better prepared for the future. Our guiding principles in this

process are 'protect, utilise and enrich'.

Protect

Together, our stations feature 65 hectares of green areas. We carefully maintain these areas, and when plants and trees die or lose their vitality, we replace them. We control invasive exotic species using natural predators where possible, for example by providing nest boxes for great tits to control oak processionary caterpillars. These measures are commissioned by ProRail.

Utilise

Climate change is confronting us with more extreme weather conditions, such as flooding and extreme heat. Additional green spaces may provide a solution to some of those problems. For example, we can plant trees to avoid heat stress and benefit from natural drainage features ('wadis') and green roofs to catch and absorb rainwater.

Enrich

The use of more plant species suitable for the local environment will increase biodiversity. In 2020, we did this at 21 of our stations, planting new prairie species, perennials and mixed flower seeds, covering a total of 1.4 hectares. In addition, in 2020 we planted so-called veteran trees at ten stations. Veteran trees are trees that receive special care to allow them to grow old and remain healthy and attractive. We also plant flowers and plants around veteran trees to promote biodiversity.

Sustainable mobility

Over 50% of all kilometres travelled by road in the Netherlands, and the associated CO₂ emissions, are attributable to Dutch employers. Clearly, employers have an important role to play in reducing mobility-generated CO₂ emissions. On the initiative of the Confederation of Netherlands Industry and Employers (VNO-NCW), the Ministry of Infrastructure and Water Management, environmental organisation Natuur & Milieu and NS, fifteen employers founded the Anders Reizen Coalition in 2015 to boost the sustainability of business travel among their employees (andersreizen.nu). In 2020, the coalition members included 65 large employers with a combined impact on 500,000 employees. The coalition aims to achieve a 50% reduction of CO₂ emissions from commuter traffic, business travel and air travel by

2030 (compared with 2016, per FTE), although the effects of the COVID-19 pandemic may force us to adjust this target. By sharing best practices, the coalition members provide each other with perspectives for action. Its ambitions and best practices have also been incorporated into the Dutch government's Climate Agreement.

In 2020, many employers placed mobility higher on their business agendas. The travel restrictions have confronted them with the material impact of travel and the need for long-term changes to their policies. With a view to providing employers with further perspectives for action and reducing CO₂ emissions caused by international travel, the coalition's best practices have been gathered in a knowledge document entitled '*Vliegwijzer*'. In addition to discussing reduction measures, the document also focuses extensively on efforts to replace air travel by rail travel on distances of up to 700 km. The Anders Reizen Coalition also calls for a reform of the tax system to encourage people to opt for sustainable travel options. Finally, in 2020 NS committed to realising a zero-emission car fleet by 2025.

This has already resulted in an average CO₂ emission reduction of 4.2% among the coalition members in 2018-2019, while the emission trend for the Netherlands as a whole was upward. As an employer, NS also wants to remain a front runner with its own mobility policy. In 2020, we implemented a new policy for international travel, requiring employees to travel by train as standard on journeys within a radius of 700 km and 8 hours of travel time.

NS: a sustainable brand

NS has for several years participated in the 'Dossier Duurzaam' survey, the name of which was changed into 'Monitor Mens & Maatschappij' in 2020. Since the questions have also changed, the scores for many brand names in 2020 were lower than in previous years. The score for NS remained the same, as a result of which we moved up to fifth place in the ranking (2019: twelfth). When it comes to sustainable brands mentioned spontaneously by respondents, we are in eleventh place (2019: fifteenth). Sustainability plays an ever more prominent role in society and in consumers' choice for the train above other means of transport. The sustainability image of various means of transport is shifting, with electric cars now scoring higher than the train. In 2019 it was the other way about.

Sustainable procurement

Every year, NS purchases goods and services with a value totalling more than a billion euros. In 2020, we had ties with approximately 3,500 suppliers in 24 countries. Of our total purchasing volume, we obtain 80% from 114 suppliers; the largest share of that volume (96%) originates from the Netherlands and other countries in Western Europe. These goods and services include staff, financial and facility services, IT, construction, communication, energy, trains and transport.

Through a targeted supplier policy, NS uses its position as a purchaser to encourage suppliers to make their products and services more sustainable. In this way, we make our suppliers contribute to our sustainability objectives. We have included our CSR requirements in the procurement governance rules and embedded them in our General Terms and Conditions of Purchase (www.nsprocurement.nl/en/) and in our Sustainable Third-Party Policy. In addition, we work closely with our suppliers and challenge them and other market players to submit innovative and sustainable offers.

We use the following initiatives to steer procurement:

Sustainable Third-Party Policy

Through our Sustainable Third-Party Policy, we encourage our suppliers to make their products and services more sustainable, inviting them to explore the following four themes with us:

- climate-neutral and efficient energy consumption

- sustainable mobility
- circular use of materials
- corporate social responsibility

Embedding sustainability in procurement through tendering plans

One permanent consideration in our European tendering procedures is to include suitable sustainable selection and award criteria based on the above themes.

Supplier assessments and Code of Conduct

We subject our major suppliers to a Corporate Social Responsibility (CSR) assessment. This involves an assessment of the supplier in terms of its environmental impact, labour and human rights record, integrity and sustainable procurement. We have imposed the CSR assessment as a requirement since 2015 on all parties that have won an NS contract. Since then, we have steadily increased the minimum standards that we require these suppliers to meet. Through our Code of Conduct, moreover, we expressly communicate to our suppliers the CSR standards and values that we apply to doing business with them. NS has engaged an independent party to check whether suppliers are complying with the principles of the NS Suppliers 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 concerned and ask for an improvement plan. In cases of serious violations, such as corruption, we will terminate the relationship.

Attractive and inclusive employer



NS is one of the largest employers in the Netherlands. Skilled and healthy employees are crucial for NS in putting our strategy into practice. Over the past year, our employees were confronted with a range of new challenges. We found new ways of retaining professional expertise, developing talent and leadership and encouraging the inflow of new talented people so as to emerge from the crisis as a healthy and agile organisation. Needless to say, protecting the [health and well-being of our employees](#) was a major concern over the past year.

Our employees

- At year-end 2020, NS had a workforce of 19,305 people in the Netherlands (17,461 FTEs) (2019: 20,074 employees and 17,742 FTEs).
- Women made up 31% of the workforce at NS (2019: 32%) (2019: 32%).
- Of NS's workforce, 71% were full-time employees (male/female ratio: 82%/18%) and 29% were part-time employees (male/female ratio: 37%/63%) (2019: 69% full-timers, m-f 82-18%; 31% part-timers, m-f 37-63%).
- Of all NS staff, 93% had permanent contracts (2019: 87%) (male/female ratio: 94%/91%) and 7% had temporary contracts (male/female ratio: 6%/9% (2019: 87% permanent contracts, m-f 91-78, 13% temporary contracts, m-f 9-22%).
- The average age of our employees was 45 (2019: 45).
- In 2020, NS had a flexible layer with hired personnel that represented about 4.7% of the workforce (2019: 6.1%).

Recruitment

NS aspires to remain one of the most attractive employers in the Netherlands. In 2020, we were fifteenth on Intelligence Group's ranking of favourite employers, and featured among the top 5 of favourite employers identified by the Image Survey of Intermediair.

NS recruited over 2,800 new employees in 2020, of whom approximately 2,400 were offered a permanent contract. In 2020, we filled 1,555 vacancies for people with vocational qualifications and 879 vacancies for higher professional education / university graduates (2019: 2,671 and 1,064 respectively). We hired a total of 301 guards, 490 train drivers and 112 Safety & Service staff. Owing to the COVID-19 crisis, we engaged fewer trainees than usual (11). In addition, we have taken on 13 new operational management trainees, who will start their work in 2021. The hiring desk filled 409 temporary positions. Demand for hired staff was lower last year due to NS's financial situation, and we also had fewer permanent positions to fill.

In mid-March we switched overnight to fully digital interviews with candidates, who received extensive guidance throughout this process from the recruitment team. In the summer we also switched to a fully digital onboarding process for new colleagues.

Diversity and inclusiveness

NS wants to be an attractive employer where everyone can feel at home. To that end, we will have to ensure that our employees and managers, overall, reflect the diversity that we see in society at large. We encourage the recruitment and retention of women, employees from migrant communities and people with occupational disabilities. We expect our suppliers to do the same.

Women at the top

At year-end 2020, women filled 37% of senior management positions at NS (2019: 35%). At year-end 2020, 50% of the members of the Supervisory Board were female and the Executive Board had two female members (50%). Research into wage differences between men and women at NS has confirmed the absence of a gender pay gap.

Staff with occupational disabilities

In 2020, a total of 119 employees at NS had a 'social responsibility' job, created for people with occupational disabilities (2019: 103). Most of the successful candidates for these 'social responsibility' jobs in 2020 were people with a vocational or higher professional education diploma. Reaching our targets proved a challenge, due in part to the limited possibilities for onboarding new employees when working from home. At the end of 2020, three job

vacancies had not yet been filled. We will continue our efforts in this field in the years ahead. In January 2020, we launched a new strategy to attract and guide special talents for retail. The people involved, who have limited opportunities on the labour market, are given special on-the-job guidance. In May, June, July and August we trained retail staff and managers in supervising special talents. By 31 December, NS had placed 93 special talents.

Staff with a migration background

Launching a catch-up effort in 2020, NS devoted particular attention to the inflow and promotion of staff with a migration background, for example by running the 'objective selection' pilot of the Ministry of Social Affairs and Employment, and through targeted marketing and collaboration with the ECHO centre of expertise and a diversity committee. These efforts have resulted in a larger share for members of this group of employees at the top, in senior management and among trainees. In addition, in a campaign involving employees and managers we specifically focused on cultural differences and the need for a more inclusive work environment. With other employers we developed a serious game called Blindspot, which centres on the recognition of latent prejudices. In 2020, as part of our collaboration with the UAF foundation for highly educated refugees we set up a work-study programme on Technology & IT, and five asylum permit holders were able to gain work experience. In addition, we are encouraging their intake for regular job vacancies and in traineeships through intensive cooperation with the UAF and municipalities.

Learning at NS

NS encourages employees to keep developing themselves. This will help them remain employable and attractive for employers within NS or elsewhere on the labour market. In 2020, NS invested over €15 million in training courses and other educational activities. This is lower than the amount in 2019 (€21 million), owing to cancellation and postponement of programmes. In all, NS employees attended 196,031 training activities.

Lifelong learning

In our own NS Learning Centre, we train new employees and maintain the professional knowledge of all our staff by offering different forms of learning, enabling them to continue developing their knowledge and skills. This involves training tools such as simulators, e-learning tools, apps, professional pages for on-the-job learning, as well as classroom teaching. We continually refresh and update the range of tools available. After the outbreak of COVID-19 we started offering our basic training, refresher training and work meetings online as soon as the situation allowed us. This required major adaptations, both from our staff at the Learning Centre and from the participants.

Focus on professional expertise

In 2020, we expanded our partnership with MBO Amersfoort for training our chief guards, which now involves 17 students. Approximately 50 train drivers joined in 2020 through the Regional Training Centres in Amsterdam and Twente and STC. Within NS itself, 174 chief guards, 67 general service staff and 74 Safety & Service staff successfully completed their basic training in 2020.

Rolling stock technology and TechniekFabriek

At the end of 2020, 34 students (17 first-year and 17 second-year students) were doing a two-year apprenticeship in Mechatronics at TechniekFabriek (the 'technology factory'), the institute for technical training where current and prospective train mechanics complete an intensive vocational programme. Last year, 33 students from TechniekFabriek moved on to a job within NS. We developed a series of master classes to promote maximum involvement of students in the world of practice, despite the remote learning format. Following a short

break, lessons resumed in June and all students eventually managed to move on to a job. The first-year students completed their final modules in September and embarked upon the second year of training in October.

In order to provide a controlled learning environment, we launched a pilot project involving virtual reality tools. The results are good, students are enthusiastic and recognise the added value of this approach.

Careers

NS enables its people to control their own careers. In 2020, 394 colleagues completed a career orientation programme (2019: 605). We provide information about career opportunities through the Careers Platform, a new self-scanning tool for skills currently in demand, and a tool that allows employees to explore suitable new positions based on their current role.

In the event of organisational developments that have consequences for staff, to prevent redundancies NS ensures staff receive guidance from an early stage in finding new employment within or outside NS. In 2020, most redundant employees were able to find a suitable alternative job within the period during which they received guidance. NS provides such guidance to staff not just as an anticipatory job mobility measure for redundant employees, but also in connection with re-integration and outplacement. Many re-integrating staff eventually return to their employer either in their own (possibly adapted) job or in another capacity.

Employee participation and industrial relations

During much of the year, consultations with the employee participation bodies were dominated by the COVID-19 measures. The consultations continued in an adapted format. The Central Works Council and the four Works Councils (OR Reizigers, OR Instandhouding, OR C&O en Groep and OR Stations) and their administrators designed an online consultative structure. The employee participation bodies were closely involved in the design and implementation of crisis response measures during the first months of the crisis. Next to that, regular consultative sessions were held and a variety of requests for advice and approval were dealt with.

As NS's existing CLA expired on 31 March 2020, early 2020 saw the start of talks with the trade unions about a new agreement. The talks were suspended in March 2020, due to the COVID-19 outbreak. The Central Works Council and the unions were then involved in discussions on potential agreements regarding employment, the CLA, pension arrangements and the NS social plan. These consultations did not however result in collective agreements. In the autumn of 2020, negotiations with the unions on the CLA, pension arrangements and the NS social plan were resumed. NS and the unions reached agreement on the new CLA in February 2021.

NS has embarked on a programme to reduce the size and increase the agility of its organisation. In this context, we submitted an overall request for advice to the Central Works Council in October, asking them for an opinion on a cost-savings programme totalling €1.4 billion for the period up to and including 2024. With this programme, NS hopes to at least break even again in 2024, bearing in mind the downward adjustment of passenger forecasts. Over time, the cost-savings programme will significantly reduce the number of jobs within NS.

A new CLA

NS and the unions (FNV, VVMC, VHS and CNV) signed a new CLA in February 2021. The new agreement recognises the enormous effort put in by all our people as well as the severe financial situation that our business is in. Among other things, the new CLA provides for a pay rise totalling 4%, an employment guarantee until 1 January 2025 and a better early retirement scheme. The new CLA has retroactive effect from 1 April 2020 and will terminate on 1 July 2022.

Pay rise and term of the CLA

The CLA is effective until 1 July 2022. As of 1 April 2020, wages will be raised retroactively by 1.2%. This is followed by further pay rises as of 1 April 2021 (1.6%) and 1 January 2022 (1.2%). This works out at an average annual pay rise of 1.8%, which is 0.4%, on average, above the expected rate of inflation of 1.4%. The total pay rise throughout the term of the CLA is 4%. In addition, employees who were on the payroll as at 1 January 2021 are entitled to a one-off net payment of €200 in April 2021 (in proportion to their working hours).

Early retirement

The early retirement scheme will be improved, allowing colleagues to opt for early retirement within three years before their statutory retirement age. Those who decide to retire one to three years early are entitled to a one-off gross payment of €22,164 each. Employees who decide to retire less than one year early will receive a part of that amount.

Employment guarantee

NS makes every possible effort to help employees find a new job within NS. This includes an employment guarantee until 1 January 2025 for all employees on a permanent contract.

Employee engagement

The biennial employee engagement survey was held at the end of 2020. The response rate of 68% was the highest ever for this survey, following a steady increase since the survey was first held. Given the score of 7.6 and an Employee Net Promotor Score of 23%, our employees are evidently quite satisfied with NS. They are proud to work for NS and enthusiastic about their job. However, the work-life balance and home-working demand our attention, as does the increase of nuisance and inappropriate behaviour. The survey results will be discussed within the various teams, priority actions will be identified and a plan of action will be drawn up.

In an effort to identify the best way of supporting our people during the COVID-19 crisis, and as a follow-up to the employee engagement survey and the home-working survey, we introduced a system of 'pulse measurements'. These are monthly questionnaires among a random selection of staff working from home, managers and operational staff, containing fifteen questions and statements. We analyse the results to take suitable measures, monitor developments and adjust our approach where necessary.

A vigorous organisation and absenteeism

NS is shifting its management focus from reducing absenteeism to increasing employees' labour potential. Measurements will give us a better understanding of the mental and physical health of our people. These insights will serve as a basis for targeted actions to make the organisation more vigorous and prevent absenteeism. The sickness absence rate at NS was 6.6% in 2020 (2019: 6.6%). The outbreak of COVID-19 caused a peak in absenteeism levels, but since April the figures for each month have actually been slightly

lower than in the same period in 2019. Long-term absence demands our particular attention. The frequency of sickness reports and the number of employees who never reported sick throughout the year are both close to the Dutch average. In 2021, assisted by the new occupational health and safety office Arbo Unie, NS aims to provide better guidance for managers and employees in cases of long-term absence.

Leadership at NS in 2020

The COVID-19 crisis has forced us to reduce costs, to scale down and become more agile as an organisation. NS has already taken steps in this direction. Leaders play a crucial role in our strategy and in ensuring a successful outcome of change programmes. For that reason, in 2020 we once again made targeted investments in leadership development. For example, in the spring and the summer we organised leadership sessions targeting the fifty most senior leaders, including the members of our Executive Board. The discussions focused on issues such as:

- leadership in times of crisis, and the COVID-19 crisis in particular;
- virtual leadership, managing people remotely;
- the crisis as a catalyst to help us become more agile and resilient;
- the commitment, safety and vitality of our people.

In the second half of the year we launched a programme with a long-term focus aimed at inspiring our managers, connecting them and supporting them in their development as leaders. In this context, the commitment, vitality, connection and trust of all our people are important prerequisites for the successful transformation of NS starting in 2021. For that reason, we intend to continue the leadership programme with a special focus on this subject.

Succession

In 2020, we continued our strong focus on promoting the current managers and preparing the managers of the future. In doing so, we aim to increase diversity among our most senior leaders and in our succession planning strategy. We have already identified potential successors for staff in key positions for the short and long term, and we conduct succession planning reviews three times a year.

Leadership development for middle management

Employees who are able and willing to advance to managerial roles can count on us to provide tailor-made assistance and in-company leadership development programmes. For example, we concluded such a programme for a group of twenty prospective managers. Of these individuals, one took a follow-up step during the programme. All participants stated that the programme had enabled them to achieve their personal development goals. Due to cost savings, no new group enrolled in the programme in 2020.

Our activities and achievements abroad

Abellio



Abellio is a fully-owned subsidiary of NS and operates in the passenger transport markets in the United Kingdom (UK) and Germany. Abellio generated a revenue of € 3.8 billion. In 2020 the corona virus pandemic severely impacted the public transport sector both operationally and financially. The corona crisis put pressure on the profitability of various Abellio franchises.

Passenger numbers dropped which resulted in huge one-off effects relating to corona related provisions for potential Termination Sums in the UK and asset impairments in the UK and Germany, impacting the financial result. The quantum of these one-off effects is still in process with the relevant public transport bodies and is therefore based on provisional information rather than the actual outcome. This treatment is based on accounting principles for the annual report in accordance with international accounting standards (IFRS).

Abellio consolidated	2020	2019
(in € million)		
Revenue (excl. 50% Merseyrail joint venture)	3,844	3,454
Impact of additional grant to continue to provide rail services in the UK	1,525	N/A
EBIT before non-recurring items	43	55
Non-recurring items	-786	-
EBIT reported	-743	55
Net profit attributable to NS	-554	4
Net profit attributable to minority interests	-203	7
Net result for the period	-757	11

The consolidation of Abellio consists of Abellio UK, Abellio Germany and the Dutch entity Abellio Transport Holding B.V.

Introduction

Abellio generated a positive EBIT contribution from normal operations of € 43 million and a consolidated negative EBIT result of € 743 million due to non-recurring items. The net loss attributable to NS amounts to € 554 million. A net loss of € 203 million is attributable to minority shareholders. This year has been dominated by the € 786 million one-off effects on EBIT, made up of € 702 million for corona related provisions for potential Termination Sums and asset impairments in the UK and non-corona related asset impairments of € 84 million for rail contracts in Germany. The remaining cash-out exposure for NS relating to the attributable loss in UK is limited to its share of € 244 million in the undrawn parent company support guarantees for the related UK franchises. This is within capital at risk framework which has been agreed between the Dutch Ministry of Finance and NS.

In the UK the operation was profitable until the corona virus pandemic hit in March 2020, which resulted in a steep decline in passenger revenue. Until 2020 Abellio UK contributed some € 300 million in the cumulative net result. Existing rail franchise contracts in the UK, except for Merseyrail, have been amended by short-term emergency agreements from 1 March 2020 whereby revenue and cost risks have been fully taken over by the UK Government and operators can earn a management fee and performance based fee of between 1% to 2%. In 2020 Abellio received an additional UK government subsidy of € 1.5 billion to continue delivery of rail services. The UK government is in the process of transitioning the present franchising system to a management contract system and also reviewing the balance of risk and reward for operators, government and taxpayers.

A condition for entering into the current Emergency Recovery Measures Agreements ("ERMA", successor of EMA) and the subsequent expected direct award with the UK Department of Transport ("DfT") was that the pre-existing franchise agreements would end at the expiry date of their respective ERMA's and that a termination sum may be payable to the DfT. It was anticipated that the potential Termination Sums would have been known

prior to the financial year end but the process was extended by the DfT such that the Termination Sum will be known later in 2021. We have welcomed this extension given that we believe the preliminary estimates by the DfT will require adjustment. Given the weight of evidence provided to the DfT to validate the Abellio view of the profitable franchise projections pre- corona we expect the provisional Termination Sums to reduce and any reduction that will follow from the final agreement with the DfT will be reflected in 2021.

In Germany the direct financial impact of the corona pandemic has been limited because the risk of lost revenue sits with the Public Transport Authorities ("PTAs"), the clients of Abellio. However, as in previous years the German market is difficult to operate in due to external factors other than corona, such as increased infrastructure works, a new tariff agreement for train crew and labour market developments, which negatively influenced the results in 2020 and prior years. In combination with the costs of mobilising new concessions this resulted in a net loss in 2020 for the German operations of € 127 million, of which € 84 million is attributable to one-off impairment of assets. Abellio asked the PTAs to compensate for the impact of these external factors. It is essential for the continuation of the German activities to agree on a structural change in the compensation and penalty mechanisms. Abellio has been discussing this with the various local PTAs for some time. This has turned out to be a lengthy process because agreements often cannot be made at a national level. In 2020 base principles have been agreed. A decisive answer is expected in the first half of 2021 for the regions North Rhine-Westphalia and Central Germany.

Key figures

	Abellio UK (excl. Merseyrail)	Abellio Germany
Number of employees	16,593	3,127
Revenue (€ million) excluding intercompany	3,100	744
Number of railway contracts	5	9

In 2020, Abellio achieved a revenue of € 3.84 billion, of which € 3.10 billion was for Abellio UK (excluding its joint venture Merseyrail and including €1.52 billion of additional franchise support from the UK government to cover lost revenues due to corona), and € 744 million for Abellio Germany. Revenue has increased by € 404 million in 2020 driven by the addition of East Midlands in UK from August 2019 and a full year of operation of Stuttgarter Netz and S-Bahn Rhein-Ruhr in Germany. Abellio expects that revenue will further rise to approximately € 4 billion in 2021, albeit with a large movement from UK passenger income to government subsidy as a result of corona virus pandemic.

Abellio's strategy



Abellio was founded to prepare NS for the liberalisation of the European rail market and help NS to achieve its objectives in the Netherlands.

Abellio's strategy was established on three pillars: earn, learn and prepare. The current focus is on providing reliable services to passengers which ultimately also the Dutch passenger should benefit from, for example by improving cross border connections, and achieving a sustainable long-term return on invested capital whilst managing risks through a diversified portfolio and keeping investments within the risk capital as reserved by NS. This has been challenging in 2020.

However, the rail markets in both UK and Germany are currently difficult to operate. In the UK a restructuring of the national rail industry is anticipated to achieve better alignment between track and train, to facilitate future climate targets and a return of growth in mobility. The corona virus pandemic in 2020 has been severely disruptive for public transport with a projected longer term impact on travel behaviour. For future sustainable profitability of our existing contracts it is necessary in the short term to reach agreement with the franchising bodies to compensate for the challenges that train operating companies (TOCs) are facing which are beyond their control. 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 2020 for most UK railway contracts a temporary emergency agreement was offered to compensate for the loss of passenger revenue due to the corona virus pandemic. In Germany, most passenger railway contracts are tendered as gross contracts, meaning that passenger revenue risk is retained by the tendering Public Transport Authority (PTA) and any subsidy received is based on the gross costs of the contract. The direct impact of the corona crisis has therefore been limited to changes in timetables and additional safety and cleaning measures. The German government indicated to compensate the additional costs relating to the pandemic and Abellio has received first payments from the PTAs in 2020.

In 2020 Abellio worked within the capital at risk framework which has been agreed between the Dutch Ministry of Finance and NS in 2016. With this framework NS and its subsidiary Abellio can develop foreign activities. The framework stipulates how much capital at risk can be invested in the UK and Germany. Foreign franchises and concessions, like Dutch activities, involve (financial) risks. The core of the framework is that an upper limit has been set for the capital at risk that NS, as the parent of Abellio, may allocate for its foreign activities of Abellio. This consists of € 500 million for invested capital (defined as NS share in Abellio equity) and issued guarantees. An additional limit of € 500 million applies to the contracts in the United Kingdom for specific parent company guarantees (PCS) that the franchise provider in the UK requires from the ultimate shareholder. These guarantees can be seen as a contingent contribution in capital which can be drawn as a subordinated shareholder loan to support activities of the franchise and to fulfil required liquidity ratios. No capital contributions or equity investments are required at the start of a franchise. Shareholder loans drawn for investments during the franchise are relatively low because investments in rolling stock are financed via lease rentals for the duration of the contract. The losses made in 2020 have reduced the Abellio equity and the decrease in the value of the British pound from € 1.18 at 31 December 2019 to € 1.12 at 31 December 2020 has also reduced the value in euro of guarantees provided.

Abellio capital at risk	2020	2019
(in € million)		
Equity attributable to NS*	42	334
Guarantees provided by NS	71	84
<i>Guarantees called on (NS portion)</i>	<i>20</i>	<i>21</i>
Total equity and guarantees	113	418
Total PCS guarantees provided by NS	455	480
<i>PCS guarantees called on (NS portion)</i>	<i>85</i>	<i>89</i>
Total capital at risk	568	898
<i>Of which called on</i>	<i>105</i>	<i>110</i>
<i>Of which reserved through capital increase</i>	<i>240</i>	<i>-</i>

* The total net cash investment of NS in Abellio amounts to € 175 million per 31 December 2020, consisting of capital contributions of € 249 million offset by dividends received of € 74 million. In addition, a capital increase of € 240 million is reflected in equity as at 31 December 2020 and in the drawn capital at risk, although the related cash contribution has not yet taken place.

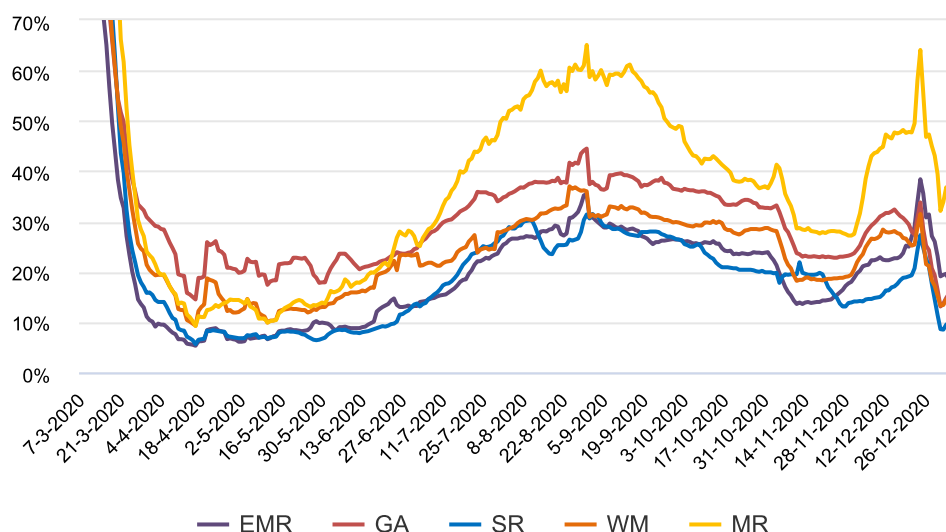
Abellio UK



Current market context

It has been an exceptionally difficult year for rail operators in the UK due to the corona virus pandemic. The British government responded to the outbreak by implementing a nationwide lockdown in March 2020 and ordering that the use of the railways was limited to essential travel for key workers only. Passenger numbers in average fell below 10% of the equivalent period in 2019 during the first lockdown. Passenger demand recovered after the initial lockdown to a national average of around 40% by September 2020. However demand fell again as the British government introduced tighter restrictions in the autumn with demand then increasing during December 2020 before further restrictions were imposed in later in that month.

The graph below highlights the impact on the passenger revenues of the Abellio TOCs from these key government interventions, by comparing 2020 passenger revenues as a percentage of 2019 passenger revenues for the equivalent time period.



Abellio London Bus played a key role in keeping key workers moving during the pandemic, adapting services to reflect both customer demand and staff availability. Abellio Rail Replacement (ARR) continued operating buses through the lockdown period with reduced volumes. Event Connect, which supplies ground transport solutions to major sporting events, tour operators and corporate clients has been severely affected due to the downturn in the leisure sector.

UK rail franchises and bus services

Abellio operates 5 UK rail franchises and around 9% of London bus services with a combined revenue of € 3.1 billion (excluding Merseyrail; a non-consolidated 50:50 joint venture with Serco). It operates East Midlands Railway, ScotRail, Greater Anglia, West Midlands and Merseyrail, as well as a profitable bus business.

Operator	Expiry date of contract	Possible extension	Emergency contract end date*
Greater Anglia (GA)	12 October 2025	12 October 2026	19 September 2021
Merseyrail (MR)	20 July 2028	20 July 2033	N/A
ScotRail (SR)	31 March 2022	13 October 2022	31 March 2021
West Midlands (WM)	31 March 2026	31 March 2028	19 September 2021
East Midlands (EMR)	17 August 2027	17 August 2029	31 March 2022

* Revenue and cost risks are taken over by UK Government from 1 March 2020, with a possible extension of the end date by 7 rail periods of 4 weeks by the franchising authority.

With the sudden loss of 80% of revenues in 2020 due to the lockdowns, contracts that normally operated on a 3%-4% margin became unviable. Estimates suggest that train travel will not return to pre-corona levels in the short term, due to changed working habits and passenger concerns over safety. Given the uncertain outlook, the DfT swiftly responded by initiating the following process to realign contracts.

On 22 March 2020, all three Abellio DfT franchises (Greater Anglia, West Midlands and East Midlands) accepted an offer of a variation to their franchise agreements, recognising the exceptional circumstances presented by the corona pandemic and to ensure continuity of operations. An equivalent offer for ScotRail was received from Transport Scotland (TS) on 24 March 2020 which closely mirrored the structure of the DfT offer. No contract variation was offered for Merseyrail, which continued operating with revenue and cost risk under the existing concession agreement with Merseytravel albeit with a reduced profit.

Emergency Measures Agreements

The Emergency Measures Agreement (EMA) was intended to ensure that franchisees are insulated as far as reasonable from the severe financial impacts of the corona virus pandemic. In order to achieve this the UK and Scottish governments essentially took on revenue and cost risk for the term of the EMA, with operators being paid a management fee with the potential to earn a performance fee dependent on meeting a number of key performance indicators.

The term of the EMAs was initially from 1 March 2020 to 20 September 2020. The EMA was extended in ScotRail from 20 September 2020 to 10 January 2021, with a further extension to 31 March 2021 agreed on 18 December 2020. TS continues to take revenue and cost risk and consistent with the first EMA, a fee is earned by ScotRail linked to achieving certain key performance indicators. ScotRail is in positive dialogue with TS about a further extension of the EMA after 31 March 2021.

Emergency Recovery Measures Agreements

In respect to the three Abellio UK DfT franchises the EMAs were replaced on 20 September 2020 by Emergency Recovery Measures Agreements (ERMAs). These ERMAs vary in length, depending on the operator, from 6-18 months and, similar to the EMAs, costs are borne by the DfT with an, albeit smaller, management fee earned by TOCs. The DfT linked the fee to four performance targets: operational, financial, customer service and collaboration with Network Rail. For East Midlands Railway the ERMA contract will expire at the end of March 2022 whilst for West Midlands and Greater Anglia these will end in September 2021 with an option for DfT to extend the ERMAs by a maximum of 7 rail periods of 4 weeks.

A fundamental condition on signing an ERMA was that each TOC agreed on a process to terminate their existing franchise agreement at the end of the ERMA period and the DfT has begun a process of transition to new contracts. Direct awards of potentially 4 to 6 years in duration will replace the ERMAs where the TOC meets the qualifying criteria. The expectation is that revenue and cost risks will remain with the UK government. Further details on the Direct Award process and terms and conditions are expected during the second half of 2021.

As part of the termination process, a Termination Sum is potentially payable based on the forward financial projections of the franchise in absence of the corona virus pandemic. The potential Termination Sum is capped at the undrawn PCS guarantees and the net assets of the TOC. The cash out exposure for NS is therefore limited to € 244 million of undrawn PCS guarantees for Greater Anglia and West Midlands which is within the agreed capital at risk framework. Negotiations are currently ongoing with the DfT in respect of the quantum of any potential Termination Sum and an outcome is expected later in 2021. For the purposes of the 2020 Financial Statements, full provision has been made for the potential Termination Sums still being negotiated. We note that at the time of presenting the Financial Statements Abellio is unable to quantify the reduced expectation and therefore full provision has been made based on DfT's provisional outcome.

On the 21 October 2020 the DfT issued the estimated termination sums payable by each TOC. For East Midlands Railway the DfT projected a profit-making contract and therefore no

termination sum is due. For each of Greater Anglia and West Midlands the DfT projected loss-making contracts with the full draw down of PCS guarantees required to terminate these franchises. NS fundamentally disagrees with this calculation as it bears no relation to Abellio's own models, which demonstrate that both contracts have been profitable in the past and would have remained profitable in the absence of the pandemic, with some specific but manageable challenges for the Greater Anglia contract.

The final termination sum will be determined by the DfT based on the financial status of each TOC prior to the pandemic, and assessment of their potential trajectory modelled for the remainder of the franchise term. We have engaged in an extensive and detailed process of evidence based representations to the DfT, which we believe make a strong and persuasive case that these termination sums should be significantly less. Consequently if the DfT's process is fair and reasonable and takes account of the comprehensive evidence provided to them, the expectation is the final termination sums to reduce significantly and reflect our own pre-corona pandemic forecasts of a profitable outturn. Any reduction that will follow from the final agreement with the DfT will be reflected in 2021.

Public attitudes

As mentioned above, public attitudes to travelling by train have been slow to adapt since the start of the pandemic. Although a study by the RSSB (Rail Safety & Standards Board) has shown a relatively low risk of infection on trains and in stations, the perception remains that train travel is not safe according the DfT's National Travel Attitudes Survey. Another key driver behind low passenger numbers is the fact that a significant number of major employers have agreed that staff can work from home for many months as requested by the governments. Working with the DfT Abellio continues to develop flexible and attractive ticketing solutions as part of an industry-wide response to the pandemic recovery and to facilitate easier payment methods. This includes the ongoing conversion of paper season tickets to digital Smart season tickets in West Midlands.

Williams Review

Before the pandemic the Williams Review, a Government-ordered review of the rail industry commissioned in 2018, was seeking to reform the rail industry and end the franchising model in its current form, and the latter was accelerated this year due to the corona virus outbreak with the introduction of emergency contracts. The structure and governance of the industry are set for change and the DfT has pledged to publish its proposals arising from the Review. It is thought this will result in a "guiding mind" for rail at arm's length from the government. A new body is likely to oversee the results and the infrastructure as well as letting future rail operating management contracts which are expected to involve no direct cost and revenue risks but with some financial incentives.

Stonehaven Incident

Safety is always a guiding principle of the rail industry and this was brought into sharp focus in the late summer of 2020 with the derailment of a ScotRail train at Stonehaven. The tragic incident occurred on August 12 during heavy local rainfall, when the 06:38 ScotRail Aberdeen-Glasgow service struck a landslip with the loss of two ScotRail colleagues, the driver and the conductor, and the loss of a passenger.

ScotRail is working closely with accident investigators, Network Rail and industry bodies so that the industry can learn the lessons of this tragedy and make the railway as safe as possible for colleagues and passengers. Network Rail (NR) introduced a range of additional safety measures and inspected sites with similar higher-risk trackside slopes. NR has also launched two taskforces, led by independent experts, as part of its long-term response to climate change and the challenge of maintaining its large portfolio of railway embankments and cuttings.

The line between Aberdeen and Dundee reopened on November 3, 2020, after the completion of extensive work to repair the railway.

Brexit

Brexit occurred on 31 January 2020 and a trade deal between the EU and the UK was finally agreed in December 2020. It came into effect on 1 January 2021, ending the free movement of people and goods and services between the UK and the EU. The deal ensures tariff-free trade between the UK and the EU with no limits on trade volumes however additional customs declarations will be necessary in some cases.

As a business Abellio UK is significantly insulated against any negative effects of Brexit as it has a domestic customer base, does not conduct business across borders and trades in GB pounds sterling.

However, Brexit has the potential to disrupt hiring plans, particularly in respect of agency workers, mainly bus drivers and cleaners, due to a new points-based immigration system and visa requirements.

While Abellio has a largely UK-based supply chain, the import of some supplies via mainland Europe may be impacted by new customs regulations. Abellio has been working with industry partners to identify and address potential issues regarding Brexit.

Key figures for Abellio UK rail franchises and bus services

Carrier	Revenue (€ million)	Customer satisfaction	Punctuality	Number of stations	Number of trains/buses	Number of employees
Greater Anglia	729	77%	93.0%	136	1,226	2,912
Merseyrail (Joint Venture, JV)	164	90%	97.4%	66	171	1,149
ScotRail	1,037	90%	91.9%	359	1,098	5,249
West Midlands	640	79%	88.5%	151	647	2,940
East Midlands	487	83%	93.1%	91	439	2,580
Abellio London Bus	240	-	-	-	852	2,704
Total carriers	3,296	-	-	803	4,433	17,534
Abellio UK head office	-	-	-	-	-	208
Exclusion intercompany and JV	-197	-	-	-	-	-1,149
Consolidated (incl. head office, excl. JVs)	3,100	-	-	803	4,433	16,593

Carrier	Passenger revenues (€ million)	Government contribution (€ million)	Other income (€ million)	Revenue (€ million)
Greater Anglia	268.6	345.2	115.6	729.4
Merseyrail (JV)	33.8	110.5	20.0	164.3
ScotRail	136.6	887.6	12.6	1,036.8
West Midlands	204.6	410.9	24.1	639.6
East Midlands	150.3	308.2	28.1	486.6
Abellio London Bus	-	208.2	31.3	239.5
Total franchises	793.9	2,270.6	231.7	3,296.2
Consolidated (excl. Merseyrail)	759.1	2,160.0	180.6	3,099.7

The EMAs and ERMAs have provided significant support from the UK and Scottish Governments. For Abellio UK operating companies, the additional franchise support received during 2020 through additional subsidy and reduced franchise premium totalled €1.5 billion, across Greater Anglia, ScotRail, West Midlands and East Midlands.

Financial Result

Abellio UK consolidated (in € million)	2020	2019
Passenger revenue	759.1	1,875.70
Government income	2,160.0	870.6
Other income	180.6	173.1
Revenue (excl. Merseyrail)	3,099.7	2,919.4
EBIT before non-recurring items	86.8	81.6
Non-recurring items	-701.8	-
EBIT	-615	81.6
Intercompany financial result *	-15.9	-13.9
Other financial results	15.8	-19.9
Profit before tax	-615.1	47.8
Corporation tax	0.5	-9.7
Net profit	-614.6	38.1
Minority interest	-202.8	-7.3
Net profit attributable to Abellio	-411.8	30.8
Capital investments (excl. Merseyrail)	0.2	129.3
Equity attributable to NS	-295.1	116.9
PCS guarantees provided by NS	455.4	480.3
Other guarantees provided by NS	70.9	84.1
Total capital at risk Abellio UK	231.2	681.3
PCS guarantees called on (NS portion)	84.9	89.4
Other guarantees called on (NS portion)	20.1	21.3
Total guarantees called on (NS portion)	105.0	110.7

*Intercompany financial result consists of interest on shareholder loans and guarantee fees.

Operational performance

The performance data shows an improving trend due to the fact that fewer trains were running and carrying fewer passengers during the pandemic. Delay minutes were also down in line with the punctuality (PPM*, Public Performance Measure) data in the table below. Under the ERMAs, performance is due to be measured with certain KPIs: cancellations, short formations and punctuality.

Carrier	2020	2019	Trains per day
1 Merseyrail	97.4%	96.4%	414
2 c2c Rail	96.3%	95.0%	298
3 TfL Rail	95.7%	95.5%	452
4 London Overground	94.8%	93.1%	1.205
5 Chiltern	94.0%	93.0%	312
6 East Midlands Trains	93.1%	89.4%	380
7 Abellio Greater Anglia	93.0%	89.7%	1.08
8 Great Western Railway	92.5%	89.4%	1.237
9 Southeastern	91.9%	89.5%	1.488
10 ScotRail	91.9%	88.5%	1.716
11 TfW Rail Services	91.7%	89.6%	668
Average for all TOCs	91.4%	86.9%	
12 Crosscountry	90.3%	84.6%	187
13 South Western Railway	89.8%	81.7%	1.366
14 Transpennine Express	89.8%	78.1%	237
15 London North Eastern Railway	89.8%	78.0%	113
16 Northern Trains	89.7%	81.1%	1.935
17 Govia Thameslink Railway	89.2%	85.2%	3.076
18 West Midlands Trains	88.5%	81.3%	941
19 Caledonian Sleeper	88.3%	82.7%	4
20 Avanti West Coast	86.4%	80.1%	230

- 1 This table shows the performance of the UK's franchised TOCs (MAA = Moving Annual Average) for Period 10 of the railway calendar for 2020 and 2019. 12 of these operations are franchised by DfT. ScotRail and Caledonian Sleeper are franchised by Transport Scotland and Transport for Wales Rail Ltd is franchised by Transport for Wales. MerseyRail, LOROL and TFL Rail are public sector operated concessions. LNER and Northern Trains are operated directly by DfT. The key reason for the improvement in PPM in 2020, across all TOCs, reflects the reduced volume of traffic operating on the rail network during the corona virus pandemic.
- 2 PPM is the standard industry measure of train punctuality when a service arrives within 5 minutes of time advertised, or 10 minutes for long distance services.

The table below shows the cause of delays to Abellio TOCs in 2020 as attributed to the following categories:

- NR on TOC: delays attributed to Network Rail (infrastructure) on train operating companies, including extreme weather conditions.
- TOC on Self: delays attributed to a train operating company caused by themselves.
- TOC on TOC: delays attributed to a train operating company caused by other train operating companies.

	Greater Anglia	Merseyrail	ScotRail	West Midlands	East Midlands
NR on TOC	66.4%	66.3%	61.8%	59.2%	63.7%
TOC on self	25.5%	32.5%	32.8%	30.5%	21.4%
TOC on TOC	8.1%	1.2%	5.4%	10.3%	14.9%

Customer satisfaction

The National Rail Passenger Survey by Transport Focus was suspended shortly after lockdown due to low numbers of passengers and difficulty carrying out fieldwork. The NRPS data in the table with the key figures relates to the spring 2020 survey which reached only 75 per cent of its target sample before the pandemic took effect.

Transport Focus has replaced it with a smaller survey which tracks attitudes but does not break them down by TOC. The percentage of rail passengers satisfied with their journey has ranged between 77% and 90%.

Abellio as an employer

Abellio is a major employer with more than 16,000 colleagues across our operating companies. The organisation has had to be aligned to the new ERMA/EMAs, direct awards and future concessions. Abellio was named among some of the biggest employers in the UK for its commitment to apprenticeships. The Education and Skills Funding Agency ranked Abellio 39th out of 100 top UK employers which was the highest ranked private sector transport organisation. More than 300 colleagues have started apprenticeships in the past year, in roles ranging from bus and train drivers to customer services, engineering and leadership.

Abellio continues to engage with the trade unions through maintaining professional, cordial relationships to support and engage employees. Abellio has invested in the health and wellbeing of its employees to support them through the pandemic through the provision of online sessions, access to employee assistance support and strengthening the communications and engagement with leaders and managers. Abellio has been carrying out twice yearly engagement surveys to understand how it can make Abellio an even better place to work. Abellio also established engagement forums to allow employees to have a voice in all that Abellio does.

Abellio is continuing the journey to become a diverse and inclusive workforce. Abellio has set up a forum and key actions to increase the number of ethnic minorities and women in senior management, create opportunities for young people and to increase understanding of the benefits of an inclusive workforce. The majority of our operating companies are ahead of target for the appointment of female senior managers and the ethnic diversity of new recruits, while almost a third of apprentices are from a BAME (Black, Asian and Minority Ethnic) background. Abellio has also been identifying and supporting the development of its top talent and investing in their development so we have leaders for the future. We are investing and developing our employees through providing ongoing learning and development investing in online learning programmes.

Outlook 2021

The EMA in ScotRail and ERMA contracts for the DfT operating companies have provided Abellio UK with stability in what still remains uncertain times. Our immediate priorities are to deliver against the four criteria the DfT and TS have set out, ensure that we mitigate the revenue risk in Merseyrail from any further lockdown restrictions, and have each of our business best placed to deliver for our passengers when demand for public transport is recovering from the corona pandemic impact as vaccines are rolled out resulting in restrictions being lifted.

Abellio UK will also prepare for the move from emergency contracts to Direct Awards for DfT operators. We will also prepare for further rail reform in relation to the possible establishment of the new arm's-length body likely to oversee rail infrastructure as well as the letting of future rail operating contracts. In respect to Abellio Bus, we will continue to bid strategically for routes in London and explore opportunities to expand our bus franchising offering into major metropolitan regions in England.

Greater Anglia



The highlight of 2020 at Greater Anglia (GA) has been the continued roll out of high quality, new trains across our network. Operation of all our regional routes in Norfolk, Suffolk, Cambridgeshire, plus the Marks Tey to Sudbury line in Essex, switched over to our new Stadler bi-mode trains from 1 February 2020, with new electric intercity trains taking over Norwich to London intercity services from the end of March 2020. The transition for Stansted Express services followed from late July 2020 onwards. Meanwhile testing and commissioning of our new suburban trains continued apace before the first ones entered service towards the end of the year. Customer feedback has been very positive.

It was also a good year for performance, with consistent punctuality of between

91% and 97% for most of the time from March 2020 onwards, reflecting the reduced time tables and lower passenger numbers caused by the corona virus, as well as the impact of both new trains and continued focus on effective maintenance with the rest of the fleet. The ongoing station investment programme saw the completion of the installation of new customer information systems across the network, major projects developed for key locations such as Witham and Wickford and 'Access for All' government funding secured for schemes to improve the accessibility at Bury St Edmunds, Colchester and Needham Market.

Our environmental performance improved with figures for 2019 showing carbon emissions reduced by 11%, waste to landfill down by 67% and hazardous waste down by 50%. Work with community rail partnerships (CRPs) further cemented local links and improvements, with a new CRP up and running on the Hertford East line and all CRPs gaining accreditation under the DfT's community rail strategy.

Finally, our continuous service enhancements saw independent, external recognition with Greater Anglia named 'Train Operator of the Year' at the Rail Business Awards and Norwich named 'Large Station of the Year' at the National Rail Awards (the third time in four years GA has won that award after Cambridge in 2017 and Ipswich in 2018).

GA has delivered an excellent service throughout the pandemic period, with enhanced cleaning regimes, clear and timely customer information and guidance, consistently high punctuality, timetables adjusted to suit the prevailing situation, effective collaboration with partners, and positive support for employees and proactive stakeholder updates. This effective approach has been recognised by DfT and other stakeholders.

The loss of passenger revenue from March 2020 has been compensated by income from UK government under EMA/ERMA contract variations, which is reflected in the table below.

Greater Anglia (in € million)	2020	2019
Passenger revenue	268.6	754.3
Government income	345.2	0
Other income	115.6	113.7
Revenue	729.4	868
EBIT before non-recurring items	32.9	12.1
Capital investments	-19.6	71.1
PCS guarantees provided by NS	182.4	192.8
PCS guarantees called on (NS portion)	53.8	56.7
PCS guarantees not called on (NS portion)	128.6	136.1

* *Intercompany financial result consists of interest on shareholder loans and guarantee fees to the shareholders NS and Mitsui.*

Merseyrail



The Merseyrail concession is Abellio's longest rail contract, let by Merseytravel (the Liverpool City Region's strategic transport advisor), for a period of 25 years (2003 to 2028). Merseyrail operates metropolitan services in and around the Liverpool City Region and is operated as a 50/50 joint venture with Serco.

As a result of the corona virus pandemic, the focus has been on providing a safe and reliable service to the people of the Liverpool City Region who need to travel. This has involved numerous timetable changes and changes to advice to passengers in line with UK government public health messaging.

Merseyrail continues to operate under the Concession Agreement with

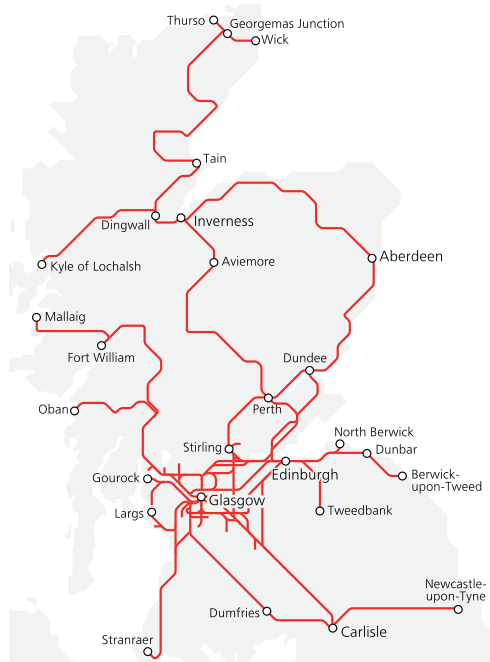
Merseytravel and during the course of the pandemic has continued to operate with revenue and cost risk. Only due to the strong profitability of the business which has been built up since 2003 and the hard work of the team have we been able to remain profitable for the year ended 31 December 2020 without additional government support for lost passenger revenue.

Merseyrail continues to work towards delivering the introduction of a new fleet of rolling stock in 2021 and 2022 and continuing to roll out smart ticketing initiatives such as platform validators at stations across the network and digital ticket products. The new fleet has been publicly procured by Merseytravel and will be delivered by Stadler.

Merseyrail continues to be one of the most punctual UK operators as measured by PPM and retained its place as the top regional rail operator – and second best overall rail operator - in the country in the Spring 2020 National Rail Passenger Survey.

Merseyrail (based on 100%)	2020	2019
(in € million)		
Passenger revenue	33.8	65.2
Government income	110.5	111.9
Other income	20.0	26.5
Revenue	164.3	203.6
EBIT	0.4	29.2
Capital investments	1.0	0.8
PCS guarantees provided by NS	-	-

ScotRail



ScotRail operates trains across the whole country of Scotland including between Scotland's 7 cities, as well as Great Scottish Scenic Railway trains in the Highlands, Borders and South West. The ScotRail network comprises more than 350 stations and 9 depots.

During the corona virus pandemic, ScotRail's priority remained the safety of passengers and employees. A number of timetable changes were brought in to comply with government public health messages and advice on travelling on public transport to allow key workers to travel and maintain a safe physical distance while they carried out their essential work. Meanwhile, there have been continued improvements for customers including the ongoing redevelopment of Motherwell and

Aberdeen stations and the transformation of Queen Street station in Glasgow, served by Abellio's £475million investment in new and upgraded trains.

Across Scotland, the punctuality and reliability of Scotland's Railway has continued to improve, meaning that ScotRail's Moving Annual Average (MAA) punctuality measure has improved to 91.9%. As a result, from the most recent independent passenger survey, nine out of ten customers are satisfied with ScotRail making them among the most satisfied of any across Britain, with the national average for customer satisfaction at 82%.

The loss of passenger revenue from March 2020 has been compensated by additional income from Transport Scotland (TS) under EMA contract variations, which is reflected in the table below. The ScotRail operation was slightly profitable under pre-corona circumstances. The corona crisis however triggered impairments on assets resulting in a non-recurring loss in 2020. The cash risk for the shareholder is limited to undrawn PCS and other guarantees of € 51 million. ScotRail is in positive dialogue with TS about a further extension of the EMA after 31 March 2021.

ScotRail	2020	2019
(in € million)		
Passenger revenue	136.6	427.6
Government income	887.6	534.7
Other income	12.6	41.2
Revenue	1,036.80	1,003.50
EBIT*	-93.1	2.5
Capital investments	9.5	22.4
PCS guarantees provided by NS	31.8	32.7
Other guarantees provided by NS	50.8	53.7
Total guarantees provided by NS	82.6	86.4
PCS guarantees called on	31.1	32.7

* EBIT includes a non-recurring loss of € 107 million (2019: nil)

West Midlands



West Midlands Trains (WMT) operates services from London Euston via Birmingham to Liverpool and across the West Midlands.

Following the first major timetable change in May 2019, WMT suffered from six months of challenging operational performance in the second half of the year 2019. This led to the agreement of a Remedial Plan between WMT and the DfT in January 2020, including a 3% compensatory discount for season ticket holders. Organisational and operational

steps taken in early 2020 led to significant improvement in performance in the run-up to the corona virus pandemic. Punctuality rose in the first quarter of 2020, from an average of 70.1% (Q4, 2019) to 79.5% (Q1, 2020) and was sitting at 88.5% by the 2020 year end helped also by the reduced timetable and lower passenger number caused by the corona virus.

WMT remains focused on delivering public transport improvements in the region, including the introduction of over 400 new train vehicles, expected late 2021 and building on improved operational performance during 2020.

The loss of passenger revenue from March 2020 has been compensated by additional income from UK government under EMA/ERMA contract variations, which is reflected in the table below.

West Midlands (in € million)	2020	2019
Passenger revenue	204.6	512.0
Government income	410.9	132.6
Other income	24.1	15.0
Revenue	639.6	659.6
EBIT before non-recurring items	18.5	39.7
Capital investments	4.2	18.3
PCS guarantees provided by NS	115.5	122.0
Other guarantees provided by NS	-	9.1
Total guarantees provided by NS	115.5	131.1
Guarantees called on (NS portion)	-	-

East Midlands



East Midlands Railway (EMR) provides a mixture of railway services across England. It includes long distance Intercity services, linking London St Pancras International with the towns and cities of the East Midlands and South Yorkshire as well as Regional services stretching from Liverpool to Norwich, encompassing the East Midlands, northern and central England.

Abellio started the EMR franchise on 18th August 2019, to run until August 2027 with a possible two-year extension at the discretion of the DfT. Upon expiry of the ERMA on 31 March 2022 a new contract duration will be determined.

Since March 2020 and the corona virus pandemic, EMR has focused on providing safe and reliable transport for those who are still travelling during this time. This includes an enhanced cleaning regime on stations, trains and workplaces to reduce the spread of corona by protecting staff and customers. In addition, EMR has introduced a number of temporary timetables in response to guidance from central Government to support the country's response to the pandemic.

EMR is pressing ahead with its plans to replace the entire fleet with new or refurbished trains across the network, including a standard fleet for EMR Regional services and the introduction of the new bi-mode (electric and diesel) fleet in 2023, known as Aurora.

East Midlands (in € million)	2020	2019
Passenger revenue	178.5	181.5
Government income	308.1	11.6
Revenue	486.6	193.1
EBIT	25.2	16.5
Capital investments	6.1	11.2
PCS guarantees provided by NS	125.7	132.8
Other guarantees provided by NS	20.1	21.3
Total guarantees provided by NS	145.8	154.1
PCS guarantees called on	-	-
Other guarantees called on	20.1	21.3
Total guarantees called on	20.1	21.3

Abellio UK Bus

Abellio London Bus (ALB) runs 852 buses on 60 London routes, 9% of the market in the capital, for the client Transport for London (TfL).

Abellio London Bus played a key role in keeping key workers moving during the pandemic, with TfL adapting services to reflect both customer demand and staff availability. A range of safety measures were introduced in the vehicles and depots, including enhanced cleaning regimes and greatly improved protection for drivers whilst in their cabs. At the outbreak of the pandemic, services were reduced to around 60% before recovering to 100% by June 2020, but with capacity limitation to recognise social distancing needs, and additional school services were introduced for the start of the new school year in September. Around 10% of the workforce, mainly drivers, were temporarily stood down as a result of the corona virus pandemic under a Government wage support scheme.

Abellio won Bus Operator of the Year at the 2020 London Transport Awards. It also introduced its first 34 zero-emission, fully-electric buses in line with the Mayor's Transport Strategy and trialled a new hydrogen bus.

Abellio Rail Replacement (ARR) provides alternative transport services – coaches, buses and taxis - to the Greater Anglia, ScotRail, East Midlands and West Midlands franchises and to Serco's Caledonian Sleeper franchise during planned and unplanned rail disruption. ARR has also been awarded the contract for similar services to Transport for Wales from 2021. Event Connect supplies ground transport solutions to major sporting events, tour operators and corporate clients. ARR continued operating through the lockdown period with reduced volumes to reflect lower customer numbers and social distancing measures on coaches. The Event Connect business has been severely affected due to the downturn in the leisure sector.

Abellio London Bus (in € million)	2020	2019
Government income	208.2	191.7
Rail Replacement (Intercompany)	31.3	31.4
Revenue	239.5	223.1
EBIT	9.2	11.1
Capital investments	2.5	5.6
Guarantees provided by NS	-	-

Abellio Germany



Current market context

In Germany the rail passenger transport market is dominated by Deutsche Bahn and its regional transportation subsidiary DB Regio, with a market share of some 60.6%. Abellio is one of the largest private operators of regional rail passenger transportation services behind Deutsche Bahn with a market share of some 6.9%. Regional public transportation in Germany is subsidised by the federal and the state governments through grants in contrary to public long-distance transportation that is not subsidised.

By increasing the funding of regional public transportation services ('regionalisation fund') in 2020, the German government is supporting the financing of regional public transportation. This will give the 16 federal states the opportunity to order more public transportation, make rail transport more attractive and thus achieve the goal they have set themselves of doubling the number of passengers by 2030. An important development is the implementation of the "Deutschlandtakt", a logistics plan that will see trains run between major cities every half hour. The German state and Deutsche Bahn will invest € 86 billion by 2030 to modernise the rail network. This will increase the capacity of rail infrastructure in the longer term but will cause lots of construction works in the short term with massive impact on both passengers and train operating companies.

The year 2020 has been exceptionally difficult for rail operations in Germany due to the corona virus pandemic. The Government and federal states responded to the outbreak by implementing regional lockdowns for several months. During these lockdowns the use of the railways was limited to essential travel for key workers only. The local public transportation industry in Germany expects a loss of around € 5 billion due to the corona virus pandemic. The individual federal states are in charge of the local public transportation. At the end of May 2020 the individual federal states announced that they will contribute € 2.5 billion to the public transport rescue package on top of the German government contribution which also amounts € 2.5 billion. As a result of the rescue package Abellio Germany expects to be compensated for any loss resulting from the corona virus pandemic as Abellio has concluded gross contracts with the authorities. Abellio Germany has no revenue risk and therefore the financial impact of corona has been relatively limited. Abellio has claimed compensation of additional costs relating to the pandemic and has received first payments in 2020.

German rail concessions

Abellio Germany was founded in 2004 as a regional rail company in Essen. Today Abellio operates 50 lines in 9 rail concessions in 9 federal states across 3 regions. The region West includes Abellio Rail Nordrhein-Westfalen GmbH (ABRN) in North Rhine-Westphalia (NRW) and WestfalenBahn GmbH (WfB) in North Rhine-Westphalia and Lower Saxony. ABRN operates the 5 concessions S-Bahn Rhein-Ruhr (SBRR), Ruhr-Sieg-Netz (RSN), Der Münstener (S7), Niederrhein-Netz (NRN) and Rhein-Ruhr Express (RRX) and WfB operates the Emsland and Mittelland (EMIL) concession. In Central Germany, Abellio operates the Saale-Thüringen-Südharz network (STS) and the Sachsen-Anhalt diesel network (DISA) with Abellio Rail Mitteldeutschland GmbH (ABRM). In southern Germany it operates Lot 1 of the Stuttgart network (STN) with Abellio Rail Baden-Württemberg GmbH (ABRB). In addition, Abellio in Germany owns the cleaning and security services company PTS, located in Essen.

Franchise	Company	Start	End	Passengers per day (approx.)	Annual train kilometres in millions	Punctuality up to 5 min.	Trains
Ruhr Sieg Netz	ABRN	2019	2034	17,000	3.4	94.7%	18
Der Müngstener (S7)	ABRN	2013	2028	13,000	1.5	92.5%	9
Niederrhein-Netz (NRN)	ABRN	2016	2028	19,000	2.4	92.2%	22
Rhein-Ruhr Express (RRX)	ABRN	2018/2020	2033	40,000	6.2	87.2%	29
S Bahn Rhein-Ruhr (SBRR)	ABRN	2019	2034	80,000	7.1	92.3%	29
Emsland-/Mittelland-Netz (EMIL)	WfB	2015	2030	43,500	5.4	93.8%	28
Saale-Thüringen-Südharz-Netz (STS)	ABRM	2015	2030	22,000	8.7	95.2%	35
Dieselnetz-Sachsen-Anhalt (DISA)	ABRM	2018	2032	19,000	9	95.1%	54
Stuttgarter Netze (STN)	ABRB	2019/2020	2032	25,000	6.8	82.4%	52
Total				278,500	50.5		276

*estimate pre-corona

In Germany, Abellio only has gross contracts with the local authorities (PTAs), which means that Abellio Germany is paid for its services per train kilometre. The revenue risk is allocated to the PTAs. In addition, the inflation risk of certain costs (e.g. personnel costs and energy costs) is hedged by indexation formulas in the contracts with the PTAs. Therefore, the risk profile of gross contracts is relatively low when the operating performance is solid. However, the reduction of working hours and additional restrictions for the employer in planning working hours, as well as the possibility for the employee to opt for a wage increase or additional vacation days in new tariff agreements, results in an increased need of employees (mainly train drivers and conductors). The consequential increase in training and staff costs is not adequately covered by the inflation and personnel cost index.

A working group within the PTA association BAG/SPNV has been discussing an adjusted index for more than a year, which index should adequately reflect developments in personnel costs in the compensation. The presentation of the new index has been postponed four times in 2020 and is now expected in March 2021. The labour market in Germany is difficult. Experienced train drivers are scarce, and it is not easy to recruit qualified specialists as career changers in the industry. This leads to higher recruitment and training costs.

In connection with the high level of track construction works, the lack of personnel has led to increased penalties for lower punctuality and train cancellations by the PTAs. In future it will be crucial to work together with the PTAs and the state governments to solve the problems of the German public rail industry regarding the index and the penalties for low punctuality that cannot be influenced by operators such as Abellio. The general conditions existing at the time of the submission of the European tenders have changed so drastically due to the reasons mentioned above that the rail companies consider adjustments of compensation and penalty mechanisms in the current contracts necessary. If no solution is

found, the operation will remain lossmaking and it will be difficult to achieve a reasonable profitable result for the German business. It is therefore crucial for Abellio Germany's strategy to reach an agreement with its PTA's to receive structural additional payments to compensate for increased personnel and training costs, as well as an adjusted penalty regime, whereby fines are only imposed for factors that can be influenced by train operators.

Abellio Germany has won several concessions in 2015 and 2016 and has completed all mobilisations. In the mid of 2020 the last of these start-ups were set into operation. This comprises the start of the RE1 at the Rhein-Ruhr-Express (RRX) in North Rhine-Westphalia and the route Stuttgart to Tübingen in the Stuttgarter Netz (STN). Due to the delayed delivery of trains by the manufacturer, Abellio had to implement replacement concepts at STN which led to a high complexity of operations and low punctuality. Abellio has been compensated for additional costs. At the end of 2020 Bombardier delivered 46 of the 52 Talent 2 trains ordered.

The current strategy is to optimise already contracted services and pursue opportunities that are regionally well connected to our current business activities and will offer synergy potential. Preferably the cross-border traffic between the Netherlands and Germany is expanded and improved. This supports the strategy of NS and is an attractive prospect for Dutch passengers, but only if the contracted fee enables Abellio Germany to earn a reasonable return over time.

Financial result

In 2020 Abellio Germany achieved a revenue of € 744 million from its operations which will grow to approximately € 800 million in 2021. The negative EBIT of € -127 million (2019 € -24,5 million) is due to:

1. exceptional impact of € 84 million from impairment of assets because the carrying amount of these assets exceeded the estimated realisable value. The impairment is related to the issues in the German rail market rather than the corona virus outbreak;
2. collective tariff agreements with the unions resulted in reduced working hours, which require hiring more employees, higher personnel costs and additional recruitment and training costs;
3. high penalties for cancellations, lower punctuality and lower quality (€ 36 million), mainly due to an increased level of track works and lack of staff. In addition, there were several force majeure events leading to cancellations and delays beyond control of the operators;
4. start-up problems of new concessions (SBRR, RRX and STN) and issues due to late delivery of new trains and start-up issues with delivered new trains had a negative impact on the 2020 operational performance and financial results.

The financial performance of Abellio Germany for the period ending 31 December 2020 is as follows:

Abellio Germany consolidated	2020	2019
(in € million)		
Government income	685.9	501.7
Other income	58.5	32.5
Revenue	744.4	534.2
EBIT before non-recurring items	-43.2	-24.5
Non-recurring items	-83.9	-
EBIT	-127.1	-24.5
Intercompany financial result	-5.1	-5.3
Other financial results	-14.4	-13.2
Profit before tax	-146.6	-43
Corporation tax	-0.9	10.3
Net profit	-147.4	-32.7
Capital investments	9.0	27.9
Equity attributable to NS*	-16.7	61.2
Other guarantees provided by NS	-	-
Total capital at risk Abellio Germany	-16.7	61.2

*The negative equity position in 2020 is to be seen in conjunction with subordinated loans from the direct shareholder Abellio Transport Holding BV

Operational performance

In June 2020, Abellio in Baden-Württemberg started the third and last phase of the Stuttgarter Netz (STN) concession. Due to a high utilisation of the infrastructure at Stuttgart main station combined with a renovation, the delay in the delivery of new trains and a shortage of skilled work force, Abellio encountered start-up issues for STN. Abellio in North Rhine-Westphalia simultaneously launched the second and last phase of the concession Rhine-Ruhr Express (RRX). Similar to STN, in 2020 Abellio had start-up issues with SBRR (started in December 2019) and RRX. The issues are mainly due to the lack of train drivers and a significant number of infrastructure constructions. These constructions are causing delays and cancellations that could not be influenced but nevertheless led to severe penalties. During the year mobilisation costs in the amount of € 4.6 million (2019 € 9.5 million) have been expensed prior to the start date of new concessions.

In Central Germany, the STS concession entered its fifth year of operation in December 2019. Despite much infrastructure work by DB Netz, the performance of ABRM on the STS network was good with an average punctuality of 95.1%, and punctuality in DISA improved during the year, resulting in an average punctuality of 95.0%.

In the quality reports of the Regional Transport Association of Westphalia-Lippe (NWL), Abellio has consistently been on the podium as a gold and silver medal winner in recent years including 2020. The Verkehrsverbund Rhein-Ruhr- (VRR) also consistently gives Abellio top marks in its customer satisfaction ranking. RE 11 (RRX) with a punctuality rate of 94.4% is the most punctual line of the RE lines.

Customer satisfaction

The company also received good remarks from passengers in terms of seat availability, vehicle condition, exterior cleanliness, and passenger information. In addition, passengers feel safe on Abellio trains. Accordingly, the company occupies the first five places in the ranking of 49 lines. The general customer satisfaction with the company increased and, according to VRR, made Abellio once again the most popular rail company for passengers in North Rhine-Westphalia in 2019, which is awarded in 2020.

Organisation and staff

Abellio Germany's head office is based in Berlin with subsidiary offices in Halle, Bielefeld, Hagen and Stuttgart. Abellio has collective tariff agreements with the unions Gewerkschaft Deutscher Lokomotivführer (GDL) and Eisenbahn Verkehrs Gewerkschaft (EVG). With the mobilisation of several new networks and the consequences of the collective tariff agreements with the unions Abellio had to make great efforts in an empty labour market in Germany in order to hire enough staff to comply with the contract requirements.

Outlook for 2021

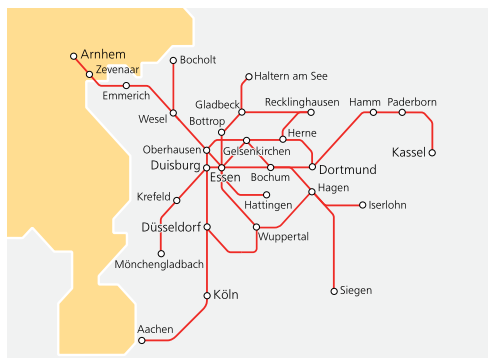
Surveys and analysis regularly confirm Abellio's high reputation in the individual regions. In quality surveys, Abellio's companies consistently achieve top rankings. But the financial situation does not reflect these good operating results. There are mainly external reasons for this, irrespective of the corona pandemic. Challenges facing the industry are caused by increased personnel costs that are not covered by the PTA's as well as the high penalties for causes outside the control of the operators that put pressure on profitability. Therefore, after a phase of growth, a phase of consolidation and structural realignment of the group is now following.

First and foremost it is crucial for Abellio Germany's strategy to reach an agreement with its PTAs to structurally change the compensation and penalty regimes for the existing concessions. We expect to reach this agreement in 2021. To further improve profitability, an internal program has been initiated that should contribute to better results. In 2021 a Germany-wide functional structure will be implemented with one central management team. As a next step Abellio aims to merge the four regional companies into one company called Abellio Rail GmbH in 2021 with the aim to create synergies and to optimise and harmonise existing processes. The service company PTS GmbH will not be impacted by the new structure. In the future, Abellio intends to support the shareholder strategy for example by improving and expanding cross border connections.

German operating companies

Abellio Germany	Revenue	Number of employees
	(in € million)	(end of December 2020)
Abellio Rail Nordrhein Westfalen	261.5	1,052
Abellio Rail Central Germany	242.0	965
Abellio Rail Baden-Württemberg	114.5	384
WestfalenBahn	119.3	295
PTS	6.9	396
Other	0.2	35
Total	744.4	3,127

Abellio Rail NRW GmbH



Abellio Rail NRW GmbH (ABRN), headquartered in Hagen, is one of the largest private rail companies in North Rhine-Westphalia.

ABRN currently offers a service volume of around 20.6 million train kilometres and carrying 62 million passengers per year. With the Ruhr-Sieg-Netz, the S-Bahn Rhein-Ruhr and the Rhein-Ruhr-Express, ABRN sets the pace for millions of commuters on the Rhine and Ruhr.

Abellio is also active in the cross-border Lower Rhine network between Arnhem and Düsseldorf and connects the Dutch province of Gelderland with the most populous German state. 1,052 colleagues work for the North Rhine-Westphalian company, which has received several awards for its service quality. ABRN started the second phase of the Rhine-Ruhr Express with the operation of the RE 1 line in June 2020, which connects the cities in North Rhine-Westphalia from Dortmund to Aachen.

Abellio Rail Mitteldeutschland GmbH

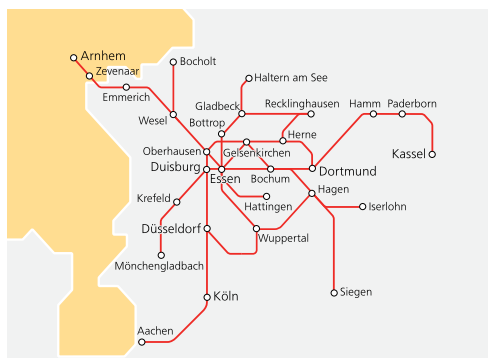


Abellio also plays an important role in Central Germany. Since 2015, Abellio trains are running on the Saale-Thüringen-Südharz (STS) electric network and since December 2018 in the Dieselnetz Sachsen-Anhalt (DISA) network. Thousands of passengers are now able to travel with Abellio in the Harz and Börde regions and as well between the major cities of Erfurt and Magdeburg.

The large-scale construction works at the two major hubs of Halle and Köthen in Mitteldeutschland led to great difficulties

in planning, unpunctuality and penalties.

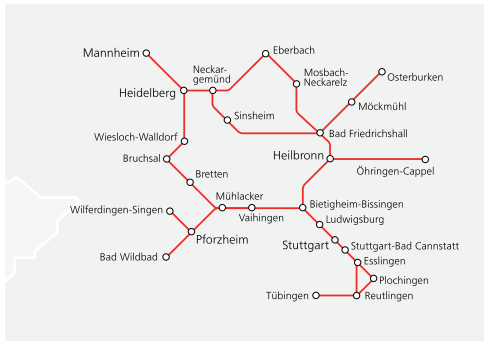
WestfalenBahn GmbH



The company is based in Bielefeld and connects the cities of Braunschweig and Hannover in Lower Saxony with Bielefeld and Rheine in North Rhine-Westphalia. From Münster there is a direct connection via Meppen and Leer to Emden at the North Sea. The WestfalenBahn expanded its train service between Hannover and Braunschweig. On Sundays there is also a half-hourly service between the two largest cities in Lower Saxony. This corresponds to

almost 1,000 additional trips per year.

Abellio Rail Baden-Württemberg GmbH



The company is located in Stuttgart. On June 9, 2019, the first phase, on December 8, 2019 the second phase and on June 13, 2020 the third and final phase of the concession were put into operation.

The train manufacturer was only able to deliver a very limited number of the 52 new trains ordered to Baden-Württemberg, so that several replacement concepts with third-party

vehicles had to be used. Passengers and stakeholders have been patient with Abellio for several months after the start of the concession. However, as the manufacturer was still unable to deliver sufficient new trains, passenger complaints increased and the PTA, politicians and media reported increasingly critically on the bumpy start of the operation.

In Pforzheim, a three-track workshop with a total length of 120 meters and sidings for the Stuttgart network was put into operation at the end of 2019. This city in Baden-Württemberg near Stuttgart has a long tradition of trains and is ideally located within the network.

Financial performance

Finance in brief



The COVID-19 crisis has a significant impact on NS's financial performance. NS posted revenues of €6,601 million in 2020 (2019: €6,661 million). This amount includes a compensation of €2,367 million paid by the UK and German governments to keep our trains running despite the significant drop in passenger numbers due to the COVID-19 crisis.

Last year, NS invested €548 million, mainly in the procurement of new trains and upgrades of existing trains. NS posted a negative result from operating activities of -€2,443 million (2019: €287 million), with an associated net loss for 2020 of -€2,581 million (2019: €215 million). The result from operating activities includes an exceptional loss due to an impairment and a provision for onerous contracts of €2,232 million as a result of deteriorated business prospects caused by the impact of COVID-19 on the rail sector.

(in millions of euros)	2020	2019
Revenue	6,601	6,661
Result from operating activities before impairments and provision for onerous contracts	-111	287
Impairments and provision for onerous contracts	-2,332	0
Result from operating activities after impairment and provision for onerous contracts	-2,443	287
Net financing result	-21	-51
Result before income tax	-2,464	236
Income tax	-117	-21
Result for the reporting period	-2,581	215
Minority interests	-203	-7
Result attributable to the shareholder	-2,378	208

Operating revenue

Revenue	2020	2019
The Netherlands	2,757	3,208
The United Kingdom	3,100	2,919
Germany	744	534
Total income	6,601	6,661

Revenue in the Netherlands (€2,757 million in 2020, €3,208 million in 2019)

Revenue Netherlands	2020	2019
Revenue from rail transport	1,539	2,661
Public transport availability payment	818	0
Station development and operation	400	547
Total income	2,757	3,208

Revenue from passengers in the Netherlands decreased by €1,122 million as a result of the drop in passenger numbers. The number of passenger-kilometres fell by 55% compared with 2019. In addition, revenue from Stations operations declined by €171 million, which is mainly attributable to the lower income from retail activities and OV-fiets as a direct consequence of the drop in passenger numbers. At the request of the government we continued running our trains, even after passenger numbers had plummeted to a mere 10% of the normal volume. The government partly compensated us for this by offering an 'availability payment' (*beschikbaarheidsvergoeding*) of €818 million. That payment has been recognised under revenues in the financial statements. Over the period from March to

December 2020, it amounts to a 93% compensation of the costs net of revenues achieved. In November we received an 80% advance on the availability payment. As for station activities in the period March–December, NS recognised a contribution towards wage costs of €24 million (under the Temporary Emergency Bridging Measure for Sustained Employment (NOW)).

Revenue of Abellio UK (€3,100 million in 2020, €2,919 million in 2019)

Revenue UK	2020	2019
Revenue from rail transport	700	1,826
Grants	2,160	870
Revenue from bus transport	240	223
Total revenue	3,100	2,919

In the United Kingdom, too, passenger numbers plunged to less than 10% of normal levels after the COVID-19 outbreak and the introduction of government restrictions. Following the easing of those restrictions in July, passenger volumes recovered to around 20% of normal levels. However, in December the numbers dropped once again to less than 10% of normal levels. Immediately after the COVID-19 outbreak, the UK authorities acted fast and effectively by assuming the turnover and cost risks from train operating companies and offering 100% compensation of the costs incurred plus a management fee. In all, over 2020 Abellio UK received €1,525 million in compensation for the loss of passenger revenues. The growth in revenues for Abellio was mainly driven by the East Midlands franchise contract, which started in August 2019.

Revenue of Abellio Germany (€744 million in 2020, €534 million in 2019)

Revenue from Abellio Germany grew by €210 million to €744 million (2019: €534 million). This growth was primarily driven by the start of the Stuttgarter Netz, Ruhr-Sieg Netz 2 and S-Bahn Rhein-Ruhr franchise contracts in the second half of 2019, and phase 2 of Rhein-Ruhr-Express and Stuttgarter Netz in 2020. In Germany, the direct financial impact of COVID-19 on revenues has remained limited because the clients – the public transport authorities – bear the loss-of-income risk. The start of the last phase of Rhein-Ruhr-Express and Stuttgarter Netz means that the last franchise contracts won in 2015 and early 2016 are now operational. Abellio has not won any new franchise contracts since 2016, but instead has focused on implementing existing franchises. Abellio Germany's revenue has grown from €77 million in 2015 to €744 million in 2020.

Operating expenses

Costs in the Netherlands decreased by €72 million. Despite the inflow of new trains and investments in IT solutions, resulting in higher depreciation costs, NS has managed to reduce the costs it can influence directly, by taking a series of measures. The launch of new franchises pushed up the costs in the United Kingdom and Germany by €495 million and €229 million respectively. In the United Kingdom, the Group received a contribution of €330 million for its Greater Anglia franchise, which was deducted from the franchise fee received. The company also recognised a one-off expense of €2,332 for impairment and a provision for onerous contracts. This expense largely results from the impact of COVID-19 on our future operations. In the Netherlands, we recognised an impairment for our main rail network franchise of €1,562 million, which is a direct consequence of the lower projected revenue from passenger transport over the period through 2024. Abellio recognised an expense of €702 million for impairment of assets in the United Kingdom and for a provision related to the expected termination of several franchise contracts and their conversion into a

new type of contract in the United Kingdom under which the UK government will assume most of the turnover and cost risks. In Germany, we recognised an impairment of assets of €68 million, which equals the amount by which the estimated recoverable amount of the German franchises falls short of their carrying amount. The expected future income is insufficient to cover all costs.

(in millions of euros)	2020		2019	
	€	%	€	%
Wages, salaries and social security charges	2,250	25	2,125	33
Other personnel expenses	90	1	75	1
Staff hired in	114	1	105	2
Depreciation, amortisation and impairments	904	10	823	13
Use of raw materials, consumables and inventories	463	5	534	8
Own capitalised production	-137	-2	-147	-2
Subcontracted work and other external costs	747	8	634	10
Infrastructure levies and franchise fees	1,515	17	1,495	23
Other operating expenses	768	9	738	12
Total operating expenses before exceptional items	6,714		6,382	
Impairments and provision for onerous contracts	2,332	26	0	0
Total operating expenses	9,046	100%	6,382	100%

Underlying result from operating activities

Our financial position and results need to be sound if we are to achieve our ambitions and keep train fares affordable. We should be able to achieve healthy returns by ensuring good operational performance and high levels of customer satisfaction. This will also enable us to keep investing in new rolling stock and thus serve the public interest. The development in the underlying result from operating activities is a good yardstick for assessing whether NS is able to achieve healthy returns on its business operations. The underlying result shows the result from operating activities after eliminating exceptional items. Due to COVID-19, the underlying result decreased by €2.7 billion to end the year with a negative result from operating activities of -€2.4 billion. Needless to add, this is not sufficient for us to achieve our ambitions. Our primary focus, therefore, is on getting passengers back into our trains and at our stations as soon as the situation allows, and on scaling down to regain our financial health, so that we can keep train fares affordable.

(in millions of euros)	2020	2019
Result from operating activities	-2,443	287
Of which abroad	-742	55
Settlement of various claims	9	5
Remarketing fee for Fyra		-21
Availability payment	-818	
Temporary Emergency Bridging Measure for Sustained Employment (NOW) scheme	-24	
EMA and ERMA Abellio UK	-1,525	
WW II compensation	5	47
CLE mechanism		-4
Provision for onerous contracts and impairment Abellio UK	702	
Impairment Abellio Germany	68	
Impairment main rail network contract	1,562	
Provision for reorganisation	31	
Repayment of ACM fine received		-41
Other	3	2
Underlying result from operating activities	-2,430	275
Of which underlying result from foreign operations, excluding impact of IFRS 16	-1,489	29

Exceptional items in 2020 mainly concern COVID-19-related support measures, the recognition of impairments in the Netherlands, the United Kingdom and Germany and the provision for possible termination fees in the United Kingdom.

In 2019, exceptional items mainly concerned the Fyra remarketing fee, a €47 million provision for individual compensation for victims of WWII transports, and repayment of a fine previously imposed by ACM.

Taxation

Income tax

We have calculated our corporate (income) tax liability on the basis of the applicable tax rates, taking account of the tax rules and the valuation of temporary differences.

The effective tax rate for the profit before corporate (income) tax was -4.7%, compared with 8.9% in 2019. Despite the considerable loss before tax in 2020, the tax burden amounted to €117 million (2019: €21 million). This burden and the difference in tax rates can be explained, in particular, by the write-down of deferred tax amounts due to the lower expected future profit in the Netherlands and Germany.

Other tax information

Payroll tax is a tax that NS, as the employer, withholds from the salaries of its employees and then pays to the Tax and Customs Administration. In 2020, the Tax and Customs Administration granted a deferral of payroll tax due. NS's costs are largely subject to the high VAT rate. NS can set off the VAT charged against the VAT that it has to pay on its sales.

Most of NS's sales are taxed at the lower VAT rate or are zero-rated. In the United Kingdom, the VAT rate on the sale of train tickets is zero. The taxable profit is liable to corporate income tax. The amounts paid or received are shown in the table below, in millions of euros.

Overview of taxes per country in € million (minus sign refers to paid taxes)

	Value-added tax		Wages and salaries tax		Corporation tax	
	2020	2019	2020	2019	2020	2019
The Netherlands	12	-108	-104	-425	0	0
The United Kingdom	340	336	-263	-232	-1	-10
Germany	77	51	-16	-13	0	1
Total	429	279	-383	-670	-1	-9

Financing

The net cash flow from operating activities was €914 million (2019: €1,146 million). Despite the negative result for the reporting period, this positive cash flow can be explained by the level of the provisions created and the impairment (€1,733 million) that were charged to the result and by the €273 million increase in operating capital (2019: €87 million increase). The tax deferral granted means that the negative operating capital will increase. In November, NS received 80% of the availability payment for 2020 (€619 million). The remainder (€196 million) will be disbursed in 2021 and has been recognised as an asset.

Under the Emergency Measures Agreement, Abellio UK received an advance payment from DfT to finance its operations. This had a one-off positive impact on cash flow of approximately €150 million.

The cash flow from investment activities was €602 million (2019: €750 million). This mainly concerns capital expenditure of €548 million on rolling stock and ICT projects, loans granted (€34 million) and expansion of the NS Insurance investment (€4 million).

The net cash outflow from financing activities was €25 million (2019: outflow of €511 million), due to the redemption of lease commitments (€482 million) and net amounts drawn under a number of credit facilities totalling €507 million (2019: redemption of €54 million). In 2020, in view of the existing economic uncertainties the shareholder renounced the final dividend for 2019 of €72 million. In 2019, the shareholder received an interim dividend of €37 million.

The above resulted in a positive cash flow of €337 million (2019: €115 million negative).

Financial position

NS's solid financial position deteriorated sharply over the past year. This is reflected in the structure and composition of the available capital, and in the available cash resources including any committed credit facilities. In October, Standard & Poor's (S&P), a leading credit rating agency that investigates the financial position of companies, lowered the credit rating of NS Groep NV from A+ to A with a negative outlook. This rating is based on an underlying credit profile of bbb, raised by three notches given that the Dutch State is our sole shareholder.

The estimated long-term impact of COVID-19 on the business has been factored into the financial forecasts for the coming twelve months. At year-end 2020, cash resources available in the Netherlands amounted to over €600 million. In addition, NS has access to a credit facility of €645 million and entered into financing agreements in December covering an amount of over €300 million. For further details, see the going concern section in the financial statements.

Equity and balance sheet total

At the end of the year under review, equity was €1,179 million (2019: €3,781 million). The net loss of €2,581 million has been recognised in the general reserves and explains the drop in equity, in particular. The return on equity was 37% negative in 2020 (2019: 5.6% positive). Solvency, at 14%, was much lower than in the previous year (2019: 40%). The decrease in total assets (€8,155 million at year-end 2020, compared with €9,448 million at year-end 2019) is due in particular to the recognition of the impairment of assets in the result.

	2020	2019
Concerning the capital position		
Capital base/total assets	14%	40%
Current assets/current liabilities	0.69	0.76
Working capital (in millions of euros) *	-1,181	-901
Total assets (in millions of euros)	8,155	9,448
Concerning profitability		
Profit for the period/average equity (ROE)	-37.00%	5.60%

* Working capital: Current assets (excl. cash and cash equivalents) -/- current liabilities (excl. loans, provisions and RC credit)

2021 and beyond

While in previous years we had to make every conceivable effort to facilitate the growth in passenger volumes, the challenge has now shifted to winning passengers back, recovering passenger volumes and rebuilding our results and our financial position. Affordable train fares, high-quality operational performance and satisfied customers remain central to everything we do.

NS wants to be able to continue providing world-class mobility services now and during the subsequent franchise period from 2025: always accessible, always sustainable and always affordable. To that end, we will continue innovating and investing in new trains, even more convenient payment options, propositions to match evolving customer needs and passenger behaviours, and world-class stations that serve as mobility hubs. Despite the losses that NS will incur over the years ahead as a result of the downward adjustment of passenger forecasts, we will continue to invest to make these ambitions come true. The amounts invested will however be adapted to the changed circumstances and outlook. As a result, in the period ahead we will devote a great deal of attention to scaling down our organisation in order to adapt our costs, products and services to this new reality. Even after the virus has been overcome, the change in travel behaviours will persist and it will take years before passenger numbers have fully recovered. In order to balance our cost level with these new prospects, NS has prepared a cost-saving programme worth €1.4 billion covering the period through 2024. Our important social function is a major consideration in how we design and provide services for passengers. If we are to continue performing that social function, financial agreements are essential.

NS Group

Report of the Supervisory Board



In mid-March, the COVID-19 outbreak in the Netherlands plunged the country into a deep crisis. The extremely sharp drop in passenger numbers took a heavy toll on our company. Due to the crisis, the activities of the Supervisory Board were very different than in normal years in terms of scope, nature and intensity.

Over the past year we held frequent and intensive consultations, both internally and with the Executive Board, the Ministry of Finance (NS's shareholder) and the Central Works Council. Apart from the COVID-19 crisis, these consultations also concerned a number of serious, fatal accidents. In addition, the Supervisory Board took time to consider other important issues, such as the adapted strategy in light of COVID-19, the railway and station structure and changes in the Executive Board.

The COVID-19 crisis

NS's performance in 2019 was unique in several respects. We transported more passengers than ever before, and customer appreciation figures and our financial situation were very satisfactory. We managed to attain virtually all our KPIs, thanks to the commitment of all our employees. In the first few months of 2020, this rising trend in our performance over the past few years looked set to continue as strongly as ever. Operational and financial performance figures were quite positive. Then COVID-19 struck, marking a turning point for our organisation. People stopped travelling practically overnight. At the government's request, NS maintained the existing service and timetable, adjusted to current circumstances. The Supervisory Board is impressed by the way in which NS employees continued to perform their tasks in a professional manner on our trains, at our stations and at home. Since the outbreak of COVID-19, we have held frequent consultations with the Executive Board (mainly online) to keep abreast of current developments as well as to provide advice and supervision, where necessary, on crisis management issues. It goes without saying that we held many and intensive discussions with the Executive Board, the Central Works Council and the shareholder.

The effects of the crisis are felt in many areas, including finance and operations. The Dutch government provides an availability payment (*beschikbaarheidsvergoeding*) to compensate in part for the costs in connection with the Dutch main rail network franchise. Other countries are taking a variety of measures to support service providers. It is uncertain what the long-term consequences will be, for how long and in what form the support measures will remain in effect and when passenger numbers will return to normal. This is why it is also incumbent on NS itself to formulate proposals on how to slim down and become more agile.

Strategy

The COVID-19 crisis erupted not long after NS had presented its strategy entitled 'Keeping the Netherlands accessible in a sustainable manner, for everyone'. That strategy rests on a strong and vigorous network, stations as hubs for mobility and quality of life, and flexible travel options supported by digital tools that give passengers control over their entire journey. Within that context, last year we commissioned new trains, opened new and modern stations and upgraded the NS App with features such as the *Treinwijzer*. Even so, the COVID-19 crisis somewhat overshadowed the launch of our new strategy. While new, the strategy is characterised by a familiar focus on passengers, high-quality services and an excellent and safe door-to-door product across modalities. These remain our top priorities.

Main rail network franchise

The core of our strategy for the past years – high-quality performance for passengers, resulting in financially healthy operations – forms the basis of the government's proposed decision to award the main rail network franchise to NS. We all did our very best at NS to achieve this. When NS passed the midterm review it earned a performance bonus of €6 million. A similar amount was divided among the employees. We are also pleased that NS and ProRail will remain jointly responsible for the stations, as this will allow us to ensure the best possible passenger facilities and optimise passengers' travel experience.

Safety

Sadly, in 2020 two serious accidents occurred at NS involving the loss of lives. In May, a colleague died in an accident at an uncontrolled level crossing near Hooghalen. We are still awaiting the conclusions and recommendations of the investigation. The Supervisory Board supports the efforts of ProRail and NS to take permanent measures to improve safety at and around level crossings. In August, two colleagues and one passenger died, and six passengers were injured, in a derailment accident in Scotland, caused by a landslide following heavy rainfall. We are awaiting the results of the official investigation that is being carried out in the United Kingdom. Early in 2020, a DDZ train derailed in The Hague. The investigation report includes recommendations of a technical and organisational nature. A special programme, Risk Management, Deviations and Adaptations - Improvement Through Quality (also known as RAAK), has been launched to address organisational issues that emerged from the DDZ investigation, and reduce the risk of safety incidents.

Following an investigation into operational instability, the DDZ was temporarily decommissioned in December. We initiated an investigation to find out what causes this problem and under what conditions DDZ rolling stock can be safely used once again. The Supervisory Board carefully considered all the details of the derailment incident and supports the recommendations from the programme. For the Supervisory Board, too, passenger safety is of paramount importance, and a permanent item on the agenda. It goes without saying that we extensively discussed these accidents and the measures taken in response.

Abellio

The performance and positioning of Abellio are a regular item on the agendas of the Supervisory Board and the Executive Board. The Supervisory Board regularly discusses the COVID-19 situation in the United Kingdom and Germany. In the United Kingdom in particular, the pandemic has had a considerable impact on performance and financial results. Temporary emergency agreements have helped to compensate the enormous loss of revenue from passengers. It has since become clear that the existing franchise contracts will be terminated and replaced by a system of management contracts, establishing a new balance between risks and returns for carriers, the government and taxpayers. The UK government has made termination of the contracts conditional on the payment of termination fees. The NS management however disagrees with the provisional amounts imposed, believes they are unreasonable and unfair, and is engaged in consultations on the matter. The Supervisory Board is keeping close track of these developments and supports the management in its attempts to make the Department of Transport reconsider its decision.

The Supervisory Board also carefully monitored the situation in Germany over the course of the year. There, the direct financial impact of COVID-19 has remained limited because the German franchising authority bears the loss-of-income risk. However, due to several other external factors, such as current developments on the German labour market, the CLA and increased maintenance works, operations on the German rail network have been difficult, as in the previous year. Abellio is continuing its consultations with the German public transport authorities on compensation for these external factors. The Supervisory Board expects that clarity will be provided in the short term as to the additional compensation required to cover the costs of operations.

From a financial perspective, the risks of our international operations are within the boundaries of the capital-at-risk agreements made with NS's shareholder, the Dutch Ministry of Finance. Apart from COVID-19, a range of other external factors have an impact on our operations – from the introduction of new trains and Brexit to the study into the structure of the franchise system in the United Kingdom. As a result, the conditions in which we operate are in a constant state of flux. We consult with the Executive Board on both the short-term consequences of all those developments and their effects on our long-term strategy.

Financial results

NS registered a net loss attributable to the shareholder of -€2,378 million this year, compared with a profit of €208 million in 2019. The net loss results in a sharp decrease in equity and solvency. For a large part, the net loss is due to the impairment and the provision for onerous contracts in the amount of €2,232 million. The impairment points to a series of major challenges awaiting NS in the years ahead, requiring the company to adapt to the changed circumstances resulting from the COVID-19 pandemic. This will have significant consequences for the organisation and for our planned investments. At the same time, NS will have to continue investing in order to meet the strict quality requirements imposed by the franchising authority and by our passengers. This represents a huge challenge as to our ability to maintain the current level of service without external financial support. Over the course of the year, the Supervisory Board critically assessed the results on various occasions and discussed them with the external auditor.

Corporate governance

Changes in the Executive and Supervisory Boards

Chair and CEO Roger van Bortel left NS as of 1 October 2020. The Supervisory Board is grateful to Mr van Bortel for his deep commitment to NS and for helping the company regain pride and self-confidence after a difficult period. In consultation with all parties involved, Mr van Bortel's term of office was extended by two months in the interests of the proper finalisation and transfer of issues such as COVID-19, station structure and the franchising process. Mr van Bortel was succeeded by Marjan Rintel. We are pleased to have been able to find a person from our midst who has the experience required for this challenging position in these difficult times. In late 2020, it became clear that Ms Rintel's former position of Director of Operations is to be filled by Eelco van Asch starting on 1 March 2021. He will be responsible for securing the high level of our operational performance, in the interests of our passengers. The appointment of Ms Rintel coincided with the reappointment of Bert Groenewegen as CFO for a period of four years. Within the Supervisory Board, its members Janet Stuijt and Marike van Lier Lels have both been reappointed for a second term.

Functioning of the Supervisory Board

Every three years, the Supervisory Board engages an external agency to evaluate its own performance. The Executive Board conducts internal evaluations in the intervening years. This evaluation took place at the end of 2020. The results are positive. The members of the Supervisory Board cooperate effectively and their skills and experience are sufficiently complementary. The relationship between the Supervisory Board and the Executive Board is good. The Supervisory Board is involved in major and complex decisions in a timely and effective manner. The discussions also cover concrete dilemmas.

The functioning of the Executive Board and collaboration with the Supervisory Board

The Executive Board functioned satisfactorily and performs its tasks well. The Supervisory Board has confidence in the Executive Board and professional relations between the two boards are good. Both the Supervisory Board and the Executive Board keep to their roles in the performance of their tasks.

Meetings of the Supervisory Board and its committees

Owing to the exceptional circumstances caused by the COVID-19 crisis, the Supervisory Board held frequent consultations outside regular meetings in 2020. In total, the Supervisory Board met twenty times in the past year. Virtually all of these meetings were attended by all the Supervisory Board Members, with average attendance amounting to 96%. The Supervisory Board has two permanent committees: the Risk and Audit Committee, and the combined Remuneration and Appointments Committee. All committee meetings were attended by all their members.

Risk and Audit Committee

The Risk and Audit Committee (RAC) consists of all Supervisory Board members and is chaired by Herman Dijkhuizen. The RAC met four times. The Chair and CEO, the members of the Executive Board for Finance and Risk, the Audit Director and the external auditor were also invited to these meetings. The auditor attended all RAC meetings. In addition, in preparation for the meetings the chair, together with the CFO and the auditor, held several prior consultations on important topics related to COVID-19, such as its impact on liquidity and solvency, and the use of models and parameters to determine the impairment, assets and onerous contracts. Depending on the agenda, other individuals such as the directors of Legal Affairs, Group Control & Expertise and Integrity & Compliance were also invited. In 2020, the RAC held extensive discussions about the financial statements, the annual report and the yearly reporting for the Ministry of Infrastructure and Water Management, the six-monthly figures, the budget, risk management and risk appetite (see also the section in this report on Safety), the group plan for 2021-2025, periodic reporting by Integrity & Compliance, audit plans and reports prepared by the external auditor. In addition, the committee devoted considerable attention to the financial impact of the COVID-19 crisis on the group's liquidity and solvency position and our foreign participations. Several scenarios for the development of passenger numbers and customer appreciation were also discussed. Within this context, on various occasions throughout the year the RAC also dealt with the reports on financing and liquidity, and the financing plan. Other recurring issues on the RAC agenda were cybersecurity in connection with staff working from home, and the increased risks associated with this trend. The RAC also discussed rolling stock reports and the performance of the external audit function. A key focus in the RAC, based in part on the available I&C reports, was the progress made in addressing undesirable types of behaviour and preventing nuisance.

One important theme covered in the auditor's management letter was the COVID-19 crisis and its impact on internal control, both within the main rail network and in the United Kingdom and Germany. The auditor also highlights the impact of cost savings on the quality of internal control measures in the medium term and of the critical functions in the 'three lines of defence' model. In addition, the auditor points out that further adjustments to the internal control framework are required, and that the improvements in the IT landscape are contributing to the quality of internal control within NS in the long term. The auditor also considered the cybersecurity risks that NS has identified, as well as the associated measures and reporting. The most important topics from the year-end auditor's report that were discussed concern the results, solvency, financing and continuity of NS, the impairment of assets, and provisions in the context of termination fees.

Over the course of the year, the chair of the Supervisory Board and the chair of the RAC held several consultations separately with the external auditor.

Remuneration and Appointments Committee (combined)

The combined Remuneration and Appointments Committee is chaired by Janet Stuijt; its members are Gerard van de Aast, Nebahat Albayrak, Pim van der Feltz and Marike van Lier Lels. The committee met four times in 2020. Topics discussed include the job profile for Executive Board members and, in particular, the recruitment and appointment of successors to Roger van Boxtel and Marjan Rintel. Other topics included the remuneration report, target letters, the appraisal process and the Abellio Gain Sharing Plan. All members of the Supervisory Board are independent as defined in the Dutch Corporate Governance Code. The Supervisory Board broadly subscribes to best practice stipulations 2.1.7 through to 2.1.9 in the 2016 Code.

Shareholder

The Supervisory Board maintained a good relationship with the shareholder in 2020, with regular contacts in a professional setting.

Employee participation

In 2020, the Supervisory Board met with the Central Works Council on several occasions. This applies in particular to the two Supervisory Board members whose appointment was effected under the Central Works Council's enhanced powers of recommendation, and to the chair. The Supervisory Board had two 'Section 24 Works Council Act meetings' with the full Central Works Council.

Relationship with the external auditor

As standard, the external auditor attends all meetings of the Risk and Audit Committee (RAC). The external auditor also attends the meetings of the full Supervisory Board when the financial statements and six-monthly figures are discussed. In addition, the RAC consults with the external auditor without the Executive Board being present. Every year, the RAC evaluates the external auditor's performance and issues a report to the Supervisory Board. The external auditor has been reappointed for the period up to and including 2023. Before the end of that term, a new tendering procedure will be organised for the period after 2023.

About this report

The financial statements for 2020, as prepared by the Executive Board, were discussed within the Supervisory Board in the presence of the external auditor. The financial statements are accompanied by the Executive Board's report. We invite the General Meeting to adopt the 2020 financial statements. We also invite our shareholder to discharge the Executive Board and the Supervisory Board from their liabilities. The loss for the 2020 financial year will be charged to the distributable reserve.

The Supervisory Board would explicitly like to thank all employees, the employee participation bodies and the Executive Board of NS for their excellent performance in these challenging times. Once more they have proven that NS is an extremely effective company: a wonderful organisation that plays a very significant role in Dutch society. The challenge for the period ahead is to stay calm and resume operations in the wake of the COVID-19 crisis, so that before long we will be able to focus once again on our great strengths. Needless to add, we hope we can also count on the undiminished commitment of all NS staff for our passengers in 2021.

Utrecht, 24 February 2021

The Supervisory Board

Personal details – Supervisory Board

Gerard van de Aast, chair (b. 1957), Dutch nationality (m)

- Appointed on 4 March 2014 until 2018, reappointed until 2022
- Background: former chair of the executive board of Royal Imtech NV
- former chair of the executive board of Koninklijke Volker Wessels NV, former member of the executive board of RvB Reed Elsevier
- Other positions held: member of the supervisory board of Signify, member of the supervisory board of Witteveen+Bos



Nebahat Albayrak (b. 1968), Dutch nationality (f)

- Appointed on 1 June 2019 until 2023
- Background: vice-president External Relations, Global Integrated Gas and New Energies at Shell. Former State Secretary for Justice and MP
- Other positions held: member of the supervisory board of Unilever Nederland, member of the executive board of Fonds21



Pim van der Feltz (b. 1964), Dutch nationality (m)

- Appointed on 1 May 2017 until 2021
- Background: former CEO of Google Netherlands
- Other positions held: supervisory board of Kröller-Müller Museum, member of the advisory board of NWO



Marike van Lier Lels (b. 1959), Dutch nationality (f)

- Appointed on 3 February 2016, reappointed until 2024
- Background: COO of Schiphol Group until 2005, held various supervisory board memberships after that
- Other positions held: member of the supervisory board of PostNL, member of the supervisory board of Dura Vermeer, non-executive board member at RELX Plc, chair of Innovation Quarter



Janet Stuijt (b. 1969), Dutch nationality (f)

- Appointed on 15 August 2016, reappointed until 2024
- Background: General Counsel & Head of Compliance, Corporate Secretary, NN Group NV, member of the management board, NN Group NV

**Herman Dijkhuizen (b. 1960), Dutch nationality (m)**

- Appointed on 1 January 2020 until 2024
- Background: CFO and vice-chair of the executive board of NIBC Holding N.V
- Other positions held: vice-chair of the supervisory board of Stichting VU, member of the supervisory board of the Dutch World Wildlife Fund



The remuneration of Supervisory Board members can be found in [note 2](#) to the financial statements.

Name	First appointment	Reappointment	Retiring at the latest on
Mr G. van de Aast (chair)	04 March 2014	04 March 2018	04 March 2022
Ms M. van Lier Lels	03 February 2016	03 February 2020	03 February 2024
Ms. J.L. Stuijt	15 August 2016	15 August 2020	15 August 2024
Mr W.J. van der Feltz	01 May 2017	-	01 May 2021
Ms N. Albayrak	01 June 2019	-	01 June 2023
Mr H.H.J. Dijkhuizen	01 January 2020	-	01 January 2024

Remuneration of the Executive Board

Composition of the Executive Board

The members of the NS Executive Board are nominated by the Supervisory Board and appointed by the shareholder, the Ministry of Finance, for a period of no more than four years. Reappointments can be made for subsequent four-year periods. Marjan Rintel was appointed CEO of NS effective 1 October 2020. Her previous term of office, as Director of Operations, ended on 14 July 2020 and was extended until 1 October 2020. Roger van Boxtel's term of office originally ended on 31 July, but Mr Van Boxtel was found willing to continue his service and eventually stepped down on 30 September 2020. The appointment of Ms Rintel coincided with the reappointment of Bert Groenewegen for another four years. Eelco van Asch was appointed Director of Operations effective 1 March 2021. In 2020, the Executive Board comprised the following members:

	Position	First appointment	End of appointment
Marjan Rintel	Chair and CEO	1 October 2020	30 September 2024
	Director of Operations	15 July 2016	30 September 2020
Roger van Boxtel	Chair and CEO	1 August 2015	30 September 2020
Bert Groenewegen	Finance Director	15 September 2016	14 September 2024
Tjalling Smit	Commerce & Development Director	1 April 2017	31 March 2021
Anneke de Vries	Stations Director	15 October 2019	14 October 2023

In accordance with the remuneration policy, the term of the employment contract coincides with the term of office, with the exception of Ms Rintel. She already had a permanent contract before her first appointment. Pursuant to all employment contracts, the employer must observe a notice period of four months.

Remuneration policy

In 2018, NS began recalibrating its remuneration policy based on the National Government Participations Policy Memorandum (*Deelnemingenbeleid Rijksoverheid*). Effective 1 January 2020, the Minister of Finance, on behalf of the Dutch State, adopted the new remuneration policy for the NS Executive Board. The policy aims to enable the Supervisory Board to attract and retain highly qualified administrators (from both internal and external sources). The remuneration policy is required to support the objectives and strategy of NS and reflect the public nature of the company. It is based on the principles of the remuneration policy for state participations and complies with the best practice provisions on remuneration laid down in the Dutch Corporate Governance Code.

The pay ratio within the Executive Board is in line with common practice in the external market, depending on the job load for the position concerned. We use the Hay method to determine the job load, which also plays a role in determining remuneration levels for board members. The latter is done on the basis of a comparison with two reference markets: the public or semi-public reference market comprising state participations and transport companies (BNG Bank, COVRA, FMO, Gasunie, Havenbedrijf Rotterdam, KLM, NWB Bank, Amsterdam Airport Schiphol, TenneT, Thales, ProRail, RET, GVB and HTM) and the private reference market comprising Dutch companies with board level positions similar in weight to those at NS. The basis for establishing the reference income (base salary and variable remuneration) for Executive Board members is the median for the combination of fixed and variable components in these reference markets, with a ratio of 60% for the public and semi-

public and 40% for the private sector. We chose the median as the basis because in both markets the median is stabler across job weight levels than higher or lower market levels. In addition, given the public nature of NS, the 60% versus 40% weighting for public/semi-public versus private takes into account a lower market level than the median relative to the overall Dutch market.

When determining the remuneration of Executive Board members, the remuneration policy's impact on long-term value creation was taken into account. For NS, this means that the remuneration is determined with due regard for NS's position in society, its obligations under the franchise and the long-term challenges for mobility in the Netherlands.

On premature termination of the employment contract at the initiative of NS, a severance payment cannot exceed one year's base salary. The Supervisory Board decides whether a severance payment is to be paid and, if so, what the amount should be. Board members who are not reappointed will not receive a severance payment, unless the law provides otherwise.

Performance agreements for Executive Board members

The Executive Board has drawn up performance agreements that comprise collective and individual targets as laid down in so-called target letters. While the results do not give entitlement to any reward (see Variable Remuneration), they do form part of the assessment process. The individual targets are related to the portfolio for which the Executive Board member concerned is responsible. The table below presents the collective targets that applied for 2020. Since then, current developments have added further themes such as COVID-19, continuity and safety:

Objectives	KPI	Target
Customer	Customer satisfaction	82%
	Passenger punctuality 5-min. main rail network	92.2%
	Occupancy rate at peak times (main rail network)	95%
Financial	EBIT NS	€ 273 million
Conduct & culture	NS is working on an open and safe working environment, in which we hold each other accountable, are honest with each other, make conscious choices, weigh up risks and help each other.	
	Sickness absence	Max. 6.0%
	Demonstrably manage a sustainable substantial reduction in sickness absence, with our joint goal being an average level of 6% in line with that achieved at the beginning of 2018.	
	Integrity	0.3
	The score on the maturity level of the January 2021 integrity culture measurement has increased in comparison with the score based on the January 2019 measurement.	
	Safety	75%
	Risk Assessments and Evaluations include a corresponding action plan carried out in accordance with the occupational health & safety policy.	
Sustainability	Sustainability	Min. 2%
	More energy efficiency for our buildings and trains, per year per passenger-kilometre.	

The COVID-19 crisis clearly had an impact on the targets that had been set for 2020. The 'customer satisfaction' KPI was not measured. The 'integrity' KPI was not measured for January 2021, but an earlier measurement in 2020 showed that 75% of our employees felt positive about the theme of integrity. This percentage has remained unchanged relative to 2018. The targets for EBIT NS, absenteeism due to illness and sustainability were not reached. NS did however reach all other targets.

Structure of the remuneration package

In response to the proposal submitted by the Remuneration and Nominations Committee and with the unanimous approval of all members of the Executive Board, in June the Supervisory Board decided to reduce the base salary of Executive Board members temporarily by 10%, over the period from 1 July 2020 up to and including 31 December 2021. Nor will the 1.2% salary increase pursuant to the CLA effective 1 April 2020 be applied in 2020. This was decided in view of the financial impact of the COVID-19 crisis on NS.

In the financial statements, the section entitled [Remuneration of the Executive Board](#) includes a table with specific figures for the overall remuneration for 2020.

Base salary

In 2020, the agreed gross annual base salary including holiday allowance for the members of the Executive Board was as follows:

	Position	Base salary on 31 December 2020 (EUR)	Base salary earned 2020 (EUR)
Marjan Rintel ¹	Chair and CEO / director of operations	473,806	376,025
Roger van Boxtel	Chair and CEO	0	343,509
Bert Groenewegen	Finance Director	371,612	353,032
Tjalling Smit	Commerce & Development Director	371,612	353,032
Anneke de Vries	Stations Director	371,612	353,032

The difference between the base salary and the base salary actually received is explained by the wage restraint measure (10% reduction) mentioned above.

Variable remuneration

In their employment contracts, all members of the Executive Board waived entitlement to variable remuneration. They did not receive any compensation for this via their base salary. In accordance with the remuneration policy, the Supervisory Board could consider granting the variable remuneration once again. The variable remuneration cannot exceed 20% of the annual base salary.

Pension

The members of the Executive Board are also members of the NS pension plan. The employer pays two thirds of the total pension costs. The tax-facilitated pension build-up has been capped since 1 January 2015. The capping threshold for 2020 is €110,111 gross. All new and existing employees, including Executive Board members, whose salary exceeds that level will receive a gross allowance of 12% over the part of their income in excess of that threshold. A transitional scheme applies for members who were 46 or older – and in the employment of NS – on 1 January 2015. They receive a supplementary age-related contribution. This transitional scheme currently only applies to Ms Rintel.

Other benefits

The other benefits are equal to those that apply to all NS employees, including healthcare insurance schemes and transport facilities. Executive Board members are additionally entitled to an appropriate expense allowance, a lease car (or mobility budget allowance) and the use of communication devices. For business-related travel, two chauffeur-driven director's cars are available to all Executive Board members. NS takes this to include business trips not directly associated with the relevant member's appointment, but where private use is unavoidable given the combination with the obligations associated with that member's position at NS. All Executive Board members are subject to an additional tax liability for the use of the director's cars. Given that the private use of those cars is unavoidable and arises from the relevant member's position with NS, they will receive a net allowance that equals the wage tax due on the amount of the addition.

NS has not extended any loans, advances or guarantees to the Executive Board.

Pay ratios

The overall income of the Chair and CEO is 8^[1] times the median value of the salaries of all NS staff in the Netherlands. In 2019, the internal pay ratio was 9. The decrease is attributable to the wage restraint measure (10% reduction) that came into effect on 1 July 2020.

* *Basic assumptions: All full-time and part-time employees of NS and Abellio in the Netherlands who were employed throughout the year are included in the calculation. The calculation includes the following components: the base salary, variable remuneration (if applicable) and pension costs. The total income of the Chair and CEO has been determined on the basis of the new income for the full year.*

Personal details - Executive Board as on 1 March 2021

Marjan Rintel (b. 1967), Chair and CEO, Dutch nationality

- Focus on: communication and corporate affairs, audit and risk management, legal and board secretariat, Integrity & Compliance
- Other positions held: member of the board of governors of Hermitage Amsterdam, member of the supervisory board of Nederlandse Loterij, member of the executive board of the National Committee for 4 and 5 May Foundation
- Background: Business Administration (Groningen University)
- Career includes: Amsterdam Airport Schiphol, KLM, Air France/KLM



Bert Groenewegen (b. 1964), Member of the Board - Finance and Abellio, Dutch nationality

- Focus on: finance, Abellio, IT, procurement, accommodation, new trains
- Other positions held: member of the supervisory board of Coolblue, member of the supervisory board of Teslin Participaties, member of the supervisory board of the Dutch Railway Museum
- Background: Business Economics (Tilburg University)
- Career includes: Exact Software, General Atlantic Partners, PCM Uitgevers, Ziggo



Tjalling Smit (b. 1977), Member of the Board - Commerce & Development, Dutch nationality

- Focus on: strategy and innovation, network development, sustainability, commerce
- Other positions held: member of the executive committee of Coöperatie OV Bedrijven
- Background: Business Administration (Nyenrode)
- Career includes: Transavia, Air France/KLM



Anneke de Vries (b. 1964), Stations, Dutch nationality

- Focus on: station management and operation, retail, real estate, QHSE, HR
- Other positions held: patroness of NS Harmonie
- Background: Economic Geography and post-doc degree in Real Estate Studies (University of Amsterdam)
- Career includes: Albert Heijn, ING Vastgoed Ontwikkeling, Bureau Architectenregister and Rochdale Housing Corporation



Eelco van Asch (b. 1972), Operations, Dutch nationality

- Focus on: operations management, service, maintenance, train modernisation, technology, QHSE in operations
- Other positions held: none
- Background includes: VU Amsterdam, IMD Lausanne, Stanford University
- Career includes: KLM, Air France/KLM, Delta Lloyd



Stepped down in 2020

Roger van Boxtel (b. 1954), Chair and CEO, Dutch nationality

- Focus on: corporate strategy and communication
- Other positions held: member of the supervisory board of APG Group, member of the managing committee of VNO-NCW, chair of the supervisory board of museum De Fundatie, chair of the supervisory board of Amsterdam Sinfonietta, member of the board of CER, chair of the Werk aan Uitvoering sounding board group of MR
- Background: Dutch Law (University of Amsterdam)
- Career includes: VNG, AEF, Member of Parliament in Lower House and Upper House (party chair), Minister for Urban Policy and Integration and IT, CEO of Menzis



Corporate governance



NV Nederlandse Spoorwegen is a public limited company under Dutch law. Its registered offices are in Utrecht. NV Nederlandse Spoorwegen is the holding company of NS Groep NV. NS is a state participation, The governance of NS is based on the modified two-tier company regime. NS has a two-tier management structure. NS Groep NV is managed by the Executive Board, which consists of the same people as the Executive Board of NV Nederlandse Spoorwegen.

Corporate Governance Code

As a major enterprise with a significant role in Dutch society, and as a state participation, NS attaches great value to a high-quality governance structure. Although not a listed company, therefore, NS does apply the Dutch Corporate Governance Code 2016 (hereinafter the 'Code'). Given that NS is not a listed company and does not have a one-tier management structure, several elements of the Code do not apply to it. On its [website](#), NS provides an overview of all the provisions in the Code plus explanatory notes on how NS applies those provisions.

Shareholder

The sole shareholder of NV Nederlandse Spoorwegen is the Dutch State. The role of the shareholder is performed 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 instructs the auditor to audit the financial statements. 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.

Executive Board

The Executive Board is charged with and responsible for managing the business. The Executive Board develops the vision and associated mission, strategy and objectives of NS. The Executive Board aims to achieve the objectives and ensure the continuity of the company and its affiliated enterprises. The Executive Board is also responsible for implementing the NS strategy. Through the NS strategy, the Executive Board focuses on long-term value creation while weighing up the relevant interests of the stakeholders. That means that when making decisions, the Executive Board takes aspects such as safety and the role of NS in providing sustainable mobility into account, in addition to financial aspects. The tasks of the Executive Board are performed in part by the business units and subsidiary companies. As such, the executive directors of those business units and subsidiaries share responsibility for implementation.

Responsibilities, tasks and procedures

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. Pursuant to the Articles of Association of NV Nederlandse Spoorwegen, the Executive Board Rules of Procedure and the Supervisory Board Rules of Procedure, certain 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. The Executive Board reports to the Supervisory Board and the General Meeting.

Appointment

Executive Board members are appointed in the General Meeting on the recommendation of the Supervisory Board. The Supervisory Board decides on the number of members for the Executive Board. Members of the Executive Board can be suspended or dismissed by the General Meeting. Members of the Executive Board are appointed or reappointed for a period of four years at most. The Executive Board aims for a composition that is diverse, with a good mix in terms of gender and age. Both the Executive Board as a whole and each individual Executive Board member are authorised to represent NS.

Interests

Members of the Executive Board will not be involved in discussions or decision-making concerning matters or transactions 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, as a result, the Executive Board is unable to make a decision, the decision will be made by the Supervisory Board. The Supervisory Board must give its approval beforehand to decisions by the Executive Board about such matters as entering into transactions which involve conflicting interests that are of material significance to NS and/or the Executive Board member in question. Such transactions are published in the report of the Executive Board, stating the conflicting interest. There were no such transactions in 2020. Transactions involving conflicts of interests of members of the Executive Board or Supervisory Board are agreed with conditions that are in line with the market. The Company Secretary ensures that the proper procedures are followed and that the actions taken comply with the legal and regulatory obligations applicable to the Executive Board. This procedure was adhered to in 2020.

Rewards

The remuneration and terms and conditions of employment of the Executive Board members are established by the Supervisory Board with due regard for the remuneration policy adopted by the General Meeting. The remuneration policy for members of the Executive Board, to which reference is made in their respective employment contracts, includes the right to compensation upon dismissal on the initiative of NS, up to a maximum that has been fixed at one year's basic salary. The Supervisory Board decides whether a severance payment is to be paid and, if so, what the amount should be.

Supervisory Board

The Supervisory Board's tasks include supervising the Executive Board's policies and the general affairs of the company and its affiliated enterprises. It also advises the Executive Board. In performing its duties, the Supervisory Board focuses on long-term value creation for the company and its affiliated enterprises, taking into consideration the interests of the company's stakeholders. The Executive Board provides the Supervisory Board promptly with the information and resources the latter requires in order to do its work properly. If the Supervisory Board and/or one of its members consider it necessary, they can obtain information from the Executive Board, NS Audit, the external auditor, the Central Works Council and/or other officials and external advisers to NS.

Responsibilities, tasks and procedures

The Supervisory Board's responsibilities, tasks and procedures are laid down in the Articles of Association of NS, the Articles of Association of NS Groep NV and the Rules of Procedure of the Executive Board, the Supervisory Board and its committees. The Supervisory Board reports to the General Meeting. The Supervisory Board as a whole is responsible for the proper implementation of its tasks. Supervisory Board members are free to adopt positions independently from 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 performance of the Executive Board as a body and the performance of the individual members of that board.

Appointment

Supervisory Board members are appointed by the General Meeting, on the recommendation of the Supervisory Board, with due observance of the job profile and after consulting the Central Works Council. The Central Works Council has enhanced powers of recommendation covering the nomination of one third of the Supervisory Board members. The Supervisory Board has at least five members and at most nine. The Supervisory Board had six members as

at 31 December 2020. The Supervisory Board has drawn up a profile for its size and composition, taking account of the nature and activities of the company and the desired expertise and backgrounds of its members. The Supervisory Board aims for a composition that is diverse, with a good mix in terms of gender and age. Supervisory Board members can be appointed for two terms of four years each. After that period, they can be reappointed for a maximum of two terms of two years each. Reappointment after a period of eight years must be justified by the Supervisory Board in its report. In the case of a reappointment, the manner in which the relevant board member fulfilled their duties in the previous term is taken into account, and members will only be reappointed after careful consideration. The Supervisory Board's retirement schedule is published on the company's website.

Interests

Members of the Supervisory Board will not participate in discussions and decision-making about any matter or transaction where their direct or indirect personal interests conflict with the interests of NS.

Committees of the Supervisory Board

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 advise the Supervisory Board and prepare its decisions. This allows the committees to assist effective decision-making by the Supervisory Board. The Supervisory Board as a whole remains responsible for the decisions that have been prepared by a committee.

Risk and Audit Committee

The Risk and Audit Committee (RAC) performs its duties pursuant to the Rules of Procedure as established by the Supervisory Board under the provisions of the Code. The RAC advises the Supervisory Board and prepares the Supervisory Board's decisions with respect to monitoring the integrity and quality of NS's financial reporting and the (assessment of the) effectiveness of NS's internal risk management and control systems. The RAC convenes at least twice a year or as often as it deems necessary, and at least once a year with the external auditor without the Executive Board being present. The Rules of Procedure stipulate that the RAC must have at least three members. The RAC had six members as at 31 December 2020.

Remuneration and Appointments Committee

The combined Remuneration and Appointments Committee performs its duties pursuant to the Rules of Procedure as established by the Supervisory Board under the provisions of the Code. The Remuneration and Appointments Committee prepares the decisions of the Supervisory Board in areas such as the appointment of Executive Board and Supervisory Board members, the performance of the Executive Board and the Supervisory Board, and the formulation, implementation and monitoring of the remuneration policy for the Executive Board. The Rules of Procedure stipulate that the Remuneration and Appointments Committee must have at least three members. The committee had five members as at 31 December 2020.

External auditor

The external auditor is appointed by the General Meeting. The external auditor reports to the Supervisory Board and Executive Board on its audit. After the examinations and audit, the auditor issues an audit opinion regarding the truth and fairness of the NS financial statements.

The Risk and Audit Committee annually reports to the Supervisory Board on the

performance of and developments in the relationship with the external auditor. The external auditor attends the meetings of the Supervisory Board in which its report on the audit of the financial statements is discussed, and is also available for the General Meeting in which the adoption of the financial statements is handled. The external auditor also attends the meeting of the Supervisory Board held to discuss the six-monthly figures. In principle, the external auditor attends the meetings of the Risk and Audit Committee, unless that committee determines otherwise. The external auditor immediately informs the chair of the Risk and Audit Committee if, in the course of its audit task, it encounters any actual or suspected abuses or irregularities. If an actual or suspected abuse or irregularity concerns the functioning of an Executive Board member, the external auditor reports this to the chair of the Supervisory Board. EY has been NS's external auditor since the 2014 financial year. In 2020, the appointment of EY in that role was extended by two years to cover the period up to and including the 2023 financial year, in line with the rule regarding the maximum term of office of an external auditor.

NS Audit

NS Audit provides independent and objective assurance and advice on the adequacy of governance, risk management and internal control measures in view of the need to support NS's objectives and promote continuous improvement. NS Audit is subordinate to the Executive Board, with the NS Audit Director reporting directly to the Chair and CEO. The NS Audit Director also reports to the chair of the Risk and Audit Committee. The NS Audit Director has direct access to the NS Chair and CEO, the chair of the Risk and Audit Committee, the members of the Executive Board and the external auditor.

Risk

Risk governance at NS has been set up using the 'three lines of defence' model. The guiding principle in this model is that the first line of defence (the operational business) is responsible for the management of the risks by embedding this properly in processes and clearly assigning responsibilities. The second line of defence, which involves the NS Risk, Legal and Integrity & Compliance (I&C) departments, provides support and advice and makes sure that line managers are fulfilling their responsibilities as intended. In addition, there are safeguards that risks are demonstrably taken into account in decision-making, thanks in part to advice from this second line of defence. The third line of defence, involving NS Audit, carries out independent audits to make sure that the risk management and internal control system is working properly. Finally, safeguards have been put in place to ensure that NS will learn from incidents, thus promoting the continuous improvement of risk management processes.

Sustainability

The Council for Sustainable Business Practices is NS's policy preparation body for sustainability issues. The Council is comprised of the business unit and staff department directors and its meetings are chaired by the Member of the Board for Commerce & Development. Where necessary, proposed decisions and policies are submitted for approval to the Executive Board. Progress and development in sustainability results are monitored and managed through the regular planning, control and reporting cycle. The Council for Sustainable Business Practices periodically discusses the KPI reports on sustainability results. In accordance with the Code, the Executive Board is responsible for the aspects of Corporate Social Responsibility that are relevant to NS. The Executive Board reports on this to the Supervisory Board and the General Meeting.

Risk management



Risk management is all about targeting uncertainties that could impede the achievement of the strategic objectives. To provide a picture of our risk management approach, this chapter looks at risk appetite, the organisation of risk management and the key risks.

NS operates a risk management framework that comprises eight components. These serve as the basis for risk management processes within NS:



Organisation of risk management

To ensure permanent integral management of risks, risk management must move along with internal and external developments. In 2020, NS took steps to adjust its risk appetite by enhancing risk awareness and using quantitative analyses. We use probabilistic planning schedules and analyses to present a realistic picture of the future impact of uncertainties and risks, so as to gain better insight into the reliability of project-related plans, policy choices and risk budgets. This supports the decision-making process. In 2020, we adopted this approach once again in various business units, also devoting attention to securing business continuity management within the organisation, and to climate-related risks that could potentially impact NS operations.

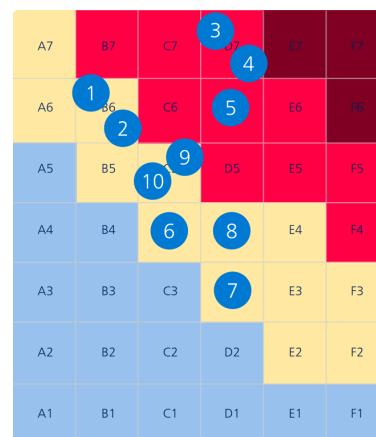
Recording and reporting

Identified risks, including the risk owners, have been recorded in risk registers and are assigned quantitative scores using a single, uniform risk matrix. We implemented a new NS-wide risk matrix in line with the adjusted risk appetite profile. Every three months, NS reports the main risks for each business unit; those reports are discussed in the Executive Board as part of the planning and control cycle. Any risks that fall outside our risk appetite are reported immediately and escalated where necessary. The Executive Board reports on and renders account for the risk management and internal control system to the Supervisory Board after discussing it in the Risk and Audit Committee.

Risk appetite and risk tolerance











The risk appetite and risk management we are aiming for in six risk themes at NS can be found in our 'risk appetite statements'. Each risk theme is linked to specific performance indicators with a quantitative bandwidth. Every year, the Executive Board evaluates and, if necessary, adjusts the risk appetite for each theme. The table below presents the current risk appetite for each risk theme plus the most important group risks. We apply a uniform method for determining the risk appetite for all of these themes, which also covers the subsidiaries Abellio UK and Abellio Germany.

We have plotted individual risks in the NS Risk Matrix and provide explanatory notes in the last table of this chapter. NS's risk appetite changed in 2020, as a result of the impact of the COVID-19 crisis and the associated government measures on our financial situation. As a consequence, we have become more risk averse when it comes to the category 'finance'. Specifically, this means that financial risks are now more likely to qualify as unacceptable in the risk matrix.



Key changes in the risk profile compared with 2019

The table on the next page shows how the profile for NS's most significant risks changed in 2020 and what measures have been taken to mitigate those risks. The most significant changes are explained below.

Risk theme and risk appetite		Main group risks	Trends
1	Safety Averse		
		1. Safety: Failure to fulfil our duty of care in cases of major safety incidents involving passengers and/or staff.	=
2	Compliance Averse		
		2. Non compliance: Not complying with legislation and regulations or exceeding applicable norms and values.	+
3	Finances Averse		
		3. Revenue: Long-term decrease in revenue.	-
		4. Foreign operations: Loss-making investments due to setbacks in foreign operations.	-
		5. Savings: Failure to implement cost-saving measures due to the impact of the COVID-19 crisis.	★
4	Operations Neutral		
		6. HSL South: Failure to achieve agreed results on HSL South.	=
		7. Infrastructure: Inconvenience to customers caused by lack of infrastructure capacity and quality improvement backlog.	=
		8. IT reliability: Failure to meet the operational and security requirements for IT systems.	=
		9. Agility: Providing improvements too late or with insufficient results.	★
		10. COVID-19 crisis: The risk of a decline in NS's level of service due to deepening of the COVID-19 crisis.	★
5	Reputation Neutral		
		<i>The main group risks do not concern the theme of Reputation.</i>	
6	Sustainability Tolerant		
		<i>The main group risks do not concern the theme of Sustainability.</i>	
<div><div> Trend improved</div><div> Trend unchanged</div><div> Trend worsened</div><div> New risk</div></div>			

Decrease of top risks

Two risks identified in the 2019 Annual Report decreased sharply in 2020 and no longer qualify as top risks for NS. These are 'Staff shortages: discontinuity in crucial processes due to lack of staff' and 'Market regulation: losing parts of the business activities and the contributions they make to the result'. The potential staff shortage has decreased across the board, but could easily flare up again due to the effects of the COVID-19 crisis (see last risk). In 2020, the Dutch government pledged to grant NS the main rail network franchise, and while the details are yet to be decided, this has strongly reduced the risk of changes in market regulation harming NS's result.

Financial risks

The most significant change in terms of risk profile is seen in the area of finance. NS's revenue fell sharply in 2020. Even though the company introduced drastic measures to cut costs, it will remain uncertain for a relatively long time how our revenue will develop as a result of changes in travel behaviours and our ability to respond to them. Since the agility of our response is crucial, we are taking a whole range of measures to keep our organisation flexible in the longer term. A great many initiatives are being developed to that end, and we are conducting extensive research to predict and quantify passenger behaviour. At the same time, we are facing the considerable challenge of realising the long-term savings programme, as part of a transformation that calls for a significant commitment from all our staff.

Foreign operations

Abellio incurs revenue risks in the United Kingdom. In Germany, foreign investments may not be profitable due to the stiff penalties related to infrastructural problems and to the lack of compensation from clients for increased staff and training costs. Discussions are under way however to prevent Abellio from being held accountable for these issues beyond its control.

Safety

In 2020, NS remained highly risk averse as regards safety, and the company will continue its efforts to further and permanently control this risk. NS has demonstrably learned lessons from railway incidents that occurred in 2020 by implementing technical and organisational improvements.

The COVID-19 crisis

One new risk that emerged in 2020 is NS's inability to deliver the required level of services due to exacerbation of the COVID-19 pandemic. The risk particularly concerns the availability of operational staff. This is why NS is closely monitoring staff levels using the channels designed for that purpose. In 2020, by quickly adapting to changing circumstances NS proved to be sufficiently agile and flexible to keep the Netherlands accessible even during this major crisis.

Group risks

Group risk	Development 2020	Control measures
1. Safety: The risk that NS in the Netherlands does not take adequate measures to prevent safety incidents or does not sufficiently fulfil its duty of care.	<p>NS works on the basis of the Hearts & Minds model to control safety risks. The key risks have been identified for each domain and are being managed accordingly. These risks were reassessed in response to the COVID-19 pandemic, and new measures were taken where necessary.</p> <p>Nevertheless, accidents have occurred, such as in the area of rail safety, the January derailment near Voorburg and the May collision near Hooghalen. As a result, lessons have been learned and additional technical and organisational measures are being taken.</p>	<ul style="list-style-type: none"> • Rail travel is one of the safest forms of mobility. NS seeks to continue improving safety by controlling safety risks and continuously improving safety performance. To ensure effective control across all the operations involved, clear governance roles have been assigned to the various business units alongside the central Security function. Considerable progress has been made, but more work is needed in some areas (including Cyber, see risk 9) to reach the desired maturity. • Improvements have been implemented in various safety areas, which has increased safety. With occupational safety, improvement measures have been taken on the basis of Risk Inventories and Evaluations (RI&Es). With respect to rail safety, ORBIT (a warning system) has now been built into trains, which is partly responsible for the sharp decrease in the number of SPADs. The systemic leap needed to keep the train driver from being the last line of defence for rail safety is outlined in two possible routes. We are currently testing those two approaches in collaboration with ProRail and the Ministry of Infrastructure and Water Management and plan to take a joint decision in 2021. With respect to social safety, new measures have been taken throughout public transport to reduce the risk of COVID-19 contamination on trains and at stations. With respect to security, NS is connected to the relevant government agencies and regular exercises take place to deal with terrorism situations. In addition, a programme to improve the monitoring of NS property has been initiated.
2. Non-compliance: The risk that NS does not comply with legislation and regulations or exceeds applicable norms and values	<p>The control of compliance was further strengthened in 2020, as part of a multi-year integrity and compliance programme. The management of compliance risks has been deepened and broadened in consultation with the business. In addition, compliance policy, monitoring and accountability were further expanded.</p>	<ul style="list-style-type: none"> • The NS code of conduct was renewed and the policy management framework was further expanded. In addition, further efforts have been made to increase compliance knowledge and awareness, including through NS-wide training in the areas of integrity, competition and privacy. The NS Risk Framework has been further developed so that compliance is effectively factored in. • With regard to specific compliance risks (such as fraud, soil contamination or Working Hours Act violations), measures have been taken and monitoring established. Risks are now also explicitly factored in and included in the NS Risk framework.
3. Revenue: The risk that the revenue will remain low for a longer period of time or be structurally reduced.	<p>Revenue fell sharply in 2020, and expectations for future years are also substantially lower due in part to more working from home. In addition, a new economic recession is not inconceivable.</p>	<ul style="list-style-type: none"> • Various studies have taken place to understand changing travel behaviour, and traveller forecasts are updated with greater regularity. Based on this, investments and services are adjusted as necessary. • Propositions are also adjusted to stay as close as possible to customer needs and what we need to adjust internally to do so.
4. Savings: The risk that NS will not realise the necessary savings as a result of the COVID-19 pandemic.	<p>The COVID-19 pandemic has disastrous consequences for our financial return. In order to balance spending with this, NS has established a €1.4 billion savings programme for the Dutch organisation, which will require a significant transformation.</p>	<ul style="list-style-type: none"> • A dedicated team has been set up to drive the transformation and develop savings initiatives for direct and indirect employees. This seeks to realise cooperation with social partners and employees. Savings for 2020 have already been implemented and several requests for advice have been submitted. Investment plans are adjusted and put on hold if possible. Forecasts are periodically recalibrated and progress monitored.
5. Foreign operations: The risk of NS making a loss on its investments abroad (Abellio).	<p>Abellio UK has revenue risk on train contracts. Contracting authorities have assumed the revenue and cost risk as of March 2020. In order to be able to prematurely terminate the existing contracts and claim a new form of contract, a termination payment will be agreed upon.</p> <p>Abellio Germany has no revenue risk, but is facing loss-making contracts due to insufficient compensation from contracting authorities for increased personnel and training costs and for the high fines related to causes that cannot be influenced.</p>	<ul style="list-style-type: none"> • Abellio is consulting with contracting authorities in the UK and Germany on adjusting contracts so that at least a break-even result is achievable in the future. The financial risk for NS is limited to the guarantees issued for the Abellio entities. For a few contracts in the United Kingdom, the financial risk is shared with joint venture partners. • The total amount of the investments by NS abroad and the guarantees issued by NS for them remains within the maximum of the Capital-at-Risk framework agreed with the NS shareholder. This maximum has already been taken into account in the NS capital structure.

Group risk	Development 2020	Control measures
6. HSL South: The risk of not performing as agreed on the HSL.	Performance and risk management continued to improve in 2020, and the shortage of seats did not occur due to the impact of the COVID-19 pandemic. The KPIs are sensitive to risk factors associated with the complexity of HSL South. The ICNG delivery has been delayed and new arrangements have been made with the Ministry of Infrastructure and Water Management.	<ul style="list-style-type: none"> • HSL South Improvement Programme is working with ProRail on further measures to improve operational performance. The Ministry of Infrastructure and Water Management's infrastructure improvement package of €60 million has been extended to the end of 2022, which means that infrastructure quality will lead to fewer train cancellations. • Close attention is paid to controlled inflow of ICNG and to avoid introduction dips as much as possible. • New heat guidance has been successfully implemented to keep rolling stock deployable during extremely hot periods, which has ensured that no major outages have occurred this year during the long and extreme heat period.
7. Infrastructure: The risk that the implementation of the timetable and the realisation of our ambitions (high frequency and speed increase) will be negatively affected by infrastructure bottlenecks.	As a consequence of the postponement of product steps due to the COVID-19 pandemic, there is slightly more room because passenger growth has slowed down and if the (timing of the) product steps is jeopardised, we aim for timely clarity/communication in order to focus on the impact determination and thus manage expectations with stakeholders. This is offset by budget pressures on infrastructure investments and activity (maintenance) delays, which can lead to infrastructure bottlenecks with an impact on our services. Pressure remains on Greater Amsterdam, especially due to the dependency between different projects and the many activities.	<ul style="list-style-type: none"> • The Medium Term process together with ProRail has been improved and promotes transparency in decision making.
8. IT: The risk of IT systems failing to meet operational and security requirements.	On balance, the risk has remained the same. Measures are in place to increase control, but threats including cyber risks (including on the train) are now increasing as the threat landscape continues to grow.	<ul style="list-style-type: none"> • The most important critical systems in train logistics control were replaced in 2019 and 2020, and the major remaining operational legacy systems, including travel information system and Data Warehouse systems, will largely be replaced during the period to 2022. Business continuity agreements with suppliers have been tightened. • Large systems to be replaced are made as modular as possible for the purpose of future-proofing; • The IT capacity shortage remains and with it dependence on third parties. To mitigate this, external employees are replaced by in-house employees whenever possible. Agile working within NS will be accelerated in the coming years by means of a transformation plan and is therefore also a mitigating measure. • Based on a roadmap, cybersecurity will be further strengthened, both in terms of process by means of governance and policy, and substantively in the case of IT and operational technology (OT) on and around the trains. Significant steps have been made in security monitoring, allowing for faster detection of cyber irregularities in the network. • Awareness campaign concerning secure working from home and extra alertness internal IT security monitoring. Accelerated rollout of resources for working securely at home, including MS Teams.
9. Agility: The risk of NS failing to achieve sufficient change and innovation capability.	We kept the Netherlands moving during the COVID-19 pandemic and adapted to the new circumstances, proving to be agile and flexible. The financial situation and downward traveller projections demand that we work structurally to make NS smaller and more agile.	<ul style="list-style-type: none"> • Supported by a Transformation Team, NS is working in a structured manner on cost savings and behavioural change so that we can work together more decisively and respond more quickly to changes. We also promote advancement and retraining so that people remain employable and flexible in the changing context.

Group risk	Development 2020	Control measures
10. COVID-19 crisis: The risk of a decline in NS's level of service due to deepening of the COVID-19 pandemic.	This risk is new in 2020. The increasing absence of direct staff at NS or ProRail leads to pressure on the implementation of timetables. NS is compelled, with coordination throughout public transport, to respond quickly to government measures.	<ul style="list-style-type: none"> • Based on an evaluation of the first wave, governance was tightened and lessons were learned for possible new waves and government actions. Monitoring of staff availability takes place through regular channels that are adapted accordingly. Several variants for the possible scaling down of timetables due to occasional staff shortages have been prepared. • Measures have been taken to ensure social distancing or mitigate contamination risks in trains and stations.

Organisational improvements

NS aspires to be an organisation characterised by an open and safe corporate culture where professional integrity is a matter of course. While we attach great importance to result-oriented working practices, they should always be consistent with the norms and values to which we have committed ourselves. We have measured the maturity of integrity culture at NS since 2017. These measurements show that we pursue a controlled approach of risks and issues surrounding integrity and compliance. Integrity and compliance issues are a key consideration in all our decisions and management measures. Over the next few years, we intend to make further progress and develop into an organisation that tackles integrity issues proactively, thus preventing problems from arising.

Open and ethical culture

The conduct of NS's employees in their day-to-day activities and the choices they make in their work are crucial to the integrity of the company. We promote a culture of openness and accountability by adopting the Hearts and Minds method, which stimulates professional integrity and provides for periodic measurements of the maturity level achieved. Additionally, NS has a planning and control system in place that helps to make and keep integrity and compliance risks and issues within the organisation visible and manageable.

NS applies an updated Code of Conduct that helps employees make decisions and conscious choices in a range of possibly difficult situations. The Code of Conduct also forms a basis for handling integrity reports and investigations. The code is consistent with the relevant OECD guidelines and with the Dutch Corporate Governance Code. It serves as the basis for policies adopted for specific themes, such as conflicts of interests, competition, information protection and fraud.

Integrity & Compliance governance

The first line of defence is responsible for ethical business operations and regulatory compliance. It benefits from advice by various departments, including Legal, Risk, Finance, Procurement, HR and Quality, Health, Safety & Environment. Our Integrity & Compliance (I&C) department focuses on encouraging desired behaviour, regulatory compliance and observance of the NS Code of Conduct. I&C develops policy, provides information on that policy, investigates integrity violation reports, provides solicited and unsolicited advice and promotes integrity awareness within NS. In addition, I&C monitors business risks surrounding integrity and compliance and reports on those risks to the Executive Board, the Supervisory Board's Risk and Audit Committee and the organisation. Issues are submitted to confidential advisors within NS, if and to the extent permitted by confidentiality rules.

Finally, NS has an Integrity Committee whose members include the directors of HR, I&C, Legal and Risk. This committee assesses new integrity and compliance policies and provides advice on I&C-related issues and reports.

Integrity Desk and Regulations for Reporting Integrity Issues

The Regulations for Reporting Integrity Issues (including whistle-blower reporting) guarantee that employees can report actual or suspected irregularities, that these reports will be dealt with carefully and confidentially and that employees will not experience any adverse consequences of having reported an incident. Employees have several options for (anonymously) reporting integrity issues or abuses: via the Integrity Desk on the internal network, via a special app, by email, by telephone or in a one-on-one conversation. An integrity violation report may result in a recommendation to the person who reported the issue and to the managers involved on any subsequent steps or measures. It may also be decided to investigate the cause of the incident and take specific measures if required. In 2020, a total of 66 integrity violation reports were received (2019: 96). The number of reports dropped in the second quarter, which is presumably due to the fact that most people were working from home and had fewer contacts. In the second half of the year however, figures returned to their pre-COVID level. Of all finalised reports in 2020, 39% were found to be wholly or partially founded.

Employees may seek support from one of NS's confidential advisors if they want to report an integrity violation (or another issue). In 2020, they did so on 80 occasions. External stakeholders can report issues to a special [desk](#).

Advice and information for employees

On the Integrity Portal on the intranet, employees can find a wealth of information about integrity and compliance-related issues. For instance, the portal includes a current overview of NS's integrity and compliance policies. Employees can also use the Integrity Portal to submit specific issues and dilemmas to I&C. Alternatively, they can ask questions by telephone or drop by in person. I&C will then advise them about possible solutions and measures.

In addition, employees receive regular information about current developments and issues, for example during the Integrity Week. We also use messages, thematic bulletins and newsletters to draw our employees' attention to themes such as communication and behaviour, conflicts of interests or social conduct. I&C organises dilemma sessions for all parts of the organisation, from the Executive Board to teams in the various regions, in which teams are invited to discuss issues surrounding integrity, compliance and social conduct. In 2020, 377 of such dilemma sessions and dialogues were held.

Compliance

We are aware that as a state participation we serve as an example to other players, must be transparent on our regulatory compliance and act with integrity at all times. We are keen to ensure that we comply with all the applicable laws and regulations and abide by the standards and values in force.

In these efforts, NS is bound to an extensive compliance framework that governs compliance with external laws and regulations such as the Railways Act, the Competition Act, the main rail network franchise, NS's obligations under the CLA, and the Working Hours Act. In addition, we apply internal policy frameworks such as the NS Code of Conduct, the procurement regulations and the train drivers' manual. NS has a compliance management structure in order to ensure that we keep abreast of this multitude of rules, standards and norms and are able to bring our social responsibility into practice. These requirements have been translated into performance indicators and norms regarding aspects such as competition, tendering procedures, privacy issues and work requirements. We also have a dashboard for NS as a whole, covering the key risks and issues regarding integrity and

compliance, plus an overview of all relevant KPIs. In addition, NS pursues a nationwide Desired Behaviour Programme to improve existing social behaviours on the shop floor. The NS Code of Conduct serves as the guiding document for this programme. NS also invests in raising the knowledge of its employees about specific compliance themes. For example, in 2020 we ran a series of training programmes on competition and privacy.

Privacy

The need to handle our passengers' and employees' personal data carefully is self-evident. Our approach is based on four guiding principles: 'Transparent', 'Safe with NS', 'Choice and control' and 'Innovative and open'. To safeguard compliance with privacy laws, NS has set up a privacy structure and privacy governance system and maintains a permanent focus on privacy training and awareness, for example through (compulsory) e-learning programmes, training courses and newsletters. We have appointed 'privacy champions': employees who, in addition to their regular work, answer first-line questions and serve as the eyes and ears of the Privacy Office within their respective business units. Together with the Data Protection Officer and the Privacy Officers, these privacy champions make up the privacy function within NS. This enables us to maintain short lines of communication between the business units and the privacy experts and to create an extensive network for privacy-related knowledge within NS as a whole.

Despite NS's careful handling of customer and employee data, incidents cannot be ruled out. For instance, a person may lose a mobile phone that was not locked. In a more serious incident last year, NS International sent more customer data to Facebook than the customers themselves had given permission for. Those data have since been deleted. The most problematic incident however was an attack in which hackers used passwords obtained from elsewhere to access the accounts of NS customers. The customers concerned were informed and their passwords reset. In cases such as these, NS notifies the supervisory authority and/or the person concerned. In all cases, data leaks also serve as input for process improvements.

Effective and careful data processing starts with applying privacy-by-design principles. According to this method, NS integrates measures to protect the privacy of individuals in the very design of a product or service. NS also frequently conducts data protection impact assessments to identify any risks for individuals and take measures to mitigate those risks.

Statement by the Executive Board

The Executive Board is of the opinion that the risk management and internal control systems concerning the financial reporting risks in the year under review functioned satisfactorily and give a reasonable degree of assurance that the financial reports do not contain any material misstatements. The report gives sufficient insight, therefore, into the functioning of the said systems. 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;
- given the current state of affairs, the preparation of the financial reports on a going concern basis is justified;
- the annual report specifies the material risks and uncertainties that are relevant to expectations about the company's continuity for a period of twelve months after the compilation of the report.

- Note that the above does not mean that those systems and procedures provide absolute assurance as regards the achievement of operational and strategic objectives, nor that they will necessarily be sufficient to prevent any and all inaccuracies, errors and cases of fraud and failure to comply with laws and regulations. Neither can they provide assurance that we will be able to reach our objectives.

Given the above, the Executive Board is of the opinion that it satisfies the requirements of principle 1.2 of the Dutch Corporate Governance Code.

Dialogue with our stakeholders in the Netherlands



In addition to daily contact with passengers, NS maintains close relations with many different stakeholders. Thanks to this dialogue, which is based on trust, we are able to jointly seize opportunities and accept or mitigate risks at an early stage. These talks also provide valuable expertise and ideas for our organisation and for better, more sustainable services for our passengers.

Our stakeholders

Our stakeholders are the people or groups who are affected by our actions and who, in turn, influence our organisation and services. NS is continuously monitoring who its stakeholders are. The nature of our contacts with stakeholders is determined in some cases by legislation (government ministries and regulatory authorities), in some cases by collaboration in the transport sector (carriers, ProRail) and in other cases by the public nature of our service (passengers, the media and interest groups). There can also be stakeholders who are on the scene temporarily for specific subjects – their input can be relevant and we take it seriously. We organise sessions with stakeholders on specific themes or promote a broad stakeholder dialogue on the course of NS. We also held such sessions in 2020, for example on the subject of sustainable enterprise.

The dialogues with our stakeholders take place at various levels within the organisation, with the Executive Board often being involved. This enables us to build up trust.

Collaboration in the transport sector

We work with partners in the transport sector, such as other carriers and ProRail, to ensure an optimum door-to-door journey for our passengers. This collaboration features prominently at all levels of our organisation, in terms of strategy as well as operations, and with an eye on the long-term vision that we drew up in the Mobility Alliance with a view to improving and optimising mobility within the Netherlands. Our intensive collaboration with sector partners is also improving customer satisfaction, thanks to better operational statistics for aspects such as punctuality and the quality of connections, and to improvements in the journey to and from the station.

Vision for the future of public transport up to 2040

If congestion in the Netherlands is to remain manageable, ProRail, travellers' organisations and other stakeholders will have to continue their mutual dialogue. As before, in 2020 NS participated in the efforts to flesh out the Vision for the Future of Public Transport up to 2040 (*Toekomstbeeld 2040*). Together, the participants drew up the TBOV development agenda entitled 'Now Boarding for 2040' (*Nu instappen naar 2040*). NS's contributions were significant, focusing on network development and hubs. We were also actively involved in preparing the development agenda, which was adopted at the National Public Transport and Railways Platform meeting in November 2020. Over the next few years, this document will serve as a guide for mobility policy of the Ministry of Infrastructure and Water Management.

Tailored regional solutions

NS serves all parts of the Netherlands: both densely populated and sparsely populated areas, the Randstad conurbation and rural regions, and all twelve provinces. We aim to meet the needs of the various regions, and ensure smooth connections within the Netherlands and with other countries. September saw the first 'regional management dinner' – an NS initiative – for regional administrators and the NS Executive Board. The participants discussed their shared ambitions and challenges and collaboration between the various regions and NS. The regional authorities are important partners for NS, and the regional management dinner served to further intensify NS's collaboration with the various provinces.

Over the past year, we continued our consultations with regional authorities about the development of the timetable and the railway / public transport infrastructure, and about the role of train services in accessibility and mobility issues. The regional authorities are also greatly interested in hub development (also with a view to the housing construction

impulse), international railway connections and a better spread of passengers during peak times. Regional administrators are facing major tasks and complex challenges, such as the nitrogen crisis, and are aware of NS's ability to help solve these issues. NS is keen to intensify its collaboration with provincial and regional authorities by jointly developing plans and implementing measures.

Dilemmas in the discussions

NS shares the dilemmas it is facing with stakeholders in good time, so that they have a better understanding of policy considerations and joint solutions can be found. We provide our stakeholders with feedback about their ideas and recommendations and the effect that the dialogue has had on NS policy, both in regular discussions and thematic sessions and in reports. Examples include adaptations to our product portfolio or in compiling new timetables. The aim is that passengers overall should benefit from this, although there will inevitably be passengers for whom any given choice has an adverse effect. We have contacts with consumer organisations to address these dilemmas.

Consultations with the trade unions

NS attaches great importance to good relations with the trade unions. In 2020, we started talks with the unions about the new CLA, the social plan and pensions. We also discussed the implementation of agreements from the CLA for 2017-2020 and the ensuing HR policies, for example as regards safe working during the COVID-19 crisis, absenteeism and sustainable employability.

Case study: spreading passengers to prevent congestion

In order to prevent new peak hours and renewed congestion in public transport, it is crucial that we spread our available capacity as much as possible throughout the day, which will also help to keep public transport affordable. The idea is that lectures and lessons should not all start at the same time. In addition, educational institutions are exploring possibilities to ensure that not all lectures start at the same time.

In the first half of 2020, in collaboration with other public transport companies and with municipal and provincial authorities we made regional agreements with universities, institutions for higher professional education, vocational training centres and secondary schools to ensure their students travel at different times of the day/week. In November 2020, following a successful evaluation the national agreements on spreading passenger volumes were extended until the summer of 2021, in consultation with the Ministry of Education, Culture and Science and the Ministry of Infrastructure and Water Management. In this connection, the transport and education sectors are building on experiences gained in the Arnhem-Nijmegen region, where agreements with Radboud University Nijmegen, HAN University of Applied Sciences and the Nijmegen Regional Training Centre have been in place since September 2018. After these parties had adapted the start times of lessons and lectures, the number of train and bus passengers at peak times decreased by 22% and 10% respectively. We are eager to enter into similar agreements with other employers, including public authorities.

Case study: Creating better and faster connections with the province of Zeeland

The province of Zeeland and NS have been engaged in talks since 2018 on creating better and faster connections with the Randstad conurbation and the province of Noord-Brabant. We were able to partly fill this need in 2019 by adding extra peak-hour trains in the mornings and evenings.

However, what Zeeland was really hoping for was an increase in train frequency and faster trains over a larger part of the day, but an operating deficit prevented us from fulfilling that wish. Even so, in 2020 the national government decided to grant the province of Zeeland a package of compensatory measures after cancelling the planned transfer of a marine base to Vlissingen. In that context, the Wientjes Committee was installed to explore possibilities for mobility improvements and the associated extra impulse for the Zeeland economy, in consultation with parties including ProRail and NS. The committee recommended a phased programme to introduce better and faster connections in the region. The national government has made funds available for that purpose.

NS will implement the first phase when the 2022 timetable comes into effect, raising the frequency to three trains per hour. One of those trains is a fast Intercity service to the Randstad conurbation. The other two are an Intercity stopping train to the Randstad and a Sprinter connection with Roosendaal. The next phase, which involves faster connections via the high-speed line and a second fast Intercity service, will follow in due course. NS is currently engaged in consultations on this subject with the Ministry of Infrastructure and Water Management, the province of Zeeland and ProRail.

In addition, within the context of the Smart Mobility Plan, NS and the provincial and municipal authorities have come together to create a regional development plan. The focus areas of that plan include station development, mobility hubs and opportunities for commuters, tourism and students.

Stakeholder dialogue diagram

The table below presents an overview of the wide range of dialogues between NS and its stakeholders in the Netherlands. The numbers refer to the themes from the material relevance matrix.

European	Nature of dialogue	Content of dialogue	Effects of the dialogue on NS policy
EU institutions, CER, UIC, ERA	Informational, creation and to determine standpoints	2, 5, 6, 9 Promoting sustainable mobility in Europe, stimulating international rail traffic (for distances of up to 700 km), investment and co-investment, stimulating innovation, facilitating passenger first-to-last-mile	<ul style="list-style-type: none"> • Strengthening position of (international) passengers • Optimising cooperation between European railway companies and institutions • Sustainable investments in the railway sector that contribute to climate objectives by encouraging the modal shift from air to rail • NS's reputation as a sustainable partner
National (NL)	Nature of dialogue	Content of dialogue	Effects of the dialogue on NS policy
Customers (consumers and businesses) N.B. Some customer groups are represented by interest groups. See also LOCOV	Informational, creation, monitoring	2, 3, 7, 11 Timetable, public transport card (OV-chipkaart), customer satisfaction, handling complaints and inquiries, consumer portfolio, corporate portfolio, collaboration with bus, tram and metro companies, accessibility	<p>Improved services, including:</p> <ul style="list-style-type: none"> • Introduction of <i>Treinwijzer</i>: by registering their journey, travellers gain insight into train congestion • NS Flex goes live: Over 455,000 customers have discovered the benefits of our 'travel now, pay later' option. To be purchased online or at NS counters. As of 1 September, the Traject Vrij season ticket is also available in an NS Flex variant. • Following consultation with Eye Association Netherlands (<i>Oogvereniging</i>), passengers with a visual handicap can now also report nuisance in the train via an app or SMS text messaging This service was extended to the stations this year. • As part of the upgrade of the ticket machines, a first step was taken in cooperation with the Eye Association Netherlands to introduce audio feedback. • Development of the NS Platform Indicator app in collaboration with Eye Association Netherlands enabling travellers who cannot read the signs above the platforms or have difficulty reading this, can access this information with the app. • Spread of rush hours by adjusting lecture times in various regions • Improve communication between people with hearing impairments and NS Customer Service. A questionnaire has been distributed to the target group that was prepared together with the interest groups representing people with hearing impairments and the the association for the elderly. Measures will be taken in 2021 based on the results.

			<ul style="list-style-type: none"> • Improve customer communication for and by people with disabilities. Together with a wide range of interest groups representing people with disabilities, the accessibility pages on NS.nl have been updated and videos have been made explaining the possibilities of travelling with a disability during the COVID-19 pandemic. • Increase in the number of stations where assistance is offered (+25 stations) <p>Scooter, bicycle, train and car in NS Lab app: The addition of the new means of transport to the NS Lab app (the NS experimental app) involves a trial that will last until the middle of next year. With this trial, NS aims to make it easier for travellers to get from door to door with the transport of their choice.</p> <ul style="list-style-type: none"> • The Youth 1-day pass will be available as of 1 September. • Gates closed at several stations, including The Hague Centraal and Goes.
Shareholder Ministry of Finance	Intensive involvement	1, 12, 14, 16	<p>Performance of NS, remuneration, strategy, appointments, major investments, benchmark return from State participations, financial situation, CSR</p> <ul style="list-style-type: none"> • Determining financial policy, appointment of new CEO and Executive Board remuneration • Setting benchmark return 2020 • Transparent reporting as per GRI • Progress of GRC measures and savings through efficiency measures • New 2020-2025 strategy and consultation in the adoption of new strategy by Supervisory Board • Assess risk profile of foreign operations, partly in the context of COVID-19 • Impact of COVID-19 on NS financial performance/decision regarding 2019 dividend payment in the context of Availability Payment • Preparation of monitoring CSR targets
Ministry of Infrastructure and Water Management	Intensive involvement	1, 2, 4, 6, 11, 14	<p>Performance of NS, (management) main rail network franchise, reliability, transport capacity, cooperation, annual cycle, door-to-door journey, HSL South train services, cross-border transport, personal safety and railway safety, public transport card (OV-chipkaart), accessibility, timetable, transparency, sustainability</p> <p>Including:</p> <ul style="list-style-type: none"> • Transportation Plan 2021, 2020 semi-annual and annual report • Timetable 2021, 2022, and new product steps (including ICNG) • Agreements on second half of franchise period 2020-2025 • International train services: introduction of direct Eurostar and night train to Vienna • Outline of vision of the future of public transport • Steps towards new payment methods (also in NOVB context) • COVID-19 and KPIs/compliance with franchise obligations, availability payment/public transport protocol

			<ul style="list-style-type: none"> Establish supporting accessibility measures 2021-2022 following consultation with interest groups representing people with disabilities. Waste reduction and separation at stations. NS is taking ongoing initiatives towards the Ministry of Economic Affairs and Climate Policy, the Ministry of Infrastructure and Water Management and VNO-NCW (Confederation of Netherlands Industry and Employers) to shape follow-up agreements on energy efficiency (successor to the long-term energy efficiency agreement 3: MJA3).
National political bodies	Informational, intensive involvement	1, 4, 5, 6, 8 11, 13, 15 COVID-19, NS strategy, operational performance, sustainability, circular economy, new rolling stock, ERTMS, accessibility, main rail network franchise including HSL, international train connections, public transport card (OV-chipkaart)/access gates, diversity policy, personal/railway safety, timetable, coping with winter and seasonal conditions, service at stations, suicide prevention	<p>Including:</p> <ul style="list-style-type: none"> Spread agreements with educational institutions Connections to and from regions, including faster journeys between the northern part of the Netherlands and the Randstad conurbation Investigation into speeding up and extending international, cross-border connections Accessible travel by train Waste reduction and separation at stations. Package of measures for personal safety
Supervisory authorities – ACM, IL&T, Dutch Data Protection Authority	Involvement, consultation ('guidance') and information	4, 7, 10, 11, 14. Responding to regular and ad hoc requests for information. Discussing topical subjects such as achieving a more professional safety culture, market issues, acceptance of rolling stock, safety incidents, incident investigations, clarification of new regulatory requirements, and providing input for market studies and consultations.	<ul style="list-style-type: none"> Improved implementation and service Promoting compliance Transparency Position statements Increasing safety on the track, both for NS and throughout the sector
ProRail	Intensive involvement	1, 4, 6, 7, 8, 9, 11 Long-Term Rail Agenda, timetable development, performance of the rail system, availability of infrastructure, safety, accessibility, station development, ERTMS, sustainability	<p>Including:</p> <ul style="list-style-type: none"> Cooperation on seasonal measures Cooperation on safety and safety policy Cooperation on sustainable business practice and accessibility Cooperation with regard to stations (management, maintenance, development and new construction) Better alignment between infrastructure and the timetable [via the MLT Steering Group] Cooperation with regard to sustainable development and placing it on the political agenda
LOCOV (National Public Transport Users' Forum)	Intensive involvement	1, 2, 3, 5, 11.	Including:

		<p>NS timetable, fares, travel information, OV-chipkaart, service delivered to passengers, Transport Plan, customer satisfaction, punctuality, new rolling stock, withdrawals from service, accessibility, international connections, HSL services, NS strategy.</p>	<ul style="list-style-type: none"> • Better train product by incorporating suggestions from consumer organisations (such as timetable suggestions, new rolling stock, pricing policy, accessibility, communication, etc.). • Adoption of various recommendations related to season ticket update (decision in 2019, implementation in 2020) • Adoption of various recommendations related to the conditions for refunds in the event of delays (decision in 2019, implementation in 2020) <p>No increase in minimum rate as of 1-1-2020 and no phasing out of RAILPLUS in 2020 as a result of advice from consumer organisations.</p> <ul style="list-style-type: none"> • No differences between NS Flex and Pre-Paid Travel in first-class fares, following advice by consumer organisations (decision of October 2018, implemented in 2019).
Interest groups, NGOs, Anders Reizen (employers' coalition)	Involvement, consulting and information	<p>4, 5, 6, 9, 11, 13</p> <p>Promote sustainable mobility (via Anders Reizen), Social policy, Promote accessible train travel for people with disabilities</p>	<p>Including:</p> <ul style="list-style-type: none"> • NS challenged its updated sustainable enterprise strategy (<i>NS onderneemt duurzaam</i>) in a stakeholder dialogue with directors of key NGOs resulting in actionable feedback, appreciation for the sustainable direction of NS and strengthening of the relationship between key green stakeholders and NS. • NS makes its own mobility policy more sustainable. In 2020, the NS internal flight policy has been amended: business trips under 700 kilometres are now always made by train. • NS contributes to the realisation of the measures regarding sustainable passenger mobility from the Climate Agreement. • In various invitations to tender, NS has included SROI obligations for suppliers to engage people who are at a distance the labour market. • During the COVID-19 pandemic, the CEO of NS engages with everyone and the Minister of Disability Affairs and states that NS will maintain the inclusive agenda even in difficult times. Interest groups for people with disabilities regard NS as a reliable and inclusive partner.
Trade unions	Intensive involvement	<p>4, 7, 13</p> <p>Collective labour agreement, personal safety, COVID-19, perspectives for action, employment (pact), pension plan, social plan, personal and social consequences of organisational changes, signs suggesting satisfaction or dissatisfaction among staff, employees' interests, long-term NS strategy</p>	<ul style="list-style-type: none"> • Implementation of the 2017-2020 collective labour agreements and resulting HR policy • Preparation of new collective labour agreement • Implementation of the Social Plan • Implementation of the pension plan • Implementation and evaluation of a package of measures for personal safety and the implementation decree

Suppliers, subcontractors	Consulting and making acquaintance, negotiating conditions, making contractual agreements, intensifying collaboration, innovation and development	6, 9, 12, 14, 15, 16 Sustainable business practice, Innovation, Financial performance, Integrity and Compliance, Responsible procurement, Risk management	<ul style="list-style-type: none"> • Focus on cost reduction for NS due to its financial situation • Focus on continuity risk of suppliers due to COVID 19 impact • Focus on reliability and availability of products and services for business-critical processes • Encouraging cooperation and innovation with partners (supplier management) • Achievement of CSR objectives (by making entire supply chain more sustainable) • Introduction of new products and services
Media	Informational, intensive involvement	All NS-related subjects	<ul style="list-style-type: none"> • Position statements • Improving NS image in line with operational performance
Regional authorities and official representatives of the provinces, metropolitan regions and municipalities, other carriers and consumer organisations	Informational, negotiations, contractual agreements, crisis management, collaboration, exploring and investigating	1, 2, 4, 5, 7, 8, 9, 11, 17 Quality of train services, crowded trains, punctuality, network development, redevelopment of existing stations, public transport and railway discussion platforms, advisory body on the Multi-annual Programme for Infrastructure Space and Transport for the northwest Netherlands (BO MIRT NWNL), vision of the future of public transport and the public transport development agenda, national environmental strategy, timetable, cross-border transport, personal/railway safety, transport sector-wide agreements, regional franchises, noise nuisance near the railways, hub development	<ul style="list-style-type: none"> • New, more modern stations and redevelopment of station surroundings • Tailored regional solutions for replacement bus service when train services are interrupted • Regional customisation for timetable contracts, e.g. Hilversum Utrecht-Amsterdam night train • Joint public transport development agendas for attractive stations and better accessibility from door to door • Customisation in the main rail network timetable and improved connections to regional public transport • Various bicycle storage facilities free of charge for the first 24 hours, extension of P+R sites • Collaborating on regional tasks and ambitions for the future of public transport • Door-to-door journey (incl. MaaS projects) • Optimising the Noord-Holland North timetable • Public transport bicycle (<i>OV Fiets</i>) pop-up during major interruption of service at Amsterdam Bijlmer ArenA in cooperation with <i>Amsterdam Bereikbaar</i> • ZWASH – Metro package for west side of Amsterdam to make room on the rail network for the growth and urbanisation challenge there • Joint – Regional carriers, municipality and Police – safety campaign at Arnhem Centraal station; • Design new timetable – together with partners in the region – to extend the Leeuwarden-Meppel Sprinter train to Zwolle in 2021;

- Quick scan ProRail-NS for acceleration measures in the northern Netherlands – Randstad in the medium term, results discussed with the *OV- en Spoortafel Noord-Nederland* group
- Accelerate and improve the Zeeland timetable
- IC Randstad-Aachen

Internal: central and local works councils, vocational training

See [Attractive and inclusive employer](#)

Strategy and material topics diagram

NS presented a new strategy in 2020. The performance figures in this diagram allow us monitor progress in implementing this strategy.

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Strategic priorities		Indicators with a quantitative target value	Objectives	Results	Risk factors	Result/prospects	Contribution to global objectives	
Themes	Material topics	KPI	2024	Objective in 2020	Achieved in 2020	Risks	Social impact	SDG
A responsible and comfortable journey	Operational performance	Punctuality for passengers (to 5 minutes) on the main rail network	91.5%	88.9%	93.5%	HSL South / Infrastructure / Reliability of IT	Mobility / Journey time	SDG 9 / SDG 11
		Punctuality for passengers (to 15 minutes) on the main rail network	97.4%	96.7%	97.9%			
		Punctuality for passengers (to 5 minutes) on HSL South	84.2%	82.1%	85.2%			
		Seat availability at peak times (main rail network)	95.5%	94.3%	97.3%			
		Occupancy rate at peak times (HSL South)	94.9%	91.2%	98.1%			
		Top 10 most crowded trains	--	4.9%	1.4%			
		Travel information during the train journey	--	81.4%	85.0%			
	Customer satisfaction	General customer satisfaction with the domestic main rail network	75.0%	74.0%	--	HSL South / Infrastructure	--	--
		General customer satisfaction with HSL South services	74.0%	68.0%	--			
		Reputation (RepTrak)	--	62	69			
Travelling and working in safety	Customer satisfaction with personal safety	79.0%	81.0%	--	Safety	Health and safety	SDG 8	
		Number of signals passed at danger in the Netherlands	--	--				32
		TRR	--	--				3.4
	Accessibility	Stations with travel assistance	--	--	68.0%	Infrastructure	Mobility	SDG 10
Focusing on broad mobility services	Door-to-door journey / Collaborating with stakeholders	Quality of connections to other carriers	95.6%	94.0%	96.7%	Infrastructure	Mobility / Journey time	SDG 9 / SDG 11
	World-class stations	Customer satisfaction survey on stations	--	--	79.0%	Safety / Infrastructure / Reliability of IT	Expenditure	SDG 11
	Designing and sharing knowledge on mobility	CO ₂ emission reduction by members of Anders Reizen Coalition	--	--	Not yet calculated for 2020	Infrastructure	Mobility / Journey time / Expenditure	SDG 11
Sustainable accessibility, nationally and internationally	International connections		--	--	IC Berlin 10 minutes faster	NS's investments abroad	Mobility / Journey time / Environment	SDG 7 / SDG 12 / SDG 13 / SDG 15
		Faster international connections		--	Three trains per day between London & Amsterdam			
	Contribution to Dutch Climate Agreement	Energy efficiency of traction	--	--	138.4%	Non-compliance	Environment	

		Waste separation	--	--	55.0%		
An agile organisation	Innovation	Number of innovations contributing to NS strategy	--	--	7	Infrastructure / Reliability of IT / Agility	Expenditure
	Financial performance	Revenue (in € million)	--	--	€ 6,601.00	Turnover / Savings / Agility / Coronavirus crisis	Expenditure
		ROE	--	--	-37%		SDG 8
		Investments (in € million)	--	--	€ 548.00		

* this refers to the savings realised from 2018 to 2019 by members. The data for 2020 is not yet known at the time of publication of our Annual Report.

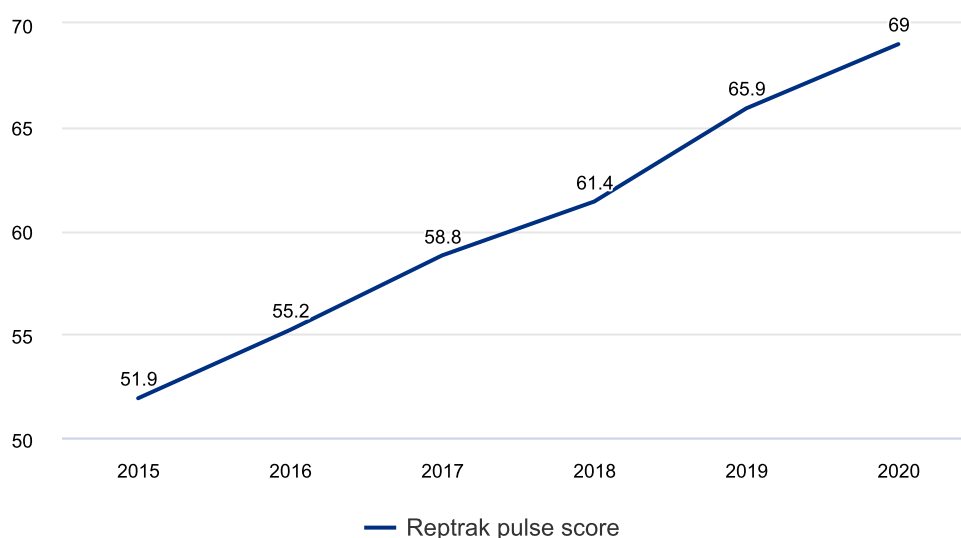
Our performance in a wider context

Benchmark

In 2020, NS and ProRail presented the results of the most recent international benchmark to the Lower House of Dutch Parliament. In the benchmark, we compare our performance over the 2014-2018 period with that of similar railway companies (DSB, NMBS, SBB, Greater Anglia, West Midlands Trains). It shows that NS and ProRail attracted above-average scores for customer appreciation, punctuality and passenger safety. The increase of customer appreciation (11%) was the highest in the peer group, due in particular to improved operational performance and the modernisation of rolling stock and stations. In addition, we post high productivity figures in busy railway network and with intensive train operations. This results in relatively low costs per passenger-kilometre. We are also a front runner in terms of sustainability.

Reputation

We have engaged the Reptrak Company to monitor and calculate our reputation. In the second quarter of 2020, the RepTrak score for NS reached 70, which is the highest level ever. Despite a slight decline towards the end of the year, the annual average still registered a record score of 69, which is above our target score of 62 for reputation in 2020. NS is doing particularly well on social values and the attractive employer score. With these results, NS is continuing the upward trend of recent years.



Transparency

NS is transparent about its performance. Every month, it reports via www.ns.nl on the latest scores for the KPIs that have been set for the main rail network franchise, with detailed supporting evidence. The COVID-19 crisis prevented us from measuring all KPIs throughout the year. NS is included in the permanent research group of the 250 largest Dutch organisations for the Transparency Benchmark. This is a tool provided by the Ministry of Economic Affairs for improving corporate sustainability reporting within the Netherlands. The results are presented in a Transparency Ladder that is made publicly available and widely communicated. The 2019 Annual Report was not assessed. NS achieved a position among the top 3, however, for its 2018 Annual Report. The 2019 Annual Report was nominated for the Sijthoff Prize awarded by the *Financieele Dagblad* newspaper.

Sustainable Development Goals


NS's contributions to the Sustainable Development Goals





The SDGs (Sustainable Development Goals) are 17 goals that aim to make the world a better place by 2030, as agreed between all UN member states. NS contributes to these goals and has included several in its sustainability strategy.

NS's vision is as follows: 'Keeping the Netherlands accessible in a sustainable manner - for everyone'. With its sustainable enterprise strategy, NS has shown what this term, 'sustainable', actually means in practice. Our approach is based on five key focus areas: zero emission, circular and green enterprise, by everyone and for everyone. Together with our stakeholders we have identified the SDGs of particular relevance to them which could benefit from additional future contributions by NS. This has resulted in a list of nine SDGs which NS helps to advance. Five of those benefit from direct NS contributions through our sustainable enterprise strategy, while we promote the other four SDGs through our regular operations.



NS is looking for ways to measure and influence our contributions to the SDGs. To that end, for each priority area of our sustainability strategy we identify the SDG sub-targets to which it contributes. We use indicators to measure this. We convert the international indicators into measurable NS indicators. The table below presents these steps for each priority area of our sustainability strategy. SDG 13 concerns creating policies to combat climate change and its impacts. For NS, developing policies is a relevant issue and a factor overall. In addition, SDG 13 does not contain a useful indicator for NS.

NS strategy	Contributes to these sub-goals of the SDGs	Impact on SDG sub-goal is measured by this indicator	How will NS measure its impact?	This is how NS knows its impact on SDG:
Zero-emission Enterprise 	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix	7.2.1 Renewable energy share in the total final energy consumption	→ % Matching power consumption with green generation → Number of MWh generated on NS land/buildings → The number of m3 gas consumption	7, 9 and 13**
	7.3 By 2030, double the global rate of improvement in energy efficiency.	7.3.1 Energy intensity measured in terms of primary energy and GDP	→ The energy consumption per passenger kilometre	7, 9 and 13**
	9.4 By 2030 upgrade infrastructure and retrofit industries to make them sustainable.	9.4.1 CO2 emissions per unit of value added	→ CO2 emissions per passenger kilometre	7, 9 and 13**

Circular Enterprise 	12.2 By 2030, achieve the sustainable management and efficient use of natural resources	12.2.1: Material footprint, material footprint per capita, and material footprint per GDP	Indicator under development*	12
	12.2 By 2030, achieve the sustainable management and efficient use of natural resources	12.2.2: Domestic material consumption, domestic material consumption per capita/GDP.	Indicator under development*	12
	12.4. By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle.	12.4.2 Hazardous waste generated per capita and proportion of hazardous waste treated	→ Kg of hazardous waste generated	12
	12.5. By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse	12.5.1: National recycling rate, tonnes of material recycled	→ % residual waste from NS waste	12, 13**
Green Enterprise 	12.2 By 2030, achieve the sustainable management and efficient use of natural resources	12.2.1: Material footprint, material footprint per capita, and material footprint per GDP	Indicator under development*	12
	12.3. By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses	12.3.1 Global food loss index	Indicator under development*	12, 13**
For & by everyone 	11.2 Provide access to safe, affordable, accessible and sustainable transport systems for all by 2030.	11.2.1 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities	→ % main rail network stations with travel assistance	11
			→ Independently accessible rolling stock: % of sprinter fleet	
	11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities	11.7.2: Proportion of persons victim of physical or sexual harassment, by sex, age, disability status and place of occurrence.	Indicator under development*	11
Sustainable Mobility 	9.1. Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	9.1.2 Passenger and freight volumes, by mode of transport	→ We annually measure the impact of NS on society by means of the True Value Model	7,9,11,12 en 13**.

* This will be measured using the Circular Transition Indicator. Once the zero measurement for this indicator becomes available in 2021, it will be possible to measure and manage circular performance.

** SDG 13 concerns creating policies to combat climate change and its impacts. For NS, developing policies is a relevant issue and a factor overall. In addition, SDG 13 does not contain a useful indicator for NS.

Notes to the material themes

Compared with 2019, the themes in NS's material relevance matrix for 2020 are rather more evenly distributed and less clustered. As a result, it is now easier to see which themes for 2020 have the most and which have the least material relevance for NS. We emphasise, however, that given our broad social role, NS is fully aware that all of these 17 topics are important.

We differentiate the extent to which we report on our performance on the 17 material topics. [We report on objectives and results](#) for all high-relevance topics (1-12). As in previous years, for the five least relevant topics (13-17) as a minimum we provide notes on our activities on the subject concerned. Compared with previous years, in particular the themes of Operational performance (1), Door-to-door journey (2), Travelling and working in safety (4) and International connections (5) have risen in the priority ranking. The higher ranking of the first two themes is attributable to NS's increasing commitment to these themes as part of its efforts to maintain the appeal of rail transport. The higher ranking for Travelling and working in safety however is probably due to an external development: the impact of COVID-19 on our passengers and employees. This has probably made people more aware of the importance of a safe environment. The higher ranking for International connections can be associated with the public debate on climate change and the growing interest in trains as a sustainable alternative to air travel. One theme that has dropped in the ranking, in particular, is Integrity & compliance (14), which can be explained by the fact that no incidents have occurred that NS could have prevented.

We use our results in the annual evaluation of our management approach of the various material topics. For Operational performance (1), Door-to-door journey (2) and Customer satisfaction (3), for example, we use the KPIs from the 2020 Rail Transport Franchise. For the other material topics we use our own performance indicators. We report on any adjustments to our management approach that result from the evaluation.

Definitions of the materially relevant themes

#	Topics in 2020	Definition
1	Operational performance	The extent to which NS is committed to achieving operational performance agreements on the Main Rail Network and HSL South, such as punctuality and seat availability.
2	Door-to-door journey	The extent to which NS facilitates customised door-to-door travel for all public transport passengers in all regions of the Netherlands. Using our own physical and digital services where possible but also by using other providers.
3	Customer satisfaction	The extent to which NS meets the core needs of travellers with respect to their travel experience.
4	Travelling and working in safety	The extent to which NS is committed to safety for passengers, employees and colleagues of partners.
5	International connections	The extent to which NS works with partners to provide faster international connections in order to offer an attractive alternative to short-haul flights and the car.
6	Contribution to Dutch Climate Agreement	The extent to which NS is committed to making mobility more sustainable, by reducing energy use and CO2 emissions and making circular use of resources and materials.
7	Collaborating with stakeholders	The extent to which NS works reliably, openly and accessibly with (inter)national and regional stakeholders to shape mobility in the Netherlands.
8	World-class stations	The extent to which NS is committed to working with our partners in the region to provide world-class stations by creating functional and valued hubs for mobility and quality of life in their environments.
9	Innovation	The extent to which NS continues to innovate in order to optimise our services, the quality of our products and efficient operations, and thus the satisfaction of passengers with their journeys, now and in the future.
10	Designing and sharing knowledge on mobility	The extent to which NS is actively taking the lead in shaping future and sustainable mobility in the Netherlands and sharing knowledge with the sector.
11	Accessibility	The extent to which NS is committed to seamless travel in order to make its products and services available and accessible to all.
12	Financial performance	The extent to which NS is able to achieve a financial return now and in the future so that it can continue to invest in improving its services.
13	Attractive and inclusive employer	The extent to which NS can offer its employees an attractive (terms of employment, rewards, development) and inclusive (open and safe, diversity, equality) working environment where everyone can be themselves.
14	Integrity & compliance	The extent to which NS is committed to sustainable assurance of integrity, desired behaviour and compliance.
15	Responsible procurement	The extent to which NS takes responsibility for making products and services more sustainable and innovative through active procurement policies, including a focus on social entrepreneurship, innovation, energy consumption and circularity.
16	Risk management	The extent to which NS is able to consciously deal with uncertainties that may have a negative impact on the realisation of its strategic objectives.
17	Abellio franchises	The extent to which NS achieves sustainable financial returns, learns from its experiences abroad and allows Dutch passengers to benefit from its presence abroad.

About the scope of this report

NS is based in the Netherlands and has a single, Dutch shareholder, the Dutch State. In this annual report, which was published on 26 February 2021, we primarily render account to our Dutch stakeholders for our potential social impact in the Netherlands. Even so, we also report on our international operations and have included a separate chapter for that purpose. NS focuses on passengers and enabling them to enjoy a comfortable door-to-door journey. To that end, NS's main priority is to improve operational performance on the railways, supported by the provision of, for instance, bicycle facilities and station services and by optimised door-to-door journeys thanks to public transport bicycles and collaboration with other partners in the public transport sector and elsewhere. In addition, we aim to remain financially healthy so as to be able to continue investing in services to meet the growing mobility needs in the Netherlands, and to keep train fares affordable. Indeed, this is what our stakeholders expect from us. They also want to see accountability for our non-financial results in the Netherlands.

In order to offer passengers the best possible service at the right price, we are also accumulating experience abroad. We monitor the extent to which our results in the United Kingdom and Germany add value for passengers in the Netherlands, in terms of cross-border travel, for example. Our international activities have to benefit the interests of our stakeholders in the Netherlands. According to our Dutch stakeholders, our activities in the United Kingdom and Germany are a materially relevant theme. Given Abellio's low positioning in the material relevance matrix, we do report on this subject but only in proportion to the financial impact of Abellio on NS as a whole. In tendering procedures, the franchising authorities set the terms of the franchised agreements, which leave less room for non-financial indicators. This is why there is less reporting on non-financial performance indicators.

Apart from the financial statements and the combined auditor's report, the NS Annual Report for 2020 contains the following information:

- the Report of the NS Executive Board, including Foreword by the CEO, 2020: A year dominated by COVID-19, Our strategy, Expected developments in the long term, How NS adds value to Dutch society, Our impact on the Netherlands, The profile of NS, Compensation for victims of WWII transports, Our activities and performance in the Netherlands, Our activities and performance abroad, Financial performance, and the following sections which are part of the chapter on NS Groep: Corporate Governance, Risk management, Organisational improvement, Dialogue with our stakeholders in the Netherlands, Notes to the material themes, About the scope of this report, and Scope and reporting criteria;
- the Report of the Supervisory Board;
- other data, in accordance with Title 9 of Book 2 of the Dutch Civil Code.

This annual report is subdivided into three blocks:

- a core report comprising the Foreword by the CEO, 2020: A year dominated by COVID-19, Our strategy, Expected developments in the long term, How NS adds value to Dutch society, Our impact on the Netherlands, The profile of NS, Compensation for victims of WWII transports, Our activities and performance in the Netherlands, Our activities and performance abroad, Financial performance. For the operational results, the core of the report consists of the results that we have achieved within the franchise agreements with the Ministry of Infrastructure and Water Management for the Dutch main rail network;
- a section with other information including Corporate governance, Risk management, NS and taxes, Organisational improvement, and Dialogue with our stakeholders in the Netherlands.
- the financial statements.

Scope and reporting criteria



In the annual report, NS presents its operational and financial performance and the associated social aspects with the highest possible degree of integration. Our reporting method is in accordance with the GRI Standards' 'core' option. The following are the main building blocks of this type of reporting:

- relevant provisions in the Dutch Civil Code;
- the International Financial Reporting Standards (IFRS);
- the revised 2016 Dutch Corporate Governance Code;
- GRI SRS reporting guidelines ('core' option);
- the International Integrated Reporting Council IIRC.

In order to provide assurance regarding the reliability of the information included, NS instructed EY to perform an audit with a limited level of assurance, with a focus on non-financial information in the following chapters: In brief, Foreword by the CEO, 2020: A year dominated by COVID-19, Our strategy, How NS adds value to society, Our impact on the Netherlands, The profile of NS, Our activities and performance in the Netherlands, Our activities and performance abroad, and the following sections: Organisational improvement, Dialogue with our stakeholders in the Netherlands, Notes to the material themes, About the scope of this report, and Scope and reporting criteria.

GRI indicators

The selection of the GRI indicators is based on the GRI method, the 2020 Transport Plan, discussions with our stakeholders and the resulting material relevance matrix. The reported data are derived from measurements, calculations, third-party reports or internal systems. Any changes in definitions or inherent limitations in the data are highlighted in the report. The GRI index is available at the end of the online annual report. Definition cards for performance indicators from the Transport Plan and the reporting criteria can be found on www.ns.nl/mvoberekeningen and the [PI Vervoerplan 2020](#).

Scope

NS reports on topics whose material relevance emerges from the material relevance analysis, which also serves as the basis for choices regarding the level of detail and demarcation of our reporting. Themes where NS has little impact or that stakeholders do not consider particularly important are included in the report in less detail. Within the context of the stakeholder dialogue, Abellio regularly provided input and answered questions on material themes such as our financial position, operations in Europe and developments abroad.

This report primarily concerns NS's activities in the Netherlands. The activities in the United Kingdom and Germany are discussed where they involve operations in which NS holds a stake of more than 50%.

All data derive from measurements, unless stated otherwise in the description of the method. Any estimates are made using the relevant procedures in our Reporting Manual. Uncertainties in the data regarding the quantification of our impact are explained on www.ns.nl.

We report on the transport supply 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, where relevant, under value creation.

Acquisitions are included in the data from the date of acquisition; disposals are included until the date of disposal, unless stated otherwise.

The definitions of the KPIs and the descriptions of the measurement methods used can be found in the [2020 Transport Franchise Definitions](#).

Financial statements

Consolidated financial statements

Consolidated income statement for 2020

(in millions of euros)	2020	2019
1 Revenue	4,564	6,661
1 Additional government contributions related to corona	2,037	-
Total revenues	6,601	6,661
2 Personnel expenses	2,455	2,305
3 Depreciation, amortisation and impairments	2,637	823
4 Use of raw materials, consumables and inventories	464	534
5 Own capitalised production	-137	-147
6 Costs of subcontracted work and other external costs	747	634
7 Infrastructure levies and franchise fees	1,515	1,495
8 Other operating expenses	1,365	738
Operating expenses	9,046	6,382
15 Share in result of investments accounted for using the equity method	2	8
Result from operating activities	-2,443	287
Finance income	39	12
Finance expense	-60	-63
26 Net finance result	-21	-51
Result before income tax	-2,464	236
9 Income tax	-117	-21
Result for the reporting period	-2,581	215
Attributable to:		
Shareholder of the company	-2,378	208
Minority interests	-203	7
Profit for the reporting period	-2,581	215

Consolidated statement of comprehensive income for 2020

(in millions of euros)

	2020	2019
Profit for the reporting period	-2,581	215
Other comprehensive income items that may be reclassified to the income statement in subsequent periods		
Currency translation differences on foreign activities	-9	2
Changes in measurement at fair value through other comprehensive income	1	7
Effective portion of changes in fair value of cash flow hedges	-18	2
Income tax	-	-
	-26	11
Other comprehensive income items that will not be reclassified to the income statement in subsequent periods		
Actuarial result for defined benefit plans (see note 28)	-1	-
Taxation	-	-
Actuarial result for defined benefit plans as a consequence of revaluation of investments accounted for using the equity method, after tax (see note 15)	-	-
	-1	-
Total comprehensive income for the reporting period	-2,608	226
Attributable to:		
Shareholder of the company	-2,405	219
Minority interests	-203	7
Total comprehensive income for the reporting period	-2,608	226

Consolidated statement of financial position as at 31 December 2020

before profit appropriation

(in millions of euros)		31 December 2020	31 December 2019
Assets			
11	Property, plant and equipment	2,919	4,260
12	Investment property	129	135
13	Intangible assets	376	484
30	Right-of-use assets	1,865	2,022
15	Investments accounted for using the equity method	19	19
22	Other non-current financial assets, including investments	160	159
10	Deferred tax assets	133	202
Total non-current assets		5,601	7,281
16	Inventories	194	184
17	Trade and other receivables	1,174	1,144
	Income tax receivables	13	13
22	Other current financial assets, including investments	35	8
18	Cash and cash equivalents	1,137	818
Total current assets		2,553	2,167
Total assets		8,154	9,448
Equity and liabilities			
23	Equity		
	Issued share capital	1,012	1,012
	Other reserves	21	48
	Retained earnings	2,697	2,495
	Unappropriated result	-2,378	208
Total group equity		1,352	3,763
	Minority interests	-173	18
Equity		1,179	3,781
27	Deferred credits	197	240
24	Loans and other financial liabilities, including derivatives	1,130	656
30	Lease liabilities	1,601	1,676
28	Employee benefits	37	35
29	Provisions	179	126
19	Accruals	13	32
10	Deferred tax liabilities	93	54
Total non-current liabilities		3,250	2,819
24	Loans and other financial liabilities, including derivatives	81	99
30	Lease liabilities	465	433
	Income tax payable	14	10
20	Trade and other liabilities	2,022	1,497
21	Deferred income	562	738
29	Provisions	581	71
Total current liabilities		3,725	2,848
Total liabilities		6,975	5,667
Total equity and liabilities		8,154	9,448

Consolidated cash flow statement for 2020

(in millions of euros)		2020	2019
	Profit for the reporting period	-2,581	215
	Adjustments for:		
	Income tax	117	21
	Results from investments accounted for using the equity method	-2	-8
11,12,13	Depreciation	909	823
11,12,13	Impairment losses and reversals	1,730	-
	Net financing result	20	51
	Change in provisions	606	102
15.22	Change in non-current financial assets (excluding deferred tax positions)	-	-
	Change in other non-current liabilities not resulting in cash flows	-56	-41
	Change in deferred credits	-45	-35
		3,279	913
	Result after adjustments	698	1,128
	Change in inventories	-10	-14
	Change in trade and other receivables	10	-124
	Change in current liabilities	273	225
	Movements in working capital	273	87
	Financing burden paid	-56	-60
	Income tax paid	-1	-9
		-57	-69
	Net cash flow from operating activities	914	1,146
	Finance income received	2	14
15	Dividends from investments accounted for using the equity method	3	10
	Disposal (acquisition) of subsidiaries, net of cash disposed of (acquired)	-	-
11.13	Acquisition of intangible assets and property, plant and equipment	-548	-767
12	Acquisition of investment properties	-	-2
	Receipts (payments) from other investments	-34	-
	Acquisition of non-current financial assets, including investments	-42	-36
15.22	Disposal of non-current financial assets, including investments	4	12
11,12,13	Disposal of intangible assets, property, plant and equipment and investment properties	13	19
	Net cash flow from investing activities	-602	-750
	Net cash flow from operating and investing activities	312	396
	Repayment of borrowings	-494	-454
	Repayment of lease liabilities	-482	-420
	New borrowings	1,001	400
	Dividends paid	-	-37

Net cash flow from financing activities	25	-511
Net decrease/increase in cash and cash equivalents	337	-115
Cash and cash equivalents as at 1 January	818	906
Effect of exchange and translation differences on cash held	-18	23
Cash and cash equivalents classified as held for sale	-	4
Cash and cash equivalents as at 31 December	1,137	818

Consolidated statement of changes in equity

(in millions of euros)	Issued capital	Other reserves	Retained earnings	Unappropriated result	Total	Minority interests	Total equity
Balance as at 1 January 2019	1,012	37	2,427	106	3,582	11	3,592
Result				208	208	7	215
Other comprehensive income		11			11	-	11
Total comprehensive income for the period	-	11	-	208	219	7	226
Dividend paid to shareholders			-37		-37	-	-37
Other		-	105	-106	-1	1	-
Balance as at 31 December 2019	1,012	48	2,495	208	3,763	18	3,781
Result				-2,378	-2,378	-203	-2,581
Other comprehensive income		-27			-27	-	-27
Total comprehensive income for the period	-	-27	-	-2,378	-2,405	-203	-2,608
Dividend paid to shareholders	-		-73		-73		-73
Reverse dividend paid to shareholders			73		73		73
Other		-	202	-208	-6	12	6
Balance as at 31 December 2020	1,012	21	2,697	-2,378	1,352	-173	1,179

Notes to the 2020 consolidated financial statements

The notes are divided into six sections. The notes contain the relevant information as well as a description of the specific accounting policies applied in the case of the subject of that particular note.

Section 1 General information and significant accounting policies

General Information

NV Nederlandse Spoorwegen has its registered office on Laan van Puntenburg in Utrecht, the Netherlands (Chamber of Commerce number 30012558). The company's consolidated financial statements for the 2020 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 that carry out the Group's various business operations. 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 passenger transport, the management and development of property and the operation of station locations.

The Executive Board prepared the financial statements on 24 February 2021. 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 2021, the Executive Board and Supervisory Board approved the publication of the financial statements. Adoption of the financial statements is on the agenda of the General Meeting of Shareholders on 2 March 2021.

Pursuant to Section 402(1) of Book 2 of the Dutch Civil Code, a summarised income statement is sufficient in the company financial statements of NV Nederlandse Spoorwegen.

Acquisition and disposal of companies

There were no material acquisitions or disposals in 2020.

Significant accounting policies

Below is a description of the accounting policies for consolidation, the measurement of assets and liabilities and the determination of the result of the Group. These policies are in accordance with IFRS, insofar as they are accepted by the EU and are applied consistently to all information that is presented. Furthermore, insofar as applicable, the financial statements comply with the legal regulations as included in Title 9 of Book 2 of the Dutch Civil Code. The Group applies the historical cost price system as measurement basis, unless stated otherwise.

Impact of COVID-19

The Group's net result was €2,581 million negative, partly due to significant impairments (note 14) and a provision for termination payments (note 29) with a total negative impact of €2,343 million. The result was also positively influenced by governmental contributions (note 1) and lower franchise costs in the United Kingdom (note 7). The governmental contributions are shown in the table below. The balance sheet total decreased mainly as a result of the above.

The COVID-19 outbreak in March 2020 had substantial impact on the Group as follows:

- In the Netherlands, in the first lockdown, the number of travellers initially fell to 10% of the comparable period in 2019. NS maintained the timetable (for the most part), partly at the explicit request of the Ministry of Infrastructure and Water Management (I&W). NS makes use of the I&W measure with the pledge to the public transport sector, as a vital sector, of an availability payment (*beschikbaarheidsvergoeding*) as compensation for the decline in passenger revenue for the period up to and including 30 September 2021. Discussions with the Ministry are still ongoing for the period after 30 September 2021. The availability payment amounts to 93% of the eligible costs, less 100% of the revenues realised during the period from 15 March 2020 to 30 September 2021. Because of downward passenger projections for the longer term, the group has developed plans to cut costs. Part of this is the reduction of FTEs, as also explained in the section of the Annual Report entitled '2020: A year dominated by COVID-19'. Discussions with the trade unions and Central Works Council are currently ongoing and this plan therefore contains uncertainty.
- In the United Kingdom, when COVID-19 broke out, the contracting authorities the Department of Transport (hereinafter: DfT) and Transport Scotland (hereinafter: TS) amended the contract terms and conditions for Greater Anglia, East and West Midlands and ScotRail until 30 September 2020 by means of 'Emergency Measures Agreements' (hereinafter: EMAs). The contracting authority DfT subsequently followed up on the term of the EMAs with 'Emergency Recovery Measures Agreements' (ERMAs) for Greater Anglia, East and West Midlands. These ERMAs have been signed by Abellio. Upon expiration of this form of contract, the contracts may then be converted into new 'direct award' contracts. These contractual changes shifted the risk related to passenger revenue to the contracting authorities. As one of the conditions of entering into these ERMAs, the DfT requires a termination payment/net asset payment. A provision has been made for this. Constructive discussions are in progress with Transport Scotland regarding a further extension of the ERMA in respect of the ScotRail franchise. It is assumed that this will be continued from March 2021 to the end of the original franchise period (March 2022).
- Abellio Germany has gross contracts, with no risk being taken on passenger revenues, so that the financial impact of the COVID-19 pandemic is relatively limited. In 2020, Abellio Germany nevertheless incurred a loss due to higher than compensated personnel costs, a difficult start of new franchises, and fines for, among other things, deteriorating punctuality whose causes were beyond Abellio's control.

A more detailed analysis of the result is included in the 'finance in brief' section of the NS Annual Report.

Additional contributions on franchise contracts in the Netherlands and abroad had the following impact on recognised revenues in 2020. These mainly concern the availability payment for train-related transport in the Netherlands and the amended contract conditions in the United Kingdom.

(in millions of euros)	Revenues	Additional government contributions in the context of COVID-19	2020	2019
Train-related transport in the Netherlands	1,539	818	2,357	2,661
Station development and operation in the Netherlands	376	24	400	547
Train-related transport in the United Kingdom	1,665	1,195	2,860	2,696
Bus-related transport in the United Kingdom	240	-	240	223
Train-related transport in Germany	744	-	744	534
Total revenue	4,564	2,037	6,601	6,661

In addition, in the United Kingdom, the Group received €330 million for the Greater Anglia franchise as a contribution deducted from the franchise fee paid.

With reference to the impact of COVID-19 and the above developments, the Group assessed the value of its assets for possible impairment. Mainly due to the projected decrease in passenger revenue growth in the Netherlands, the new contract forms in the United Kingdom and the aforementioned losses in Germany, the Group recognised the following impairments and provisions.

(in millions of euros)	The Netherlands	The United Kingdom	Germany	Total
Impairments	1,562	215	68	1,845
Provision for termination fees	-	487	-	487
Totaal	1,562	702	68	2,332

Continuity assumption

The Group prepared the financial statements for the 2020 financial year on a going concern basis, which assumes the continuity of ongoing business activities and the realisation of assets and settlement of liabilities as part of its normal business activities.

The Group has prepared financial forecasts for the twelve months from the date of approval of these financial statements, which include an estimate of the ongoing business impact of COVID-19. The Group has concluded that it is appropriate to prepare the financial statements on a going concern basis and that there is no material uncertainty. To reach this conclusion, the Group has calculated several scenarios and there is room in each of the scenarios for possible disappointing revenues and/or expenses.

With regard to the expected cash flow in respect of the hedging the risks arising from the Abellio franchises, conservative estimates have been made and included in the liquidity forecasts. Amended contract forms in the United Kingdom have reduced future liquidity risks from normal business operations.

The most important assumptions and uncertainties in the liquidity forecast relating to the Dutch operations relate to:

- setbacks in passenger revenue. Until at least 30 September 2021, 93% of the eligible costs less passenger revenues are covered by the public transport availability payment;

- timing of the receipt of the 2020 availability payment and advances for 2021 where the group assumes that these will be received in full during the financial forecast period. This concerns an amount of approximately €680 million;
- the student public transport contract will continue in its regular form and these revenues for 2022 will be received in full in advance in the financial forecast period;
- timing of investments in new rolling stock (ICNG and SNG);
- possibility of deferral of payment of payroll taxes in the amount of approximately €450 million. Repayment will begin on 1 October 2021 and will take place over 36 months.

The Dutch liquidity available to the Group at the end of 2020 amounts to more than €600 million. In addition, the Group can draw on a credit facility of €645 million and financing agreements in the amount of €300 million were concluded in December 2020, which are available to the Group as of March 2021. Furthermore, the Group expects to be able to use alternative financing options should the situation so require.

Based on the above, the Group has come to the conclusion that it is appropriate to prepare the financial statements on a going concern basis and that there is no material uncertainty.

New standards and amendments to standards that are mandatory from 2020

As of 1 January 2020, the Group has adopted the following new standards and amendments to standards, including all consequent changes deriving from them in other standards. These new or amended standards have not had a significant impact on the Group's consolidated financial statements:

- Amendments to References to the Conceptual Framework in IFRS Standards (effective 1 January 2020);
- Amendments to IFRS 3 Business Combinations (effective 1 January 2020);
- Amendments to IAS 1 and IAS 8: Definition of Material (effective 1 January 2020);
- Interest Rate Benchmark Reform (amendments to IFRS 9, IAS 39 and IFRS 7 and IFRS 16 (effective 1 January 2020).
- Amendment to IFRS 16 Leases Covid-19-related rent concessions (effective 30 June 2020)

New standards and amendments to standards that are mandatory from 2021 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 2021 or later.

The following new or amended standards have no significant impact on the consolidated financial statements of the Group:

- *Amendments to IFRS 4 Insurance Contracts – deferral of IFRS 9*
- *Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 Interest Rate Benchmark Reform – Phase 2*

Estimates and assessments

The preparation of the financial statements requires the Executive Board to make judgements and estimates 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 results 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 relates to those periods.

The most important estimates and assessments concern:

- going concern assumption (as included above in the 'Going concern assumption' section;
- Impairments (note 3 and 14);
- infrastructure levies and franchise fees (note 7);
- deferred tax assets (note 10)
- trade and other receivables (note 17)
- provision for termination payments/net asset payments (note 29);
- other provisions/off-balance sheet arrangements (note 29 and note 31)
- leases (note 30)

The estimates concerning leases mainly relate to reasonable certainty of any extension and termination options.

The policies for financial reporting set out below have been applied consistently to all the periods presented in these financial statements.

Accounting policies for 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 surplus or shortfall is recognised in the income statement. If the Group retains 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.

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 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 gain from a beneficial sale is 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 revenues and expenses from such transactions are eliminated. Unrealised gains arising from transactions with investments accounted for using 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 gains, but only insofar as impairment is not indicated.

Currency translation

Foreign currency transactions

Transactions denominated in foreign currency are translated to the functional currency of the Group entity concerned at the exchange rate prevailing on the date of the transaction. Monetary assets and liabilities that are denominated in foreign currencies are translated to the functional currency at the exchange rate prevailing on the balance sheet date. Non-monetary assets and liabilities denominated in foreign currency that are measured at fair value are translated to the functional currency using the exchange rates that prevailed at the dates when the fair values were determined. Non-monetary assets and liabilities denominated in foreign currency that are measured at historical cost are not retranslated.

The exchange rate differences arising on translation of the following items are recognised in other comprehensive income:

- financial liabilities that are designated as a hedge of the net investment in a foreign operation;
- qualifying cash flow hedges, insofar as the hedge 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 prevailing on the reporting date. The revenues and costs of foreign operations are converted into euros at an average exchange rate that approximates the exchange rate on the transaction date.

Currency translation differences are included in the other comprehensive income and accounted for in the translation reserve. If the Group ceases to have control, significant influence or joint control due to the disposal of a foreign operation, the cumulative amount in the translation reserve will be reclassified to profit or loss when the profit or loss from the disposal is recognised. If the Group only sells part of its interest in a subsidiary, while retaining control, a proportionate share of the cumulative amount will be reassigned to the minority interest. If the Group only sells part of its interest in an associate or joint venture, while retaining significant influence or joint control, a proportionate share of the cumulative amount will be re-allocated to the income statement.

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 for measurement and/or disclosure purposes were determined using the following methods.

Investment property

In view of the nature, diversity and locations (station areas), the fair value of the investment property portfolio is not determined on a regular basis unless impairment is indicated. The fair value is expected to exceed the carrying amount of the investment property. Investment property is measured at cost, less accumulated depreciation and accumulated impairment losses.

Investments in non-current financial assets

The fair value of investments in debt instruments is determined using the price on the reporting date. The fair value of the equity investment (Eurofima) has been determined on the basis of the latest available financial statements.

Derivatives

The fair value of derivatives is based on the derived market prices, taking account of the current interest rates and estimated 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 finance leases, the market interest rate is determined by reference to similar lease arrangements.

Segment reporting

The Group is under no obligation to comply with the requirements of IFRS 8 because it is not listed on a stock exchange. Segment information with a breakdown of revenue and FTEs by geographical area has been included in order to comply with the requirements of Dutch legislation and regulations.

Accounting policies for the consolidated cash flow statement

The cash flow statement is drawn up using the indirect method, using a comparison between the initial and final balances for the financial year in question. The result is then adjusted for changes that did not generate revenue or expenses during the financial year.

Section 2 Result for the year

1. Revenue

In the following table, revenues are broken down into a combination of transport type and geographic area.

(in millions of euros)	Revenues	Additional government contributions in the context of COVID-19	2020	2019
Train-related transport in the Netherlands	1,539	818	2,357	2,661
Station development and operation in the Netherlands	376	24	400	547
Train-related transport in the United Kingdom	1,665	1,195	2,860	2,696
Bus-related transport in the United Kingdom	240	-	240	223
Train-related transport in Germany	744	-	744	534
Total revenue	4,564	2,037	6,601	6,661

Public transport availability payment/main rail network (train-related transport in the Netherlands)

Based on the 2020 public transport availability payment arrangement as issued by the Ministry of Infrastructure and Water Management, NS is entitled to compensation as a result of the loss of revenue that NS suffered as a result of the pandemic. The compensation amounts to 93% of the eligible costs, less 100% of the revenues realised during the period from 1 March 2020 to 31 December 2020. Based on a calculation, NS has accounted for the allowance in the amount of €818 million. NS received the advance of €616 million in October 2020, being 80% of the calculation at the time of application. In order to claim the public transport availability payment, conditions apply, such as operating a full timetable. These conditions were assessed by NS with the aid of the draft protocol and, based on this, concluded that the 2020 availability payment can be accounted for.

Temporary emergency bridging measure for sustained employment (Noodfonds Overbrugging Werkgelegenheid; NOW)

For the activities relating to station development and operation in the Netherlands, the so-called NOW compensation (operating company scheme) was applied for and recognised as revenue in the amount of €24 million. In order to claim the NOW compensation, conditions apply, such as the prohibition of management bonuses and an agreement from the employee representation. NS reviewed the applicable conditions and, based on this, concluded that the NOW compensation could be accounted for.

EMA/ERMA (train-related transport in the United Kingdom)

The COVID-19 outbreak resulted in the contract terms and conditions for Greater Anglia, East and West Midlands and ScotRail being amended by the DfT by means of EMAs until 20 September 2020. The contracting authority has subsequently followed up on the term of the EMAs by issuing ERMA's for Greater Anglia, East and West Midlands, which are subsequently converted into new direct award contracts upon expiry of this form of contract. These ERMA's have been signed by NS. For ScotRail, an EMA2 has been agreed with Transport Scotland. The amended contract forms have resulted in €1,195 million in additional revenue during 2020.

Other

Station development and operation in the Netherlands includes an amount of €39 million (2019: €32 million) relating to development activities.

Accounting policy

Revenue

Revenue is recognised on the basis of the fee established in a contract with a customer. The Group recognises revenue when it transfers control of a good or service to a customer. Sales include the transport revenues and revenues from other business activities less discounts and turnover tax.

Provision of services and sale of goods

Revenue from the sale of travel rights is recognised when the travel right arises. Revenue from season tickets is recognised over time and spread over the period in the profit and loss account over the validity of the period of the season ticket.

Revenue from the sale of goods is recognised in the income statement when control of the goods has been transferred to the buyer, recovery of the consideration due is probable and the associated costs or any returns of goods can be estimated reliably.

Government or similar fees arising from transport contracts or franchises are recognised in the income statement over the period to which the fee relates.

Additional government contributions in the context of COVID-19

Government contributions in the context of COVID-19 are determined on the basis of individual arrangements with various government agencies and are intended to cover costs incurred/compensate for loss of revenue during (part of) the financial year. The final amount of these contributions for 2020 will be finalised in 2021, but are sufficiently certain to be recognised in the financial statements on the basis of IAS 20. Contributions have been allocated to the period to which they apply. The availability payment in the Netherlands was determined on the basis of the preliminary technical memorandum and draft control protocol.

Rental income

Rental income from property is recognised in the income statement over time, over the term of the lease. Commitment costs incurred as an incentive to enter into lease arrangements are recognised as an integral part of the total rental income and spread on a straight-line basis over the contract period. Rent reductions granted as a result of COVID-19 during current contracts for services to be provided are spread on a straight-line basis over the contract period. Rent reductions granted retroactively for services already rendered are not deducted from revenue but are included in the assessment of expected credit losses under IFRS 9.

2. Personnel expenses

(in millions of euros)

	2020	2019
Wages and salaries	1,854	1,746
Social security contributions	248	236
Contributions to defined contribution plans	101	103
Contributions to defined benefit plans	47	40
Other personnel expenses	91	75
Staff hired in	114	105
Total	2,455	2,305

The average workforce was as follows.

(in FTEs)	2020	2019
The Netherlands	17,556	17,792
The United Kingdom	16,259	15,955
Germany	2,900	2,365
Total	36,715	36,112

The workforce as at the end of the financial year was as follows:

(in FTEs)	2020	2019
The Netherlands	17,453	17,750
The United Kingdom	16,142	16,247
Germany	3,060	2,676
Total	36,655	36,673

Remuneration of the Executive Board

(in euros)	Basic salary	Alternative for the cap on pension accrual	Payment of lease amounts	Allowance for additional tax liability for director's car	Various allowances	Pension expenses	Total 2020
Ms M.E.F. Rintel**	376,025	37,316	52	2,998	4,368	15,351	436,110
Mr R.H.L.M. van Boxtel*	343,509	32,733	-	7,191	3,276	11,513	398,222
Mr H.L.L. Groenewegen	353,032	31,380	16,920	2,998	4,368	15,351	424,049
Mr T.B. Smit	353,032	31,380	-	2,998	4,368	15,351	407,129
Ms A.M.E. de Vries	353,032	31,380	3,164	2,998	4,368	15,351	410,293
Totaal	1,778,630	164,189	20,136	19,183	20,748	72,917	2,075,803

(in euros)	Basic salary	Alternative for the cap on pension accrual	Payment of lease amounts	Allowance for additional tax liability for director's car	Various allowances	Pension expenses	Total 2019
Mr R.H.L.M. van Boxtel	469,593	43,440	-	9,588	4,368	15,009	541,998
Mr H.L.L. Groenewegen	368,308	31,286	16,920	2,400	4,368	15,009	438,291
Ms M.E.F. Rintel	368,308	33,893	2,784	2,400	4,368	15,009	426,762
Ms S.M. Zijdeveld	122,402	10,385	5,640	800	1,456	5,003	145,686
Mr T.B. Smit	368,308	31,286	-	2,400	4,368	15,009	421,371
Ms A.M.E. de Vries	78,918	6,728	967	510	928	3,187	91,238
Totaal	1,775,837	157,018	26,311	18,098	19,856	68,226	2,065,346

* Mr. van Boxtel stepped down with effect from 1 October 2020.

** Ms. Rintel took office as CEO with effect from 1 October 2020.

As of 1 July 2020, Board members have surrendered 10% of their remuneration.

Mr. Van Boxtel stepped down as CEO of NS on 30 September 2020 and his contract of employment was terminated as of the same date. No termination payment was agreed upon. Mr. van Boxtel used one of the two director's cars until 1 October 2020 and waived the mobility budget. The other four directors jointly used one director's car until 1 October and both director's cars from 1 October. Mr. Groenewegen was paid the mobility budget in full. The other three directors have a leased car. Ms. De Vries was paid the remainder of the mobility budget that was not used for the leased car.

Please refer to the chapter 'Remuneration of the Executive Board' in the directors' report for more details on the remuneration policy for the Executive Board.

Remuneration of key management personnel (excluding the Executive Board)

(in euros)	Fixed and variable remuneration	Pension expenses	Total
2019	1,946,593	115,350	2,061,943
2020	1,837,572	112,590	1,950,162

These are managers with powers under the Articles of Association and managers with a specific portfolio. In 2020, no variable remuneration relating to the year 2020 was paid or set aside.

Remuneration of the Supervisory Board

The remuneration of members of the Supervisory Board for 2020 paid by the company totalled €232,100 (2019: €233,792). The remuneration consists of a fixed fee and an allowance for participating in one or more committees. The amounts for each member of the Supervisory Board are as follows:

(in euros)	2020	2019
G.J.A. van de Aast	44,726	46,545
<i>Chair of the Supervisory Board, member of the Risk and Audit committee, member of the Remuneration and Nomination Committee</i>		
H.H.J. Dijkhuizen (from 1 January 2020)	36,584	-
<i>Member of the Risk and Audit Committee, chair of the Risk and Audit Committee (from 26 January 2020)</i>		
J.J.M. Kremers (until 26 January 2020)	2,652	38,495
<i>Chair of the Risk and Audit Committee</i>		
P. Rosenmöller (until 1 June 2019)	-	19,401
<i>Chair of the Remuneration and Nomination Committee, vice-chair of the Supervisory Board</i>		
N. Albayrak (from 1 June 2019)	34,322	20,546
<i>Member of the Risk and Audit Committee, member of the Remuneration and Nomination Committee (from 1 June 2019)</i>		
M.E. van Lier Lels	39,888	35,905
<i>Member of the Risk and Audit Committee, vice-chair of the Supervisory Board (from 1 July 2019), member of the Remuneration and Nomination Committee (from 1 January 2020)</i>		
J.L. Stuijt	39,606	38,526
<i>Member of the Risk and Audit committee, chair of the Remuneration and Nomination Committee (from 1 July 2019)</i>		
W.J. van der Feltz	34,322	34,374
<i>Member of the Risk and Audit committee, member of the Remuneration and Nomination Committee (from 1 July 2019)</i>		
Totaal	232,100	233,792

The average allowances for the various roles (excluding expense allowances) are as follows:

(in euros)	2020*	2019
Chair of the Supervisory Board	37,003	38,605
Vice-chair of the Supervisory Board	32,774	34,192
Member of the Supervisory Board	27,488	28,678
Chair of the Risk and Audit Committee	7,929	8,272
Member of the Risk and Audit Committee	2,643	2,757
Chair of the Remuneration and Nomination Committee	7,929	8,272
Member of the Remuneration and Nomination Committee	2,643	2,757

As of 1 July 2020, Supervisory Board members have surrendered 10% of their remuneration.

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

All 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)	2020	2019
Depreciation of property, plant and equipment	335	322
Depreciation of investment property	8	8
Amortisation of intangible assets	84	71
Depreciation of right-of-use assets	482	422
Total depreciation and amortisation	909	823
Impairments of property, plant and equipment	1,474	-
Impairments of intangible assets	148	-
Impairments of right-of-use assets	111	-
Total impairments	1,733	-
Reversal of impairments of property, plant and equipment	-2	-
Reversal of impairments of investment property	-3	-
Total reversal of impairments	-5	-
Total	2,637	823

For information on impairments of non-current assets, please refer to note 14.

4. Use of raw materials, consumables and inventories

(in millions of euros)	2020	2019
Materials used	207	296
Energy consumption	257	238
Total	464	534

5. Own capitalised production

The own capitalised production in 2020 of €137 million (2019: €147 million) refers mainly to the refurbishment of trains.

Accounting policy

The own capitalised production comprises the directly attributable personnel expenses, costs of materials and attributable indirect costs incurred in the construction of assets for own use.

6. Subcontracted work and other external costs

(in millions of euros)	2020	2019
Costs of subcontracted work	186	143
Remediation costs	96	99
Maintenance	261	185
Automation costs	204	207
Total	747	634

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

7. Infrastructure levies and franchise fees

(in millions of euros)	2020	2019
Dutch train franchises	401	408
UK train franchises	792	856
German train franchises	323	231
Total	1,515	1,495

The infrastructure levies and franchise fees for the railways in the United Kingdom include an amount of €25 million (2019: €18 million) relating to the mechanism of Central London Employment (CLE). Within the total registered CLE impact in 2020, an amount of €20 million relates to prior years (2019: €6 million). The final CLE percentage will be determined after the balance sheet date.

An amount of €330 million has been deducted from the UK train franchises item as additional compensation due to COVID-19.

Accounting policy

Adjustment mechanisms for main rail network franchise

The implementation agreement with the Ministry of Infrastructure and Water Management includes a number of adjustment mechanisms for determining the franchise price. The adjustment relating to the average profitability during the franchise is recognised as a receivable when the right arises in accordance with the calculation system, as laid down in the implementation agreement. The adjustment is recognised on a straight-line basis over the term of the franchise. Other payments, one-off or otherwise, under the agreement are recognised on a straight-line basis over the term of the franchise.

Adjustment mechanisms for UK franchises

The franchise agreements, mainly with the Department for Transport, Transport Scotland and the infrastructure operator Network Rail, contain a number of adjustment mechanisms, including that for 'Central London Employment (CLE)', for adjusting the franchise fee and for a compensation for lost revenues due to work on the rail infrastructure. The CLE is an index that is adjusted annually, following which the franchise fee in the financial year concerned can be adjusted for this by the DfT and be reported. The right to compensation for lost revenues and the method of calculating it are contractually determined and recognised in the year in which the loss of revenue occurred on the basis of an estimated calculation.

8. Other operating expenses

'Other operating expenses' include insurance, accommodation costs, costs of fixtures and fittings, auditor's fees, marketing costs, maintenance costs for operating assets and additions to provisions. The increase in other operating expenses from €738 million in 2019 to €1,365 million in 2020 is mainly caused by accounting for termination payments/net asset payments in the United Kingdom in the amount of €487 million (note 29) and the operation of the East Midlands franchise from August 2019.

Auditor's fees

(in millions of euros)	2020	2019
Statutory audits	3.6	3.9
Other assurance engagements	0.4	0.5
Tax advisory services	-	-
Other services	-	-
Total	4.0	4.4

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

9. Income tax

(in millions of euros)	2020	2019
Recognised in the income statement		
Current income tax	-5	-10
Deferred income tax	-112	-11
Total income tax	-117	-21

Reconciliation with effective tax rate

Profit before tax	-2,464	236
Income tax at Dutch tax rate for corporation tax (2020 and 2019: 25%)	616	-59
Settlement of previous years	-	-1
Participation exemption	-	5
Write-down of deferred tax assets	-574	-
Permanent difference: Termination fees/net asset payments	-116	-
Effect of the tax rate in foreign jurisdictions (different rate)	-26	10
Adjustment of losses available for set-off, Germany	-	-3
Permanent difference: Capital contributions Germany	-17	-
Changes in rates for deferred tax positions	-	7
Untaxed income (Fyra receipt, refund of ACM fine)	-	15
Addition of mixed costs, investment credit, etc.	-	5
Total income tax	-117	-21

Income tax on income and expenses recognised in the other comprehensive income

- -

Corporation tax is calculated based on the applicable tax rates in the Netherlands, the United Kingdom and Germany, taking into account the tax rules that give rise to permanent differences between the determination of the profit for commercial purposes and the determination for tax purposes. The tax rules include the participation exemption and limits applying to deductible costs.

The effective tax rate for profit before corporation tax was -5% (2019: 9%). This low effective tax rate compared with the nominal tax rate is mainly caused by write-downs of deferred tax assets throughout the group.

Given the uncertainties regarding the tax treatment of the termination payments/net asset payments, these have been accounted for as a permanent differences. These deferrals would have been written down at the time they would have been classified as temporary differences, so the effect on the effective tax rate is zero.

For the Dutch tax entity, there is agreement with the tax authorities on the tax returns up to and including 2017. A final assessment has been received for 2017, but not yet for the subsequent years. In the financial statements for this year and previous years, tax is recognised on the basis of the tax returns submitted up to and including 2019, the underlying principles adopted in those tax returns and any adjustments to previous years.

Accounting policy

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 taxation. Income tax is recognised in the income statement, except insofar as it relates to items recognised directly in equity through other comprehensive income, in which case the tax is recognised in equity through other comprehensive income. All tax items 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 prevailing on the balance sheet date, plus 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 group entities.

10. Deferred income tax

The changes in deferred tax assets and liabilities are as follows.

(in millions of euros)	Net balance as at 1 January 2019	recognised in income statement	recognised in other comprehensive income	other changes	Net positions as at 31 December 2019	Deferred tax assets	Deferred tax liabilities
Property, plant and equipment	71	11	-	2	84	107	23
Intangible assets	-18	-1	-	-	-19	-	19
Right-of-use assets	-436	-8	-	-	-444	-444	-
Non-current financial assets	-3	-	-	-	-3	4	7
Receivables	-	-	-	-	-	-	-
Provisions	2	1	-	-	3	3	-
Deferred credits	43	-5	-	-	38	43	5
Loans and other financial liabilities	-	-	-	-	-	-	-
Lease liabilities	445	5	-	-	450	450	-
Other items	3	-	-	-	3	3	-
Loss set-off	50	-14	-	-	36	36	-
Deferred tax assets (liabilities)	157	-11	-	2	148	202	54

(in millions of euros)	Net balance as at 1 January 2020	recognised in income statement	recognised in other comprehensive income	other changes	Net positions as at 31 December 2020	Deferred tax assets	Deferred tax liabilities
Property, plant and equipment	84	-62	-	-	22	45	23
Intangible assets	-19	2	-	-	-17	-	17
Right-of-use assets	-444	-56	-	-	-500	-461	39
Non-current financial assets	-3	-4	-	1	-6	1	7
Receivables	-	-2	-	-	-2	4	6
Provisions	3	2	-	-	5	5	-
Deferred credits	38	-20	-	-	18	19	1
Loans and other financial liabilities	-	-	-	-	-	-	-
Lease liabilities	450	50	-	2	502	502	-
Other items	3	-1	-	1	3	3	-
Loss set-off	36	-21	-	-	15	15	-
Deferred tax assets (liabilities)	148	-112	-	4	40	133	93

As at 31 December 2020, the Group has deferred tax assets for temporary differences amounting to €550 million. These deferred tax assets are not covered by projected profits in almost all scenarios. Therefore, the Group wrote down the tax assets in an amount of €525 million, taking account of offsetting by realisation of deferred tax liabilities. For an explanation of the tax rate, see note 9.

Unrecognised deferred tax assets

Deferred tax assets have not been recognised in respect of the following items because it is unlikely that there will be taxable profit in the future against which the Group can utilise the benefits. The unrecognised deferred tax assets by country are as follows:

(in millions of euros)	Recoverable losses	Temporary losses	Total
The Netherlands	14	525	539
The United Kingdom	-	-	-
Germany	32	-	32
Totaal	46	525	571

Accounting policy

The deferred tax assets and deferred tax liabilities arise from temporary differences between the carrying amount of assets and liabilities in the financial reporting and their tax base. These are calculated on the basis of the tax rates that are expected to apply when the temporary differences are reversed, using tax rates enacted or substantively enacted as at the reporting date.

Deferred tax assets, including those deriving from tax loss carry-forwards, are measured if it is probable that sufficient tax profits will be available for setting off 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.

Section 3 Non-current assets and investments

11. Property, plant and equipment

(in millions of euros)	Land	Buildings	Other fixed installations	Rolling stock	Parts	Plant and equipment	Assets under construction	Total
Composition as at 1 January 2019								
Cost	123	839	167	6,394	69	642	908	9,142
Accumulated depreciation and impairments	35	351	121	4,222	41	424	-	5,194
Carrying amount as at 1 January 2019	88	488	46	2,172	28	218	908	3,948
Changes in 2019								
Investments							635	635
Capitalisations	13	20	36	406	2	122	-599	-
Acquisitions	-	-	-	-	-	-	-	-
Depreciation	-3	-29	-9	-240	-3	-38	-	-322
Exchange rate differences	-	1	-	-	-	7	-	8
Disposals	-3	-1	-	-1	-	-10	-	-15
Impairments	-	-	-	-	-	-	-	-
Reversal of impairments	-	-	-	-	-	-	-	-
Other changes	-	13	-	-	-1	-11	5	6
Total changes during the financial year	7	4	27	165	-2	70	41	312
Composition as at 31 December 2019								
Cost	131	880	180	6,777	58	558	949	9,533
Accumulated depreciation and impairments	36	388	107	4,440	32	270	-	5,273
Carrying amount as at 31 December 2019	95	492	73	2,337	26	288	949	4,260
Changes in 2020								
Investments							481	481
Capitalisations	3	46	32	262	-	80	-424	-1
Acquisitions	-	-	-	-	-	-	-	-
Depreciation	-3	-30	-12	-239	-3	-48	-	-335
Exchange rate differences	-	-	-	-	-	-9	-1	-10
Disposals	-6	-1	-	-1	-1	-1	-	-10
Impairments	-13	-58	-31	-873	-9	-109	-381	-1,474
Reversal of impairments	-	2	-	-	-	-	-	2
Other changes	1	1	-	1	-	-92	95	6
Total changes during the financial year	-18	-40	-11	-850	-13	-179	-230	-1,341
Composition as at 31 December 2020								
Cost*	129	928	209	6,863	58	549	1,105	9,841
Accumulated depreciation and impairments	52	476	147	5,376	45	440	386	6,922
Carrying amount as at 31 December 2020	77	452	62	1,487	13	109	719	2,919

For information on impairments, please refer to note 14.

Accounting policy

Property, plant and equipment are measured at cost, less accumulated depreciation and accumulated 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 capitalised borrowing costs. Where relevant, the estimated costs of dismantling and removing the asset and the costs of restoring the site where the asset was located are added to the total cost.

Computer software that is an integral part of the computer equipment is capitalised as part of the equipment in question. Only assets where the Group has beneficial ownership are recognised in the balance sheet.

Gains and losses on the sale of an item of property, plant and equipment are determined by comparing the sales revenue with the carrying amount of the asset, and the net amount is then recognised under 'Other revenue' in the income statement.

Components

If property, plant and equipment consist of components with differing useful lives, these components are listed as separate items under property, plant and equipment.

The carrying amount of an item of property, plant and equipment 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 result in future economic benefits. All other costs of maintaining the asset are charged to the income statement when they are incurred.

Depreciation

Depreciation of property, plant and equipment happens on a straight-line basis, after deducting the residual value and based on the estimated useful life of each individual item of property, plant and equipment. Depreciation is charged to the income statement.

Land is not depreciated, with the exception of street paving. The estimated useful life for different types of property, plant and equipment is as follows.

Asset type	Depreciation period
Buildings	broken down into components (15 to 100 years); average of 40 years
Other fixed installations	10 to 25 years
Trains	20 years
Buses	6 to 15 years
Plant and equipment	3 to 10 years

The specified useful life is an average for the assets concerned and for any components of which those assets consist. The depreciation method, remaining useful life and residual value are reviewed 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 reclassified to 'investment property' or 'property, plant and equipment' respectively. Because both categories of non-current assets are measured in the same way, the reclassification is at the carrying amount.

12. Investment property

(in millions of euros)

**Total investment
property**

Composition as at 1 January 2019

Cost	282
Accumulated depreciation and impairments	-131
Carrying amount as at 1 January 2019	151

Changes in 2019

Investments	2
Depreciation	-8
Disposals	-3
Impairments	-
Reversal of impairments	-
Other changes	-7
Total changes during the financial year	-16

Composition as at 31 December 2019

Cost	263
Accumulated depreciation and impairments	-128
Carrying amount as at 31 December 2019	135

Changes in 2020

Additions	-
Depreciation	-8
Disposals	-
Impairments	-
Reversal of impairments	3
Other changes	-1
Total changes during financial year	-6

Composition as at 31 December 2020

Cost	260
Accumulated depreciation and impairments	-131
Carrying amount as at 31 December 2020	129

In addition to business premises, investment property for third parties also consists of property let to third parties or held as strategic property. In addition, the Group also has property intended for its own use, recognised under property, plant and equipment. The rental arrangements generally include a period of several years during which cancellation is not possible. This investment property and property, plant and equipment (property for own use) are not part of the main rail network cash-generating unit (as described in note 14).

In view of the nature, diversity and locations (station areas), the fair value of the investment property portfolio is not determined on a regular basis, unless impairment applies. No impairments have occurred on this portfolio and the fair value is expected to exceed the carrying amount of the investment property. The Group has reached this conclusion based on indicative management estimates on the basis of which there are no indications of impairment.

As a consequence of COVID-19, reductions of €19 million have been granted for 2020. These rent reductions led to a €13 million write-down of the accounts receivable balance. €6 million is amortised over the remaining term of the rental contracts.

The reversal of impairment relates to a number of rental properties, the assessed value of which in rented condition is higher than the carrying amount.

The overall contractual rent up to the end of the rental contracts was around €359 million as at 31 December 2020 (2019: €280 million). No contingent rent is charged.

The direct rental income was €29 million (2019: €35 million). The direct rental costs comprise maintenance costs, property taxes and direct management costs, totalling €6 million (2019: €7 million).

Accounting policy

Investment property includes property held in order to earn rental income, an appreciation in value or both. Investment property is measured at cost, less accumulated depreciation and accumulated 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 borrowing costs. Where relevant, the estimated costs of dismantling and removing the asset and the costs of restoring the site where the asset was located are added to the total cost.

The following accounting policies apply to investment property:

Components

If investment property consists of components with differing useful lives, these components are listed as separate items under the investment property.

The carrying amount of an 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 result in future economic benefits. All other costs of maintaining the asset are charged to the income statement when they are incurred.

Depreciation

Depreciation of investment property happens on a straight-line basis, after deducting the residual value and based on the estimated useful life of each individual item of investment property. Depreciation is charged to the income statement.

The estimated useful life for different types of investment property is as follows:

Asset type	Depreciation period
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 specified useful life is an average for the assets concerned and for any components of which those assets consist. The depreciation method, remaining useful life and residual value are reviewed each year.

13. Intangible assets

(in millions of euros)

	Goodwill	Software	Total
Composition as at 1 January 2019			
Cost	38	725	763
Accumulated amortisation and impairments	-	347	347
Carrying amount as at 1 January 2019	38	378	416
Changes in 2019			
Investments	-	136	136
Acquisitions	-	-	-
Depreciation	-	-71	-71
Disposals	-	-	-
Impairments	-	-	-
Reversal of impairments	-	-	-
Other changes	1	2	3
Total changes during the financial year	1	67	68
Composition as at 31 December 2019			
Cost	39	840	879
Accumulated amortisation and impairments	-	395	395
Carrying amount as at 31 December 2019	39	445	484
Changes in 2020			
Investments	-	121	121
Acquisitions	-	4	4
Depreciation	-	-84	-84
Disposals	-	-	-
Impairments	-	-148	-148
Reversal of impairments	-	-	-
Other changes	-	-1	-1
Total changes during the financial year	-	-108	-108
Composition as at 31 December 2020			
Cost*	39	806	845
Accumulated amortisation and impairments	-	469	469
Carrying amount as at 31 December 2020	39	337	376

For information on impairments, please refer to note 14.

The goodwill concerns our operations in the United Kingdom and Germany.

Accounting policy

Goodwill

All business combinations are accounted for using the acquisition method. Goodwill is the amount deriving from the acquisition of subsidiaries, associates and joint ventures. Goodwill is the difference between the cost of the acquisition and the fair value of the acquired identifiable assets and liabilities at the acquisition date. Goodwill is measured at cost less accumulated impairment.

Negative goodwill arising from an acquisition is taken directly to the income statement.

Other intangible assets

Other intangible assets with a limited useful life acquired or produced by the Group are recognised at cost less accumulated amortisation and accumulated impairment losses.

After initial recognition, expenditure on capitalised intangible assets is only capitalised if it leads to an increase in the future economic benefits embodied in the specific asset involved. All other expenditure, including internally generated goodwill and trademarks, is charged to the income statement when it occurs.

Amortisation is charged to the income statement 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 lives are as follows:

- Software 3 - 10 years
- Contracts 5 - 10 years

14. Impairments of non-current assets/onerous contracts

In view of the substantial impact of COVID-19 on passenger revenues, the Group has determined that there are indicators of asset impairment for some of the Group's cash-generating units (CGUs). First of all, the various CGUs were identified by the Group, after which the assets of these CGUs were assessed for possible impairment. It was then assessed whether the creation of a provision for onerous contracts was necessary, in addition to the possible impairment to be recognised.

The assessment of the CGU at the end of 2020 for the impairment test of non-current assets has led to a change in the composition of the various CGUs of Abellio Germany, following a more regional structure. This is mainly due to the planned merger of a number of entities in 2021. In the assessment of goodwill, Abellio Germany has, as in previous years, been classified as a single CGU, as the Abellio brand is operated nationwide.

The recoverable amount of the CGUs was then determined based on the higher of value in use and fair value less costs to sell. The value in use was determined by discounting the expected cash flows as at the balance sheet date.

The discount rate is set after tax based on the interest rate of government bonds issued by the most creditworthy government in the relevant market and in the same currency as the cash flows, adjusted for a risk premium to reflect both the increased risk of investing in equities in general and the risk of the specific CGU. Due to the financing structure of the operations in Germany (mainly leasing), the discount rate for Germany is set at a lower level than in the other countries.

For each country, the following discount rate after taxation was employed:

- The Netherlands: 5.0%
- United Kingdom 6.3%
- Germany 1.9%

The assessment resulted in the following impairments:

(in millions of euros)	The Netherlands	The United Kingdom	Germany	Total
Property, plant and equipment	1,376	95	3	1,474
Intangible assets	136	8	4	148
Right-of-use assets	50	-	61	111
Receivables	-	112	-	112
Total	1,562	215	68	1,562

The Netherlands

The COVID-19 pandemic has forced the Group to perform an analysis as to whether there is an impairment for the Netherlands. For the Netherlands, the main rail network contract has been classified as one CGU. This contract runs until the end of 2024. The fair value of the assets in question cannot be reliably determined given the strong connection between the assets and the main rail network contract, the trains are produced specifically for the Dutch railway network and there is no active market for these specific trains.

In determining the value in use, three scenarios were calculated. The range of impairment in these scenarios is between €1.2 billion and €2.5 billion. In the most likely scenario, the following key assumptions were made regarding:

- projected passenger revenue during the remaining contract term; with an assumed recovery in 2024 to 94% of the 2019 level, the pre-pandemic level. The development of passenger transport partly depends on macroeconomic factors such as economic growth, congestion and trends in travel behaviour;
- passenger transport revenues are partly dependent on timetable choices, which are coordinated with the Ministry of Infrastructure and Water Management;
- continuation of the current student public transport passes contract;
- an availability payment for 2021, which largely mitigates major risks related to passenger revenue for 2021. An availability payment of €601 million is forecast for 2021. No availability payment has been factored in for the years thereafter. The public transport sector is in talks with the Ministry about an extension of the arrangement. The prospect of an arrangement has been offered for the fourth quarter of 2021, but the conditions are not yet known;
- estimates regarding the outcomes of gearing the organisation to the lower passenger revenue with related cost savings and reduction of investments;
- in June 2020, the Ministry of Infrastructure and Water Management announced its intention to award the franchise privately to NS with effect from 2025. This was confirmed by the Dutch House of Representatives in September 2020. The term and conditions of the franchise are not yet known. For the period after 2024, it is assumed that award of the main rail network contract will take place under conditions where NS can earn the cost of capital.

The performance of the impairment test resulted in an impairment loss of €1,562 million. The main uncertainties causing the range of €1.2 and €2.5 billion are:

- medium/long-term effect of COVID-19 on economy and expected economic growth;
- medium/long-term effect of COVID-19 on traveller behaviour in different traveller segments.

The recognised impairment is the Group's best estimate despite a relatively high maximum range (€2.5 billion). The worst-case scenario assumes a structural and significant decrease in the uncertainties mentioned above, mainly relating to a slower and/or non-structural recovery of passenger revenues, which are not considered likely. The sensitivity of the cost of capital and recovery of passenger revenue is as follows:

- increase/decrease in the cost of capital by 1% has a positive/negative effect of approximately €100 million in relation to the recognised impairment;
- 10% lower passenger revenue per year in the years 2022 to 2024 leads to a higher impairment of approximately €0.6 billion compared to the recognised impairment.

The Group notes in this connection that the underlying analyses contain significant estimation uncertainties, with these uncertainties being magnified by uncertainties of how and when the Dutch economy will recover from COVID-19, the lasting impact this will have on traveller behaviour and the way in which public transport companies will be supported in the future. The realisation may differ, requiring a future adjustment of the impairment with a positive or negative effect on the result.

Impairment losses have been proportionally deducted from the carrying amounts of the rail network assets. The revised carrying amounts are amortised over the remaining useful lives of the assets.

No impairments have occurred in the other activities in the Netherlands (Station development and operation).

Abellio UK

The COVID-19 pandemic in March 2020 resulted in an enormous decrease in passenger revenue. The existing rail franchise contracts in the United Kingdom, with the exception of Merseyrail, have been replaced by short-term emergency measures agreements (EMA) with effect from 1 March 2020, with revenue and cost risks assumed in full by the UK government and carriers able to earn a management fee of up to 2%.

With respect to the three Abellio DfT franchises, the EMAs were replaced by Emergency Recovery Measures Agreements (ERMAs) on 20 September. Depending on the operator, these contracts vary in length from 6 to 18 months. As with the EMAs, the costs are borne by the DfT with a, albeit smaller, management fee. For East Midlands Railway (EMR), the ERMA contract expires at the end of March 2022, while for West Midlands and Greater Anglia it expires in September 2021 with an option for the DfT to extend it for up to seven four-week rail periods.

A basic precondition for agreeing to an ERMA contract is that each Train Operating Company (hereinafter: TOC) agrees to a process to terminate the existing franchise agreement at the end of the ERMA period upon payment of a termination fee ('termination sum'), in order to then claim a new type of (management) contract.

The TOC has the option of not agreeing to this termination fee and reverting to the original contract. This is not an attractive alternative as the revenue risk related to passenger transport remains with the TOC. The DfT has started a process of transitioning to new contracts. Direct awards (privately awarded contracts) with a term of 4-6 years will replace ERMA's when the TOCs meet the qualification criteria. More details on the direct award process and the conditions are expected during 2021.

Based on the situation, an impairment test was performed at the end of 2020. Important assumptions were made with respect to this analysis:

- expectations regarding the continuation of operations in the United Kingdom;
- expectations regarding the content of the direct award contracts, as well as their term;
- amount of the termination fee payable and payments for the transfer of assets;
- cost reduction programme estimates;
- estimates with respect to the fair value of the assets.

For the impairment test of fixed assets, the carrying amount was assessed against either the value in use of the assets or the fair value less costs to sell, whichever was higher. Management's estimate of the fair value of the assets exceeds the value in use and thus was the basis for the impairment determination.

The fair value has been estimated on the basis of the value that a third party would expect to receive at the end of the ERMA. This assessment took account of the franchise agreement, the ERMA and the relevant contracts. All significant assets not explicitly measured in these documents were then examined in detail to determine whether the net carrying amount expected at the end of the ERMA was a good indication of the fair value for a third party. This mainly relates to other property, plant and equipment. The sensitivity included in the fair value measurement is limited.

The performance of the impairment test resulted in an impairment loss of €103 million.

In addition to the asset impairment, unbilled revenue has been written down. This related to franchise fee revenue already recognised, which had been accounted for on the basis of the timing of underlying costs. However, due to the amended contract forms, it is unlikely that this revenue will still be realised. In addition, a write-down of an outgoing claim was recognised due to the changed political climate and increased uncertainty in the United Kingdom. This resulted in a write-down of receivables in the amount of €112 million.

Abellio Germany

Abellio Germany has no revenue risk and therefore the financial impact of the COVID-19 pandemic is relatively limited. In 2020, Abellio Germany nevertheless incurred a loss due to higher personnel costs that are not reimbursed through the current contracts and fines for, among other things, deteriorating punctuality whose causes were beyond the carrier's control. In response, Abellio Germany performed an impairment test.

Key assumptions in the analysis are:

- the implementation of specific contractual provisions to arrive at additional compensation from the various commissioning parties, mainly with regard to compensation of increased personnel expenses and penalties owing to, for example, worsened punctuality, the cause of which is beyond the carrier's control; Realisation of these provisions are essential for future profitability;
- the successful implementation of performance optimisation programmes initiated during the remaining contract term, and their timing;

- non-termination of the franchise contracts before the end of the remaining term unless otherwise agreed.

For the impairment test of fixed assets, the carrying amount was assessed against either the value in use of the assets or the fair value less costs to sell, whichever was higher.

Management's estimate is that the value in use exceeds the fair value less costs to sell and thus has been the basis for the impairment determination.

The performance of the impairment test resulted in an impairment loss of €68 million. This impairment relates to fixed assets of individual franchises.

The sensitivity of the cost of capital and recovery of passenger revenue is as follows:

- increase/decrease in the cost of capital by 1% has a positive/negative effect of approximately €35 million in relation to the recognised impairment;
- Decrease of the expected cash flows by 10% has a negative effect of €84 million in relation to the recognised impairment;

At the time when the assumptions in the coming periods differ substantially from those used in the impairment test as at 31 December 2020, a new test will be performed and may result in an increase or reversal of the impairment. A reversal will not amount to more than the carrying amount of the impaired fixed assets taking the original depreciation pattern into account.

Accounting policy

The carrying amount of the Group's non-current assets is reviewed every reporting date in order to determine whether there are indications of impairment. If such indications are found, an estimate is made of the recoverable amount of the asset concerned. For goodwill and intangible 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 is the higher of the value in use and the fair value less costs to sell. 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 identifiable groups of assets that generate cash flows from continuing use and that are largely independent of other assets or groups of assets ('cash-generating units'). In impairment testing, 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 carrying amount of an asset or the cash-generating unit to which it belongs exceeds its estimated recoverable amount. Impairment losses are recognised in the income statement. Impairment losses recognised in respect of cash-generating units are first deducted from the carrying amount of any goodwill allocated to the units, and then deducted from the carrying amount of the other assets in the unit or group of units on a pro rata basis.

After impairment, the remaining carrying amount is written down over the expected useful life of the related asset.

Impairment losses in respect of goodwill are 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 carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

15. Investments accounted for using the equity method

The investments that are accounted for using the equity method have a carrying amount of €19 million (2019: €19 million). The financial information for these investments is as follows.

Name of entity (in millions of euros)	Merseyrail Ltd	Other joint ventures	Total joint ventures	Other associates	Total
Share percentage	50.00%				
2019					
Current assets	68	7		20	
of which Cash and cash equivalents	47	7		13	
Non-current assets	28	-		5	
Current liabilities	58	3		9	
of which current financial liabilities	1	-		-	
Non-current liabilities	21	-		-	
of which non-current financial liabilities	21	-		-	
		-			
Net equity (based on 100%)	16	3		13	
Carrying amount of investments accounted for using the equity method	8	1	9	10	19
Revenue	204	-		34	
Depreciation, amortisation and impairments	7	-		2	
Result from operating activities	29	-		-4	
Finance income	-	-		-	
Finance expense	-	-		-	
Income tax	6	-		-	
Profit for the reporting period	23	-		-4	
Total comprehensive income for the reporting period	23	-		-	
Share in result of investments accounted for using the equity method	12	-	12	-4	8
Share in other comprehensive income	-	-	-	-	-
Share in total comprehensive income of investments accounted for using the equity method	12	-	12	-4	8
Dividend received	9	-	9	-	9

Name of entity (in millions of euros)	Merseyrail Ltd	Other joint ventures	Total joint ventures	Other associates	Total
Share percentage	50.00%				
2020					
Current assets	36	-		23	
of which Cash and cash equivalents	17	-		12	
Non-current assets	18	-		5	
Current liabilities	33	-		7	
of which current financial liabilities	5	-		-	
Non-current liabilities	9	-		-	
of which non-current financial liabilities	9	-		-	
		-			
Net equity (based on 100%)	12	-		19	

Carrying amount of investments accounted for using the equity method	6	-	6	13	19
Revenue	164	-		44	
Additional government contributions related to corona	-	-		-	
Depreciation, amortisation and impairments	7	-		2	
Result from operating activities	1	-		6	
Finance income	-	-		-	
Finance expense	-	-		-	
Income tax	-	-		2	
Profit for the reporting period	1	-		5	
Total comprehensive income for the reporting period	1	-		1	
Share in result of investments accounted for using the equity method	1	-	1	1	2
Share in other comprehensive income	-	-	-	-	-
Share in total comprehensive income of investments accounted for using the equity method	1	-	1	1	2
Dividend received	3	-	3	-	3

Interests in joint ventures

Merseyrail Services Holding Company Ltd

The Merseyrail franchise is operated under a 50:50 joint arrangement with Serco, a listed British company. NS and Serco have joint control, each with a 50% financial interest in the holding entity. The franchise is held by an independent entity in which the holding company concerned has a 100% interest. The profits of the holding company are distributed to NS and Serco in equal shares.

As regards the investments accounted for using 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.

Accounting policy

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 through which the Group shares in the control and in which the Group has rights to the net assets of the arrangement rather than rights with respect to the 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 measured at cost upon initial recognition. The cost of the investment includes the transaction costs. After initial recognition, the consolidated financial statements include the Group's share in the total comprehensive income of the investments accounted for using the equity method, up to the date on which it ceases to exercise significant influence.

Section 4 Working capital

16. Inventories

(in millions of euros)	31 December 2020	31 December 2019
Maintenance materials	154	146
Projects under construction, unsold	4	4
Trade goods	36	34
Total	194	184

The inventories of maintenance materials consist of raw materials and other materials for the production and maintenance of finished and semi-finished products for the maintenance centres. In 2020, the write-down of inventories to the net realisable value, which was recognised as an expense, amounted to €9 million (2019: €12 million). The accumulated impairment, after withdrawals, came to €95 million at the end of 2020 (2019: € 98 million).

Accounting policy

Inventories are stated at the lower of cost and net realisable value. The net realisable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the costs to make the sale.

The cost of the inventories is based on the purchase prices or costs and includes expenses incurred in acquiring the inventories and the associated costs of purchase. The cost of inventories of finished products and work in progress includes a reasonable portion of the indirect costs based on normal production capacity.

17. Trade and other receivables

(in millions of euros)	31 December 2020	31 December 2019
Receivables from clients from work in progress	-	-
Trade receivables	379	445
Unbilled revenue	117	305
Other taxes and social security charges	181	86
Other receivables	498	308
Total	1,175	1,144

Trade and other receivables includes an amount of €210 million (2019: €3 million) relating to ProRail and the Dutch central government. Of this amount, €202 million relates to the availability payment for public transport receivable in the Netherlands and €6 million relates to the NOW receivable (see note 1).

The ageing of receivables as at the reporting date was as follows.

(in millions of euros)	31 December 2020		31 December 2019	
	Gross	Provided for	Gross	Provided for
Not past due	144	21	374	-
Past due 0-30 days	98	18	46	-
Past due 31-120 days	162	14	19	1
Past due 121-180 days	6	2	3	1
Past due 181-360 days	23	2	3	1
Past due more than one year	5	2	4	1
Total	438	59	449	4

Included under a number of age categories are receivables from franchising authorities in Germany and the United Kingdom on which no provisions have been made.

Impairment losses

Movements in the provision for impairments of trade receivables during the year were as follows:

(in millions of euros)	2020	2019
Balance as at 1 January	4	3
Additions	56	5
Use	-1	-3
Release	-	-1
Balance as at 31 December	59	4

The increase in the provision for receivables is mainly caused by a provision made in connection with a claim against a supplier.

Accounting policy

Trade and other receivables are stated at fair value plus any directly attributable transaction costs upon initial recognition. After initial recognition, they are recognised at amortised cost using the effective interest method.

The Group has formed a provision for impairment equal to the size of the estimated credit 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 are expected but have not yet been identified. The group loss provision is determined on the basis of historic payment data for comparable financial assets.

Provisions for trade receivables are made in the case of an impairment, unless the Group is certain that it will not be possible to recover the amount owed. In that case, the amount is considered irrecoverable and is written off directly against the financial asset concerned.

Construction contracts are stated at cost plus profit taken as at the balance sheet date, less a provision for anticipated losses and less progress billings. 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 sum of the costs incurred (including the recognised profit or loss) exceeds the sum of the progress billings. If the sum of the costs incurred (including the recognised profit or loss) is less than the sum of the progress billings, the item is classified as a liability.

Contractual revenue and expenses arising from construction contracts are accounted for in the income statement in proportion to the stage of completion of the contract. The stage of completion is determined by ascertaining the costs of the work performed in relation to the total expected cost. As soon as the profit/loss can be reliably estimated, a proportionate part of the profit is credited to the income statement. Expected losses on contracts are recognised immediately and in full in the income statement.

18. Cash and cash equivalents

(in millions of euros)

31 December 2020 **31 December 2019**

Cash and bank balances	1,137	818
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The cash and bank balances are at the free disposal of the company, with the exception of €129 million (31 December 2019: €134 million). The amount that is not at the free disposal of the company relates to season ticket payments received in advance in the activities in the United Kingdom. The Group's interest rate risk and a sensitivity analysis for financial assets and liabilities are given in note 25.

Accounting policy

Cash and cash equivalents are stated at fair value, which is normally the same as the nominal value.

19. Accrued and deferred items

Accruals and deferred income as at 31 December 2020 amounted to €14 million (31 December 2019: €32 million). The accruals include the non-current part of the outstanding pension contributions for employees amounting to €1 million (31 December 2019: €2 million) due to the pension agreement between the Railway and Public Transport Pension Fund and NS, as explained in note 28. Over the coming years up to 2022, the item will be settled with the employees based on the discount with respect to the nominal contribution as laid down in the NS collective labour agreement.

20. Trade and other liabilities

(in millions of euros)	31 December 2020	31 December 2019
Trade payables	389	414
Current portion of deferred credits	38	40
Other taxes and social security charges	499	183
Other liabilities	572	400
Accrued expenses and deferred income	524	460
Total	2,022	1,497

Trade and other payables includes an amount of €88 million (2019: €6 million) related to ProRail and the Dutch central government, of which €86 million relates to the NOW scheme. This concerns NOW 1.0 advance payments received for the main rail network, before the public transport availability payment was available. These advances will be repaid in 2021.

The Group's liquidity risk due to trade and other payables is stated in note 25 and the continuity section.

Other taxes and social security charges increased, mainly due to the Group's ability to defer payment of payroll taxes. The Group expects to meet the obligation in 2021 so it is not a long-term liability.

21. Deferred income

The deferred income of €562 million (2019: €738 million) consists mainly of amounts for student public transport passes in the Netherlands received in advance and season ticket payments received in advance in the United Kingdom and the Netherlands.

Accounting policy

This income concerns amounts received in a single payment under agreements with terms extending to future years. The income is credited to the income statement over the term of the agreements to which the income relates. The income is measured at amortised cost.

Section 5 Financing, financial risk management and financial instruments

22. Other non-current financial assets, including investments

(in millions of euros)	31 December 2020	31 December 2019	Accounting policy
Other non-current financial assets			
Share in Eurofima	88	88	Fair value through other comprehensive income – equity investment
Share in bonds	33	29	Fair value through other comprehensive income – investment in debt instruments
Loans and receivables	7	7	Amortised cost
Finance leases	-	33	Amortised cost
Commodity derivatives	-	2	Derivatives – fair value
Other non-current financial assets	32	-	Amortised cost
Total	160	159	
Other current financial assets			
Deposits	34	-	Amortised cost
Other non-current financial assets	1	8	Amortised cost
Total	35	8	

The interest in Eurofima is measured at fair value. The net asset value of this interest was used as the best approximation of fair value. This has not resulted in a revaluation of this interest as at 31 December 2020.

Accounting policy

On initial recognition, loans, receivables and deposits are accounted for by the Group from the date on which they first arose. All other financial assets are initially recognised on the transaction date. The Group derecognises 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 rewards of ownership of the asset are transferred or not retained, and control of the asset transferred is not retained either. If the Group retains or creates an interest in the financial assets being transferred, that interest is recognised as a separate asset or liability.

The Group derecognises a financial liability if the contractual obligations have been discharged or cancelled or have expired. Financial assets and liabilities are offset and the resulting net amount is recognised in the balance sheet only if the Group has a legally enforceable right to set off the amounts and if it intends either to settle on a net basis or to realise the asset and settle 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. Non-derivative financial instruments are initially recognised at fair value. After initial recognition, non-derivative financial instruments are measured as described below.

Financial assets at fair value through profit or loss

These assets are subsequently measured at fair value. Net gains and losses, including any interest or dividend income, are recognised in the income statement.

Financial assets at amortised cost

These assets are subsequently measured at amortised cost using the effective interest method. Amortised cost is reduced by impairment losses. Interest income, foreign exchange gains and losses and impairments are recognised in the income statement. Any gain or loss arising on derecognition is recognised in the income statement.

Fair value through other comprehensive income – investment in debt instruments

These assets are subsequently measured at fair value. Interest income is calculated using the effective interest method, foreign exchange gains and losses and impairments are recognised in the income statement. Other net gains and losses are recognised in other comprehensive income. On derecognition, the gains and losses accumulated in other comprehensive income are reclassified to the income statement.

Fair value through other comprehensive income – equity investment (interest in Eurofima)

These assets are subsequently measured at fair value. Dividends are recognised as income in the income statement, unless the dividend clearly represents a recovery of part of the cost of the investment. Other net gains and losses are recognised in other comprehensive income and are never reclassified to the income statement.

Impairment of financial assets

At each reporting date, financial assets are assessed to determine whether there is objective evidence that they might be impaired on the basis of expected credit losses. A financial asset is deemed to be impaired if there is objective evidence that one or more events occurred that had a negative impact on the expected future cash flows of that asset.

An impairment loss in respect of a financial asset measured at amortised cost is calculated as the difference between the carrying amount and the present value of the expected future cash flows, discounted at the original effective interest rate. An impairment loss in respect of investments 'at fair value through other comprehensive income' is calculated on the basis of the fair value.

Financial assets that are significant are individually tested for impairment. Other financial assets are assigned to groups with similar credit risk characteristics and are assessed collectively. All impairment losses are recognised as an expense in the income statement.

An impairment loss is reversed if the reversal can be objectively related to an event occurring after the impairment loss was recognised. For financial assets measured at amortised cost and fair value through other comprehensive income – investments in debt instruments, the reversal is credited to the income statement.

Fair value versus the carrying amount

The carrying amounts of the financial assets and liabilities recognised in the balance sheet do not differ materially from the fair values.

For bonds, the fair value is calculated using the available current market prices/closing prices. In principle, the interest in Eurofima is measured at fair value. The net asset value of this interest was used as the best approximation of fair value.

When determining the value of interest swaps and currency derivatives, the Group uses valuation techniques in which all significant data required are derived from observable market data (Level 2).

The Group's credit risks, currency risks and interest rate risks associated with the other investments are explained in more detail in note 25.

23. Equity

See the consolidated statement of changes in equity for the movements in equity.

The authorised capital as at both 31 December 2020 and 31 December 2019 consisted of 4 million ordinary shares with a nominal value of €453.78 (originally NLG 1,000). There are 2,230,738 issued and fully paid up shares. All issued shares are held by the State of the Netherlands. The shareholders are entitled to a dividend, which is declared annually based on the resolution of the general meeting of shareholders regarding the profit appropriation. The shareholders have the right to cast one vote per share at meetings of the company.

The financial statements and the profit appropriation for 2019 were adopted in the shareholders' meeting of 18 March 2020. In accordance with the proposal, an amount of €135 million from the profit for the reporting period of €208 million was added to the reserves and one amount of €73 million should be distributed as dividend. However, the shareholder waived the dividend payment. In anticipation of the intention to formally ratify this at the shareholders' meeting on 2 March, the 2019 dividend has been again been added to the retained earnings. The €11 million dividend tax already paid cannot be recovered/ settled with the tax authorities and/or shareholder and has therefore been written down.

The movements in the other reserves were as follows:

(in millions of euros)	Reserve for translation differences	Hedging reserve	Fair value reserve	Actuarial reserve	Revaluation reserve for associates	Total other reserves
Balance as at 1 January 2019	-14	-7	45	-	13	37
Other comprehensive income	2	2	7	-	-	11
Other changes	-	-	-	-	-	-
Balance as at 31 December 2019	-12	-5	52	-	13	48
Other comprehensive income	-9	-18	1	-1	-	-27
Other changes	-	-	-	-	-	-
Balance as at 31 December 2020	-21	-23	53	-1	13	21

Profit appropriation as stipulated by the Articles of Association

In accordance with Article 21(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.

Proposal for profit appropriation

A proposal will be put to the Meeting to withdraw the negative result of €2,581 million from the general reserve.

Minority interests

At the end of 2019, the value of the minority interest Abellio East Anglia Ltd applied to the expected dividend cash flows payable. As a result of changed estimates regarding these future cash flows, the liability has been written down and the effect has been recognised in net finance income. The reason for this is the adjustment of the Abellio East Anglia Ltd franchise due to the impact of COVID-19, which means that dividend payments are no longer expected. The net asset value of the minority interests as at 1 January 2020 is included in other changes in equity. If there is a termination fee (note 29), the minority shareholders guarantee their relative share.

Accounting policy

Translation reserve

The translation reserve consists of all exchange rate differences arising as a result of the translation of the financial statements of foreign operations and the translation of liabilities hedging the company's net investment in a foreign group company.

Hedging reserve

The hedging reserve consists of the cumulative change in the fair value of hedging instruments (derivatives) where 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 measured at fair value – other comprehensive income until the investment is derecognised.

Actuarial reserve

The actuarial reserve relates to the actuarial gains and losses, which comprise the difference between the actual and projected changes in the pension liabilities and investment returns on pension assets (see note 28).

Revaluation reserve for associates

The revaluation reserve for associates comprises the cumulative unrealised results, recognised directly in the equity of associates accounted for using the equity method.

General reserve

The recognition in equity is after deduction of taxes. Dividends are recognised in the period in which the profit appropriation is decided upon and the dividends are declared.

24. Loans and other financial liabilities, including derivatives

This note contains information concerning the contractual provisions for the Group's interest-bearing loans and other financial liabilities that are measured at amortised cost.

(in millions of euros)	31 December 2020	31 December 2019
Non-current liabilities		
Private loans	1,113	600
Other financial liabilities	-	39
Currency derivatives	2	9
Commodity derivatives	15	8
Total	1,130	656
Current liabilities		
Private loans	50	58
Bank overdrafts	17	40
Commodity derivatives	14	1
Total	81	99
Total liabilities	1,211	755

In 2020, the Group had a net amount of €507 million in new private loans.

The 'Private loans' item includes a debt payable by the Group to the Ministry of Infrastructure and Water Management of €114 million (2019: €148 million) associated with the deferred payments of franchise fees. Of that amount, €82 million has been included under 'Non-current liabilities', for the portion that is due to be paid after 2021. The portion that will be paid in 2021 (€33 million) is recognised in 'Current liabilities'. The interest rate is fixed at 3.027%. The terms and conditions of the loan were agreed in detail with effect from 1 January 2015 under the main rail network franchise.

The other private loans have terms expiring between 2021 and 2029 and interest rates ranging from 0.01% to 1.7%.

The reconciliation of changes in liabilities resulting from financing activities is as follows:

(in millions of euros)	Private loans	Bank overdrafts	Other financial liabilities	Interest rate swaps used for hedging	Currency derivatives	Commodity derivatives	Lease liabilities	Total
Balance as at 1 January 2019	646	19	48	2		4	33	752
Repayment of borrowings	-454						-420	-874
Addition of loans	400		-					400
Total net cash flow from financing activities 2019	-54	-	-	-	-	-	-420	-474
New finance leases							826	826
Movements in working capital	-18	18						-
Currency differences							53	53
Other movements	6		-3		9	5	-	17
Balance as at 31 December 2019	658	40	39	-	9	9	2,109	2,864
Repayment of borrowings	-494						-481	-975
Addition of loans	1,001		-					1,001
Total net cash flow from financing activities 2020	507	-	-	-	-	-	-481	26
New finance leases							518	518
Movements in working capital	23	-23						-
Currency differences							-51	-51
Other movements	-25		-39		-7	20	-29	-80
Balance as at 31 December 2020	1,163	17	-	-	2	29	2,066	3,277

Accounting policy

Non-derivative financial instruments

On initial recognition, these instruments are measured at fair value plus any directly attributable transaction costs. After initial recognition, loans and receivables are measured at amortised cost using the effective interest method.

Derivative financial instruments (derivatives)

The Group holds derivatives to hedge its foreign currency, interest rate and commodity risks. On initial recognition, derivatives are measured at fair value, which is the same as the cost applicable on that date. Attributable transaction costs are charged to the income statement when they are incurred. After initial recognition, derivatives are measured at fair value and any changes are accounted for as described below.

Hedge accounting

The method for recognition of the result depends on whether hedge accounting is used and, if so, whether the hedging relationship is effective. If the hedging relationship is effective, hedge accounting is used for these derivatives. When a hedging transaction is entered into, the hedging relationship is documented. Regular assessments are performed to determine if the hedging transaction was effective throughout the past period and whether the hedging transaction is expected to be effective throughout the coming period. If the hedging instrument expires, is sold, terminated or exercised or no longer meets the criteria for hedge accounting, application of hedge accounting ends with immediate effect.

Cash flow hedges

If a derivative is classified as a hedge for variability in cash flows ensuing from a particular risk associated with a recognised asset or liability, or if a highly probable forecast transaction could affect profit or loss, the effective portion of the changes in the fair value of the derivative is recognised in other comprehensive income and presented in the hedging reserve in equity. Any ineffective portion of the changes in the fair value of the derivative is recognised directly in the income statement. The accumulated amount is reclassified to the income statement in the same period in which the hedged position affects the income statement.

Fair value hedges

Changes in the fair value of a derivative hedging instrument that is classified as a fair value hedge are charged or credited to the income statement together with the changes in the fair value of the assets and liabilities (or groups thereof) insofar as they are attributable to the hedged risk.

If a hedging instrument no longer meets the criteria for hedge accounting, expires or is sold, hedge accounting is discontinued prospectively. The cumulative gain or cumulative loss that was previously recognised in equity remains in equity until the forecast transaction has occurred. The amount recognised in equity is reclassified to the income statement (under net change in the fair value of the cash flow hedges reclassified from equity) in the same period in which the hedging instrument affects the income statement.

Economic hedges

Hedge accounting is not applied to derivatives 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 exchange rate gains and losses.

Energy hedging

The Group uses accrual accounting for commodity derivatives intended for its own use, under the exception allowed by IAS 39.5 insofar as the requirements of IAS 39.5 are met. This is applicable to purchases of diesel and fuel oil and energy in the Netherlands and is discussed in the section on risks and in 'Off-balance sheet commitments'. The other commodity derivatives, which do not meet the criterion of being intended for the Group's own use, are measured at fair value, and hedge accounting is used where possible.

25. 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
 - Energy price risk
- Credit risk
- Liquidity risk
- Insurance risks

Risk management framework

The Executive Board bears the final responsibility for the design and supervision of the Group's risk management framework. The Risk and Audit Committee and the Supervisory Board ensure that the risk management framework is adequate in view of the risks to which the Group is exposed. The Group's Risk and Audit Committee is supported in its supervisory role by NS Audit, NS Risk and the Group Control & Expertise department. NS Audit provides additional assurance concerning effective control of all NS business processes by performing regular and ad hoc evaluations. The findings of NS Audit are reported to the Risk and 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 market conditions and the Group's activities. Financial risk management is one element of the NS risk framework.

In order to ensure adequate risk management, additional policies have been defined for a number of business units. For instance, NS Insurance and Abellio have specific risk controls reflecting the nature of their activities, unlike the other business units, where Corporate Treasury determines the substance of the financial risk management.

The Group is involved in transport franchises abroad (the United Kingdom and Germany) through Abellio. These operations are primarily in the United Kingdom, mainly on an independent basis or with minority shareholders, and in part through a joint venture with the partner Serco, in which both partners have an equal share. Abellio's financial risk management is part of the Abellio risk framework and therefore the NS risk framework. Agreements were reached in 2016 with the shareholder about the amount of the financial resources permitted to be involved in the Group's activities abroad.

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 aims to keep the market risk position within acceptable limits while optimising return on investment. Market risk comprises three types of risk: interest rate risk, currency risk and price risk.

Interest rate risk

The Group's policy is aimed at ensuring that at least 50% of the interest rate risk on borrowings is based on a fixed rate of interest. When determining the interest rate risk on borrowings, the Group can take account of the cash and cash equivalents available 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. Regulations and defined position limits apply to interest rate positions held with regard to foreign units within the Group. 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)	31 December 2020	31 December 2019
Liabilities with a variable interest rate		
Financial liabilities	-	-
Effect of interest rate swaps	-	-
	-	-
Liabilities with a fixed interest rate		
Financial liabilities	1,180	761
Lease liabilities	2,066	2,109
Effect of interest rate swaps	-	-
	3,246	2,870
Financial assets		
Financial assets with a fixed interest rate	40	62
Financial assets with a variable interest rate (especially cash and cash equivalents)	1,137	818

The Group has no floating rate GBP financial liabilities, so any potential changes in interest rates due to Brexit have no impact on the Group.

Currency risk

The Group is exposed to currency risks on purchases, trading activities, cash and cash equivalents, borrowings, other balance sheet positions and off-balance sheet commitments denominated in currencies other than the euro. Because of its business activities, the Group mainly has currency positions in pounds sterling (GBP) and Swiss francs (CHF).

The risk of fluctuations in exchange rates is hedged using forward exchange contracts, spot and/or forward purchases and sales and swaps, thereby hedging one or more of the risks to which the primary financial instruments are exposed. Purchases and sales, investment and financing commitments and settling accounts with foreign railway companies mainly take place using the functional currencies of the Group's business units, namely euros (EUR) and pounds sterling (GBP).

The currency risk of participating interests denoted in a foreign currency (pounds sterling and Swiss francs) is not hedged. The currency risks relating to translation differences in both the underlying balance sheet items and the value of the participating interests if the functional currency is not the euro are only hedged if the Group expects to discontinue operations. The foreign exchange gains or losses for the regular balance sheet items in the value of the participating interest are recognised in equity through the legal reserve for exchange differences.

At the end of 2020 and 2019, no materially significant positions were held in currencies other than the functional currency of the business units concerned.

At the end of 2020, the Group entered into a number of forward contracts and currency swaps in order to hedge specific currency positions. The nominal value of the hedged positions as at the end of 2020 was €278 million (year-end 2019: €252 million). The fair value of these currency derivatives at the end of 2020 was €2 million (2019: €9 million negative).

Brexit

Brexit took place on 31 January 2020, and a trade agreement between the EU and the United Kingdom was finally reached in December. It came into effect on 1 January 2021 and ended the free movement of people, goods and services between the United Kingdom and the EU. The agreement guarantees tariff-free trade between the UK and the EU without restrictions on trade volume, although additional customs declarations will in some cases be required.

As a company, Abellio is significantly insulated from the negative effects of Brexit, as it has a domestic customer base and does not operate across borders. However, Brexit has the potential to disrupt recruitment plans, particularly for temporary workers, mainly bus drivers and cleaners, due to a new points-based immigration system and visa requirements.

Although Abellio has a largely UK-based supply chain, the importation of some rolling stock and components through continental Europe may be problematic. Abellio has been working with industry partners to identify and address issues related to Brexit.

Sensitivity analysis for foreign currencies

Given that no materially significant items in financial instruments were held in foreign currencies at the end of 2020 or the end of 2019, a change in the value of the euro with respect to a foreign currency at the end of the year will not have any material impact on equity and profits over the reporting period.

Energy price risk

The 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 ran on 'green' electricity. Since 2017, the Group's traction has been entirely green. The contract covers the following risks (in whole or in part):

- Price risk: the fees for the Programme for Responsibility and Guaranteed Origins are fixed for the entire contractual period. The contract offers the option of purchasing the requisite electricity for future years based on a hedging strategy, which limits the exposure to market prices.

- Credit risk: the credit risk is limited to the thresholds that depend on the credit rating. If the exposure (which allows for aspects such as the difference between market values and contract values of electricity covered using a hedging strategy) exceeds a certain threshold (that depends on the credit rating), the Group or Eneco must 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. In addition, a range also applies in the year in question, within which fluctuations in the volume consumed do not affect the price.

The contract complies with the 'own use' criteria and is not classified as a derivative.

The United Kingdom

Abellio has entered into fuel hedging contracts for a number of subsidiaries to partially hedge movements in fuel prices and the associated currency risks. To this end, monthly forward contracts are used for a proportion of its fuel costs for a future period (ranging from 2020 to 2021) in order to cover the risks relating to the fuel costs and the associated currency risks. The guarantees given with these hedging contracts are specified in note 31.

Sensitivity of commodity (fuel) derivatives

The sensitivity of the commodity derivatives with a carrying amount as at 31 December 2020 of €29 million negative (31 December 2019: €5 million negative) 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 €30 million (31 December 2019: €37 million) and equity would increase by €24 million (31 December 2019: €31 million). If the fuel price were to fall, 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 carrying amounts of the financial assets represent the maximum credit risk. For details of the credit risk regarding Eurofima, see note 31. The maximum exposure to credit risk at the reporting date was as follows:

(in millions of euros)	Note	31 December 2020	31 December 2019
Share in Eurofima	22	88	88
Share in bonds	22	33	29
Loans and receivables	22	7	7
Finance leases	22	-	33
Commodity derivatives	22	-	2
Other non-current financial assets	22	32	-
Trade and other receivables	17	877	753
Cash and cash equivalents	18	1,137	818
Total		2,174	1,730

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 Group. Regular checks are performed to establish whether the contractual parties still comply with the policy or whether further action is needed.

Given the creditworthiness of the counterparties, the Group expects that those counterparties will fulfil their obligations. No impairment losses were incurred on the investments, bonds and deposits in 2020 or 2019. Investments are in principle made in 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 in a number of Dutch municipalities. If a counterparty only has a single credit rating, it must satisfy Standard & Poor's or Moody's rating requirements as stated above. Investments that no longer comply with this policy are either permissible as exceptions and monitored frequently or reduced (generally through normal progression), which may persist for some time after the balance sheet date. The Group's foreign companies do not have significant long-term material 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, including 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 8% (2019: 8%) of the Group's revenues are from sales transactions with the Dutch Education Executive Agency (DUO). As part of the credit policy applied 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 renewals, figures from the business unit's own experience are also used in assessing creditworthiness. In the assessment of the credit risk, customers are divided into groups based on credit characteristics; these groups include 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.

Liquidity risk

The liquidity risk is the risk that the Group will have difficulty meeting its obligations. Based on the principles underlying liquidity risk management, 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 both normal and difficult circumstances, without any unacceptable risks being incurred or the Group's reputation being jeopardised. The Group has sufficient cash or assets that are readily convertible into cash. In addition, the Group has access to committed credit facilities of which €300 million up to May 2022 and €345 million up to May 2023.

For the assumptions regarding the availability of cash, please refer to the section on the impact of COVID-19 and the going concern assumptions used.

The Group manages the cash and cash equivalents on the basis of regular liquidity forecasts using a bottom-up approach. On the basis of this forecast, financing limits are set for the business units that are clients of Corporate Treasury's in-house bank. The bank monitors these limits and they cannot be exceeded unless authorisation has been obtained. This gives Corporate Treasury an early warning system. The liquidity forecast and the aforementioned financing limits let Corporate Treasury 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 discounted.

31 December 2019							
(in millions of euros)	Carrying amount	Contractual cash flows	< 6 months	6-12 months	1-2 years	2-5 years	> 5 years
Non-derivative financial liabilities							
Private loans	658	655	22	37	95	135	366
Finance lease liabilities	2,109	2,372	242	242	431	691	1,008
Bank overdrafts	40	40	40				
Other financial liabilities	39	39	-	-	-	-	39
Trade and other payables	814	814	814	-	-	-	-
Derivative financial liabilities							
Interest rate swaps used for cash flow hedging	9	9	5	4			
Commodity derivatives	9	9	2	2	2	1	2
Total	3,678	3,938	1,125	285	528	827	1,415

31 December 2020							
(in millions of euros)	Carrying amount	Contractual cash flows	< 6 months	6-12 months	1-2 years	2-5 years	> 5 years
Non-derivative financial liabilities							
Private loans	1,163	1,163	17	33	84	313	716
Lease liabilities	2,066	2,288	242	242	325	657	822
Bank overdrafts	17	17	17	-	-	-	-
Other financial liabilities	2	2	2	-	-	-	-
Trade and other payables	961	961	961	-	-	-	-
Derivative financial liabilities							
Currency derivatives	-						
Commodity derivatives	29	7	7	15	-	-	-
Total	4,238	4,438	1,246	290	409	970	1,538

The above items have been netted off, because the contract requires the hedging transactions to be settled on a net basis. When calculating the future cash flows, it is assumed that the future variable interest rates are the same as the last known variable interest rates.

As regards the risks relating to capital, the Group has agreed a dividend policy with the shareholder.

Insurance risks

In the course of its operational activities, the Group is exposed to risks that can be insured against. Risks beyond the scope of the business units are managed via the subsidiary NS Insurance. This refers to the risk of losses due to collisions, fire and liability as well as direct trading loss. The maximum extent of these losses is 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 claims 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 the claims burden exceed the revenue, these costs are paid from the distributable reserve of NS Insurance (if this is sufficient).

NS Insurance uses stop-loss reinsurance contracts for reinsurance. MPL (maximum possible loss) studies are carried out regularly to determine limits for the insurance. Provided market conditions allow, NS Insurance only takes out reinsurance with parties that have at least an A- rating. 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 had ratings of at least A- as at the end of 2020.

NS Insurance is an insurance company and is supervised by De Nederlandsche Bank and the Netherlands Authority for the Financial Markets (AFM). Insurers must hold sufficient capital reserves to satisfy the minimum solvency requirement of Solvency II (SCR, the Solvency Capital Requirement). Insurers are also required to determine their own standard solvency requirement. NS Insurance has determined its standard solvency requirement in such a way that it will still be able to satisfy the SCR even if the stress scenario arises. Its standard solvency requirement is €46 million. NS Insurance comfortably meets this requirement. NS Insurance is fully consolidated in the Group figures.

26. Net financing result

(in millions of euros)

	2020	2019
Interest income from financial assets	1	3
Other interest income	38	9
Finance income	39	12
Interest expense on financial liabilities measured at amortised cost	-10	-14
Interest expense on lease liabilities	-34	-37
Exchange differences	-3	-3
Interest expense from discounting of provisions/other employee benefits	-4	-1
Other financial expenses	-9	-8
Finance expense	-60	-63
Net finance result included in the income statement	-21	-51

The other financial income of €38 million relates to changed estimates regarding future dividend cash flows payable in connection with the minority interest Abellio East Anglia Ltd (see note on minority interests).

Accounting policy

Finance income includes the interest income from monies invested, lease income, gains from the sale of available-for-sale financial assets and gains on hedging instruments that are recognised in the income statement. Interest income is recognised in the income statement as it accrues, using the effective interest method. Dividend income is recognised in the income statement when the right to the dividend payment is established.

Finance expenses include the interest expenses on borrowings, lease contracts, interest accrual on provisions and losses on hedging instruments that are recognised in the income statement. All borrowing costs that are not directly attributable to the acquisition, construction or production of a qualifying asset are recognised in the income statement using the effective interest method. No borrowing costs were capitalised in 2019 or 2020.

Financial benefits released from cross-border lease arrangements are deducted from the interest expense. Exchange rate gains and losses are included in the finance income and expense respectively.

Section 6 Other notes

27. Deferred credits

(in millions of euros)	31 December 2020	31 December 2019
Lump sum payments	162	182
Adjustment mechanism for franchise fee	73	98
Deferred credits	235	280
Less: current	-38	-40
Total non-current as at 31 December	197	240

The lump-sum payment for wage increases resulting from making the Railway and Public Transport Pension Fund independent in 1994 is expected to be released up to 2035, and to be credited to the income statement. The franchise fee adjustment mechanism is included in the implementation agreement for the main rail network franchise (see note 32). The amounts will be released in equal instalments and be credited to the income statement during the term of the franchise up to and including 2024.

Accounting policy

This income concerns amounts received in a single payment under agreements with terms extending to future years. The income is credited to the income statement over the term of the agreements to which the income relates. The income is measured at amortised cost.

28. Employee benefits

The non-current employee benefits comprise:

- other long-term employee benefits, including long-service awards;
- obligations resulting from occupational disability and supplements to social security payments;
- obligations relating to defined benefit plans.

(in millions of euros)	31 December 2020	31 December 2019
Defined benefit plans	5	3
Other long-term employee benefits	32	32
Total	37	35

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.

(numbers)	31 December 2020	31 December 2019
Railway Pensions Fund	16,839	16,878
Hotel & Catering industry pension fund	1,338	1,558
Food business industry pension fund	832	981
Servex supplementary pension plan	48	49
ScotRail	5,170	4,713
East Anglia/Greater Anglia	1,768	1,702
Abellio Transport Holdings	16	24
Abellio London & Surrey	1,890	2,113
Abellio West Midlands	2,426	2,475

In all 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 defined benefit pension plans are accounted for in these financial statements as defined contribution plans, in accordance with IFRS.

The total amount of the pension contributions charged to the income statement in 2020 was €148 million (2019: €141 million).

Railway and Public Transport Pension Fund pension plan (defined contribution plan)

The pension plan for the railway industry is administered by the Railway and Public Transport Pension Fund (*Pensioenfonds Rail en OV*). As of 1 April 2020, the Railway Pension Fund (*Spoorwegpensioenfonds*) merged into the Railway and Public Transport Pension Fund. The plan qualifies for recognition in the financial statements as a defined contribution plan. The contribution agreed with the Railway and Public Transport Pension Fund is a fixed annual contribution agreed in advance and expressed as a percentage of the pensionable earnings. In 2020, NS paid the nominal pension contribution of 24% to the pension fund. Two-thirds of the pension contributions paid to the Railway and Public Transport Pension Fund are paid by the company and one-third is paid by 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.

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 on 1 January 2017. This led to a receivable from Railway and Public Transport Pension Fund of about €240 million that was received in two years (2016 and 2017). The employees' part of the contribution build-up (one third of the amount) is recognised 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 (note 27).

There is a defined contribution plan for Abellio London & Surrey and the Servex supplementary pension plan.

Defined benefit plans

Abellio Greater Anglia, Abellio ScotRail, Abellio West Midlands and Abellio Transport Holdings have arranged for pensions for their staff to be administered by 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 amount 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 nature 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 Trust Company Limited. The plans' assets are invested via 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 as at 31 December. At year-end 2020, the net liabilities of Abellio Transport Holdings Limited were €5 million (year-end 2019: €3 million). The average term for the pension liabilities is about 24 years.

To reflect the nature of the franchise, the shortfalls between the pension liabilities and the pension assets for Abellio Greater Anglia, Abellio ScotRail and Abellio West Midlands have been included in 'Non-current liabilities' to the extent that they concern the term of the franchise. The remaining amount at the end of the term of the franchise is not recognised in the balance sheet because it will constitute part of the debts of the next franchise holder. At year-end 2020, the net liabilities were nil (year-end 2019: nil). The average term for both pension liabilities is about 20 years.

In determining the pension costs, only the costs that are expected to be borne by the franchisee (the Group) during the term of the franchise are recorded in the income statement. These net pension costs are therefore calculated while taking into account that part of the costs that will be borne by the employees (40%) and by other parties after the end of the current term of the franchise. This net calculation also takes into account any allocation within the term of the franchise that may possibly occur in connection with the triennial assessments during the term of the franchise, as well as any adjustments to the annual contributions over the term of the franchise.

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):

	31 December 2020	31 December 2019
Discount rate	1.6%	2.2%
Total wage increase	2.4%	2.2%
Increase of pension benefits	2.4%	1.9%
Inflation	2.9%	1.9%

Mortality table: S1NA tables with CMI 2019 projections plus long-term expectation of +1.25%.

Breakdown

The breakdown of the pension liabilities is as follows.

(in millions of euros)	31 December 2020	31 December 2019
Fair value of plan assets	2,767	2,727
Present value of defined benefit obligations	4,694	3,764
Deficit	1,927	1,037
Employees' share	-771	-415
Deficit at the end of the franchise period	-1,151	-619
Group's net commitments concerning franchise period	5	3

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.

(adjustment by 0.25%) (in millions of euros)	Increase	Decrease
Discount rate	-273	291
Inflation	288	-271
Future salary increases	73	-70

A change in life expectancy of one year would lead to a change in the gross liability of about €150 million (31 December 2019: €95 million). The impact of these changes on the Group's net liabilities during the term of the franchise is expected to be limited, given the transfer of liabilities at the end of the franchise.

Movement

The changes in the pension assets and liabilities are as follows.

(in millions of euros)	2020	2019
Plan assets as at 1 January	2,727	1,820
Addition of new fund	-	479
Interest income	56	65
Pension contributions (including employees' share)	73	65
Pension benefits paid	-84	-56
Administration expenses	-13	-10
Return on plan assets, excluding interest income	154	252
Exchange results	-146	112
Plan assets as at 31 December	2,767	2,727
Defined benefit obligations as at 1 January	3,764	2,338
Addition of new fund	-	679
Pension costs	151	118
Interest expenses	76	84
Pension benefits paid	-84	-56
Net actuarial gain or loss	988	459
Exchange results	-201	142
Defined benefit obligations as at 31 December	4,694	3,764

Breakdown of pension assets

The breakdown of the pension assets is as follows.

(in millions of euros)	31 December 2020	31 December 2019
Shares	1,914	1,791
Fixed-income securities	174	181
Property	240	252
Cash	261	349
Other	178	154
Total	2,767	2,727

Pension costs recognised in the income statement

(in millions of euros)	2020	2019
Pension costs (employer's share)	91	71
Interest expenses	-	-
Administration expenses	8	6
Adjustment due to limitation of franchise period	-52	-37
Total	47	40

Based on current accounting policies, the Group expects to recognise pension costs for Abellio of €47 million for the above defined benefit plans in 2021.

Unrealised actuarial gains and losses

(in millions of euros)

	2020	2019
Net actuarial gain or loss due to:		
- Demographic assumptions	-14	20
- Financial assumptions	999	-520
- Experience adjustments	4	-
Return on plan assets, excluding interest income	-154	239
Adjustment due to limitation of franchise period	-462	140
Changes in members' share	-373	121
Total	-	-

Other long-term employee benefits

This includes long-service award obligations. The AG2019 mortality table is used for the calculation of the long-service award obligations.

The changes in the provision were as follows:

(in millions of euros)	2020	2019
Long-service award obligation as at 1 January	32	29
Payments	-3	-2
Actuarial gains and losses	2	2
Accrued interest	1	3
Long-service award obligation as at 31 December	32	32

The current portion of this provision is €3 million.

The sensitivities are as follows.

	2020	2019
Discounting (-0.5%)	4.3%	4.8%
Total wage increase (0.5%)	4.3%	4.7%
Career opportunities (+25%)	1.3%	3.2%
Probability of resignation/dismissal (+25%)	-6.1%	-5.3%

Accounting policy

'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 recognised in the income statement in the period for which the contribution is payable.

Defined benefit plans are those plans 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 entitlements that employees have accrued in the reporting period and the preceding years. The present value of these pension entitlements is determined and netted off against the fair value of the invested pension assets. The discount rate is the interest rate as at the balance sheet date for high-grade fixed income securities for which the term to maturity 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 portion is deducted from the liability.

The pension liabilities relating to the Group business units that are based in the United Kingdom have been included for the period during which the transport franchises 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 recognised 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 other comprehensive income.

Liabilities relating to long-service awards and early retirement are calculated actuarially and recognised at the present value. This takes account of developments in wages and prices, recent mortality tables and estimates of the employment contract. Any actuarial gains or losses are recognised in the income statement in the period in which they occur. The liabilities 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 converted to the present value, taking account of future salary increases. Other short-term employee benefits are measured without being converted to the present values and recognised when the service associated with them is rendered.

29. Provisions

(in millions of euros)	Provisions for reorganisation costs	Provision for soil remediation	Termination fees/net asset payments	Other provisions	Total
Balance as at 1 January 2020	2	73	-	122	197
Addition	33	1	487	88	609
Accrued interest					-
Withdrawal	-2	-		-40	-42
Other changes				-2	-2
Release		-1		-2	-3
Balance as at 31 December 2020	33	74	487	166	760
Presented under:					
Non-current	18	67	-	94	179
Current	15	7	487	72	581

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 been eliminated as a result of reorganisations. Important starting points for determining the provisions for reorganisation costs at year-end 2020 in the Netherlands are:

- the final collective bargaining offer submitted by NS to the parties to the collective labour agreement is accepted by the trade unions in February 2021;
- Estimates with respect to advancement and outflow during the reorganisation.

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% (2019: 1.5%).

Termination payments/net asset payments

On 20 September, the Emergency Measures Agreements (EMAs) for the three Abellio UK DfT franchises were replaced by Emergency Recovery Measures Agreements (ERMAs). Depending on the operator, these contracts vary in length from 6 to 18 months and, like the EMAs, the costs were borne by the DfT with a management fee earned by the TOCs.

One of the conditions of signing the ERMA is that each TOC agrees to the possibility of a termination payment to the DfT and, depending on certain factors, a net asset payment at the end of their ERMA. On 21 October 2020, the DfT published the Estimated Termination Sum to be paid by each TOC. The TOCs have submitted a substantive response to the DfT's (preliminary) calculation method, following which the DfT will determine and confirm the final termination payment in 2021. The TOCs will then have the choice to accept or reject this payment, after which the ERMA will end and the original contract will be reinstated.

In anticipation of the final confirmation by the DfT, the Group has made an estimate of the termination payment and net asset payments. These are based on communications by the DfT. The Group is currently disputing the substantive calculations by the DfT and has provided justifications for this. Given the uncertainty of the amount of these payments, they have been accounted for under provisions. The Group is aiming for a significant downward adjustment of the termination payment. This is expected to become clearer later in 2021.

Other provisions

'Other provisions' include provisions for losses arising from accidents and fire, uncertainties concerning settlements with carriers, provisions for maintenance in connection with lease contracts and provisions for staff-related matters. Withdrawals include the payments for individual compensation for victims of WWII transport.

Individual Compensation for Victims of WWII Transport

During the Second World War, NS operated trains on instructions from the occupying forces. Various discussions with Mr. Salo Muller, a Holocaust survivor, have shown that Mr. Muller, but also others, want NS not only to commemorate the victims of the transports and their direct descendants collectively, but also to acknowledge and compensate for their suffering individually. NS does not believe that anyone benefits from lengthy legal proceedings and has expressed its willingness to grant individual financial compensation on moral grounds, to those most directly affected by its actions. It was therefore jointly decided not to institute legal proceedings on liability and to set up a committee to implement the compensation scheme. A special committee chaired by Job Cohen has been tasked with handling individual compensation on moral grounds to an as yet undefined group of survivors and their direct descendants. The committee started work in January 2019. The Committee on Individual Compensation for Victims of WWII Transport by NS presented its recommendation on 26 June 2019. NS has adopted the committee's recommendation and made a provision of €47 million in 2019 to account for the expected compensatory payment and costs of execution (recognised under other operating expenses). At the end of 2020, almost the entire provision has been settled.

NS announced on 26 June 2020 how it will implement the collective form of acknowledgement. NS has made available and paid €5 million to four existing remembrance centres for this purpose.

Accounting policy

A provision is recognised in the balance sheet whenever the Group has a legal or constructive obligation as a consequence of a past event and it is probable that the settlement of that obligation 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 liability.

Reorganisation costs and non-activity schemes

Provisions are made in connection with reorganisations if a formal, detailed plan has been drawn up for the reorganisation, and the reorganisation is either under way or has been publicly 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 operating assets. 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 contamination occurs or is found to have occurred.

Onerous contracts

A provision for onerous contracts is included in the balance sheet if the economic benefits that the Group expects to derive from a contract are exceeded by the unavoidable costs of meeting the obligations under the contract.

The provision is measured at the present value of the anticipated net costs of continuing the contract or, where this is lower, the present value of the anticipated costs of termination of the contract, being any compensation or penalty 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, provisions for maintenance in connection with lease arrangements and other risks.

30. Leases

Group as lessee

The Group has lease contracts for rolling stock, real estate and other operating assets that are used in its operations. The Group's obligations under the leases are safeguarded by the lessor's right to the ownership of the leased assets. Generally, the Group's possibilities for subleasing the leased assets are restricted. There are various lease contracts that contain extension and termination options, which are discussed in more detail below.

The Group also has certain lease contracts for machines with a lease term of 12 months or less and lease contracts for office equipment of low value. The Group applies the recognition criteria for exemptions for 'short-term leases' and 'leases of low-value assets' for these lease contracts.

The carrying amounts of the recognised right-of-use assets and the changes during the period are stated below.

(in millions of euros)

	Rolling stock	Property	Other	Total
Composition as at 1 January 2019				
Cost	2,190	192	15	2,397
Accumulated amortisation and impairments	775	27	2	804
Carrying amount as at 1 January 2019	1,415	165	13	1,593
Changes in 2019				
Additions	783	15	5	803
Acquisitions				
Depreciation	-402	-18	-2	-422
Impairments	-	-	-	-
Exchange differences	47	-	2	49
Other changes	-1	1	-1	-1
Total changes during the financial year	427	-2	4	429
Composition as at 31 December 2019				
Cost	2,991	208	21	3,220
Accumulated amortisation and impairments	1,149	45	4	1,198
Carrying amount as at 31 December 2019	1,842	163	17	2,022
Changes in 2020				
Additions	504	14	-	518
Acquisitions	-43	-	-1	-44
Depreciation	-461	-18	-3	-482
Impairments	-83	-27	-1	-111
Exchange differences	-46	-1	-1	-48
Other changes	10	-3	3	10
Total changes during the financial year	-119	-35	-3	-157
Composition as at 31 December 2020				
Cost	2,977	214	27	3,218
Accumulated amortisation and impairments	1,254	86	13	1,353
Carrying amount as at 31 December 2020	1,723	128	14	1,865

The carrying amounts of the lease liabilities and the changes during the period are stated below.

(in millions of euros)	2020	2019
Lease liabilities as at 1 January	2,109	1,650
Additions	518	825
Interest allocated	34	37
Payments	-515	-457
Other changes	-29	-
Currency differences	-51	53
Lease liabilities as at 31 December	2,066	2,109
Presented under:		
Non-current	1,601	1,676
Current	465	433

The lease liabilities can be subclassified into the following countries:

(in millions of euros)	31 december 2020	31 December 2019
The United Kingdom	844	959
Germany	1,042	953
The Netherlands	180	197
Total	2,066	2,109

The maturity analysis of lease liabilities is disclosed in note 25.

The following amounts are recognised in the income statement:

(in millions of euros)	2020	2019
Depreciation of right-of-use assets	482	422
Impairments of right-of-use assets	111	-
Interest expense on lease contracts	34	37
Costs relating to short-term lease arrangements (Other operating expenses)	30	49
Costs relating to leases of low-value assets (Other operating expenses)	1	1
Variable lease payments (Other operating expenses)	17	18
Total recognised in the income statement	675	527

The Group has no lease arrangements with material variable lease payments.

Accounting policy

The Group recognises a right-of-use asset and a lease liability at the commencement date of the lease arrangement. The right-of-use asset is initially measured at cost, comprising the initial amount of the lease liability, adjusted for any lease payments made at or before the commencement date of the lease arrangement, plus any initial direct costs incurred and an estimate of the costs of dismantling and removing the underlying asset or restoring the underlying asset or restoring the site on which it is located, less any lease incentives received.

The right-of-use asset is subsequently depreciated on a straight-line basis from the commencement date until the end of the lease term. The average depreciation periods are as follows:

- Rolling stock 1-6 years
- Real estate 1-11 years
- Other 1-9 years

In addition, the right-of-use asset is periodically reduced by any impairment losses and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the Group's incremental borrowing rate. The lease liability is measured at amortised cost using the effective interest method. It is remeasured if there is a change in the future lease payments as a result of a change in an index or rate, if there is change in the Group's estimate of the amount expected to be payable under a residual value guarantee or if the Group changes its assessment of whether it will exercise a purchase, extension or termination option.

31. Off-balance sheet arrangements

A number of investigations are under way against NS and/or group companies and various claims have been submitted which are being contested by the company. Where deemed necessary, provisions have been made for this. A number of important subjects are explained below.

Authority for Consumers and Markets (ACM)

In its judgement of 6 March 2015, the ACM concluded that NS had infringed Sections 67 and 71 of the Railways Act by not making a reasonable offer in the Limburg tendering process for a number of facilities. On 22 May 2017, the ACM ruled that NS had acted in violation of Section 24 of the Competitive Trading Act and Article 102 of the Treaty on the Functioning of the European Union. The ACM therefore imposed a fine of €40.95 million on NS. Based on a system of standards that the ACM itself devised, the ACM concluded that the offer by NS did not satisfy the 'internal rate of return' requirement. This approach taken by the ACM is new and has far-reaching consequences for the rail sector and future tenders and investments by NS. In view of this, NS lodged an objection to the decision. NS disputes the suggestion that it submitted a loss-making bid in the public transport tender in Limburg. The bid also satisfied the 'internal rate of return' requirement. NS therefore disagrees with the ACM's ruling and the supporting arguments for the decision. NS submitted a notice of objection, asking the ACM to reconsider its decision. On 29 March 2018, the ACM dismissed NS's objections. NS lodged an appeal against the ruling on the objection. The fine imposed

was paid in 2017 and charged to the income statement in 2017. On 27 June 2019, the District Court of Rotterdam set aside the ACM's decision. The fine was annulled and repaid to NS in July 2019 and recognised in the income statement in 2019. The ACM has lodged an appeal and requested a period of time to supplement its arguments. There are no significant developments in 2020.

Public Prosecution Service

The Public Prosecution Service (specifically the National Office for Serious Fraud, Environmental Crime and Asset Confiscation in Den Bosch) started a criminal investigation in 2015 into possible criminal acts in connection with the tendering process for public transport in Limburg. The investigation focused 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 B.V., Abellio Transport Holding B.V. and Abellio Nederland B.V. In February 2016, NS Groep N.V. received the final report of the criminal investigation. The Public Prosecution Service then issued NS Groep N.V. with a summons. The substantive proceedings took place in the second half of 2017. On 21 December 2017, the District Court of Oost-Brabant acquitted NS of two of the offences with which NS had been charged and ruled that the Public Prosecution Service was not allowed to prosecute in the case of a third offence with which NS had been charged.

On 13 November 2020, the Public Prosecution Service withdrew its appeal in the criminal case against NS.

Chromium 6

On Thursday, 31 January 2019, the National Institute for Public Health and the Environment (RIVM) presented the results of the Chromium-6 investigation into the reintegration project tROM in Tilburg. In that project, people on unemployment benefit worked on trains belonging to NS and the Dutch Railway Museum at the then NedTrain workshop in Tilburg between 2004 and 2011. The RIVM carried out an investigation in which NS cooperated. An independent committee drew conclusions on the basis of the results of the investigation and formulated ad hoc recommendations. The committee drew firm conclusions, including about the role of NS in the Tilburg project. According to the committee, the municipality of Tilburg, NS and the Railway Museum all cut corners. At the beginning of February 2019, the parties announced that they would come to an arrangement jointly and each on the basis of its own responsibility. The aim is to provide clarity to those involved as quickly as possible.

NS already provided for its share of the expected costs as at 31 December 2019 and remeasured this based on its understanding as at 31 December 2020. The movement in the provision is recognised in other operating expenses.

Furthermore, the police carried out a criminal investigation on the instructions of the Public Prosecution Service, in which NedTrain was one of the suspects. The investigation has been completed and the Public Prosecution Service has announced that it will prosecute NedTrain for complicity in violation of the Working Conditions Act (*Arbeidsomstandighedenwet*). The outcome of the criminal prosecution is still uncertain.

Long-term contracts

There were a number of long-term financial commitments to third parties at year-end 2020, mainly concerning lease arrangements for trains, company cars and copiers. There are also long-term contracts for services by third parties in the areas of IT, maintenance and cleaning.

The Group has various lease contracts that have not yet commenced as at 31 December 2020. The future payments under these non-cancellable lease contracts are €92 million within no more than one year, €265 million within no more than five years and €270 million thereafter.

In March 2021, two long-term loans concluded in December 2020 totalling €300 million will be paid.

Energy contracts

As at the end of 2020, the purchase commitments under the energy contract in the Netherlands for the volumes already covered, the payments for the Programme for Responsibility and the surcharge for green electricity for the period 2020-2024 (the remainder of the 10-year contract) came to €205 million (compared with €235 million at the end of 2019). The amount expected to be required for 2021 and 2022 is fully covered. Transport costs and energy taxes are not included in the purchase commitments shown. If the difference between the market values and the contract value exceeds a given threshold, the Group or Eneco has to give the other party guarantees or provide cash collateral. Any payments and liabilities are netted, as they are both inextricably linked. As at year-end 2020, NS had received €0 million (year-end 2019: €9 million) in collateral in the form of margin money.

For more detailed information about the energy contracts, see note 25.

Tax group

For the purpose of corporation tax, all the Dutch subsidiaries belonging to the Group are part of the NV Nederlandse Spoorwegen tax entity. As a result, the Group is jointly and severally liable for all tax liabilities of the subsidiaries included in the tax entity.

Investment commitments

At the end of 2020, the Group had outstanding investment commitments of €1,184 million (2019: €1,312 million), primarily for purchasing and upgrading trains and investments in the areas around the stations.

Contingent liabilities

The Group has paid €28 million (translated) of its share in the issued share capital (€139 million after translation) of EUROFIMA AG. The Group has a liability for full payment on demand of the shares and other guarantee commitments totalling €251 million (after translation). Payment of the liability can be demanded if EUROFIMA AG's own equity position gives reason to do so.

As a result of the agreements made with the Belgian carrier regarding the IC Brussels service in the context of the main rail network, the Group is making allowances for a negative balance for the Group in the settlement of the costs of commercial operation for this route. The amount of that negative balance depends on the commercial results on that route. The expected outcomes are part of the main rail network impairment test as explained in note 14.

Guarantees

The Group has issued guarantees totalling €421 million (31 December 2019: €454 million) (excluding loans already drawn) relating to the operation of the franchises in the United Kingdom and Germany. This includes an amount of €244 million issued as a PCS guarantee, but which is part of the provision for termination payments (see note 29).

Franchises

The Group had the following franchises during 2020:

Franchises in 2020	Expiry date	Type of contract
The Netherlands		
Main Rail Network/HSL South	31 December 2024	net
Gouda-Alphen aan den Rijn train service	11 December 2031	net
The United Kingdom		
Merseyrail franchise around Liverpool	20 July 2028	mixed
Greater Anglia franchise (East Anglia)	12 October 2025	mixed
Abellio London franchises (bus)	see below	gross
ScotRail franchise in Schotland	31 March 2022	mixed
West Midlands train franchise	31 March 2026	mixed
East Midlands train franchise (since 18 August 2019)	21 August 2027	mixed
Germany		
Ruhr Sieg Netz	December 2034	gross
Der Mungstener	December 2028	gross
Saale-Thüringen-Südharz	December 2030	gross
Niederrhein-Netz	December 2028	gross
Rhine-Ruhr-Express (start of the operation in two steps: December 2018 and December 2020)	December 2033	gross
Stuttgarter Netze	December 2032	gross
Dieselnetz Sachsen-Anhalt	December 2032	gross
S-Bahn Rhein-Ruhr	December 2034	gross

Disclosure

Net contracts are contracts with a revenue risk concerning the revenue from passengers.

Gross contracts are contracts with no revenue risk concerning the revenue from passengers.

Mixed contracts are contracts with certain protective measures for the revenue from passengers.

The Netherlands

Main rail network

The main rail network franchise is awarded by the Ministry of Infrastructure and Water Management. It covers passenger transport by rail on the main rail network in the Netherlands. The old main rail network franchise and the HSL franchise (see the paragraph below) ended in 2014 and the ministry decided in December 2014 to award a new integrated main rail network franchise to NS for the period from 1 January 2015 to 31 December 2024. The train services on the HSL South have also been covered by this franchise from 1 January 2015 onwards. The franchise agreement stipulates that performance must improve during the term of the franchise. The evaluation will take place during 2024. If NS does not achieve the target values for 2024, NS will be obliged to pay a sum of €1.5 million for each performance indicator not attained up to a maximum of €19.5 million per evaluation. 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 up to €6.5

million a year on NS if NS does not achieve the minimum baseline values for the franchise performance indicators. The performance indicators are measured for the following performance areas: general (customer satisfaction), the door-to-door journey, ease of travelling (transport capacity at peak times), journey information (in the event of disruptions), safety (including personal safety) and reliability (punctuality for passengers). NS recognised a bonus of €5.5 million for 2019 for the achievement of performance indicators.

The agreements made with the government include agreements on the production assets (rolling stock in particular) that are to be used for operating the main rail network franchise. Depending on the ownership situation and the form of tender, the production assets may be leased in the event of complete or partial loss of the main rail network franchise to a subsequent franchise holder, or sold at the carrying amount, and/or their leases may be transferred unchanged to the subsequent franchise holder.

The overall fees for track use and the franchise for the integrated main rail network/HSL South franchise were €172 million in 2020. The negotiation agreement of 2011 included an adjustment mechanism to avoid the liquidation of HSA. This adjustment mechanism has been included in the implementation agreement for the franchise. It works as follows. If the average return on investment for the franchise holder over a fixed period turns out to be lower than the threshold value (4%), the holder will be entitled to an adjustment to the franchise price (equal to the difference between the actual return and 4%, with the adjustment over the entire duration of the franchise being capped at the equivalent of €144 million at 2010 prices). There was no entitlement to any such adjustment over 2015. Any entitlement to an adjustment was first calculated in 2016 using the average return on investment for 2015 and 2016, and thereafter on a rolling basis using the previous three years. An entitlement to an adjustment to the franchise price deriving from the implementation agreement does not lapse if at any point in subsequent years the return on investment exceeds the threshold value. Payment of any entitlement that may have arisen through an adjustment to the franchise price will be spread in instalments, as per the implementation agreement. The adjustment mechanism for the average profitability is recognised during the franchise on a straight-line basis covering the entire franchise term.

The franchise also includes an adjustment mechanism for a settlement of any windfalls in energy price changes over the franchise period. This adjustment will be calculated cumulatively, with NS owing the Ministry of Infrastructure and Water Management 75% of the difference between the actual energy prices and the forecast energy prices according to the business case, with no adjustment being made if the cumulative actual return on investment falls below the cumulative norm return. Apart from the calculation outlined above, NS owes an unconditional one-off sum of €56 million to the ministry for 2016. This payment is amortised on a straight-line basis over the entire term of the franchise. This arrangement is capped at €290 million (including the one-off payment) and will never result in a payment to NS by the Ministry of Infrastructure and Water Management. No energy cost adjustment is owed for 2020 and previous years.

In June 2020, the Ministry of Infrastructure and Water Management announced its intention to award the franchise privately to NS with effect from 2025. This was confirmed by the Dutch House of Representatives in September 2020. The term and conditions of the franchise are not yet known.

Gouda-Alphen aan den Rijn franchise

In 2020, NS operated the Gouda – Alphen aan den Rijn franchise, with a term until 11 December 2031.

The franchise was awarded by the relevant province. A fee is received from the franchise authority for the operation of the franchise.

The United Kingdom

The original franchise conditions for each franchise are shown below. Due to COVID-19, temporary contracts are currently in place. In the United Kingdom, when COVID-19 broke out, the contracting authorities (the DfT and TS) amended the contract terms and conditions for Greater Anglia, East and West Midlands and ScotRail until 30 September 2020 by means of EMAs. The contracting authority DfT subsequently followed up on the term of the EMAs with ERMAs for Greater Anglia, East and West Midlands. These ERMAs have been signed by Abellio. Upon expiration of this form of contract, the contracts may then be converted into new 'direct award' contracts. These contractual changes shifted the risk related to passenger revenue to the contracting authorities. As one of the conditions of entering into these ERMAs, the DfT may require a termination payment/net asset payment. These have been provided for by Abellio. Constructive discussions are in progress with Transport Scotland regarding a further extension of the EMA in respect of the ScotRail franchise. It is assumed that this will be continued from March 2021 to the end of the original franchise period.

Merseyrail franchise

This franchise is operated as a 50:50 joint venture with Serco, a listed UK company. This is for passenger transport on the railway network in the region around Liverpool. There is an obligation to operate well-defined services (timetable, quality of the service) at a fixed fee that is paid by the regional authorities. An evaluation is carried out every five years, which reviews, among other things, whether the activities continue to be 'efficient'. The annual payment from the government (the subsidy) is determined in the contract and is indexed annually.

Greater Anglia franchise (East Anglia)

Abellio was awarded the new Greater Anglia franchise in August 2016. It is operated by Abellio East Anglia Ltd. The franchise operates passenger transport in the railway network in the Anglia region in the eastern part of England.

ScotRail franchise

Abellio was awarded the ScotRail franchise in October 2014. The franchise commenced on 1 April 2015 and has a term of seven years. The ScotRail franchise was awarded by Transport Scotland and is operated by the full subsidiary Abellio ScotRail Ltd, which provides intercity, regional and provincial passenger transport by train on the Scottish national railway network. There is an obligation to provide the specified services (timetable, quality of the services) at a fee determined in advance that is paid by the government (subsidy) and that is indexed on an annual basis. In December 2019, the Scottish government decided not to agree to our commercially viable option for extending the franchise until 2025 and then used the break clause in the franchise agreement to terminate the ScotRail franchise at the beginning of March 2022. This situation has been accounted for as such in the financial analyses (see also note 14).

West Midlands franchise

Abellio started operating the West Midlands franchise on 10 December 2017. The franchise runs until 31 March 2026. It covers the area around Birmingham and the services from London Euston to Crewe and from Liverpool to Birmingham. The franchise agreement stipulates that new trains need to be introduced in 2021 to provide room for more passengers during peak periods in Birmingham and London. The long trains offer more seats and more space for passengers. In this franchise, investments are also being made in a better ticket system and better journey information as part of the changes intended to improve passengers' journeys.

East Midlands franchise

Abellio started operating the East Midlands franchise on 18 August 2019. The franchise runs until 21 August 2027. The franchise comprises the Midland Main Line, which terminates at London St. Pancras, from where the services to Derby, Leicester, Sheffield and Nottingham are operated. It also covers a network of local railway lines serving destinations including Grantham, Lincoln and Mansfield. The routes also comprise services to Luton Airport and East Midlands Parkway. The franchise agreement provides for the introduction of brand new trains to replace the entire existing intercity fleet and passengers will benefit from an 80% increase in the number of morning rush-hour seats in Nottingham, Lincoln and St Pancras. Passengers will also benefit from shorter travel times over long distances, a new express service from Corby via Luton to London, the introduction of improved compensation for delays and flexipass tickets for improved value for money.

London

Abellio London operates bus services in London from a number of depots (with a market share of 8%). The franchises have an average term of five years with an option for extension by two years, depending on the achievement of various performance criteria.

Germany

Abellio operates various train services in the North-Rhine Westphalia (NRW), Central and Southern Germany regions for a fee (subsidy) set in advance by the government, which is indexed annually. The franchises have terms that expire at different times between 2028 and 2034.

The German part of the Niederrhein-Netz franchise, from Düsseldorf to Arnhem (the Netherlands), started in December 2016.

In June 2016, Abellio was awarded two routes of the RRX (Rijn-Ruhr-Express), the operation of which will commence in two stages. The first route, from Münster to Dortmund, Düsseldorf, Cologne and Aachen, started on 9 December 2019, and the second, from Düsseldorf to Dortmund, Paderborn and Kassel, in 2020.

In November 2016, Abellio was awarded the Stuttgarter Netze franchise. Abellio will operate the franchise from June 2020 with new trains in the Baden-Württemberg region.

In December 2016, Abellio was also awarded the DISA franchise (DISA) for the Saxony-Anhalt diesel network. Abellio started operating this franchise on 9 December 2019 on several routes in the Saxony-Anhalt region.

Abellio was awarded the S-Bahn Rhein-Ruhr franchise in July 2016. Abellio operates this franchise from December 2020 on a number of routes in the NRW region.

In December 2016, Abellio successfully defended its Ruhr-Sieg-Netz franchise. Abellio commenced operating the franchise with a number of trains as from 2020.

On 6 December 2017, the Group increased its interest in WestfalenBahn from 25% to 100%. WestfalenBahn is established in Bielefeld. With its Expresslines Emsland, it connects the cities of Braunschweig and Hannover in Lower Saxony with Bielefeld and Rheine in North Rhine-Westphalia. From Münster, there is a direct line via Meppen and Leer to Emden on the North Sea.

32. Related parties

Transactions with related parties are conducted 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) concerns the consideration received for student public transport cards (2020: €495 million, 2019: €458 million).

Payments of the infrastructure charge for the Dutch infrastructure are made to ProRail BV, a State-affiliated company. This is explained in note [31](#).

Furthermore, the Group received a sum of €843 million (2019: €17 million) in grants from the State in 2020 through various schemes (availability payments, NOW and other schemes). These are recognised as revenue.

For the performance of the activities by Translink Systems BV, the Group paid Translink an amount of €0.1 million in 2020 (2019: €0.1 million) for products and services provided. Translink Systems BV engages in the development, implementation and use of the electronic registration and payment system for public transport in the Netherlands.

The transactions with the Executive Board and the Supervisory Board members are disclosed in note [2](#).

There were no significant transactions in 2020 or 2019 with joint ventures and other participating interests.

Group companies

The main companies included in the consolidated financial statements are:

	Percentage interest		Registered office
	2020	2019	
Operating companies			
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 (in liquidation)	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* (merged with NS Reizigers BV since 1 January 2021)	100.0	100.0	Utrecht
	Subsidiaries of operating companies	Subsidiaries of operating companies	Subsidiaries of operating companies
Subsidiaries of operating companies			
Thalys Nederland NV*	100.0	100.0	Utrecht
NS Internationaal 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
Stationsfoodstore BV*	100.0	100.0	Utrecht
NS Poort Ontwikkeling BV	100.0	100.0	Utrecht
NS Financial Services Company (in liquidation)	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 East Anglia Ltd	60.0	60.0	London
Abellio West Midlands Ltd	70.1	70.1	Birmingham
Abellio East Midlands 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
WestfalenBahn GmbH	100.0	100.0	Bielefeld
Joint ventures			
Merseyrail Services Holding Company Ltd	50.0	50.0	Hampshire
Other interests			
Reisinformatiegroep BV	41.7	41.7	Utrecht
Eurofima AG	5.8	5.8	Basel

* Pursuant to the provisions of Section 403 of 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 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.

33. Events after the balance sheet date

No matters have come to light after the balance sheet date that provide further information about the actual situation as at the balance sheet date, nor were there events that are significant for the opinion to be formed by users of the financial statements.

Company financial statements

Company statement of financial position as at 31 December 2020

(before profit appropriation)

(in millions of euros)	31 December 2020	31 December 2019
Non-current financial assets	1,352	3,763
Total assets	1,352	3,763
Equity		
Issued share capital	1,012	1,012
Other reserves	2,435	2,146
Revaluation reserve for associates	64	59
Legal reserve for development costs	240	350
Legal reserve for translation differences	-21	-12
Profit for the reporting period	-2,378	208
	1,352	3,763
Total liabilities	1,352	3,763

Company statement of income 2020

(in millions of euros)	2020	2019
Other result	-	-
Result of group companies after tax	-2,378	208
Net result	-2,378	208

Accounting policies applied for the financial statements

General

In 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 Section 362(8) of Book 2 of the Dutch Civil Code. This means that the accounting policies 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. Participating interests in which significant influence is exercised are valued using the equity method.

Pursuant to Section 402(1) of Book 2 of the Dutch Civil Code, a summarised income statement is sufficient in the company financial statements of NV Nederlandse Spoorwegen.

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 eliminate them.

Result of group companies

The result of group companies consists of the result after income tax.

Notes to the company statement of financial position and statement of income

The amounts included in the notes are in millions of euros, unless stated otherwise.

Non-current financial assets

Participating interests in group companies

(in millions of euros)	2020	2019
Balance as at 1 January	3,763	3,582
Share in result	-2,378	208
Dividend distributed for the previous reporting period	-	-37
Other changes	-33	10
Balance as at 31 December	1,352	3,763

Equity

Other reserves

(in millions of euros)	Hedging reserve	Fair value reserve	Actuarial reserve	General reserve	Total other reserves	Legal reserve for development costs	Revaluation reserve for associates	Legal reserve for translation differences
Balance as at 1 January 2019	-7	45	-	2,099	2,137	281	59	-14
Changes in revaluation reserves	2	7			9		-	2
Dividend paid			-	-37	-37			
Result for previous reporting period				106	106			
Other changes				-69	-69	69		
	2	7	-	-	9	69	-	2
Balance as at 31 December 2019	-5	52	-	2,099	2,146	350	59	-12
Changes in revaluation reserves	-18	1	-1		-18		-	-9
Dividend paid			-	-73	-73			
Reverse dividend paid				73	73			
Result for previous reporting period				208	208			
Other changes				99	99	-110	5	
	-18	1	-1	307	289	-110	5	-9
Balance as at 31 December 2020	-23	53	-1	2,406	2,435	240	64	-21

The legal reserve was formed for software development costs. The revaluation reserve was formed for direct changes to the equity in joint ventures and for the non-distributable portion of the equity of NS Insurance. The legal reserve for translation differences comprises all foreign exchange differences arising from the translation of the financial statements of foreign operations, as well as from the translation of liabilities that hedge the company's net investment in a foreign group company.

The hedging reserve is a legal reserve consisting of the cumulative change in the fair value of hedging instruments (derivatives) where the hedged transaction has not yet taken place or the hedged position has not yet been settled.

The fair value reserve is a legal reserve consisting of the cumulative change in the fair value of investments recognised at fair value in other comprehensive income until such time as the investment is no longer recognised in the balance sheet.

Off-balance sheet commitments

No claims have been brought against NV Nederlandse Spoorwegen and the consolidated participating interests, other than as indicated in note 32, that have not been recognised appropriately in the balance sheet.

For the purpose of corporation tax, both NV Nederlandse Spoorwegen and its Dutch subsidiaries are part of the NV Nederlandse Spoorwegen tax entity. Consequently, NV Nederlandse Spoorwegen is jointly and severally liable for the tax liabilities of the subsidiaries included in the tax entity.

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 participating interests

Utrecht, 24 February 2021

Supervisory Board

Mr. G.J.A. van de Aast
Chair

Ms. M.E. van Lier Lels

Mr. H.H.J. Dijkhuizen

Ms. N. Albayrak

Ms. J.L. Stuijt

Mr. W.J. van der Feltz

Executive Board

Ms. M.E.F. Rintel
CEO

Mr. H.L.L. Groenewegen
Finance Director

Ms. A.M.E. de Vries
Stations and Risk Management Director

Mr. T.B. Smit
Commerce & Development Director

Other information

Other information

Profit appropriation as stipulated by the Articles of Association

In accordance with Article 21(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.

Combined independent auditor's report and assurance report

To: the shareholder and supervisory board of N.V. Nederlandse Spoorwegen

Please find below the conclusions and main features of our audit and review. For the full text of the auditor's report, which includes the assurance report on non-financial information, please refer to the next pages.

Summary

Conclusions

Object of audit and review	Outcome of performed work	Level of assurance
Financial statements 2020 (consolidated and company)	True and fair view	Reasonable (audit)
Non-financial information 2020	Reliable and adequate view	Limited (review)
Other information, including the reports by the NS executive board and supervisory board	No material misstatements	

Main features of our audit and review

What we have done	Scope of our procedures	Materiality	Key audit matters
Audit of the financial statements 2020 (consolidated and company)	The Netherlands, the United Kingdom and Germany	€50 million, based on 0,7% of total operating expenses (excluding impairment losses and the provision for termination fees related to the franchise contracts in the United Kingdom).	<ul style="list-style-type: none">Valuation of the main rail network assets and future profitability due to the impact of COVID-19;Abellio United Kingdom: valuation of assets, accounting for termination fees, future profitability and financing due to the impact of COVID-19;Abellio Germany: valuation of assets, future profitability and financingNS liquidity forecast and going concern assumptions due to COVID-19;Revenue recognition and complexity and effectiveness of NS IT-environment in the Netherlands.
Review of non-financial information 2020	The Netherlands, the United Kingdom and Germany	Varies for each relevant part of the non-financial information	None

What we have done	Scope of our procedures	Materiality	Key audit matters
Procedures for other information	Complete annual report	Similar materiality levels as the audit and review scope	None

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 financial statements 2020 of N.V. Nederlandse Spoorwegen (NS) based in Utrecht. The financial statements comprise the consolidated and company financial statements.

In our opinion:

- The accompanying financial statements give a true and fair view of the financial position of N.V. Nederlandse Spoorwegen as at 31 December 2020 and of its result and its cash flows for 2020 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 2020 and of its result for 2020 in accordance with Part 9 of Book 2 of the Dutch Civil Code

We have reviewed the non-financial information in the annual report of N.V. Nederlandse Spoorwegen based in Utrecht over 2020. The scope of the review is described in the section The scope of our procedures. A review is aimed to obtain limited level of assurance.

Based on our review procedures performed, nothing has come to our attention that causes us to believe that the accompanying non-financial information does not present, in all material aspects, a reliable and adequate view of:

- The policy and business operations with regard to Corporate Social Responsibility
- The thereto related events and achievements for the year 2020

In accordance with the Sustainability Reporting Standards (option Core) of the Global Reporting Initiative (GRI) and the applied supplemental reporting criteria as disclosed in chapter Scope and reporting criteria of the annual report.

Based on the procedures performed in accordance with the requirements of Part 9 of Book 2 of the Dutch Civil Code and the Dutch Standard 720, we conclude that the other information, including the report by NS executive board and the report of the supervisory board:

- 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

Basis for our conclusions

We conducted our assurance procedures in accordance with Dutch law, including the Dutch Standards of Auditing and the Dutch Standard 3810N, "Assurance-opdrachten inzake maatschappelijke verslagen" (Assurance engagements relating to sustainability reports). Our responsibilities under those standards are further described in the Our responsibilities section of our 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 *Wet toezicht accountantsorganisaties* (Wta, Audit firms supervision act), the *Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten* (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) 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 independence assurance procedures. Furthermore we have complied with the *Verordening gedrags- en beroepsregels accountants* (VGBA, Dutch Code of Ethics).

Engagement

We were engaged by the supervisory board as auditor of N.V. Nederlandse Spoorwegen on 3 September 2013 as of the audit for the year 2014 and we have operated as statutory auditor ever since that date.

Reporting criteria

The information within the scope of the audit and review should be read and understood together with the reporting criteria. N.V. Nederlandse Spoorwegen is responsible for selecting and applying the reporting criteria, taking into account the applicable laws- and regulations in respect to reporting.

The absence of an established practice on which to draw, to evaluate and measure non-financial information allows for different, but acceptable, measurement techniques and can affect comparability between entities and over time.

The scope of our procedures

The consolidated financial statements comprise:

- The consolidated statement of financial position as at 31 December 2020
- The following statements for 2020:
 - The consolidated income statement, consolidated statement of comprehensive income, consolidated statement of changes in equity and 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 2020
- The company statement of income 2020
- The notes comprising a summary of the significant accounting policies and other explanatory information

The non-financial information consists of the information included in the following chapters in the 2020 annual report of N.V. Nederlandse Spoorwegen: In Brief, Foreword by the CEO, 2020: A year dominated by COVID-19, Our Strategy, How NS adds value to the society, Our impact on the Netherlands, The profile of NS, Our activities and achievements in the Netherlands, Our activities and achievements abroad and sections Organisational improvements, Dialogue with our stakeholders in the Netherlands, Notes to the material themes, About the scope of this report and Scope and reporting criteria.

Next to the financial statements, the non-financial information and our combined independent auditor's report and assurance report, the annual report includes other information, which comprises:

- The report by the executive board, as identified in chapter About the scope of this report in the annual report
- The report by the supervisory board
- Other information

Limitations in the scope of our review of non-financial information

The non-financial information includes prospective information, such as ambitions, strategy, plans, expectations and estimates and risk assessments. Inherent to prospective information, the actual future results are uncertain. We do not provide any assurance on the assumptions and achievability of prospective information in the sustainability information.

In the chapter Our impact on the Netherlands the calculations were mostly made using sources from external parties. The sources used are explained in the Methodologie Impactanalyse jaarverslag 2020 section on www.ns.nl/mvoberekeningen. We have not performed any work with respect to the content of these external sources, other than assessing their suitability and plausibility.

The references to external sources or websites in the non-financial information, except for the 2020 Transport Franchise Definitions, are not part of the non-financial information reviewed by us. Therefore, we do not provide assurance on this information.

Our conclusion on the non-financial information has not been modified as a result of these matters.

Our approach of the audit of the financial statements and the review of the non-financial information

The activities of N.V. Nederlandse Spoorwegen mainly consist of passenger transport, the management and development of property and the operation of station locations in the Netherlands, Germany and the United Kingdom. The group structure consists of several group entities and we have designed our procedures accordingly. We have paid special attention in our procedures to a number of issues based on the Group's activities and our risk analysis, which are explained in more detail in the section Key audit matters.

We begin by determining materiality and identifying and assessing the risks that the financial statements and non-financial information may contain material misstatements due to fraud, non-compliance with laws and regulations, or due to errors, in order to determine, in response to those risks, the audit and review procedures to obtain assurance information that is sufficient and appropriate to provide a basis for our conclusions. The scope of our assurance work is affected by the application of materiality.

The risk of not detecting a material misstatement resulting from fraud is higher than for errors.

Fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.

In 2020, due to COVID-19 measures, we were forced to perform more remote work. This limited observations and increased the likelihood of missing certain signals. To compensate for these limitations on physical contact and direct observation, we performed alternative work to obtain sufficient and appropriate audit evidence as a basis for our opinion.

Materiality for the audit of the financial statements

Based on our professional judgement we determined the materiality for the financial statements as follows:

Materiality	€50 million (2019: €50 million)
Applied benchmark	0.7% of total operating expenses (€9.1 billion) excluding the impairment losses and the movement of the provision for termination fees (of €2.3 billion)
Further explanation	Given the nature of the activities of NS, her goals, and the importance of her operating performance in the Netherlands and abroad, the operating expenses excluding the impairment losses and the movement of the provision for termination fees is activity based the most relevant basis for the materiality. The materiality of the audit of 2019 was based on the revenues as activity based, but as a result of the decrease in passenger revenues due to COVID-19 we do not consider the revenues as appropriate measure for the activities of NS in 2020.

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 €2.5 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.

Materiality of non-financial information

Based on our professional judgement we determined materiality levels for each relevant part of the

non-financial information and for the non-financial information as a whole. When evaluating our materiality levels, we have taken into account quantitative and qualitative considerations as well as the relevance of information for both stakeholders and the organization.

Further description of the audit approach relates to the audit of the financial statements. A summary of the review of non-financial information is included in the annex.

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.

Because we are ultimately responsible for the opinion, we are also responsible for managing, 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. The size and/or the risk profile of the group entities or operations were decisive in this regard. On this basis, we selected group entities for which an audit or review had to be carried out on either the complete set of financial information or specific items.

The group audit mainly focused on significant group entities, the main rail network operations and Abellio in the United Kingdom and Germany. For the Dutch group entities we have performed the audit procedures by ourselves. We used auditors from our international network during the audit of the foreign group entities. In total, the above-mentioned activities represent 90.4% of total assets and 91.1% of operating expenses excluding impairment losses and the movement in the group's provision for termination fees.

Due to (international) travel restrictions as a result of the COVID-19 pandemic, we have not been able to visit Abellio's management and auditors in the United Kingdom and Germany in order to, for example, discuss business activities and identified significant risks or to review relevant portions of the auditor's audit documentation of these group entities and discuss significant matters raised in that review on-site. We performed alternative procedures in these extraordinary circumstances and primarily used communication technology, written information exchange, and remote file reviews to obtain sufficient and appropriate audit evidence.

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.

Engagement team and the use of the work of specialist

We have ensured that the engagement team has the appropriate knowledge and skills required for the audit of N.V. Nederlandse Spoorwegen, both at the group level and at the group entity level. We have included specialists in the engagement team or we have deployed internal experts in the fields of IT audit, forensic accountancy, taxation, valuations and in order to review the passenger revenue forecasts in the Netherlands.

Our focus on non-compliance with laws and regulations

Our responsibility

Although we are not responsible for the prevention of fraud or non-compliance with laws and regulations, and we cannot be expected to detect non-compliance with every law and regulation, our responsibility is to obtain reasonable assurance that the financial statements taken as a whole are free from material misstatement, whether due to error or fraud. Non-compliance with laws and regulations may result in fines, litigation or other consequences for the company that may have a material effect on the financial statements.

Our audit related to fraud risks

In order to identify and assess the risks of material misstatements of the financial statements due to fraud, we obtained an understanding of the entity and its environment, including the entity's internal control relevant to the audit and in order to design audit procedures that are appropriate in the circumstances. As in all of our audits, we addressed the risk of management override of internal control. We do not audit internal control per se for the purpose of expressing an opinion on the effectiveness of the company's internal control.

We considered available information and made enquiries of relevant executives, directors (including internal audit, legal, compliance, human resources) and the supervisory board. As part of our process of identifying fraud risks, we evaluated fraud risk factors with respect to financial reporting fraud, misappropriation of assets and bribery and corruption in close co-operation with our forensic and legal specialists. In our risk assessment, we also we considered the potential impact of the risk of bribery and corruption.

In the process of identifying fraud risks, we considered whether the COVID-19 pandemic led to specific fraud risk factors because of possible pressure on the executive board to demonstrate that loss mitigation measures were successful or to meet certain performance indicators. We also examined whether the executive board might have formed excessive provisions in the perspective of releasing them in favour of the future profitability. We have reported on this in more detail in the Key audit matters section.

We evaluated the design and the implementation and, where considered appropriate, tested the operating effectiveness, of internal controls that mitigate fraud risks. In addition, we performed procedures to evaluate key accounting estimates for management bias in particular relating to important judgment areas and significant accounting estimates as disclosed in Section 1 of the financial statements.

We also used data analytics to identify and address high-risk journal entries. Our audit procedures to respond to the assessed fraud risks did not result in a specific key audit matter for our audit.

We incorporate elements of unpredictability in our audit. We considered the outcome of our other audit procedures and evaluated whether any findings were indicative of fraud or non-compliance with laws and regulations. If so, we re-evaluate our assessment of fraud risk and its resulting impact on our audit procedures.

Our audit response related to risks of non-compliance with laws and regulations

We assessed factors related to the risks of non-compliance with laws and regulations that could reasonably be expected to have a material effect on the financial statements from our general industry experience, through discussions with the executive board, reading minutes, inspection of internal audit and compliance reports and performing substantive tests of details of classes of transactions, account balances or disclosures.

We also inspected lawyers' letters and correspondence with regulatory authorities and remained alert to any indication of (suspected) non-compliance throughout the audit. Finally we obtained written representations that all known instances of non-compliance with laws and regulations have been disclosed to us.

Going concern assumption

In the section Key audit matters we included the key audit matter NS liquidity forecast and going concern assumption as a result of COVID-19, in which the audit of the going concern assumption and our observations thereon are described.

We consider, based on the audit evidence obtained, whether there are events and circumstances that could cast reasonable doubt on the ability of the company 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 a company to cease to continue as a going concern.

Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements. We have communicated the key audit matters to the supervisory board.

The key audit matters are not a comprehensive reflection of all matters discussed.

These matters were addressed in the context of the audit of the financial statements as a whole and to conclude thereon, and we do not provide a separate conclusion on these matters.

In 2019, key audit matters included Accounting for settlement mechanisms included in franchise contracts and Progress and reliability performance indicators related to the main rail network. Because of COVID-19, adjustments have been made to the franchise contracts so that Accounting for settlement mechanisms included in franchise contracts is no longer a key audit matter. We did not identify any key audit matters in our review of the non-financial information. Progress and reliability performance indicators related to the main rail network' is not a key audit matter of our review of the non-financial information in 2020, because passenger numbers have significantly decreased as a result of COVID-19 making the reporting of performance indicators such as seat availability and punctuality less important.

The developments concerning the COVID-19 pandemic have a major impact on the operational and financial performance of N.V. Nederlandse Spoorwegen. The situation can change constantly and inherently leads to uncertainty for the company. We have recognised, in part due to the impact of COVID-19, the following four key audit matters for our audit in 2020. These were not key audit matters for our 2019 audit.

- Valuation of the main rail network assets and future profitability due to the impact of COVID-19
- Abellio United Kingdom: valuation of assets, accounting for termination fees, future profitability and financing due to the impact of COVID-19
- Abellio Germany: valuation of assets, future profitability and financing
- NS liquidity forecast and going concern assumptions due to COVID-19

Valuation of the main rail network assets and future profitability due to the impact of COVID-19

In Note 14 of the financial statements NS included the results and bandwidth of the analysis of the impairment loss of the main rail network concession related assets.

Risk	Our audit approach	Key observations
NS has recorded an impairment loss in relation to the main rail network-concession related assets for €1.6 billion in the account depreciation, amortisation and impairments.	We have discussed the scenario analyses, cash flow forecasts and cost-savings programs with NS and evaluated them with professional skepticism, devoting specific attention to the processes underlying the analyses and forecasts, trends that pose potential risks, the impact of current events and circumstances on the scenarios and the company's projected cash flows.	We concur with the determination and accounting treatment by NS of the impairment loss and the disclosures provided in Note 14 to the financial statements.
COVID-19 and the associated measures have caused a sharp decrease in passenger revenue over 2020. As requested by the Ministry of Infrastructure and Water Management, NS largely continued its regular train services.	We performed substantive tests of the scenario analyses, cash flow forecasts and cost-saving programs so as to evaluate the reasonableness of the underlying assumptions.	
Due to the impact of the COVID-19 crisis, there is an uncertainty about the passenger revenue and related cash flows for the coming years. NS is entitled to a Public Transport Availability Payment (Beschikbaarheidsvergoeding Openbaar Vervoersbedrijven) for the period from 15 March 2020 up to and including 30 September 2021. Under these measures, 93% of the qualifying costs less 100% of the generated revenue will be compensated. At the time of writing, there was no formalised support measures in place for the period following September 2021.	We included specialists in our audit team specifically with a view to assessing the assumptions concerning projected passenger revenues. In addition, we included specialists in our team to test the calculation model used and the reasonableness of NS's cost of capital.	

Risk	Our audit approach	Key observations
<p>NS has also set up and implemented cost-savings programs.</p> <p>All these developments have resulted in an indication of an impairment loss.</p> <p>As a consequence, NS calculated the recoverable amount of assets related to the main rail network franchise on the basis of multiple scenario analyses and compared the outcome with the carrying amount. The scenario analyses, cash flow forecasts and the implementation of the cost-savings programs all involve inherent and/or significant uncertainties, bandwidth which results in a significant bandwidth.</p> <p>In Note 14 to the financial statements, NS explained the results and bandwidth of the impairment analysis of the assets related to the main rail network franchise. The main assumptions, estimation uncertainties and analysis sensitivity data have also been included. Based on these figures, NS concluded that an impairment loss of €1.6 billion on main rail network related assets will have to be recognised.</p>		

Abellio United Kingdom: valuation of assets, accounting for termination fees, future profitability and financing due to the impact of COVID-19

Disclosures regarding the impairment loss of assets of Abellio in the United Kingdom and the provision for the termination fees is included in the Notes 8, 14, 17 and 29 to the financial statements.

Risk	Our audit approach	Key observations
<p>NS has recognised an impairment loss of €215 million in connection with the assets related to the UK franchises under Depreciation, amortisation and impairments. In addition, NS has recognised a provision for termination fees that she may have to pay, in the amount of €487 million relating to changes in the contractual terms. The associated costs have been recognised under Other operating expenses.</p> <p>COVID-19 has resulted in a significant decrease in passenger revenue in the United Kingdom. As a result, Abellio and the UK franchising authorities have agreed on amended franchise conditions,</p>	<p>On the basis of the amended franchise conditions and other source documents, we have verified the agreements that exist between NS and the various franchising authorities.</p> <p>We have discussed the determination of the recoverable amount of assets with NS and evaluated the outcome with professional skepticism, devoting specific attention to the process underlying the determination of the recoverable amount, and performed substantive procedures to test the reasonableness of the underlying assumptions.</p> <p>NS has made a best estimate, as at</p>	<p>We concur with the accounting treatment by NS and the disclosures in Notes 8, 14, 17 and 29 to the financial statements.</p>

Risk	Our audit approach	Key observations
<p>pursuant to which the franchising authorities have assumed the full passenger revenue related risks. Under the new contract terms, Abellio currently receives a management fee.</p> <p>One of the conditions agreed when the contract was amended is that the franchising authority, Department of Transport, will have the option of charging a termination fee for each franchise, depending partly on the pre-COVID-19 situation. NS has created a provision for this. The definitive amounts due are expected to be determined later in 2021.</p> <p>All these developments have likewise resulted in an indication of an impairment of assets.</p> <p>As a result, NS calculated the recoverable amount of these assets on the basis of multiple scenario analyses and compared the outcome with the carrying amount. In Note 14 to the financial statements, NS explained the results and bandwidth of the impairment analysis of these assets. The main assumptions, estimation uncertainties and analysis sensitivity data have also been included. Based on these figures, NS concluded that an impairment loss of €215 million will have to be recognised.</p> <p>The determination of the carrying amount and termination fees involves inherent and/or significant uncertainties, which results in a significant bandwidth.</p> <p>Disclosures regarding the impairment of assets of Abellio in the United Kingdom and the provision for termination fees are included in Notes 8, 14, 17 and 29 to the financial statements.</p>	<p>the balance sheet date, of the provision for termination fees as per 31 December 2020. We have verified that the termination fees are based on the most recent communication with the franchising authority and constitute a best estimate by the company's management.</p> <p>We have also verified that no developments have taken place after the balance sheet date that have a significant impact on the estimate as at the balance sheet date.</p>	

Abellio Germany: valuation of assets, future profitability and financing

In Note 14 in the financial statements NS explained the results and bandwidth of the impairment analysis of Abellio Germany's assets.

Risk	Our audit approach	Key observations
<p>NS has recognised an impairment loss of €68 million in connection with the franchises in Germany under Depreciation, amortisation and impairments.</p>	<p>Based on agreements with the franchising authorities and other source documents, we have verified the agreements that exist between NS and the various franchising authorities with respect to</p>	<p>We concur with the accounting treatment by NS and the disclosures in Note 14 to the financial statements.</p>

Risk	Our audit approach	Key observations
<p>Given the nature of the German franchises, under which the franchising authority assumes the full passenger revenue related risk, the impact of COVID-19 on the results has been limited.</p> <p>Due in part however to the factors explained under Impact of COVID-19 in Section 1 of the financial statements, NS did incur a loss in 2020.</p> <p>NS engaged in discussions with several franchising authorities about additional compensation, and reached a provisional agreement on this matter with a number of franchising authorities in the course of 2020. This draft agreement has yet to be formalised in a written confirmation of the relevant arrangements.</p> <p>The developments mentioned above have resulted in an indication of an impairment of assets. In view of the factors mentioned above, this is a key audit matter of our audit.</p> <p>As a result, NS calculated the recoverable amount of these assets on the basis of multiple scenario analyses and compared the outcome with the carrying amount. The scenario analyses and cash flow forecasts (including the estimate of the supplementary compensation) all involve inherent and/or significant uncertainties, bandwidth which results in a significant bandwidth. Based on these figures, NS concluded that an impairment loss of €68 million will have to be recognised.</p> <p>In Note 14 to the financial statements, NS explained the results and bandwidth of the impairment analysis of Abellio Germany's assets.</p> <p>The main assumptions, estimation uncertainties and the sensitivity of the analyses is also included.</p>	<p>supplementary compensation.</p> <p>In addition, we have discussed the scenario analyses and cash flow forecasts with NS and evaluated them with professional skepticism, devoting specific attention to the process underlying the analyses and forecasts, trends that pose potential risks, the impact of current events and circumstances on the scenarios and the company's projected cash flows.</p> <p>We performed substantive tests of the scenario analyses and cash flow forecasts to evaluate the reasonableness of the underlying assumptions.</p> <p>In addition, we included specialists in our team to test the reasonableness of NS's cost of capital.</p>	

NS liquidity forecast and going concern assumptions due to COVID-19

In the paragraph Continuity assumption in Section 1 of the financial statements NS concluded that it is acceptable to apply the going concern principle in the financial statements.

Risk	Our audit approach	Key observations
<p>COVID-19 has resulted in a significant decrease in passenger revenue, while NS largely continued its rail services at the request of the ministry of Infrastructure and Water Management.</p> <p>The impact of COVID-19 affects the company's liquidity position as at 31 December 2020 and its liquidity forecast for the year to come. In view of the importance of the going concern assumption for the financial statements, this is a key matter of our audit.</p> <p>NS is entitled to a Public Transport Availability Payment in the Netherlands for the period from 15 March 2020 to 30 September 2021. Under these measures, 93% of the qualifying costs less 100% of the generated turnover will be compensated. At the time of writing, no agreement had been reached regarding the possible extension of support measures for public transport companies beyond September 2021. Under Continuity assumption in Section 1 of the financial statements, NS concluded that it is acceptable to apply the going concern principle in the financial statements.</p> <p>NS came to this conclusion based on the scenario analyses and liquidity forecasts with taking into account the impact of COVID-19.</p>	<p>NS has specifically assessed the company's going concern assumption and its ability to continue its operations over at least the next twelve months.</p> <p>We have discussed this assessment with NS and evaluated it with professional skepticism, devoting specific attention to the process underlying the assessment, trends that pose potential risks, the impact of current events and circumstances on the company's operations and projected cash flows, and with a specific focus on the question of whether the company's cash position will be sufficient for it to continue meeting all of its obligations.</p> <p>We have spent specific attention to substantive procedures regarding amendments to the agreements between NS and the franchising authorities in 2020, projected cash flows from support measures and from guarantees granted by NS to Abellio and other parties. The procedures relate to the above-mentioned key matters of our audit.</p>	<p>NS's specific assessment of its going concern assumption and its ability to continue its operations for at least the next twelve months contains uncertainties for which NS has provided explanatory notes under Continuity assumption in Section 1 of the financial statements.</p> <p>We concur with these disclosures and with the use of the going concern assumption.</p>

Revenue recognition and complexity and effectiveness of NS IT-environment in the Netherlands

The disclosure relating to the revenue recognition of passenger transport is included in 1 of the financial statements.

Risk	Our audit approach	Key observations
<p>Dutch revenue of €1.5 billion from passenger services is included in the item Revenue in the financial statements. This amount consists of revenue from the sale of various types of tickets entitling passengers to transport services (passenger revenue), and of government contributions.</p> <p>The diversity in ticket types, combined with the high volume of transactions and cut-off aspects that apply to various ticket types, requires high standards of reliability and continuity of transaction processing systems in order to guarantee that individual transactions will result in correct</p>	<p>Our activities include testing of internal controls, performing data analysis procedures such as trend analyses and analysis of manual journal entries, performing sample testing of correct and complete transaction processing, audits on the basis of third-party confirmations and testing management's estimates with regard to revenue allocation of the governmental contributions.</p> <p>We reviewed the reliability and continuity of the automated data processing - also focusing on information security risks - only insofar as necessary within the scope of the audit of the financial statements.</p>	<p>In 2020, NS modernised a number of IT systems and further simplified the application landscape to improve the quality and effectiveness of IT controls. We reported our recommendations for further improvement in the management letter.</p> <p>The findings that still require attention and related recommendations have again been pointed out. Over the course of 2020, NS has followed up on a number of our findings reported in previous years.</p> <p>As a result of our procedures, we note that NS has further increased</p>

Risk	Our audit approach	Key observations
and complete revenue recognition. For this reason, we consider the complexity and effectiveness of NS's IT environment a key matter of our audit, in conjunction with revenue recognition.	For this purpose, we included specialised IT auditors in our audit team.	the quality of IT management and information security during 2020. Our procedures have not revealed any significant shortcomings in the continuity and reliability of automated data processing.
In recent years, NS has invested in the simplification, standardisation and improvement of its IT infrastructure, systems and processes, focusing on increasing the effectiveness, reliability and continuity of automated data processing. We refer to the section on Organisation of risk management included in the NS annual report.	Furthermore, our procedures consisted of an assessment of developments in the IT infrastructure, including an audit of the systems and applications modernised in 2020 and the associated conversions, as well as testing of the internal control procedures relating to IT systems and processes relevant to our audit.	We concur with the accounting treatment by NS and the disclosures in Note 1 to the financial statements.
The disclosure regarding revenue recognition for passenger transportation is included in Note 1 to the financial statements.		

Responsibilities

Responsibilities of the executive board and supervisory board

The executive board is responsible for the preparation and fair presentation of the financial statements in accordance with EU-IFRS and with Part 9 of Book 2 of the Dutch Civil Code and for the preparation of the other information, including the executive board's report, in accordance with Part 9 of Book 2 of the Dutch Civil Code and other information as required by Part 9 of Book 2 of the Dutch Civil Code.

The executive board is also responsible for preparation of reliable and adequate non-financial information in accordance with the Sustainability Reporting Standards (Core option) of the Global Reporting Initiative (GRI) and the additional reporting criteria used as disclosed in the Scope and reporting criteria chapter of the annual report, including the identification of stakeholders and determination of material issues. The choices made by the executive board regarding the scope of non-financial information and the reporting policy are set out in the Scope and reporting criteria chapter of the annual report.

Furthermore, the executive board is responsible for such internal control as the executive board determines is necessary to enable the preparation of the financial statements and non-financial information that are free from material misstatement, whether due to fraud or error.

As part of the preparation of the financial statements, the executive board is responsible for assessing the company's ability to continue as a going concern. Based on the financial reporting frameworks mentioned, executive board should prepare the financial statements using the going concern basis of accounting, unless executive board either intends to liquidate the company or to cease operations, or has no realistic alternative but to do so.

The executive board 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 financial reporting process of N.V. Nederlandse Spoorwegen.

Our responsibilities

Our responsibility is to plan and perform the assurance engagement in a manner that allows us to obtain sufficient and appropriate audit evidence for our conclusions.

Our audit has been performed with a high, but not absolute, level of assurance, which means we may not detect all material errors and fraud during our audit.

Our review of the non-financial information is aimed to obtain a limited level of assurance.

The procedures performed to obtain a limited level of assurance are aimed to determine the plausibility of information and vary in nature and timing from, and are less in extent, than for a reasonable assurance engagement. The level of assurance obtained in a review is therefore substantially less than the assurance obtained in an audit.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements. The materiality affects the nature, timing and extent of our audit procedures and the evaluation of the effect of identified misstatements on our opinion.

We have exercised professional judgement and have maintained professional skepticism throughout the audit, in accordance with Dutch Standards on Auditing, ethical requirements and independence requirements. The section entitled Our approach of the audit of the financial statements and the review of the non-financial information above and the annex contain an informative summary of our responsibilities and the work performed as a basis for our opinion.

We apply the Regulations for Quality Systems (Nadere Voorschriften Kwaliteitssystemen: NVKS).

This provides us with a coherent quality control system, including established guidelines and procedures regarding compliance with ethical requirements, professional standards and other relevant laws and regulations. A more detailed description of our responsibilities is included in the annex to this combined auditor's report and assurance report. An informative summary of our work performed as a basis for our conclusion on the non-financial information is included in the annex.

Amsterdam, 24 February 2021

Ernst & Young Accountants LLP

Signed by J. Verhagen

Annex to the combined independent auditor's report

Work performed

We have exercised professional judgment and have maintained professional skepticism throughout the assurance engagements performed by a multi-disciplinary team, in accordance with the Dutch Standards on Auditing and the Dutch assurance standards, ethical requirements and independence requirements.

Our audit to obtain reasonable assurance about the financial statements (consolidated and corporate) included amongst others:

- Identifying and assessing the risks of material misstatement of the financial statements, whether due to fraud or errors, 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
- 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 included amongst others:

- Performing an analysis of the external environment and obtaining an understanding of relevant social themes and issues and the characteristics of the entity
- Evaluating the appropriateness of the reporting criteria used, their consistent application and related disclosures in the non-financial information. This includes the evaluation of the results of the stakeholders' dialogue and the reasonableness of estimates by management
- Obtaining an understanding of the reporting processes for the non-financial information, including obtaining a general understanding of internal control relevant to our review
- Identifying areas of the non-financial information with a higher risk of misleading or unbalanced information or material misstatements, whether due to fraud or errors. Designing and performing further procedures aimed at determining the plausibility of the non-financial information responsive to this risk analysis

These further review procedures consisted amongst others of:

- Interviewing management and relevant staff at corporate and local level responsible for the sustainability strategy, policies and results
- Interviewing relevant staff responsible for providing the information for, carrying out internal control procedures on, and consolidating the data in the non-financial information
- Obtaining assurance information that the non-financial information reconciles with underlying records of the company
- Reviewing, on a limited test basis, relevant internal and external documentation
- Evaluating whether the estimates made in the impact analysis are reasonable, including the assumptions on which the estimates are based, which are included in the document Methodologie Impactanalyse jaarverslag 2020 on www.ns.nl/

- Evaluating the suitability and plausibility of the external sources used in the calculations on which the impact analysis is based, which are included in the document Methodologie Impactanalyse jaarverslag 2020 on www.ns.nl/mvoberekeningen
- Evaluating the definitions of the performance indicators related to the transport franchise in the Transport Plan 2020 as included in the Downloads on nsjaarverslag.nl/jaarverslag-2020
- Performing an analytical review of the data and trends in the information submitted for consolidation at corporate level
- Reconciling the relevant financial information with the financial statements
- Evaluating the consistency of the non-financial information with the information in the annual report which is not included in the scope of our review
- Evaluating the overall presentation, structure and content of the non-financial information
- Considering whether the non-financial information as a whole, including the disclosures, reflects the purpose of the reporting criteria used

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 substantially less than the scope of those performed in our audit of the financial statements or in our review of the non-financial information.

Communication

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 engagements.

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.

From the matters communicated with the supervisory board, we determine those matters that were of most significance in the audit of the financial statements and the review of the non-financial information of the current period and are therefore the key audit and review matters. We describe these matters in our combined independent auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, not communicating the matter is in the public interest.

NS ten-year summary

(in millions of euros)	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Balance sheets										
Assets										
Property, plant and equipment	2,919	4,260	3,979	3,845	3,654	3,296	3,157	3,115	3,405	3,433
Investment property	129	135	151	170	197	194	196	169	314	315
Intangible assets	376	484	416	357	257	225	174	125	117	76
Right-of-use assets	1,865	2,022	-	-	-	-	-	-	-	-
Investments accounted for using the equity method	19	19	17	26	39	183	185	197	14	14
Other non-current financial assets, including investments	160	159	159	158	267	340	226	205	176	150
Deferred tax assets	133	202	196	260	229	278	295	385	346	392
Total non-current assets	5,601	7,281	4,918	4,816	4,643	4,516	4,233	4,196	4,372	4,380
Inventories	194	184	169	161	139	138	119	109	134	80
Other investments	-	-	-	-	-	270	223	231	279	362
Trade and other receivables	1,175	1,144	830	648	724	659	499	545	509	680
Income tax receivables	13	13	16	24	4	32	32	30	11	14
Other current financial assets, including investments	35	8	-	-	-	-	-	-	-	-
Cash and cash equivalents	1,137	818	906	565	709	671	775	759	948	534
Assets held for sale	-	-	191	-	140	-	-	-	-	-
Total current assets	2,554	2,167	2,112	1,398	1,716	1,770	1,648	1,674	1,881	1,670
Total assets	8,155	9,448	7,030	6,214	6,359	6,286	5,881	5,870	6,253	6,050
Equity and liabilities										
Loans and other financial liabilities, including derivatives	1,130	656	740	551	293	440	867	730	577	180
Lease liabilities	1,601	1,676	-	-	-	-	-	-	-	-
Employee benefits	37	35	30	30	31	30	33	33	35	31
Provisions	179	126	119	114	100	155	140	182	277	349
Accruals	14	32	42	42	36	55	1	23	39	239
Deferred tax liabilities	93	54	48	59	160	168	169	158	153	136
Total non-current liabilities	3,251	2,819	1,254	1,110	948	1,111	1,322	1,248	1,215	1,105
Bank overdrafts	-	-	-	-	-	-	-	-	-	-
Loans and other financial liabilities	81	99	98	201	77	488	60	57	48	365
Lease liabilities	465	433	-	-	-	-	-	-	-	-
Corporate tax payable	14	10	12	26	7	22	8	8	12	17
Trade and other payables	2,022	1,497	1,315	1,105	1,023	1,060	868	1,003	1,248	784
Deferred income	562	738	694	246	641	260	372	314	387	754
Provisions	581	71	24	49	37	36	35	196	175	48
Liabilities held for sale	-	-	6	-	115	-	-	-	-	-
Total current liabilities	3,725	2,848	2,149	1,627	1,900	1,866	1,343	1,578	1,870	1,968
Total equity and liabilities	8,155	9,448	7,030	6,214	6,359	6,286	5,881	5,870	6,253	6,050
(in millions of euros)	2,020	2,019	2,018	2017*	2,016	2,015	2,014	2,013	2,012	2,011
Consolidated income statement										
Revenue	6,601	6,661	5,926	5,121	5,093	4,973	4,144	3,873	4,638	3,628
Operating expenses	9,046	6,382	5,745	5,084	4,965	4,876	3,863	3,990	4,284	3,356
Share in result of investments accounted for using the equity method	2	8	14	20	142	70	40	47	-	-
Result from operating activities	-2,443	287	195	57	270	167	321	-70	354	272
Net financing result	-21	-51	-14	-5	-9	-23	-35	-26	-25	-12
Share in result of investments accounted for using the equity method	-	-	-	-	-	-	-	-	1	1
Result before income tax	-2,464	236	181	52	261	144	286	-96	330	261
Income tax	-117	-21	-65	-5	-49	-26	-106	53	-67	-50
Result for the reporting period	-2,581	215	116	47	212	118	180	-43	263	211

Disclaimer

Colophon

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