



## About NS

NS Group is the largest public transport operator in the Netherlands, employing over 20,000 people and with 2014 revenues of €3.3 billion (US\$3.7 billion). While the bulk of its revenues (86 percent) come from passenger transport, the group's subsidiary companies also provide maintenance for trains and are responsible for the management and commercial development of more than 400 Dutch railway stations.



*"NS shows courage by being transparent on the side effects of its activities. By publishing these effects in the annual report, NS provides a realistic image of profit and loss."* **Henk Kamp**, Minister of Economic Affairs, The Netherlands

Every day, people in the Netherlands take over one million trips on NS trains and buses, so the company has a huge impact on the mobility of society.

NS is conscious of the value it creates for society by providing mobility but is also aware that it has some negative effects on society, for example through its greenhouse gas emissions. Its long-term vision is to increase the value it creates for society while reducing its negative impacts and delivering healthy financial returns.

NS has recognized that an important step in achieving this ambition must be to quantify the value it creates, and reduces, for society in order to better understand and manage it.

Quantifying the value NS creates for society also provides fact-based data for dialogue with stakeholders, provides transparency and contributes to the broader debate around the true value of business.

*"KPMG True Value has helped us to articulate our economic, environmental and social impacts much more clearly and to explain how these impacts interact. This will help to improve our dialogue with stakeholders and help our passengers make better informed decisions about their own mobility."*

**Engelhardt Robbe**,  
Chief Financial Officer, NS

With these goals in mind, the company looked for suitable quantification methodologies. In 2013, the company began its journey by quantifying its own environmental impacts. In 2014, it engaged KPMG in the Netherlands to apply the KPMG True Value approach to calculate the socio-economic value, as well as the environmental value, that the company creates, and reduces, for society.

NS is one of the first transport companies to go public with the results of this type of analysis, and hopes to accelerate change in the transport sector through its bold leadership.



# The approach

**The project team included multi-disciplinary professionals from NS and KPMG with backgrounds in corporate finance, sustainability, operations and other functions. This multi-disciplinary approach proved to be critical as it ensured a high level of data and knowledge sharing between functions.**

Together, the team applied the first step in KPMG's True Value methodology. This is to identify the organization's material externalities and classify them as either positive or negative. Positive externalities create positive value for society while negative externalities create negative value for society.

The initial result was a 'long list' of externalities and issues that are important to stakeholders. A shortlist was then produced using the Global Reporting Initiative (GRI) G4 materiality guidelines and the principles of Integrated Reporting.

The shortlist was then assessed further to determine where sufficient data and metrics were available to quantify these externalities in financial terms.

KPMG professionals quantified these externalities and applied a financial value to them using expert input and the best available academic data sources. These included data from the Netherlands Institute for Transport Policy Analysis, the US Environmental Protection Agency (EPA) and the Netherlands Ministry of Infrastructure and the Environment.



The following NS externalities were identified as material and suitable for analysis using 2014 data:

## Mobility

### POSITIVE

- Mobility, i.e. enabling people to travel for work, study or leisure

### NEGATIVE

- Passenger time spent travelling on trains and to or from stations
- Time spent waiting at stations and changing trains
- Train delays and crowding

## Corporate expenditure, education and training

### POSITIVE

- Contribution to the economy and society through corporate expenditure, e.g. creating jobs by enabling suppliers to employ people
- Employee education and training

## Safety

### POSITIVE

- Accidents avoided when travelling by NS trains vs travelling by car

### NEGATIVE

- Accidents occurring on trains and stations or travelling to/from stations
- Health and safety incidents experienced by employees
- Passenger aggression towards NS staff

## Environmental externalities

### POSITIVE

- Emissions avoided vs car travel

### NEGATIVE

- Greenhouse gas and other emissions
- Impacts on ecosystems
- Waste incineration
- Water consumption
- Noise pollution



# The results

## Mobility

NS creates value for society by enabling people to travel for work, study or leisure. The value of the mobility provided by NS has been calculated at a minimum of €7 billion (US\$7.8 billion). (This does not include the benefits of reduced congestion, for example).

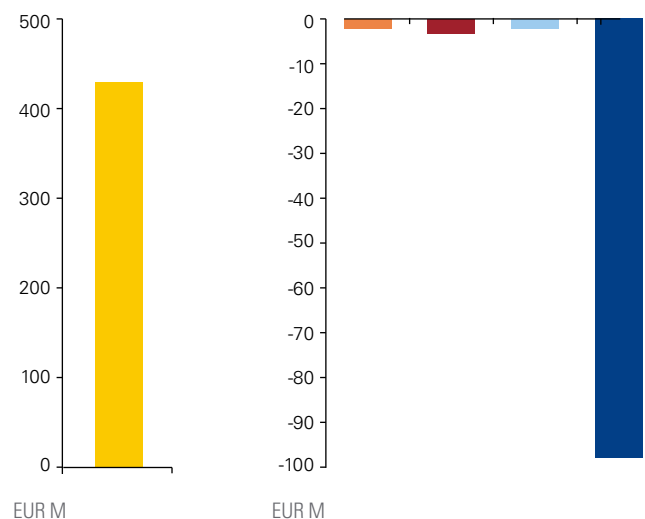
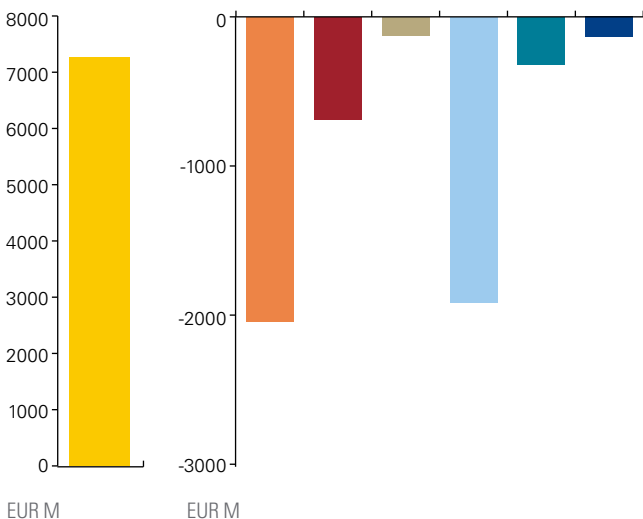
By contrast, NS also reduces some value for society because people cannot spend their time as they wish when they are on NS trains and buses or when they are travelling to and from stations. NS also needs to consider the negative effects of crowded or delayed trains and time spent waiting at stations and changing trains. Together, these negative effects have been calculated at a value of about €5 billion (US\$5.6 billion).

This means that, overall, NS creates a net positive value for society of €2 billion (US\$2.2 billion) or more through mobility.

## Safety

Travelling by train is relatively safe when compared with travelling by car because far fewer accidents and injuries occur. NS therefore creates value for society by enabling its passengers to avoid car accidents. This positive value has been calculated at about €430 million (US\$478 million) in 2014.

However, some accidents and injuries do occur either on the trains or at stations and the negative value to society of these accidents was calculated at about €1 million (US\$1.1 million) in 2014. Far greater is the cost to society of accidents when passengers are travelling to and from NS stations – this has been valued at around €100 million (US\$111 million) Health and safety incidents affecting workers also bring a cost to society as does hostile or aggressive behavior of passengers towards NS staff. Together this negative value has been calculated at about €5 million (US\$5.6 million).



- Passenger mobility (value of travel enabled)
- Passenger time: travelling to and from stations
- Passenger time: waiting at stations
- Passenger time: delays
- Passenger time: travelling on trains
- Passenger time: travelling on crowded trains
- Passenger time: changing trains

- Avoided accidents (compared with car travel)
- Health & safety incidents (employees)
- Aggression towards NS staff
- Passenger accidents and injuries: during rail travel
- Passenger accidents and injuries: during travel to and from stations

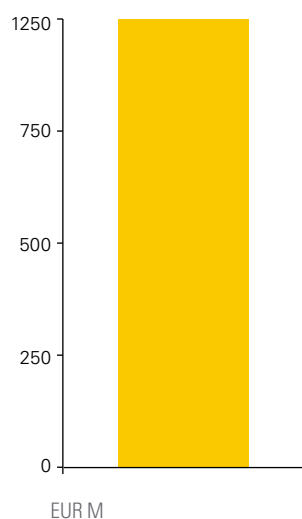
## Corporate expenditure, education and training

NS creates value for society through the money it spends on procurement, investments and staff salaries. For example, the economic value that NS created through its procurement in 2014 was quantified at €1.2 billion (US\$1.3 billion) by KPMG. NS's expenditure funded approximately 22,500 jobs at supplier companies.

NS also creates positive socio-economic value by developing the knowledge, skills and talents of its staff. The social value of the company's investment in education and training totalled about €12 million (US\$13.3 million) in 2014.

*"The KPMG True Value methodology has given us direct insight into how we can most effectively increase our positive and reduce our negative value."*

**Carola Wijdoogen**, Director Sustainability, NS



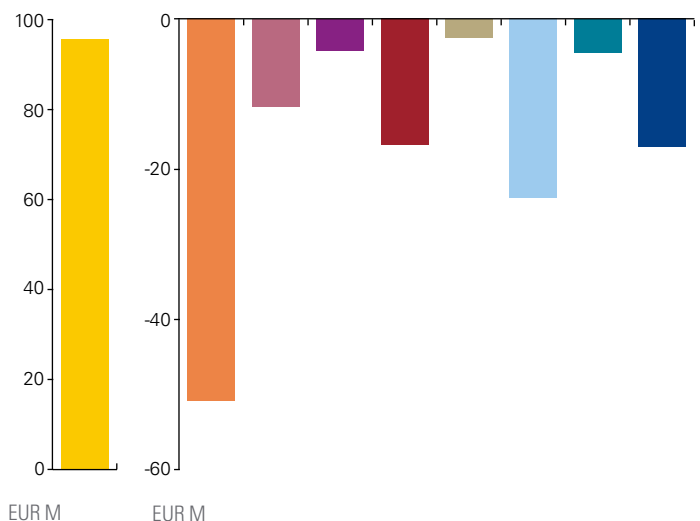
■ Economic value created through procurement

## Environmental value

The positive environmental value that NS created in 2014 has been quantified at €90 million (US\$100 million). This is based on the amount of emissions and air pollution that were avoided when travellers chose to travel by NS rail services instead of by car.

By contrast, NS created around €120 million (US\$133 million) of negative environmental value. Around €70 million (US\$78 million) of this negative value comes from NS's direct operations primarily through using fossil fuels for powering trains. This causes air pollution through the emissions of gases such as CO<sub>2</sub>, SO<sub>2</sub>, and NO<sub>x</sub> and of fine particles. These emissions have a negative effect on the climate, ecosystems and public health. Around €50 million (US\$56 million) of the negative environmental value comes from the value chain – mostly from rail infrastructure and passengers travelling to and from stations.

NS's infrastructure and operations also have some negative effects on ecosystems. The incineration of some waste, water consumption and rail noise also have a negative impact on the environment and public health.



■ Avoided emissions (compared with car travel)  
 ■ Emissions: trains  
 ■ Emissions: buses  
 ■ Emissions: electricity use in buildings and stations  
 ■ Emissions: electricity use by rail infrastructure  
 ■ Emissions: manufacture of trains  
 ■ Emissions: passenger travel to and from stations  
 ■ Waste incineration, water use, noise pollution  
 ■ Ecosystem impacts of land use (tracks, etc)

# KPMG True Value: enabling NS to manage for social and environmental value

In line with its long-term vision, NS is using the KPMG True Value analysis to identify and implement initiatives that will increase the value it creates for society while reducing its negative impacts. These initiatives include:

## Mobility

NS is working to minimize journey times, for example by reducing waiting time and improving punctuality and passenger capacity. It is also striving to achieve quick and easy changes between trains and other types of public transport as well as providing the best quality information to passengers. It is also increasing its creation of value for society by improving accessibility and comfort, and by providing services such as on-board internet access which enables passengers to spend their travelling time more pleasantly and usefully.

## Safety

NS is working on preventing physical and mental injuries among its workers through such measures as stricter safety requirements and vitality programs. In terms of public safety, NS is working with partners to prevent aggressive behavior from passengers and reduce violence and criminality in public spaces, on trains and in stations. Examples of initiatives to improve public safety include better lighting at stations and on trains and reducing the number of ticketless travelers by introducing turnstiles at stations. The company is also working with partners to prevent train collisions, derailing and unsafe situations at stations.



## Corporate expenditure

NS is exploring opportunities to increase the socio-economic value it creates through its corporate expenditure, especially in major procurement categories such as trains, construction and infrastructure, ICT and energy. Research shows, for example, that purchasing wind-generated energy creates significantly more jobs in the supply chain than purchasing fossil fuel-generated energy.

## Environmental

NS is striving to become climate-neutral by increasing the energy efficiency of trains and by using renewable energy. In 2014, NS signed a sustainable energy contract with Eneco as a result of which all trains will be powered by wind energy as from 2018. This deal is expected to reduce the negative environmental value NS creates by around €50 million euros (US\$56 million) and improve its positive environmental value creation by some €20 million (US\$22 million) compared with cars. The company is also looking to reduce as much of its waste as possible and have it reprocessed to create raw materials.

## Next steps

The KPMG True Value project has helped to kick-start internal discussions about how NS can identify further strategic initiatives that will increase the value the company creates for society and reduce its negative impacts.

The co-development of a robust framework has revolutionized the way NS understands its creation, and reduction, of economic, social and environmental value. The insights are improving internal decision-making and strengthening reporting and dialogue with external stakeholders.

NS plans to continue its work in this area, with the intention that its first steps will inspire other companies to consider how they measure, manage and report the value they create and reduce for society.

# WHAT IS KPMG TRUE VALUE?

**KPMG True Value is a tool to understand how the value a business creates and reduces for society is likely to affect the value it creates for shareholders. This knowledge provides a new lens for decision-making to improve performance, inform strategy and increase influence. KPMG True Value is a 3-step process that can be applied across sectors and geographies. It is scalable and can be applied to a whole company, a division or a specific project.**

- STEP 1:** Identify the value a company creates and reduces for society through its externalities and express this in financial terms
- STEP 2:** Assess how the internalization of externalities is likely to affect future earnings (through regulation, stakeholder action and market dynamics)
- STEP 3:** Develop business cases that build and protect future value for shareholders by increasing the value created for society

## Where has KPMG True Value been applied?



### **Cement:** **Holcim/Ambuja Cement** (India)

Holcim subsidiary Ambuja Cement used KPMG's True Value methodology to quantify risks to its future profitability. As a result, Ambuja has identified projects that will benefit society and boost future profitability. Holcim has also applied the KPMG True Value methodology at other subsidiaries and at corporate level.



### **Retail:** **Kingfisher** (Europe and Asia)

Kingfisher is a leading home improvement retailer with 1176 stores in 11 countries. KPMG member firms have provided assurance on Kingfisher's reporting of its Net Positive initiative which aims to make a positive contribution to people and the environment, while growing a stronger, more profitable business.



### **Finance:** **private equity** (Europe)

KPMG True Value has been used at the private equity arm of a global financial institution to quantify social and environmental risks and opportunities at a number of portfolio companies. The analysis has helped the firm identify strategies to reduce risk and build long-term value within its portfolio.



### **Food production and retailing:** **major food retailer**

KPMG member firms worked with an international food retailer to quantify the societal value the company creates and reduces through its food products. This analysis has helped the company to develop its corporate responsibility strategy.



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