Federal Ministry
of Transport and
Digital Infrastructure

The 2030 Federal Transport Infrastructure Plan

Foreword by the Federal Ministry of Transport and Digital Infrastructure to the final version of the Federal Transport Infrastructure Plan

Infrastructure and mobility are the foundation of growth, prosperity and jobs. There can be no prosperity without mobility – this is a fundamental principle of economics. For this reason, the Federal Government launched an investment ramp-up at the start of the 18th parliamentary term – with more public funds, greater application of the "user pays" principle and more private sector capital.

It is now a matter of using our financial resources efficiently. That is the job of the Federal Transport infrastructure Plan (FTIP), which is an overall strategy for the development of the Federal Government's transport infrastructure. In the past, each FTIP had a different priority. In the 1980s, it was the upgrading of the rail network. In the 1990s, it was the reunification of our country. In the 2000s, it was the provision of links to and from our major urban areas. Today, the focus is on strengthening the overall network – and making our infrastructure fit for the global digital era. This means modernizing transport routes, linking up infrastructure and accelerating mobility.

The new FTIP addresses this challenge. With investment totalling 269.6 billion euros and over 1,000 projects, it is a robust programme for our infrastructure. We are committed to five major innovations:

1) We are providing a firm prospect of funding. With the record level of funding available from the investment ramp-up, the FTIP is a realistic and fundable overall strategy for the structural maintenance and construction of our infrastructure.

2) We are reinforcing the principle of giving structural maintenance precedence over upgrading and new construction. The overall picture shows a record share of 69 percent for the modernization of our infrastructure.

3) We are establishing clear priorities. Investment will be made in those places where people and the economy derive the greatest benefit. This means strengthening the major transport arteries and junctions – thereby enhancing the capacity of the entire network.

4) We are removing bottlenecks. The new FTIP focuses investment in upgrading and new construction across all modes of transport on unblocking bottlenecks, thereby optimizing the flow of traffic throughout the network.

5) We have intensively involved the public. The FTIP 2030 is the first Federal Transport Infrastructure Plan that was drawn up and developed in collaboration with the public – from the basic approach through project proposals to the draft.

We have no doubt whatsoever that the 2030 Federal Transport Infrastructure Plan will ensure that we remain the number one mobility country – thereby creating the conditions for the growth, prosperity and jobs of tomorrow.

Executive Summary

High-capacity transport infrastructure for smooth mobility in passenger and freight transport

People in Germany are increasingly on the move – for both private and professional reasons. Today, more than ever before, our way of life calls for unhindered mobility. Germany is an exporting nation, a high-tech and transit country, and as such relies crucially on smoothly functioning passenger and freight transport – mobility is a first-rate locational factor. We will not be able to exploit the opportunities inherent in progress and globalization in the medium and long term unless we provide our citizens and industry with a high-capacity transport system. Modern mobility is a prerequisite of a modern society, economic growth, employment and prosperity.

High traffic growth increases the need for structural maintenance and upgrading

The number of **passenger kilometres travelled** in Germany will increase by a total of 12.2 % by 2030 compared with 2010 levels. According to the traffic forecast for 2030, this is equivalent to an annual growth rate of 0.6 %. In the same period, the **amount of freight moved** is predicted to rise by 38 % – a much more significant rise. At many places on the networks, there is thus a need for upgrading and new construction projects.

Moreover, the most recent **forecasts of the need for structural maintenance and replacement** of transport infrastructure show that, in the future, it will be necessary to invest significantly more than in the past if the existing transport network is to be preserved at a high level.

Additional funds will be used in a targeted manner

Structural maintenance and replacement plus the evolution of infrastructure that is efficient on a sustained basis are priority policy areas. For this purpose, other pillars of infrastructure funding must be used alongside the traditional public purse funding. In addition, the monies must be used in a properly targeted manner. The focus is on the principle of **"giving structural maintenance precedence over new construction"** and the **removal of bottlenecks on congested corridors**.

By adopting a **five-point investment ramp-up** in the autumn of 2014, the Federal Government launched a sustained new direction in its investment policy. The building blocks of the ramp-up are additional appropriations for transport infrastructure, the widening of the user pays principle and the greater involvement of private sector capital in Federal Government investment.

The Federal Transport Infrastructure Plan as the key element of infrastructure planning

The last Federal Transport Infrastructure Plan – or FTIP for short – was published in 2003. The previous one had been adopted in 1992, after the reunification of Germany. The present plan (FTIP 2030) lays major transport policy foundations for the period covering the **planning horizon to 2030**.

Under the Basic Law, the Federal Government is responsible for **funding the construction and structural maintenance of the federal transport infrastructure**, on which the FTIP accordingly focuses. This comprises the federal motorways and federal highways – referred to as federal trunk roads when taken together –, the federal railways and the federal waterways.

German sea and inland ports, airports and freight villages are not part of the federal transport infrastructure. The planning, construction and maintenance of these facilities is the responsibility of the federal states, local authorities or private sector operators. The Federal Government is, however, responsible for connecting these facilities to the federal transport infrastructure network and provides funds for this purpose.

The FTIP comprises necessary **capital maintenance investment and investment in replacement infrastructure** as well as **upgrading and new construction projects**. The forecast requirements for structural maintenance and replacement have been included in the Plan as a total amount for each mode of transport. When appraising upgrading and new construction works specific to individual projects, the FTIP focuses on projects that have **significant impacts on large areas** and develop a **significant capacity-enhancing** and/or **quality-improving impact**. The FTIP is the Federal Government's most important transport infrastructure planning tool.

High-capacity transport networks are the prime objective

The FTIP 2030 targets primarily those transport policy objectives that can be tangibly influenced by the evolution of transport infrastructure. Thus, **smooth mobility in passenger transport** and **efficient freight transport** are fundamentally dependent on high-capacity infrastructure networks. They are the key prerequisite of an unhindered

flow of traffic on all modes of transport. But the FTIP's appraisals also reflect aspects of **transport safety, climate change mitigation, environmental protection and noise abatement**.

Significantly greater involvement of the public and trade associations

In 2013, trade associations and the public were, for the first time, able to provide comments on the draft **basic approach** of the new FTIP during a much widened **public participation exercise** prior to publication of the revised basic approach. In addition, the associations were repeatedly consulted during the process of drawing up the FTIP.

The **Draft FTIP 2030** was sent to relevant institutions, published on the Internet and made available for inspection in several towns and cities. In addition, the Federal Ministry of Transport and Digital Infrastructure made available online a **Project Information System** (PRINS) that provided a more detailed insight into the appraisals at project level.

Participation of the authorities and the public on the Federal Transport Infrastructure Plan meets the statutory requirements of **Strategic Environmental Assessment (SEA)**. The latter's objective is to ensure, at an early planning stage, a high level of environmental protection as the FTIP 2030 is implemented. As a basis for the participation of the authorities and the public within the scope of SEA, the **Environmental Report on the FTIP 2030** is published.

Over a period of six weeks, all interested parties were able to provide comments on the Draft FTIP electronically and in writing. The Federal Ministry of Transport and Digital Infrastructure reviewed all the comments that were received within the specified period and summarized them in a **Report on the Consultation Procedure**.

Around 2,000 proposals for upgrading and new construction projects were reviewed

The federal states, members of parliament, the Federal Government itself, railway infrastructure companies, members of the public, trade associations and other stakeholders submitted over **2,000 project ideas** for appraisal in the FTIP 2030. Of these, federal trunk roads accounted for around 1,700, federal railways for around 400 and federal waterways for around 50.

The most important innovation in the notification procedure was an **intensified screening** and **optimization** of the projects. For road and rail projects, the notifications were also subjected to a **plausibility check** by independent consulting engineers.

Subsequently, all project ideas that in principle had a prospect of being included in the FTIP 2030 were appraised. To be able to efficiently distribute the limited public resources available, the appraisal process of the FTIP 2030 has been comprehensively and methodically evolved. The projects were compared in **four appraisal modules** and finally selected.

The key appraisal module is the **benefit-cost analysis**, which compares all the monetizable (i.e. to be expressed in monetary units) project impacts – positive and negative – with the investment costs of a project. Impacts that are difficult to monetize or that cannot be monetized at all have been separately examined in **environmental, nature conservation, spatial planning and urban development assessments**.

National scheme of priorities for the efficient distribution of funds

Given the constraints on the financial resources available for transport infrastructure, it is unlikely that work will be able to commence on numerous projects by 2030. The appraised projects have thus been classified into various priority categories on the basis of technical criteria. In the future, the Federal Government must invest in transport infrastructure in a more targeted manner than in the past. For this reason, the Federal Government is focusing its investment primarily on the spheres of structural maintenance/replacement and the removal of bottlenecks.

The **capital maintenance investment and investment in replacement infrastructure** that is required for the existing networks over the period to 2030 was initially included in the overall budget as essential expenditure. This implemented the major objective of **giving priority to the structural maintenance and replacement** of the existing networks.

The second step involved **distributing** the other **funds for upgrading and new construction schemes to the three modes of transport**. When doing so, due regard was paid at the level of the overall plan to, in particular, the transport effects and environmental impact associated with the distribution.

The third step involved classifying the individual projects of three modes of transport into **priority categories**. First, the upgrading and new construction projects were divided into ongoing/definitely planned projects and new projects. All ongoing and definitely planned projects will be completed as quickly as possible. For the new projects, the FTIP 2030 contains the following priority categories: **first**

priority (VB) with **first priority – removal of bottlenecks (VB-E)** and **second priority (WB) with second priority with planning go-ahead (WB*)**. VB/VB-E projects are to be implemented or commenced during the lifetime of the FTIP by 2030.

The national scheme of priorities developed by the Federal Ministry of Transport and Digital Infrastructure guarantees that the bulk of the funds available for upgrading and new construction will be invested in **projects with significant impacts on large areas**.

€ 269.6 billion for high-capacity transport networks

The total level of funding provided by the FTIP 2030 is around €269.6 billion. Of this total, €226.7 billion covers maintenance of the structural fabric plus the upgrading and new construction projects in the VB with VB-E category for the period from 2016 to 2030. There is an additional €42.8 billion for funding projects on which work will not commence until a late phase of the FTIP's lifetime and where funding will not be completed until after 2030.

The **structural maintenance** of the existing road, rail and waterway networks alone will require around **€141.6 billion** between 2016 and 2030. This figure is equivalent to **around 69 % of the FTIP's planning framework** in the period from 2016 to 2030. We are thus significantly increasing the level of funding for maintenance of the structural fabric compared with the FTIP 2003, which earmarked investment of around €83 billion for this purpose.

However, the results of the network analyses and project appraisals clearly illustrate that, in the future, there will continue to be a **great demand for upgrading and new construction schemes** in all modes of transport in order to remove bottlenecks, enhance the efficiency of traffic flows and reduce accessibility deficiencies. The FTIP 2030 earmarks investment of **€98.3 billion** for this purpose.

It is thus necessary to **stabilize the investment for transport infrastructure at a high level**. For the structural maintenance and upgrading of the transport networks, the target in the FTIP period from 2016 to 2030 is an average level of funding of around €15 billion per annum.

Of the total level of funding of the FTIP 2030 (including structural maintenance), the road mode accounts for 49.3 %, the rail mode accounts for 41.6 % and the waterway mode accounts for 9.1 % of funds. For upgrading and new construction projects (2016 to 2030), the roads' share is higher at 53.6 % (€2.3 billion per annum on average). The railways will receive a share of 42.1 % (€1.8 billion per annum on average) and the waterways will receive a share of 4.3 % (€0.2 billion per annum on average).

The FTIP 2030 focuses in particular on the **major transport arteries and junctions** of the transport networks. The bulk of the funds for investment is concentrated on **projects with significant impacts on large areas**. In the rail and waterway modes, almost all projects have significant impacts on large areas. In the road mode, around 75 % of the funds for investment will be used for projects with significant impacts on large areas, i.e. for motorways and federal highways of link function levels 0 and 1. Around 25 % will be invested in other federal highways. Taking an overall view of all modes of transport, 87 % of the funds for upgrading and new construction will be invested in projects with significant impacts on large areas, including the ongoing and definitely planned projects.

Ongoing and definitely planned upgrading and new construction projects account for investment totalling €25.2 billion. These projects' share of the total level of funding for upgrading and new construction is significantly lower in the new Federal Transport Infrastructure Plan (in the period from 2016 to 2030) than in the FTIP 2003 (in the period from 2001 to 2015) – 40 % as against 72 %.

Effects of implementing the FTIP

With the help of the FTIP 2030 projects, it will thus be possible to significantly reduce present-day and potential future bottlenecks caused by inadequate network capacity. The road construction projects in the VB/VB-E category will remove capacity-induced bottlenecks over a length of around 2,000 kilometres (measured in both directions) on the German motorways. This will make it possible to reduce the amount of time spent by vehicles in stationary or slow-moving traffic by over 160 million hours per annum.

The rail projects in the VB/VB-E category will reduce capacity-induced bottlenecks over a length of around 800 kilometres and make it possible to carry both more passengers and more freight by rail. This will make it possible to reduce the waiting times that would otherwise be likely each year by around 15,200 hours. The additional capacity will result in more use being made of the railways, thereby reducing the number of passenger car kilometres by 1.5 billion and the number of HGV journeys by 724,000 (with a mileage of 519 million HGV kilometres) each year.

On the waterways, qualitative infrastructure bottlenecks impact on the profitability of transport operations over the entire length of all origin-destination pairs affected, even though most of the route allows better navigability. The waterway projects in category VB/VB-E will remove, on the federal waterways, a total of eight qualitative bottlenecks on waterways navigable by sea-going ships with a total length of around 300 km and seven qualitative bottlenecks

plus one quantitative bottleneck on inland waterways with a total of around 370 km. A further four qualitative bottlenecks on inland waterways with a total length of around 430 km will have their bottleneck impact reduced in the “with” scenario.

The FTIP as the basis for upgrading acts and requirement plans

The FTIP 2030 was developed by the Federal Ministry of Transport and Digital Infrastructure with the support of consultants and has been adopted **by the Federal Cabinet**. On the basis of the FTIP, the **requirement plans** for the individual modes of transport are drafted. These plans are tabled to the German Bundestag as annexes to the respective **upgrading acts** and are adopted by parliament as binding legislation. The **requirement plans are reviewed** every five years on the basis of statutory regulations.

In the subsequent stages of planning, the individual projects of the FTIP and requirement plans are fleshed out by the respective developers. Here, depending on requirements, the projects go through spatial impact assessment procedures, route and alignment determination procedures and plan approval procedures. The time at which and order in which the projects are implemented ultimately depends on their prioritization in the VB/VB-E category, the planning status and the financial resources available.

Contents

Table of contents

List of figures and tables

Part I:
Objectives and principles of federal transport infrastructure planning – investing in transport infrastructure that meets current and future needs

1 | Challenges and problem-solving approaches – how do we fund our transport infrastructure?

People in Germany are increasingly on the move – for both private and professional reasons. Today, more than ever before, our way of life calls for unhindered mobility. Germany is an exporting nation, a high-tech and transit country, and as such relies crucially on smoothly functioning passenger and freight transport – mobility is a first-rate locational factor. We will not be able to exploit the opportunities inherent in progress and globalization in the medium and long term unless we provide our citizens and industry with a high-capacity transport system. Modern mobility is a prerequisite of a modern society, economic growth, employment and prosperity.

Germany has one of the best developed transport networks in the world. It is imperative that we keep it in a good condition, despite the fact that the demand for transport will continue to rise in the future. In addition, there are changing transport needs and demographic trends which, in many places, entail a need for enlargement and optimization on the networks.

The transport forecast for 2030, which was commissioned by the Federal Ministry of Transport (see Chapter 10 for more details) predicts a **rise in passenger kilometres travelled** (number of travellers multiplied by the average distance they cover) by a total of 12 % compared with 2010 levels over the period to 2030. This is equivalent to an annual growth rate of 0.6 %.

The probable **growth rate in freight traffic** will be even more pronounced. Freight moved (i.e. the mass of the goods transported multiplied by the distance they cover) on German transport infrastructure is set to rise by 38 % over the period covered by the forecast. The main driver of this trend is a significant increase in the volume of international transport. It is likely that all modes of transport will be confronted by a high rate of growth. The railways, in particular, face major challenges in the form of a forecast growth rate of 42.9 %. At many places on the networks, there is thus a need for **upgrading and new construction projects**.

Moreover, the most recent **forecasts of the need for structural maintenance and replacement** of transport infrastructure show that, in the future, it will be necessary to invest more than in the past if the existing transport network is not to be worn out but preserved at a high level.

Given the tight constraints on public funding and the constitutionally mandated limit on public borrowing ("debt brake"), investment in transport infrastructure faces competition from other government responsibilities. **The financial resources available in the past will not be sufficient** to promptly deliver all the upgrading and new construction projects that are beneficial in terms of transport policy and for the economy as a whole while at the same time ensuring that the structural fabric of the overall network is maintained.

So what are the consequences of this for transport infrastructure policy? Structural maintenance and replacement plus the evolution of infrastructure that is efficient on a sustained basis are priority policy areas. For this purpose, other pillars of infrastructure funding must be used alongside the traditional public purse funding.

In addition, the monies available must be used in a more targeted manner than in the past. The Federal Government's investment decisions will thus focus on the spheres of structural maintenance and replacement plus the removal of bottlenecks on congested corridors. The only way to ensure that infrastructure development can be viable in the long term is to ensure that the increased funding available compared with the FTIP 2003 is accompanied by an efficient distribution of funds. Clear prioritization and the associated efficient distribution of funding in the Federal Government's investment in transport infrastructure will help enhance acceptance for the investment ramp-up in the competition with other Federal Government responsibilities.

By adopting a **five-point investment ramp-up** in the autumn of 2014, the Federal Government launched a sustained new direction in its investment policy. The building blocks of the ramp-up are additional appropriations for transport infrastructure, the widening of the user pays principle and the greater involvement of private sector capital in Federal Government investment. In addition, clear prioritization in infrastructure projects and the principle of "giving structural maintenance precedence over new construction" are being pursued. For the funding of transport infrastructure, this means more specifically:

The Coalition Agreement for the 18th parliamentary term provides for a substantial increase in funding for transport infrastructure. It has been possible to achieve this ambitious target. Over the period to 2017, **additional funding totalling €5 billion** will be mobilized for urgently needed investment, of which €3.6 billion for federal trunk roads, €1.05 billion for railways and €350 million for waterways. This additional investment is to be sustained at this level. In November 2014, the Federal Government decided to launch a ten-billion euro package for future-oriented investment for the period from 2016 to 2018. Of this total, an **additional approximately €3.1 billion** will be channelled into the Federal Government's transport investment. Thus, compared with 2014, investment

in infrastructure will rise by around 40 % to around €14 billion per annum over the period to 2018.

To ensure sustained funding of transport infrastructure and planning certainty that is as extensive as possible, the classic funds for investment contained in the transport budget that have not been spent in one calendar year will also be made available in the following year with no reductions. It will also be possible for there to be reciprocal virement of the investment between the modes of transport.

Transport infrastructure funding, especially of Federal Government projects, is supplemented by EU funds for the **trans-European networks (TENs)**. In the ongoing programming period from 2014 to 2020, Germany has so far received around €1.6 billion, predominantly for investment in railway and waterway projects.

To cover the gap in revenue that resulted from the lowering of the HGV toll rate in January 2015 and to guarantee funding of transport infrastructure, **compulsory tolling for HGVs** has been and will be widened. Since July 2015, tolls have been charged on an additional 1,100 km of federal highways. Since October 2015, vehicles with a maximum permissible weight of between 7.5 and 12 tonnes have also been included in the tolling scheme. The extension of HGV tolling to all federal highways, as envisaged in the Coalition Agreement, is due to enter into force in 2018.

To fund the structural maintenance and upgrading of the motorway network, we will introduce an **infrastructure charging scheme** that will make an additional appropriate contribution to the funding of transport infrastructure by the keepers of vehicles not registered in Germany. The net revenue from user funding will be injected with no deductions into transport infrastructure.

Alternative forms of procurement are used to deliver requirement plan projects. Since 2005, projects in the federal trunk roads sector have continuously been launched as public-private partnerships (PPPs). The whole life cycle approach that is typical of PPP projects, i.e. a "one-stop shop" for construction, operation, structural maintenance (including planning and management in each case) and pro rata funding, combined with a transfer of risk, provides an incentive to deliver quickly and efficiently in the case of suitable projects.

The four pilot projects of the first batch (2005 to 2009) developed PPP as a procurement option in the federal trunk roads sector. A further nine PPP projects of the second batch[1] with updated project structures are currently either completed, under construction, at the procurement stage or still in the preparation phase (three projects): A 1/A 30 motorways from Münster via Lotte/Osnabrück interchange to Rheine; A 44 motorway from Diemelstadt to Kassel-Süd; and A 61, A 650/A 65 motorways from Worms to the state border between Rhineland-Palatinate and Baden-Württemberg. In the case of the projects still at the procurement stage, the PPP procurement procedures will be launched as quickly as possible – in each case depending on when the federal states give the construction go-ahead and when value for money has been demonstrated. The EU funds PPP projects through various European Investment Bank instruments.

At the end of April 2015, the Federal Ministry of Transport and Digital Infrastructure, after consultation with the Federal Ministry of Finance, announced a "New Generation" with 11 PPP projects which, alongside motorway widening, also contains structural maintenance projects and schemes to fill existing gaps plus, for the first time, federal highway projects. The objectives of the "New Generation" PPPs are to implement necessary road construction schemes more quickly and more efficiently, to minimize congestion and the harm to the national economy caused by congestion, to further pursue the life cycle approach for construction, structural maintenance, operation and pro rata funding and to make it possible to include private sector capital through institutional investors and project bonds.

The "New Generation" PPP projects comprise the following schemes. Future changes or additions to the list cannot be ruled out (see Table 1)[2].

1 In the implementation of the second batch of PPP projects, the remuneration mechanism was simplified. Thus, in a second batch PPP project, remuneration is via a uniform toll rate, which means that the private sector investor receives a standard toll, determined in competition, per tolled vehicle kilometre. Other second batch PPP projects are designed as availability models, which means that the remuneration is based on the availability of the contract section to road users and is thus no longer dependent on traffic volumes.

2 The start of the PPP procurement procedures and the exact project configurations depend on when the federal state highway authorities give the construction go-ahead and on the outcome of the value for money assessments.

Federal state	Project description
Baden-Württemberg	A 6 federal motorway, Weinsberg interchange – Feuchtwangen/Crailsheim interchange (Widening to six lanes)
Bavaria	A 3 federal motorway (Biebelried interchange – Fürth/Erlangen interchange): (Widening to six lanes)
Bavaria	A 8 federal motorway, Rosenheim – German/Austrian border (Widening to six lanes)
Brandenburg	A 10/A 24 federal motorways, Neuruppin junction (A 24) – Pankow junction/Brandenburg state border (A 10) (Widening to six lanes (A 10) and full depth reconstruction (A 24))
Hesse	A 49 federal motorway, Kassel-West to junction with A 5 (Widening to four lanes from Schwalmstadt junction to junction with A 5)
Lower Saxony	E 233 (federal highway), Meppen junction (A 31) – Cloppenburg junction (A 1) (Widening to four lanes)
Lower Saxony/Hamburg	A 26 federal motorway, Hamburg (A 1) – Rübke (Construction of a new four-lane road, including port ring-road (closing of gap), envisaged as a model under the Private Sector Funding of Trunk Road Construction Act)[3]
North Rhine-Westphalia	A 57 federal motorway, Köln/Nord interchange – Moers interchange (Widening to six lanes)
Schleswig-Holstein/Lower Saxony	A 20 federal motorway, Elbe crossing (Construction of a new road, envisaged as a model under the Private Sector Funding of Trunk Road Construction Act)
Thuringia	A 4 federal motorway, Gotha junction – Thuringia/Saxony state border): (Structural maintenance)
Thuringia	B 247 federal highway, Bad Langensalza – A 38 federal motorway (Construction of a new two- to four-lane road)

Table 1: "New Generation" PPP road projects

In addition, **further sources of funding** are available in the federal budget for various tasks in the sphere of transport investment. One of the main sources is the state subsidies paid by the Federal Government to the federal states to fund local public transport. In addition, there are federal funds provided on the basis of the Unbundling Act and the Local Authority Transport Infrastructure Financing Act, which are used to improve transport at the local authority level.

3 In an F model under the Private Sector Funding of Trunk Road Construction Act, a private sector investor constructs, operates and maintains a section of road and is given the right to collect tolls from all users (HGVs and passenger cars) himself. The F model is confined to bridges, tunnels and mountain passes along motorways and federal highways plus multi-lane federal highways with separate carriageways for the two directions of traffic.

2 | Tasks and objectives of federal transport infrastructure planning – what do we want to achieve?

2.1 | Why do we have federal transport infrastructure planning?

The Federal Government, federal states, railway infrastructure companies and numerous other stakeholders are continuously working to **identify and correct deficiencies on the transport network**. To this end, infrastructure solutions are to be developed in many places.

The public funds for the upgrading and new construction of transport infrastructure must be used responsibly and in manner that is conducive to the public good. For this reason, careful planning is required to determine what transport investment is most beneficial to the general public and, accordingly, has the greatest need for implementation. Our most important governance tool for this is cross-modal federal transport infrastructure planning, the results of which are documented roughly every ten years in a **Federal Transport Infrastructure Plan (FTIP)**.

The last FTIP was published in 2003. The previous one had been adopted in 1992, after the reunification of Germany. The present plan (FTIP 2030) lays major transport policy foundations for the period covering the **planning horizon to 2030** and thus meets one of the key transport policy demands of the Coalition Agreement for the 18th parliamentary term.

Under the Basic Law, the Federal Government is responsible for **funding the construction and structural maintenance of the federal transport infrastructure**. This comprises the federal motorways and federal highways – referred to as federal trunk roads when taken together –, the federal railways and the federal waterways. Accordingly, the FTIP focuses on this transport infrastructure.

German sea and inland ports, airports and freight villages are not part of the federal transport infrastructure. The planning, construction and maintenance of these facilities is the responsibility of the federal states, local authorities or private sector operators. The Federal Government is, however, responsible for connecting these facilities to the federal transport infrastructure network and provides funds for this purpose. Irrespective of who is responsible, the Federal Government always includes all modes of transport and their interlinking in its planning activities.

2.2 | The objectives of the FTIP 2030

For the successful development of a federal transport infrastructure plan, it is essential that, right from the outset, clear objectives be defined that are to be achieved with this planning tool. When the FTIP 2030 was being drawn up, a distinction was made between the overarching objectives of transport policy, which are a result of transport and environmental programmes, and the **objectives and problem-solving strategies derived** from them, which the Federal Transport Infrastructure Plan can actually pursue. The latter are the basis for the prioritization strategy of the FTIP 2030.

The FTIP 2030 focuses primarily on those transport policy objectives that can be tangibly influenced by the evolution of transport infrastructure. Thus, smooth mobility in passenger transport and efficient freight transport are fundamentally dependent on strong infrastructure. It is the key prerequisite of an unhindered flow of traffic on all modes of transport.

The FTIP's appraisals also reflect aspects of transport safety, climate change mitigation, environmental protection and noise abatement. Nevertheless, the evolution of transport infrastructure is not primarily a nature conservation and environmental protection measure. More efficient, non-infrastructure measures are available for reducing CO_2 emissions, such as improving fuel efficiency. In this context, however, it is also a question of boosting the environmentally sustainable rail and waterway modes and shifting traffic, without questioning the importance of the roads for the overall system.

As in the past, the objectives of the FTIP 2030 were deliberately not quantified ahead of the project appraisals. For some of the objectives, there are no specifications, for instance reducing the time spent in congestion. For other objectives, there are targets, but they relate to transport policy in general and not explicitly to transport infrastructure. These include reducing final transport energy consumption by ten percent by 2020 against 2005 levels. Thus, based on the appraisal results, there was instead a trade-off of objectives, taking into account the overarching objectives, in the course of the allocation of funds to the modes of transport. Section 7.1 contains a detailed account.

Table 2 provides an overview of the overarching objectives of the FTIP 2030 and the objectives and problem-solving strategies of the new Federal Transport Infrastructure Plan derived from them.

Overarching objectives:	Derived objectives and problem-solving strategies for the FTIP 2030
Facilitate mobility in passenger transport	• Maintain, replace and modernize the structural fabric • Improve the flow of traffic/remove bottlenecks (incl. traffic management) • Improve accessibility/quality of links
Ensure the supply of goods, enhance the competitiveness of enterprises	• Maintain, replace and modernize the structural fabric • Reduce transport costs • Improve the flow of traffic/remove bottlenecks (incl. traffic management) • Increase the reliability of transport operations • Improve links to and from intermodal hubs (e.g. airports, seaports or combined transport terminals)
Enhance transport safety	• Maintain, replace and modernize the structural fabric • Shift traffic to parts of the network and transport routes with a higher level of safety
Reduce emissions of pollutants and greenhouse gases	• Improve the flow of traffic/remove bottlenecks (incl. traffic management) • Shift traffic to low-emission transport modes • Maintain, replace and modernize the structural fabric
Limit the impact on nature and the landscape	• Limit additional land take • Avoid additional losses of unfragmented areas
Improve the quality of life, including the noise situation, in towns, cities and regions	• Prevent and reduce noise • Ease the burden on places and people/unlock urban development potential

Table 2: Overarching and derived objectives or problem-solving strategies for the FTIP 2030

3 | Role and development process of the FTIP 2030 – what is a federal transport infrastructure plan?

3.1 | Subject matter and limits of the FTIP

This Federal Transport Infrastructure Plan is valid for the planning horizon from 2016 to 2030 and comprises necessary **capital maintenance investment and investment in replacement infrastructure** as well as **upgrading and new construction projects** on the road, rail and waterway networks for which the Federal Government is responsible. In the case of upgrading and new construction works, the FTIP focuses on the appraisal of projects that have **significant impacts on large areas** and develop a **significant capacity-enhancing** and/or **quality-improving impact.**

The role of the Federal Government in the evolution of the transport networks corresponds to that of a broker between different interests. In the FTIP, it sets priorities and decides whether upgrading and new construction projects under consideration are beneficial to and necessary for the whole economy.

With its focus on the project proposals with the greatest significance for the whole economy, the FTIP is the most important tool for the Federal Government's transport infrastructure planning, but not the only one. The FTIP thus does not aspire to study all infrastructure planning activities.

Investment that is outside its remit includes noise mitigation measures, HGV parking areas on federal motorways, cycle tracks on roads for the construction and maintenance of which the Federal Government is responsible, level crossings and flyovers or refurbishment and upgrading schemes to improve transport safety, such as widening federal highways from two to three lanes.

This investment is addressed by separate plans – in some cases by the federal states or local authorities – or programmes (such as the Immediate Action Programme for Inland Traffic to and from Seaports, the Second National Noise Mitigation Package or the ITS Action Plan). These measures can be implemented outside the FTIP or the requirement plan. Nevertheless, Chapter 9 looks at them briefly as part of an overview of the Federal Government's transport infrastructure policy.

3.2 | The role of the FTIP in infrastructure planning

The **Federal Transport Infrastructure Plan** itself is developed by the Federal Ministry of Transport and Digital Infrastructure with the support of consultants on the basis of project proposals submitted to it and is adopted by the Federal Government in the cabinet. It sets the framework for investment in the Federal Government's transport infrastructure. However, the FTIP adopted by the Federal Cabinet is not a funding plan, nor is it of a statutory nature.

On the basis of the FTIP, the draft requirement plans for the individual modes of transport are prepared and likewise adopted by the Federal Cabinet. The draft requirement plans are subsequently tabled to the German Bundestag as annexes to the respective **upgrading acts** and are adopted by parliament as binding legislation. Because of possible changes made in the course of their referral to parliament, the FTIP and the requirement plans are not usually completely identical. It is the requirement plans that finally stipulate which transport infrastructure projects are to be planned and funded from the federal budget and in which priority category.

The Federal Transport Infrastructure Plan remains in force until it is superseded by a new FTIP. The planning horizon set for the FTIP 2030 is the year 2030. The **requirement plans are reviewed** every five years on the basis of statutory regulations. The purpose of these reviews is to determine whether the requirement plans for the individual modes of transport need to be adapted to the latest traffic and economic trends. Any new findings from the project planning activities are also taken into account.

In the subsequent stages of planning, the plans of the FTIP and requirement plans are fleshed out by the respective developers on a project-by-project basis. Here, irrespective of the FTIP appraisal and depending on requirements, the projects go through spatial impact assessment procedures, route and alignment determination procedures and plan approval procedures until they are ready for the construction go-ahead. The time at which and order in which the projects are implemented ultimately depends on their priority category, the planning status and the financial resources available.

To implement upgrading projects, the Federal Ministry of Transport and Digital Infrastructure prepares **five-year plans**. Most recently, the intermodal 2011 – 2015 Framework Investment Plan for the Federal Government's transport infrastructure was published in March 2012. It contains the investment needed for the structural maintenance or replacement of the existing networks, for the continuation of projects already under construction

and for the projects with a well advanced status of planning. The annual provision of funds for transport investment occurs when the German Bundestag adopts the federal budget.

Figure 1 contains a diagram showing the links between the individual elements of federal transport infrastructure planning from the project idea to the delivery of the infrastructure project.

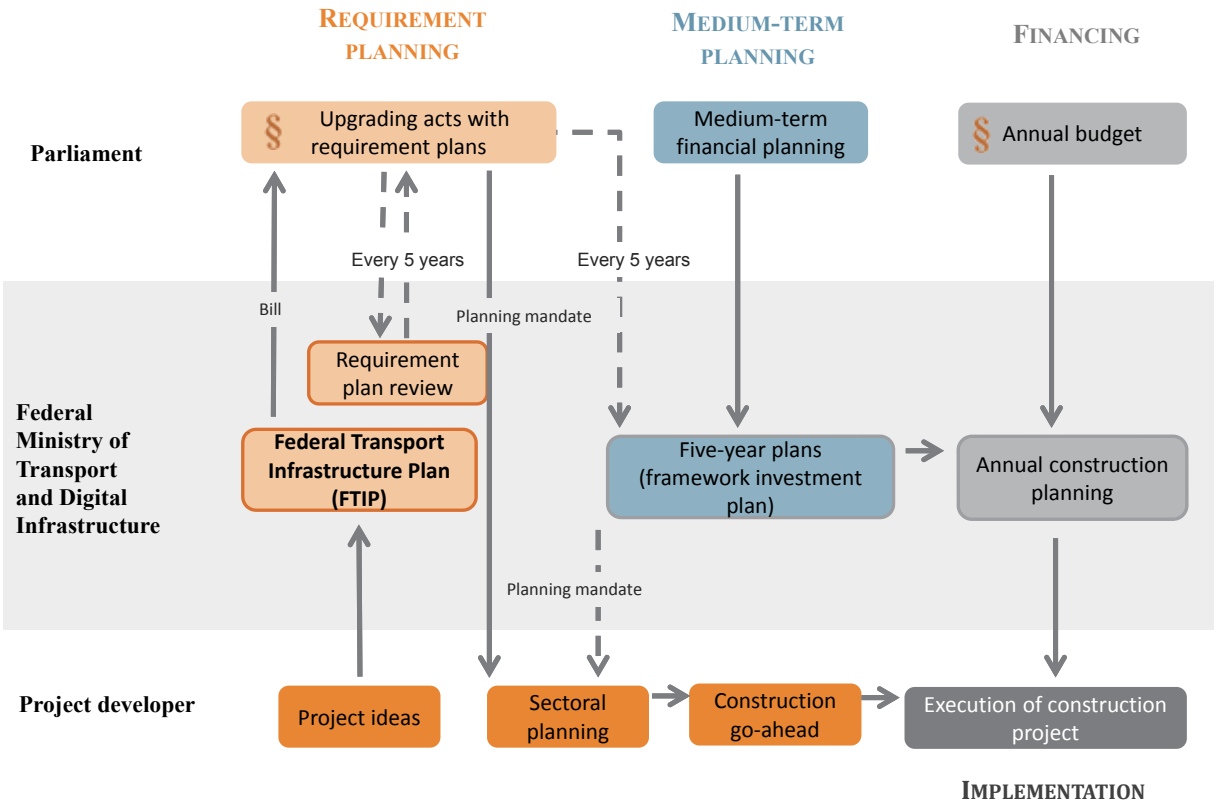


Figure 1: **An overview of federal transport infrastructure planning**

3.3 | Procedure of preparing the FTIP

The draft **basic approach of the new Federal Transport Infrastructure Plan** was developed by the Federal Ministry of Transport and Digital Infrastructure between 2011 and early 2013. Subsequently, a significantly wider **public participation exercise** was held in which trade associations and members of the public had an opportunity to express ideas and criticism. The Federal Ministry of Transport and Digital Infrastructure incorporated many of the comments it received into the basic approach of the FTIP before its publication in April 2014. Chapter 8 contains a detailed account of the procedures used in and the lessons learned from the public participation to date and of the participation that has yet to take place.

An essential prerequisite for ensuring that the transport infrastructure planning within the scope of the FTIP 2030 was likely to achieve results was a forecast of future traffic volumes that was as reliable as possible. Since infrastructure projects in the transport sector have a long preparatory planning stage and their delivery usually takes many years, the Federal Ministry of Transport and Digital Infrastructure commissioned a **traffic forecast with a forecast horizon of 2030** for passenger and freight traffic. Chapter 10 contains a more detailed account of its results. While this forecast describes the future overall framework for transport policy action, the FTIP looks for solutions to the transport policy challenges within this framework.

The FTIP follows the key principle of "giving structural maintenance precedence over upgrading and new construction". The necessary **capital maintenance investment and investment in replacement infrastructure** for the existing transport network has been forecast and explicitly taken into account in the total budget that is likely to be available for transport infrastructure. The methodology used for this differs from one mode to the next and is described Chapter 11 .

Between the end of 2012 and the beginning of 2014, numerous stakeholders submitted a total of over 2,000 project proposals for **upgrading and new construction projects**. Federal trunk roads accounted for

around 1,700, federal railways for around 400 and federal waterways for around 50 of these proposals. The Federal Ministry of Transport and Digital Infrastructure provided the project notifiers with bottleneck analyses and special studies so that the notified projects were able to meet significantly higher minimum standards than in the FTIP 2003. Intensified preliminary and plausibility checks plus project optimization were also carried out. Across all three modes of transport, the projects were at very different stages of planning. Subsequently, all project ideas that in principle had a prospect of being included in the FTIP 2030 after a preliminary check were appraised.

To be able to efficiently distribute the limited public resources available, it was necessary to have comparable standards when assessing the project ideas. To this end, the **appraisal procedures** of the FTIP 2030 were methodologically evolved compared with previous federal transport infrastructure plans. Using a strictly controlled procedure, the projects were compared in four appraisal modules and finally selected.

The impact analysis of an individual project is based on a comparison of the "with" and "without" scenarios. The "without" scenario network is based on the present-day transport network and continues to comprise all projects that do not need to be reappraised. The "with scenario" network is identical to the "without scenario" network but additionally includes the transport infrastructure project to be appraised. The only difference between the "with" and "without" scenarios is the project that is to be appraised and the changes in traffic flows it would cause. By comparing the "with" and "without" scenarios, it is possible to analyse a project idea with regard to its advantages and disadvantages. This comparative calculation is done separately for each project that is to be appraised.

The key module is the **benefit-cost analysis (BCA)**, which compares all the positive and negative project impacts that can be expressed in monetary units with the investment costs of a project. Projects are deemed to be beneficial to the whole economy if the sum of all benefits is greater than the investment costs.

However, projects also have impacts that can be expressed in monetary terms only with great difficulty or not at all, for instance the fragmentation of natural areas. For this reason, these impacts were studied separately in the modules of **environmental and nature conservation assessment, spatial planning assessment and urban development assessment**. Details of the appraisal methods in all four modules can be found in Chapter 12.

If upgrading and new construction schemes proved to be worthwhile, they were included in the FTIP as individual projects or – where appropriate – as packages of projects. In the process, they were classified into various priority categories in accordance with the **National Scheme of Priorities** developed by the Federal Ministry of Transport and Digital Infrastructure.

The outcome of the overall process, which is summarized in Figure 2, is the present **Overall Plan**, which lists the structural maintenance and replacement requirements as a grand total per mode of transport and all the worthwhile upgrading and new construction projects. The environmental impacts of delivering the projects of the FTIP are described in a special **environmental report**[4] that meets the requirements of Strategic Environmental Assessment (SEA) and was published at the same time as the Draft FTIP.

Following the **participation of the authorities and the public**, the FTIP was adopted by the cabinet and the **upgrading acts** with the annexed **requirement plans** were tabled in the German Bundestag. There are then **requirement plan reviews** every five years to determine whether they are up to date.

4 Federal Ministry of Transport and Digital Infrastructure (ed.) (2016): *Strategische Umweltprüfung zum Bundesverkehrswegeplan 2030*

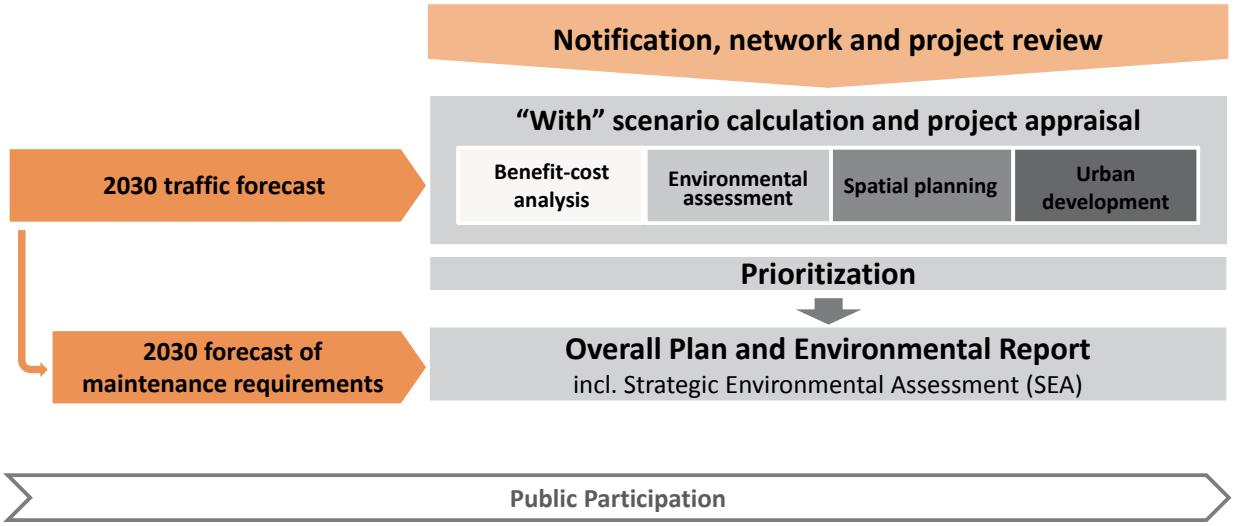


Figure 2: **The overall process of the FTIP 2030**

Speedy implementation of ongoing and definitely planned projects

Many of the projects of the FTIP 2003 that have not yet been delivered continue to be necessary to solve the transport-related problems on the network. However, in view of changes to the general conditions, some projects have to be evolved or even challenged. In the FTIP 2030, therefore, the FTIP 2003 projects that have not yet been delivered have been reappraised using the updated methodology. The only exceptions were projects that are already classified as "ongoing". These include schemes that are already under construction or on which work is due to commence shortly, or for which a concession agreement exists or will exist shortly within the framework of a public-private partnership (PPP).

Thus, projects have been reappraised that are already at an advanced stage of planning or in some cases have already been given plan approval. This was a basic prerequisite of open-ended and demand-driven prioritization. Every project idea had to prove, irrespective of the notifier or planning status, that it can make a contribution towards solving the pressing problems of the transport systems.

Moreover, infrastructure projects frequently consist of several subsections, which can often not all be delivered simultaneously. Sometimes, however, individual subsections have benefits for transport users before the complete delivery of an overall project. In such cases, a decision was taken, after a case-by-case review, as to whether sections of specific projects on which work had not yet commenced were to be included again in the FTIP appraisal.

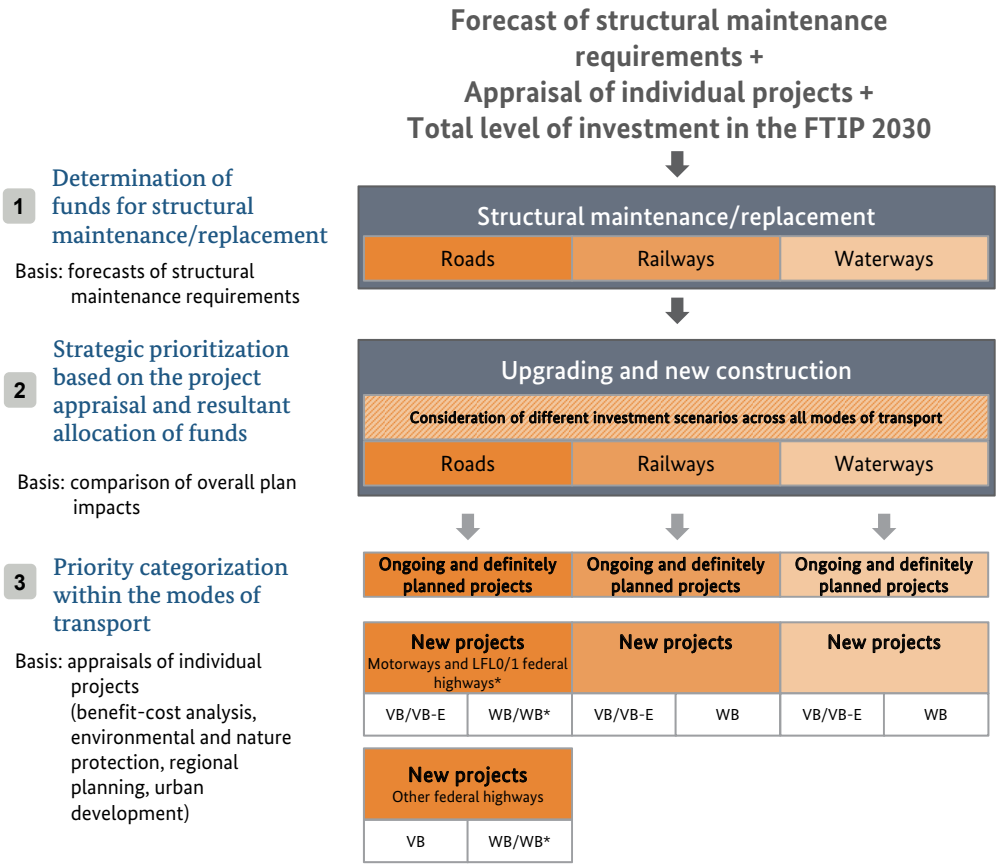
3.4 | National scheme of priorities for federal transport infrastructure that meets current and future needs

The projects studied in the FTIP not only compete with one another but also with projects from other public sectors for limited financial resources. For this reason, it is unlikely that numerous economically beneficial projects will be able to be delivered, or at least commenced, by 2030, the planning horizon of the FTIP 2030. The appraised projects thus have to be classified into various priority categories on the basis of technically sound, clear and well-understood criteria.

The national scheme of priorities developed by the Federal Ministry of Transport and Digital Infrastructure guarantees that the bulk of the funds available for upgrading and new construction will be invested in **projects with significant impacts on large areas**. In the future, at least 80 % of the funds for upgrading and new construction will be provided for projects with significant impacts on large areas across all three modes of transport.

Whereas almost all the rail and waterway projects are considered as having significant impacts on large areas, the road projects had to be studied more closely ex ante to determine their spatial link function.[5] The allocation of federal trunk roads to link function categories 0 and 1 is based on the Guidelines for Integrated Network Design and was coordinated with the federal states.

The objective of the prioritization strategy is to use the available financial resources such that they **represent value for money** and **meet current and future needs** to the greatest extent possible. This involved taking three steps, on the basis of which the funds likely to be available for investment in the lifetime of the FTIP 2030 were efficiently distributed to the individual transport infrastructure sectors. These are summarized in Figure 3.



* LFL0/1: Link function levels 0 and 1

Figure 3: Prioritization steps in the FTIP 2030

5 The basis was the consultancy study entitled "Derivation of requirements for the determination of the relevant link function level and of quality levels for the assessment of the link-related qualities of services on road networks". The findings have been recorded on a map of the federal trunk road network (published on www.bmvi.de).

First, the **capital maintenance investment and investment in replacement infrastructure** that is required for the existing road, rail and waterway networks over the period to 2030 was identified and included in the available overall budget as essential expenditure. To this end, forecasts of structural maintenance requirements were prepared or, in the case of the railways, updated on the basis of the service level and funding agreement (SLFA). In the FTIP, the capital maintenance investment and investment in replacement infrastructure was not examined for every single measure. The major objective of giving precedence to the structural maintenance and replacement of the existing networks has been implemented.

In the second step, it was necessary to define the **allocation of funds for upgrading and new construction schemes to the three modes of transport**. To this end, it was studied how the overall impacts of the plan, for instance total CO_2 emissions, change as a function of the allocation of funds. On the basis of this analysis, the strategic distribution of funds of the FTIP 2030 was established and each mode of transport was allocated an amount of funding available for upgrading and new construction.

The third step involved classifying the individual projects of individual modes of transport into **priority categories**. First, the individual projects were divided into ongoing/definitely planned projects and new projects. All ongoing and definitely planned projects will be completed as quickly as possible.

For the new projects, the FTIP 2030 contains the following priority categories: **first priority (VB) with first priority – removal of bottlenecks (VB-E)** and **second priority (WB) with second priority with planning go-ahead (WB*)**. VB/VB-E projects are due to be implemented or commenced during the lifetime of the FTIP by 2030. On the other hand, funds for investment in WB projects are not likely to be available until after 2030. The criteria for classification in the priority categories are explained in the following.

First priority (VB) with first priority – removal of bottlenecks (VB-E)
The most important criterion for classifying projects in the VB/VB-E priority category is the outcome of the **value for money assessment**. Within these priority projects, projects are labelled VB-E if, from a professional perspective, they are of **particularly high transport importance** and are thus to be implemented at an early stage. The prerequisite for this is usually that they have a high benefit-cost ratio and make a major contribution towards mitigating or removing bottlenecks. In addition, projects are only classified in VB-E if they exhibit no impact on the environment and nature conservation problems have already been comprehensively tackled in the plan approval procedure. This is designed to help ensure that work on VB-E projects can commence or the projects can be implemented at as early a stage as possible during the lifetime of the FTIP 2030.

However, projects were not classified in the VB category solely on the basis of the value for money assessment. Rather, numerous projects with a comparatively low benefit-cost ratio were classified in the first priority category because of their spatial planning and/or urban development significance. Account is also taken of synergies between structural maintenance/replacement planning and upgrading planning. Upgrading projects that simultaneously help to remove an acute requirement for structural maintenance or replacement are to be given implementation priority. As is the case with the "spatial planning" and "urban development" criteria, this is done by upgrading these projects into the VB category if they should in fact have been classified as WB on the basis of their benefit-cost ratio (BCR).

Second priority (WB/WB*)
Projects to which a fundamental transport requirement is ascribed but where the level of investment exceeds the financial framework that is likely to be available over the period to 2030 are classified in priority category WB/WB*. In the case of the road mode, projects with planning go-ahead are labelled as WB* projects within the second priority category. The federal states, acting as agents of the Federal Government, can commence project planning for WB* projects. The criteria for classification in the WB category differ from one mode of transport to the next and are described in greater detail in Chapter 7.

In addition to the aforementioned prioritization categories, there are further reasons for the classification of projects in the FTIP 2030 for the individual modes. These are described in Sections 7.2 (roads), 7.3 (railways) and 7.4 (waterways).

Part II:
The results – 269.6 billion euros for a network able to meet the challenges of the future

4 | An overview of the funds available in the FTIP 2030 – how will they be distributed?

The analyses carried out for the FTIP 2030 clearly show that there is a high level of requirements. Since numerous items of infrastructure will, over the years ahead, reach an age where they require refurbishment, the need for structural maintenance and/or replacement will arise in all three modes of transport. In the period from 2016 to 2030, the **maintenance of the structural fabric** of the road, rail and waterway networks alone will require **€141.6 billion**. This level of funding is almost equivalent to the total earmarked in the previous FTIP (2003) for structural maintenance/replacement **and** upgrading/new construction for a planning period of the same length (2001-2015). At the same time, however, it will not suffice to just preserve the existing network. The results of the network analyses and project appraisals clearly illustrate that, in the future, there will continue to be a **great demand for upgrading and new construction schemes** in all modes of transport in order to remove bottlenecks and reduce accessibility deficiencies.

The first steps of the investment ramp-up have enabled us to secure additional funding for transport infrastructure. However, it is necessary to **stabilize the investment for transport infrastructure at a high level**. For the structural maintenance, replacement and upgrading of the transport networks, the target in the FTIP period from 2016 to 2030 is an average level of funding of around €15 billion per annum. For this purpose, other pillars of infrastructure funding must be used alongside the traditional public purse funding.

The FTIP 2030 is based on a realistic level of investment by the Federal Government in transport infrastructure. **The total level of funding provided by the FTIP 2030 is €269.6 billion.** This includes – across all three modes of transport – maintenance of the structural fabric and the upgrading and new construction projects in category VB, including VB-E, for the period from 2016 to 2030 (a total of €226.7 billion). In addition, there is a "reserve" totalling €42.8 billion (including an €8.1 billion share for structural maintenance and replacement) for funding projects where work will not commence until a late phase of the FTIP's lifetime and funding will not be completed until after 2030. With the help of this total level of funding, it will be possible to meet the significantly rising need for capital maintenance investment and investment in replacement infrastructure without having to forego important upgrading and new construction projects.

Table 3 shows in detail how the total level of funding available in the FTIP 2030 is allocated to the modes of transport and the type of use. This includes not only the funding for "structural maintenance/replacement" and "upgrading and new construction", but also the funds that are likely to be required for "other investment", for instance for noise mitigation on existing railway lines, parking areas on federal trunk roads, work under the Railway Crossings Act or operating and office buildings, totalling €21.6 billion over the period from 2016 to 2030.

The investment costs of the projects have not taken any future price rises into account. This also applies to the funds for investment taken into account in budgetary and fiscal planning. This makes it possible to compare the "funding level" and "investment costs" variables.

	Total investment (in € bn)	**Other investment (2016-2030)**	**Structural maintenance/ replacement (2016-2030)**	**Upgrading and new construction (2016 to 2030) (excluding structural maintenance/ replacement share)**		**Upgrading and new construction "Reserve" (as of 2031)**
			Capital maintenance investment/investment in replacement infrastructure (incl. structural maintenance/replacement shares in combined upgrading projects)	Ongoing and definitely planned projects	New projects VB/VB-E	New projects VB/VB-E (with structural maintenance/ replacement share)
Federal trunk roads	**132.8**	12.0	67.0	15.8	18.3	19.6
Federal railway infrastructure	**112.3**	7.4	58.4	8.4	18.3	19.7
Federal waterways	**24.5**	2.2	16.2	0.9	1.8	3.5
All modes of transport	**269.6**	**21.6**	**141.6**	**25.1**	**38.5**	**42.8**

Table 3: Total level of funding in the FTIP 2030 by mode of transport and type of use[6]

6 Possible deviations in the totals are due to rounding up or down

In the period from 2016 to 2030, **a total of €141.6 billion** is earmarked **for capital maintenance investment and investment in replacement infrastructure** across all three modes of transport. This comprises both investment earmarked solely for capital maintenance investment and investment in replacement infrastructure (€118.3 billion) and the structural maintenance and replacement shares in combined upgrading projects (€23.3 billion). Over the same period, the total level of funding for **upgrading and new construction projects will be €63.6 billion.** Thus, over the period from 2016 to 2030, capital maintenance investment and investment in replacement infrastructure will account for 69 % of the total level of funding for upgrading/new construction and structural maintenance/replacement. This will implement the announced intention of the new Federal Transport Infrastructure Plan to **"give structural maintenance precedence over upgrading and new construction"**. In the FTIP 2003, the share of structural maintenance and replacement investment was 56 %.

In the sphere of upgrading and new construction, a distinction is made between "ongoing and definitely planned projects" (€25.1 billion) and "new upgrading and construction projects in the VB/VB-E category (€38.5 billon). Whereas the ongoing and definitely planned projects have been included in the FTIP without another review, all new projects have been subjected to appraisal. The ongoing and definitely planned projects' share of the total level of funding for upgrading and new construction (over the period from 2016 to 2030) is 40 %, which is significantly lower than in the FTIP 2003 (72 % over the period from 2001 to 2015.

In the FTIP 2030, the major transport arteries and junctions of the transport network take centre stage. The bulk of the funds for investment is concentrated on projects with significant impacts on large areas. In the rail and waterway modes, almost all projects have significant impacts on large areas. In the road mode, 75 % of the funds for investment will be used for projects with significant impacts on large areas (motorways and federal highways of link function levels 0 and 1) and 25 % for other federal highways. Taking an overall view of all three modes of transport, 87 % of the funds for upgrading and new construction will thus be invested in projects with significant impacts on large areas, including the ongoing and definitely planned projects.

Of the total level of funding of the FTIP 2030 of €269.6 billion, the road mode accounts for 49.3%, the rail mode accounts for 41.6 % and the waterway mode accounts for 9.1 % of funds. Relative to the total level of funding for 2016 to 2030 for upgrading and new construction projects (including ongoing and definitely planned projects), the roads' share is higher at 53 % (€2.3 billion per annum on average). The railways have a share of 42.1 % (€1.8 billion per annum on average) and the waterways 4.3 % (€0.2 billion per annum on average). A prerequisite for implementation of the investment in all three modes of transport will be that there is adequate planning capacity available in the medium and long term.

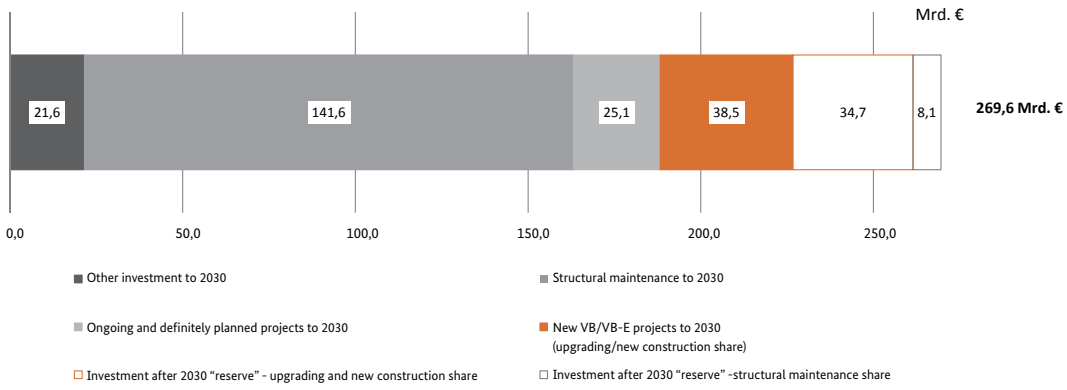


Figure 4: FTIP funding by use

To determine the allocation of funding to the modes of transport, the associated transport effects and environmental impacts, in particular, were considered at the level of the overall plan – see Chapter 7.1. In addition, the probable technical ceilings for investment were taken into account for all three modes of transport. These result in particular from the fact that capital maintenance investment and investment in replacement infrastructure plus upgrading and new construction schemes entail transport capacity constraints on the existing network.

5 | Effects of FTIP implementation – what benefit will the investment have?

5.1 | Efficient, safe and secure passenger and freight transport

Section 2.2 presented six overarching objectives that are to be achieved as the FTIP 2030 is implemented. The key priorities of the plan are to ensure **mobility in the provision of passenger and freight transport services** and to **enhance the competitiveness of companies** in Germany. These are both of particular importance for transport policy and can be heavily influenced by the Federal Government's transport infrastructure planning. The FTIP 2030 makes a major contribution towards achieving these objectives through the sustained maintenance of the structural fabric on the existing network, the removal of bottlenecks and the reduction of accessibility deficiencies.

With its key principle of **"giving structural maintenance precedence over new construction"**, the FTIP 2030 will ensure that the existing fabric of all three modes of transport does not decay despite the need for upgrading and new construction schemes. An efficient and modern existing network on which all transport users can rely is of crucial importance for both passenger and freight transport. For this reason, the largest share of the funds available will be reserved for the structural maintenance and replacement of the existing federal transport infrastructure.

In the case of upgrading and new construction, projects for the **removal of bottlenecks** will be given special priority. With the help of the FTIP 2030 projects, it will thus be possible to significantly reduce present-day and potential future bottlenecks caused by inadequate network capacity. In Figure 6 to Figure 10, this is shown in the form of bottleneck maps covering the whole of Germany for all three modes of transport. A comparison is made between the bottleneck situations in the 2030 "without" scenario and the delivery of the VB/VB-E projects. It is apparent for all modes of transport that the FTIP projects can significantly reduce the bottlenecks.

The road construction projects in the VB/VB-E category will remove capacity-induced bottlenecks over a length of around 2,000 kilometres (measured in both directions) on the German motorways. This will make it possible to reduce the amount of time spent by vehicles in stationary or slow-moving traffic by over 160 million hours per annum. This is equivalent to around 42 % of the annual time spent in congestion that would otherwise be likely on the motorways.

The rail projects envisaged on the target network will reduce capacity-induced bottlenecks over a length of around 800 kilometres and make it possible to carry both more passengers and more freight by rail. This will make it possible to reduce the train delays that would otherwise be likely by around 13 % and to reduce the waiting times that would otherwise be likely each year by around 15,200 hours. The additional capacity will result in more use being made of the railways, thereby reducing the number of passenger car kilometres by 1.5 billion and the number of HGV journeys by 724,000 (with a mileage of 519 million HGV kilometres) each year.

On the federal waterway network, a distinction has to be made between quantitative and qualitative bottlenecks. The quantitative performance of the waterway infrastructure is generally determined by the capacity of the locks. With the current condition of the network, quantitative bottlenecks only occur on a relevant scale at a few places – even if forecast growth in traffic is taken into account. It is usually qualitative navigability that is the crucial factor determining the economic efficiency of the waterways. Qualitative infrastructure bottlenecks impact on the profitability of transport operations over the entire length of all origin-destination pairs affected, even though most of the route allows better navigability.

On the target network, i.e. following delivery of all the projects classified in requirement category VB/VB-E, a total of eight qualitative bottlenecks on waterways navigable by sea-going ships with a total length of around 300 km and seven qualitative bottlenecks plus one quantitative bottleneck on inland waterways with a total of around 370 km will be removed on the federal waterways. A further four qualitative bottlenecks on inland waterways with a total length of around 430 km will have their bottleneck impact reduced in the "with" scenario.

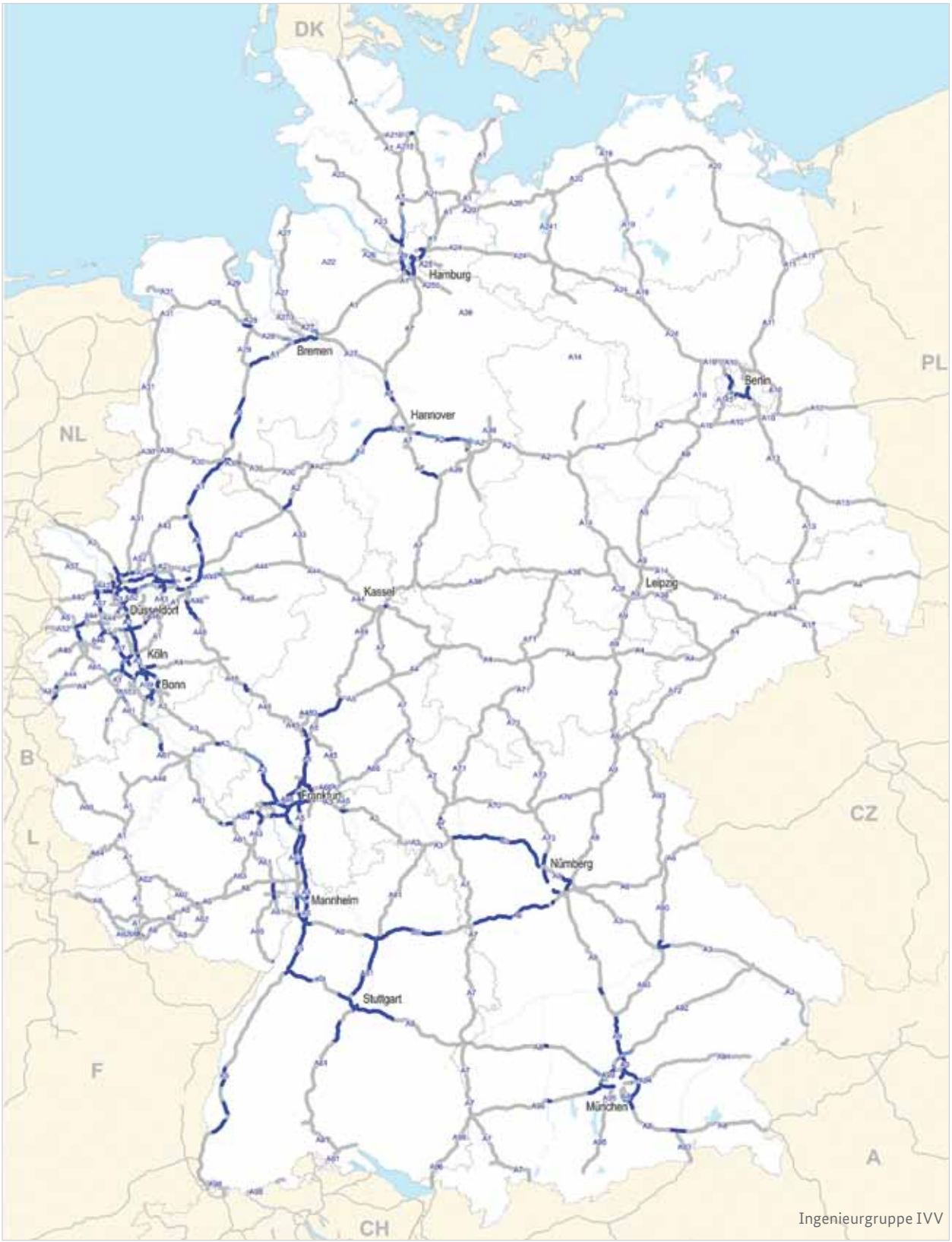
From the appraisal results of the benefit-cost analysis, it is apparent that the FTIP projects will have primarily positive economic impacts for the users. The principal major impacts will be a reduction in operating and transport costs in freight and passenger transport, benefits in terms of the time required to transport cargo, an improvement in reliability and shorter journey times in commercial and non-commercial passenger transport. In total, the projects in the VB/VB-E category in all three modes of transport will make it possible to achieve around €100 billion of benefit to the national economy resulting from lower

transport and operating costs, shorter transport times and improved reliability. In addition, journey time gains in commercial and non-commercial passenger transport will produce benefit to the national economy of around €78 billion. This will result from around 424 million fewer passenger car hours per annum in road transport and around 17 million fewer passenger hours per annum in rail transport.

An intact and modern transport network also means improvements in transport safety on the roads, railways and waterways. The systematic **maintenance of the structural fabric** is thus also geared towards achieving this important transport policy objective. Another factor is that the implementation of the projects in category VB/VB-E is likely to result in a **shift of traffic**, for instance from federal highways to federal motorways. The latter exhibit significantly lower accident figures that the federal highways. The benefit to the national economy that can be achieved through this totals around €14.5 billion in the road mode. The forecast shift of road traffic to the safer rail mode will result in a further enhancement of road safety to the tune of around €1.3 billion.

Nevertheless, it should be borne in mind that modern infrastructure can only be one element of improving transport safety. Section 9.3 describes some of the Federal Ministry of Transport and Digital Infrastructure's activities in support of this important issue outside federal transport infrastructure planning.

Motorway sections with an occasional or frequent risk of capacity-related congestion



Network: reference network according to the FTIP 2030, traffic demand in 2030

- Frequent risk of congestion (more than 300 hours per annum)
- Occasional risk of congestion (more than 100 hours per annum)
- Motorway network ("without" scenario)

Figure 5: Analysis of bottlenecks on the roads – "without" scenario

Motorway sections with an occasional or frequent risk of capacity-related congestion

Network: target network according to the FTIP 2030, traffic demand in 2030

- Frequent risk of congestion (more than 300 hours per annum)
- Occasional risk of congestion (more than 100 hours per annum)
- Motorway network (present-day network and first priority projects (VB-E + VB)

Figure 6: Analysis of bottlenecks on the roads – target network

FTIP 2030 “without” scenario

Line capacity utilization in %

- < 85 % (spare capacity)
- 85 % – 110 % (full capacity utilization)
- > 110 % (congestion)

Total number of trains per day

- 500 trains

Figure 7: Analysis of bottlenecks on the railways – “without” scenario

FTIP 2030 target network

Line capacity utilization in %

- < 85 % (spare capacity)
- 85 % – 110 % (full capacity utilization)
- > 110 % (congestion)

Total number of trains per day

- 500 trains

Figure 8: Analysis of bottlenecks on the railways – target network

Figure 9: **Analysis of bottlenecks on the waterways – "without" scenario**

Figure 10: **Analysis of bottlenecks on the waterways – target network**

Analyses of bottlenecks

For all three modes of transport, a comparison is shown between the bottleneck situation in the "without" scenario and that of the 2030 target network. The target network comprises all projects classified in the first priority category (VB/VB-E) in the Draft FTIP.

To calculate the bottleneck analysis for the federal motorway network on the target network, the existing capacity was compared with the transport demand likely each hour. This involved taking account of, among other things, the share of heavy goods vehicles, the topography of the stretch of motorway and the presence of adaptive traffic control systems. On the maps, all sections where capacity overloads are likely to be encountered occasionally or frequently are highlighted. The project-related bottleneck assessment drew on a section-by-section identification of quality levels of traffic flow in accordance with the 2015 German Highway Capacity Manual (see Section 12.5.4).

The capacity utilization of the **railways** represents the daily average for one mean working day. The degrees of utilization were formed as the ratio between the number of trains forecast and the capacity of the line. Lines on which the total number of passenger and freight trains is at least 10 % higher than the number of trains that can be handled with satisfactory operating quality are deemed to be congested. On these line sections, train delays are due to a quality of operation that is poor and no longer economically efficient.

On the **federal waterway network**, a distinction has to be made between quantitative and qualitative bottlenecks. The quantitative performance of the infrastructure is generally determined by the capacity of the locks. However, it is usually qualitative navigability that is the crucial factor determining the economic efficiency of the waterways. Qualitative bottlenecks exist in those places where the condition of the infrastructure on the core network deviates significantly from the target navigability standard. Indicators of this are primarily the permissible vessel dimensions and the available fairway depth. For origin-destination pairs covering a long distance, their reliable predictability for the entire duration of the transport operation plays a major role.

5.2 | Environmentally sustainable passenger and freight transport: exhaust emissions, noise and land take

The principal purpose of the FTIP is to establish a safe and secure transport network that meets current and future requirements. The associated effects on freight transport costs, accessibility and transport safety were described in the previous section. At the same time, however, it is also the objective of the FTIP 2030 to use the investment in transport infrastructure to lay the foundation for an environmentally sustainable transport system.

The projects contained in the Plan have, for instance, impacts on the emission of pollutants and greenhouse gases. In some cases, there are effects in opposite directions. Thus, for instance, numerous **bottlenecks** on the federal trunk road network will be removed as the FTIP projects are delivered. This will reduce not only the time spent in congestion but also the emission of pollutants and greenhouse gases. At the same time, a **shift of traffic** from the roads to the lower-emission rail and waterway modes will also mitigate environmental pressures. In some cases, however, the FTIP projects will also induce additional traffic or permit higher travel speeds, which in turn will entail higher emissions.

In total, the VB/VB-E projects of all three modes of transport will produce only around €0.3 billion of positive benefit to the national economy in the form of reduced CO_2 emissions. Here, the roads make a negative contribution (around €-3.2 billion), while the railways and waterways make a positive contribution (around €+2.2 billion and around €+1.3 billion respectively). That is the equivalent of a reduction in CO_2 of 0.4 million tonnes per annum. Measured against the CO_2 emissions from transport in Germany in 2030 totalling around 190 million tonnes, as predicted in the traffic forecast for 2030, the contribution from the FTIP 2030 is on the small side. The impact that can be made by the structural maintenance and upgrading of transport infrastructure in the endeavours to significantly reduce greenhouse gases is thus very limited. Much greater effects can be achieved by, for instance, continuously improving fuel efficiency in the transport sector.

The FTIP projects will also result in a reduction in other exhaust emissions (CO, HC, NOx and particulate matter), which means that the VB/VB-E projects of all three modes of transport will generate a benefit to the national economy totalling €0.8 billion.

With regard to the non-monetized environmental impacts (for instance land take, severance, etc.) too, care was taken when drawing up the plan to minimize impairments wherever possible. Only around 150 of the FTIP projects in the VB category were considered as having a high level of environmental impact. That is equivalent to around 16 % of all VB projects.

Within the scope of its Sustainable Development Strategy and the National Biodiversity Strategy, the Federal Government is pursuing the objective of limiting **land take for settlement and transport purposes** in Germany to 30 hectares a day. Land used for transport purposes covers 18,100 km², which is only 5 % of the area of the Federal Republic of Germany. In turn, only a small proportion of this is attributable to federal infrastructure. It also plays a relatively minor role in new land take. In 2013, the areas used for settlement and transport purposes increased by 70.5 hectares a day. Of this, land used for transport purposes accounted for 18.5 hectares a day. The VB and VB-E projects of the FTIP 2030 will cause total additional new land take of 16,299 hectares. Relative to the lifetime of the FTIP, land take for FTIP transport projects is likely to be 2.98 hectares a day. This is equivalent to a percentage share of around 10 percent of the sustainable development target value of 30 hectares a day. In the FTIP 2030, a very significant reduction in growth has thus been achieved compared with the FTIP 2003, whose total project-related growth is estimated as being around 37,100 hectares[7].

Another of the Federal Government's objectives is to preserve the existing proportion of **unfragmented areas**. Nevertheless, the first priority projects of the FTIP 2030 (including VB-E) will sever large unfragmented areas over 1,949 km. At the same time, by planning wildlife crossings, it will be possible to reconnect 27 habitat networks as part of road upgrading projects.

Individual mobility and growing flows of goods create not only prosperity but also increasing pressure on people's quality of life. The **prevention and reduction of traffic noise** is another major objective of the FTIP 2030. Thus, for instance, bypasses can reduce the exposure to noise of many people living on built-up roads. The noise impacts were thus a component of the benefit-cost analysis for all the upgrading and new construction projects studied. On the whole, the VB/VB-E projects will generate positive overall impacts. The benefit to people from noise reduction will total around €3.5 billion. Around 2.1 million people will enjoy an appreciable reduction in noise exposure, whereas around 0.7 million will be exposed to additional noise.

In addition, upgrading and new construction projects can unlock **urban development potential**. A high urban development impact has been identified in around 380 VB road projects, especially bypasses. These projects will make a major contribution to reducing the pressure on people in their living environment. In addition, around 60 of the VB road and rail projects will generate great spatial planning improvements, which means that the Plan will also make a major contribution to the objective of **improving accessibility and the quality of links**.

7 Cf. The 2030 Environmental Report

6 | Investment in structural maintenance and replacement – how are we equipping our existing network to meet the challenges of the future?

6.1 | Federal trunk roads

General framework
The federal trunk road network comprises around 13,000 km of federal motorways and around 39,000 km of federal highways.

The structural maintenance of the continuously growing federal trunk road infrastructure has become significantly more important in recent years. As a result of the **growing stresses and strains** and the **increasingly unfavourable age structure** of the road and bridge fabric, disruption caused by the condition of the fabric is occurring more and more frequently on the network, especially in the western federal states. To continue to satisfy the transport requirements, full depth reconstruction of the carriageway pavements and restoration or strengthening of civil engineering structures are scheduled for a large part of the existing network in the years ahead.

As a basis for the FTIP 2030, the **2016 – 2030 forecast of structural maintenance requirements** for the federal trunk roads was conducted. Its purpose is to estimate the funding required for the structural maintenance of the entire existing federal trunk road network, including all carriageways, structures and other miscellaneous components.

The rising level of investment in transport infrastructure and the great need for fabric-related structural maintenance work means that a large number of longer-term road works will be necessary in the years ahead. In the future, optimization of the sequence of road works on the federal trunk road network will be given high priority and attention in the **structural maintenance management system**. In addition, one of the top-priority objectives will be to enhance the quality of road works in such a manner that there are quite long periods of time in which there are no road works and traffic can flow without restrictions. Improved publicity campaigns are designed to enable road users to plan their journey times better.

The rising need for structural maintenance and replacement has already been taken into account in recent years by continuously increasing expenditure in this sphere. In 2011, expenditure on structural maintenance and replacement in the road mode was just under €1.9 billion. A significant increase was achieved in 2012 (€2.2 billion) and 2013 (€2.5 billion). In 2014, over €2.7 billion was invested – almost €1 billion more than in 2011. In the past, it was observed on several occasions that actual expenditure deviated from budgeted expenditure. It has been possible to significantly reduce these deviations. In 2011, only just over 78 % of the planned funds for structural maintenance and replacement in the road mode were spent. In 2014, more was invested in structural maintenance and replacement than planned (103 %).

Development of the network condition
With the help of the capital maintenance investment and investment in replacement infrastructure, the fabric of the carriageways and structures of the federal trunk roads is, in the years ahead, to be brought back to a **level of condition that is better than 2010**, that can withstand the stress imposed by traffic, which will continue to rise in the future, and that will secure mobility in Germany in the long run.

In structural maintenance planning, a fabric indicator is used to describe the **condition of bridges**. Every single item of damage ascertained during checks is assessed on the basis of the criteria of structural stability, road safety and durability. A "fabric indicator" is automatically calculated from all the damage assessments on a part of a structure using a fixed algorithm and by combining the criteria of structural stability and durability. This indicator has a six-level range of values from a very good condition of the structure (fabric indicator 1.0 to 1.4) to an inadequate condition of the structure (fabric indicator 3.5 to 4.0).

In the period covered by the forecast, around 32 % of the surfaces of **motorway bridges** will require structural maintenance work in the medium term (fabric indicator: 2.5 to 2.9). For around 14 %, there is an urgent need for repair or renewal (fabric indicator: 3.0 to 4.0). In the case of **federal highway bridges**, there is a medium-term need for 27 % and an urgent need for 10 % of the surfaces.

In addition to the necessary structural maintenance work, it is also necessary, because of the sharp rise in traffic volumes, to reinforce older bridges or to partly or completely renew them. In the case of the civil engineering structures, the forecast of structural maintenance requirements pursues the objective of giving priority treatment to these "strengthened structures" over the period covered by the forecast and not allowing the condition of the remaining stock of structures to deteriorate any further. A high level of investment in

bridge strengthening will significantly improve the overall condition of the civil engineering structures.

To make it possible to get a better overview of the state of play regarding bridge strengthening, all relevant projects with costs totalling over €5 million will be included in the **"Special Bridge Modernization Programme"** and funded from it. Around €2 billion will be available for this purpose in the period from 2015 to 2018. All bridge strengthening schemes that receive construction go-ahead will be funded.

For carriageways, regularly measured surface condition characteristics plus data on traffic volume, the structure of the road and its structural maintenance history are used as a basis for the forecast. On a regular four-year cycle, the longitudinal and transverse evenness, skid resistance and fabric features regarding the surface of all federal trunk roads are recorded and aggregated ("surface fabric value") as part of the condition survey and assessment of carriageway surfaces. Together with the type, thickness and age of the carriageway pavements ("stock fabric value"), an overall fabric value is calculated, which is used as an indicator for timely and economical structural maintenance of the roads. The condition of the carriageways is measured on a scale that is almost identical to that used for bridges, although here the scale has been augmented by one grade and ranges from 1 to 5 rather than 1 to 4.

On the scale of values, stretches of road with a condition value of 3.5 – the warning value – or more require intensive observation and an analysis of the causes of the poor condition. From a condition value of 4.5 – the threshold value – , the introduction of traffic restrictions or structural measures must be considered immediately.

In the case of carriageways, the objective is to reduce the proportions of federal trunk roads with a poor fabric condition of grade 4.5 or more for the carriageway indicators relevant to the fabric ("stock fabric value"). Another aim is to stabilize these reduced proportions until the end of period covered by the forecast in 2030. In the case of the federal motorways, the proportions with a condition grade worse than 4.5 are to be reduced on a national average from around 18 % to 10 %, and in the case of the federal highways from 19 % to 10 %. In the western federal states, in particular, this will require stepping up full-depth reconstruction work on the carriageway pavements.

Necessary investment in the existing network
For the structural maintenance of the federal trunk road network, a **need totalling around €67 billion** has been identified for the period from 2016 to 2030. The main causes of this higher need for funding are the cost increases of around 28 % between 2001 and 2014, the growth in the volume of freight traffic, overloading, a massive increase in the number of movements of abnormal loads and necessarily rising investment for the strengthening of bridges of around €13 bn. In addition, there is capital maintenance investment and investment in replacement infrastructure that was postponed in the past.

The funds for structural maintenance established in financial planning for the period to 2019 were taken into account in the **forecasting** for the period from 2016 to 2020. For the period from 2021 to 2030, the structural maintenance requirements have been calculated with the objective of improving the carriageway and bridge fabric.

The average funding required for structural maintenance is **around €4.5 billion per annum**. The share required for the structural maintenance of the carriageway pavements is around 52 % on average. The structural maintenance and strengthening of the civil engineering structures account for around 37 %. The share required for the structural maintenance of other miscellaneous components, cycle tracks and buildings is around 11 %.

6.2 | Federal railway infrastructure

Framework for investment in replacement infrastructure and preventive maintenance
The network of the federal railways exhibits an operational length of around 33,000 km. Under Article 87e of the Basic Law, the Federal Government is responsible for upgrading and maintaining this network and funds investment in the railways under Section 8(1) of the Federal Railway Infrastructure Upgrading Act. This comprises investment in replacement infrastructure and in the existing network. Under the umbrella of **Deutsche Bahn AG**, DB Netz AG, DB Station&Service AG and DB Energie GmbH, as federal railway infrastructure companies, are the **owners of the railway infrastructure**. In performance of their entrepreneurial function, they maintain their tangible assets and act as clients in investment projects. The corporation is controlled exclusively by its supervisory board. According to the provisions of the Stock Corporation Act, the Federal Government is not permitted to exert any other influence on individual entrepreneurial decisions taken by Deutsche Bahn AG, even though the Federal Republic of Germany is the sole shareholder.

The Federal Government funds investment in the existing network of the railway infrastructure companies by providing building subsidies, which usually cover all construction costs and are non-repayable. Until 2008, investment was funded within the scope of "collective funding agreements". A verification of proper use, conducted by the Federal Railway Authority after completion of the work, ensured that the funds were used appropriately and efficiently. In 2009, this input control was replaced by an output control as part of a **service**

level and funding agreement (SLFA), which requires the preservation of an agreed network quality on the existing network. SLFA II has been in force since 1 January 2015 and will run until the end of 2019.

With the SLFA, the railway infrastructure companies undertake to preserve their railway infrastructure in a high-quality condition. To this end, they guarantee minimum levels for investment in replacement infrastructure and preventive maintenance work. Whereas the former refer to the replacement of worn out facilities, the purpose of the latter is to maintain the full operational readiness of the existing facilities. Investment in replacement infrastructure is largely funded by the Federal Government, although the SLFA also requires the companies to make a certain contribution of their own.

Within the framework of the SLFA, the railway infrastructure companies can take their own decisions regarding their investment activities and priorities. However, the condition of the infrastructure is regularly measured using **quality indicators underpinned by sanctions**, for which annual targets are established. If the quality targets contractually agreed in the SLFA are not achieved, the Federal Government may reclaim its infrastructure contribution either wholly or in part. An infrastructure auditor appointed by the Federal Government conducts an annual audit to determine whether the railway infrastructure companies are properly meeting their obligations. In addition, Deutsche Bahn AG publishes an annual infrastructure condition and development report, in which it provides an account of the condition and development of the existing rail network and the fulfilment of its contractual objectives. This report can be downloaded from Federal Railway Authority's website (www.eba.bund.de > Finanzierung > LuFV > Infrastrukturzustandsbericht).

Condition of the rail network

For **DB Netz AG**, the *"number of infrastructure deficiencies"* and *"theoretical delays"* are major quality indicators underpinned by sanctions. The latter describes the delay that a theoretical train with an infinitely large acceleration and braking capacity suffers when operating on the overall network due to the fact that, because of deficiencies, it cannot operate on all lines at the speed at which it could travel if the lines were in perfect condition.

For **DB Station&Service AG**, the *"functionality of platforms"* and the condition grades resulting from the *"assessment of the quality of facilities"* are of particular relevance. Both indicators are considered for both the long-distance and conurbation network and for the regional networks. For **DB Energie GmbH**, the key quality indicator is the *"security of railway energy supply"*.

The information provided on the fulfilment of the indicators underpinned by sanctions is regularly reviewed by the Federal Railway Authority. Since 2008, the values have evolved as shown in Table 4. The only time the target values were exceeded was in 2013 with the *"theoretical delays"* quality indicator

Quality indicator		2008	2009[2]	2010[2]	2011[2]	2012[2]	2013[2]	2014
Theoretical delays [min.]	Overall network (target)	-	2,843	2,841	2,840	2,839	2,645	2,627
	Overall network (actual)	2,845[1]	2,763	2,594	2,601	2,496	2,675	
	LD&CN (target)	-	777	775	774	773	771	731
	LD&CN (actual)	779[1]	700	591	565	513	779	
	RN (target)	-	2,076	2,076	2,076	2,076	2,076	2,076
	RN (actual)	2,076[1]	2,073	2,013	2,047	1,993	1,907	
Number of infrastructure deficiencies	(Target)	-	-	1,758	1,719	1,677	1,644	1,459
	(Actual)	-	1,778[1]	1,687	1,607	1,515	1,500	
Functionality of platforms [points]	DB St&S (target)		22,328	22,445	22,663	22,829	22,945	23,681
	DB St&S (actual)	22,212[1]	22,426	22,712	22,930	23,216	23,493	
	RNI (target)		397	401	403	407	410	427
	RNI (actual)	395[1]	408	408	413	423	424	
Assessment of quality of facilities [grade]	DB St&S (target)	-	-	3.12	3.10	3.08	3.06	3.01
	DB St&S (actual)	-	3.14[1]	3.13	3.07	3.05	3.03	
	RNI (target)	-	-	3.47	3.41	3.36	3.31	3.20
	RNI (actual)	-	3.52[1]	3.44	3.17	3.28	3.25	
Security of railway energy supply [%]	(Target)	-	99.85	99.85	99.85	99.85	99.85	99.85
	(Actual)	-	99.98	99.985	99.912	99.927	99.99	
Minimum level of investment in replacement infrastructure [€ millions]	(Target)	-	2,500	2,500	2,500	2,500	2,750	2,750
	(Actual)[3]	-	2,958	2,942	2,904	3,077	3,091	
Minimum level of investment in preventive maintenance [€ millions]	(Target)	-	1,250	1,000	1,000	1,000	1,100	1,100
	(Actual)[3]	-	1,374	1,457	1,436	1,475	1,497	

Table 4: Evolution of quality indicators underpinned by sanctions on the existing rail network since 2008

LD&CN = long-distance and conurbation network
RN= regional network
DB St&S = DB Station&Service AG
RNI = DB RegioNetz Infrastruktur GmbH

(1) Baseline value
(2) Actual values reviewed by the Federal Railway Authority regarding fulfilment of the contractual obligations in the SLFA [unless footnote (3) applies]
(3) Values from the report of the infrastructure auditor

Necessary investment in the existing network

For the structural maintenance of the federal rail network, a **need totalling around €58.4 billion** of federal funding has been identified for the period from 2016 to 2030. This calculation is based on an update of the SLFA II, which is in force until 2019, and an estimate of the replacement shares of the upgrading and new construction schemes planned in the FTIP 2030.

The SLFA II provides for investment in the replacement of existing railway infrastructure totalling on average €4 billion per annum over the period to 2019, as Table 5 illustrates. This includes around €3.3 billion on average from the federal budget and, starting in 2016, additional dividend payouts to the Federal Government, which will be provided in their entirety by the Federal Government for investment in railway infrastructure. Moreover, it has been taken into account that investment in upgrading projects replaces investment in the existing network where it affects the existing network. In addition, the railway infrastructure companies make a contractually stipulated contribution of their own totalling €100 million for investment in replacement infrastructure. We are thus following the principle of the railways funding the railways.

	2015	2016	2017	2018	2019	Average (rounded)
Federal Government infrastructure contribution (estimate in the federal budget)	3,350	3,153	3,075	3,500	3,500	3,316
Planned dividend payouts by Deutsche Bahn AG for investment in replacement infrastructure	0	500	600	450	650	440
Investment in requirement plan upgrading projects that is relevant to the existing network	289	114	170	62	85	144
Railway infrastructure companies' own resources	100	100	100	100	100	100
Total: need for replacement/meeting the need	**3,739**	**3,867**	**3,945**	**4,112**	**4,335**	**4,000**

Table 5: **Investment in replacement infrastructure on the rail network in accordance with SLFA II, figures in € millions**

In addition, Deutsche Bahn annually provides an average of at least €1.6 billion of its own resources for the preventive maintenance of the existing network. This means that, over the period to 2019, a total of at least €28 billion will be available for investment in replacement infrastructure and the preventive maintenance of the existing railway infrastructure. By comparison, around €23 billion was available in the lifetime of SLFA I, which was also five years. This is equivalent to an increase in the funds for investment and preventive maintenance on the existing network of more than 20 %.

For the post-2019 period, the values of the current SLFA II will initially be updated as part of the FTIP planning activities. For the funds for investment of the FTIP 2030, only the Federal Government's investment in replacement infrastructure is relevant here. The total level of Federal Government funding for expenditure on replacement infrastructure on the federal rail network in the **period from 2016 to 2030 is €58.4 billion**. This comprises, on the one hand, the expenditure that is purely on replacement infrastructure and, on the other hand, the replacement shares of the FTIP 2030 upgrading projects that are relevant to the existing network.

For the FTIP expenditure that is purely on replacement in the period from 2016 to 2019, the figures from the SLFA II were carried over (Federal Government infrastructure contribution) and subsequently rolled forward with €3.5 billion per annum over the period to 2030. In addition, shares of the expenditure on the European Rail Traffic Management System (ERTMS) that are relevant to the existing network were taken into account. The level of expenditure from Federal Government funds that is purely on replacement will thus be €52.4 billion in the period from 2016 to 2030.

The replacement shares of the upgrading projects that are relevant to the existing network were determined on a project-by-project basis for the period from 2016 to 2030 using the FTIP 2030 projects earmarked for the first priority category. Over the period from 2016 to 2030, this expenditure will be around €6 billion. The specific replacement shares per project are shown in the annexes to the FTIP and in the Project Information System (see section 8.3). The need for structural maintenance and replacement for the federal railways is thus estimated as totalling €54.8 billion over the period from 2016 to 2030.

The exact investment sums will be established in due course within the scope of future service level and funding agreements.

6.3 | Federal waterways

Framework for investment in replacement infrastructure and capital maintenance investment

The federal waterway network comprises waterways navigable by sea-going ships covering an area of 23,000 km² and inland waterways with a length of 7,300 km. Of these, some 4,500 km are of great importance for waterborne transport. The federal waterways also perform other functions, such as ensuring the runoff of water, the supply of industrial water, electricity generation and use for recreational purposes.

Around one third of the inland waterways comprise flee-flowing rivers such as the Rhine and Elbe, while two thirds consist of canalized rivers (such as the Moselle, Neckar and Main) and canals (such as the Western German canal network and the Mittelland and Kiel Canals). These contain a large number of physical structures that play a major role in determining the fabric of the waterways. These structures include, for instance, over 300 locks and weirs, around 1,300 road and railway bridges across federal waterways plus over 350 siphons, the maintenance of which is the responsibility of the Federal Waterways and Shipping Administration. In addition, there are structures such as dykes on impounded reaches and canals, embankments and river regulation structures. In the sphere of the waterways navigable by sea-going ships, lighthouses, leading lights, beacons and buoys, among others, are relevant.

Condition of the federal waterway network

The fact that, in the years ahead, the need for investment in replacement infrastructure for the physical structures on the federal waterways will rise at an above-average rate is due to their **age structure**. Another factor is that the failure to invest in capital maintenance because of the constraints on public funding have been leading to cumulative structural deterioration for around two decades. Figure 11 shows, by way of example, the age structure of the weirs, locks and siphons. Around one half of the weirs and around 60 % of the locks were constructed before 1950, and around 10 % (weirs) to 20 % (locks) even date from before 1900.

Given a technical service life for these types of structure of around 80 years, the age structure shows that a large number of them on the federal waterways have reached or already exceeded this. Looking ahead over the next 20 years, this becomes even more apparent. Of the approximately 170 locks on the core network, around 120, i.e. 70 %, will be more than 80 years old by 2035. Experts estimate that, of these structures, around 100 locks will have to be replaced by new structures in the next 20 years, whereas only 7 locks have been replaced by new structures in the past 20 years.

Age structure

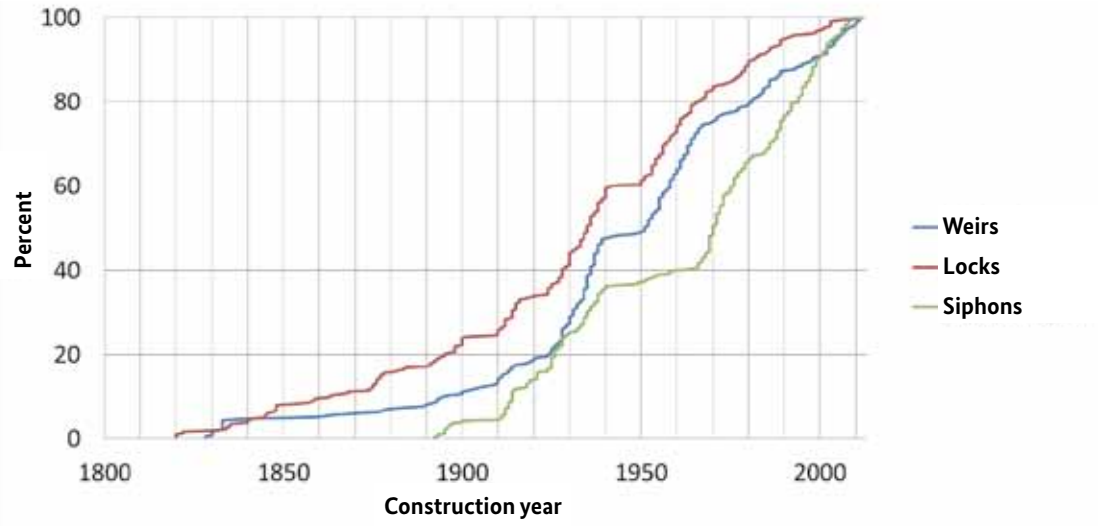


Figure 11: **Age structure of selected structures on the federal waterways**

Because of the age structure and deferred capital maintenance investment from the past, **critical structural conditions** are becoming increasingly apparent. The river and canal structures are regularly subjected to monitoring and inspection by experts in order to ensure their serviceability, structural stability and safety for traffic or, if necessary, to restrict traffic. Despite traffic restrictions, damage to structures may still entail serious risks. The failure of almost all hydraulic engineering structures can result in scenarios where there is great harm to the national economy, even going as far as danger to life and limb.

The results of the inspection and monitoring of the structures are documented in detail. A condition grade – similar to that for bridges in the road mode – is determined as a significant indicator for the structure. In simplified terms, this expresses the urgency of the need for action on the structure and represents a decision-making criterion for the planning of structural maintenance work.

The proportion of structures that are classified in the critical range of grades, or at least in the range where greater attention is required, is constantly increasing. Even if the condition grade alone does not provide any direct information on the extent of the work required, it is possible to conclude, on the basis of statistically backed up empirical values, that for around 18 % of the existing structures with the condition grade of "inadequate/ unsatisfactory" or "adequate", major restoration or the construction of a new replacement structure will be necessary. For the especially important types of structure, this produces the situation shown in Table 6.

River and canal structures	Structures inspected	Condition inadequate/ unsatisfactory or adequate	Structures where construction of a new replacement structure or major restoration will be necessary within 10 years
Locks	314	85 %	50
Weirs	240	73 %	30
Siphons	352	45 %	30
Culverts	69	33 %	5
Pumping stations	47	87 %	10
Bridges	1,261	49 %	110

Table 6: Condition of selected types of structure on the federal waterways

In addition, there are further needs for types of structure not considered here, such as flood barrages, sheet piling, river regulation structures, revetments, dykes and traffic engineering, which are also relevant to safety. For some of the investment in replacement infrastructure – especially for critical works – there are already drafts with a total level of funding of around €3 billion as justification of the needs.

Necessary investment in the existing network

The gross stock of fixed assets of the federal waterways (excluding land) is estimated at around €50 billion (at 2013 prices). Locks, lifts and weirs are the most expensive installations, alongside the canals, in terms of investment and consequential costs. Using a lump-sum depreciation approach, it is possible to calculate from the fixed assets a **need for investment in replacement infrastructure of €900 million per annum** simply to compensate for the annual structural deterioration. In addition, the **capital maintenance investment**, which is considered separately in the case of the federal waterways, will be continued with its long-term projection of around **€250 million per annum**.

Over the planning period of the FTIP to 2030, this means that – including the estimates already projected in medium-term fiscal planning – there will be a total level of funding of around €12.4 billion for investment in replacement infrastructure plus an additional €3.8 billion for capital maintenance investment. Thus, the total level of funding needed for structural maintenance and replacement from 2016 to 2030 is **€16.2 billion**.

Some of these needs for structural maintenance and replacement are also met by the replacement shares of the appraised waterway upgrading projects. This is the case, for instance, when installations in need of replacement are reconstructed with larger dimensions to enable larger vessels to operate. In these cases, the fictitious costs of investment in replacing the existing installation are valued as the replacement share, for instance the costs of restoration or construction of new installations with the original dimensions.

Of the total level of funding for the ongoing and definitely planned and for the first priority waterway projects of around €7.6 billion, the share for investment in replacement infrastructure is around €2.8 billion. This share of investment in replacement infrastructure for the upgrading projects is to be offset against the aforementioned funding need for investment in replacement infrastructure, which means that structural maintenance and replacement work not connected with upgrading and new construction only accounts for €13.4 billion.

7 | Investment in upgrading and new construction – how will we evolve our transport network?

7.1 | Distribution of funding among the modes of transport on the basis of investment scenarios

To determine the level of investment required for upgrading and new construction, various investment scenarios were created and studied in terms of their impact on the overall plan. The objective was initially to generally show what the impact on the overall transport network is and what the associated effects are. Here, the strategic distribution to the modes of transport was not yet to be intermingled with the question as to which individual projects will actually be delivered in the modes of transport.

Three investment scenarios were studied and they are shown in Table 7. The investment scenarios relate to the level of funding in the Draft FTIP for upgrading and new construction projects totalling €94.7 billion. **Scenario 1** is based on traffic in terms of passenger and tonne kilometres for the modes of transport in Germany. The mode of transport with the highest figure is road – in both passenger transport (87 % of passenger kilometres in 2014) and freight transport (71 % of tonne kilometres in 2014). Accordingly, this scenario produced a road-heavy result. **Scenario 2** takes as its starting point the planned distribution of the funds for upgrading and new construction in the 2016 budget and rolls them forward. **Scenario 3** is based on the Sustainable Development Strategy, which has formulated as its objective a shift to more environmentally sustainable modes of transport. Accordingly, it made provision for stepping up investment in the railways and waterways.

	Level of investment for upgrading and new construction (incl. reserve)		
	Scenario 1	Scenario 2	Scenario 3
	Traffic in terms of passenger and tonne kilometres	**Status quo**	**Step up investment in railways/waterways**
Total funding for upgrading and new construction	**€ 94.7 bn**	**€ 94.7 bn**	**€ 94.7 bn**
Roads	€75.7 bn (80 %)	€ 55.9 bn (59 %)	€28.4 bn (30 %)
Railways	€15.1 bn (16 %)	€36 bn (38 %)	€58.7 bn (62 %)
Waterways	€3.8 bn (4 %)	€2.8 bn€ (3 %)	€ 7.6 bn (8 %)
Of which ongoing and definitely planned			
Roads	€15.9 bn	€15.9 bn	€15.9 bn
Railways	€8.4 bn	€8.4 bn	€8.4 bn
Waterways	€0.9 bn	€0.9 bn	€0.9 bn
Of which for new VB/VB-E projects			
Roads	€59.9 bn	€ 40 bn	€12.6 bn
Railways	€6.7 bn	€27.6 bn	€50.3 bn
Waterways	€2.9 bn	€1.9 bn	€6.6 bn

Table 7: Levels of investment in the three investment scenarios based on the level of investment in the Draft FTIP of 16 March 2016

To estimate the impact on the overall plan, mean project impacts per invested euro were calculated for each mode of transport. This calculation was based on the outcomes of the 2,000 individual project appraisals[8]. It was possible to estimate the impact on the overall plan from the mean impacts for each mode of transport and the level of investment per mode of transport assumed in the scenarios.

Table 8 shows the results in terms of key indicators of the transport network. More detailed information, in particular on the environmental impacts of these scenarios, can be found in the Environmental Report. There, they form part of the statutorily required assessment of options in Strategic Environmental Assessment.

8 For the road and rail modes, all projects with a BCR ≥1 were included in the calculation of mean values. In the case of the waterway mode, all projects studied in the main appraisal were included in the mean value provided that they exhibit a BCR ≥1 or are located on waterway categories A or B.

		Scenario 1	Scenario 2	Scenario 3
Selected impact quantities	**Unit**	**Traffic in terms of passenger and tonne kilometres**	**Status quo**	**Step up investment in railways/waterways**
Cash value of benefits	Cash value in € millions	222,691	174,982	113,203
Present value of costs	Present value in € millions	57,953	54,148	48,957
Mean BCR	-	3.8	3.2	2.3
Internal benefits of users (journey time gains, operating cost reductions, etc.)	Present value in € millions	200,848	158,920	102,943
Benefits from transport safety	Present value in € millions	21,106	15,100	6,653
Monetized environmental benefits	Present value in € millions	-2,545	76	5,966
Of which benefits from CO_2 changes	Present value in € millions	-4,478	-1,821	3,527
Of which benefits from other pollutants	Present value in € millions	-58	383	1,633
Of which benefits from noise	Present value in € millions	1,992	1,514	806
Projects with a high level of environment impact	Number	183	130	58
Land take	Hectares	24,097	18,216	9,651
Adverse impacts on priority natural areas	Hectares	3,303	2,377	3,679
Significant adverse impacts on Natura 2000 sites	Number	224	174	118
Severance of large unfragmented areas	Kilometres	3,028	2,303	1,246
Severance of unfragmented areas with a low density of traffic	Kilometres	104,464	77,671	38,602

Table 8: Impact of the investment scenarios on the overall plan (see Table 7)

Note: Present values represent the total benefits and costs over the entire useful life of the projects, harmonized to the reference date of 2015.

The options show the expected picture of the modes of transport. By removing bottlenecks and improving the infrastructure, road projects contribute primarily to time gains, cost reductions and an enhancement of transport safety. Here, the transport users derive mainly direct benefit. The impact of the FTIP projects on CO_2 and pollutants have on average a negative target contribution in the road mode. In the case of rail and waterway projects, on the other hand, there is on average a lower benefit for transport users. Nevertheless, these projects can help to reduce climate change emissions and pollutants. However, the internal benefits for the users are many times higher than the environmental impact in all modes. Accordingly, scenario 1, which is based on traffic in terms of passenger and tonne kilometres, is the scenario that represents the best value for money (mean BCR = 3.8). Scenario 2, which is the status quo (BCR = 3.2), and scenario 3, which involves stepping up investment in the roads and railways (BCR = 2.3), lag far behind the value for money of scenario 1 (traffic in terms of passenger and tonne kilometres), despite their better environmental benefits.

From the perspective of the environmental protection and nature conservation variables, the projects of all modes of transport result in additional land take. Here, the average land take in the road mode per invested euro is almost five times as large as that in the rail mode and as many as twelve times as large as that in the waterway mode. It is a similar picture regarding the severance of areas with a low density of traffic and large unfragmented areas. As far as adverse impacts on priority natural areas and Natura 2000 sites are concerned, it is not possible to identify any general direction of impacts in the individual modes of transport. Here, the selection of the individual projects per mode of transport is more decisive.

If all variables are included, it is not possible to give a **clear recommendation in favour of one mode of**

transport. Each mode of transport has strengths and weaknesses that have to be taken into account. From an environmental perspective, stepping up investment in the rail and waterway modes is welcome. However, the absolute effect of shifting funds for investment should not be overestimated. Thus, for instance, in scenario 3, CO_2 emissions will be reduced by a total of one million tonnes in 2030. Given that the traffic forecast for 2030 estimates that CO_2 emissions from transport in Germany are likely to be around 190 million tonnes in 2030, infrastructure investment can make only a minor contribution to their reduction.

The FTIP 2030 is a plan for high-capacity transport infrastructure. Its principal purpose is to establish a safe and secure transport network that meets current and future requirements. However, it is the objective of the Federal Government to use the investment in transport infrastructure to lay the foundation for an environmentally sustainable transport system. For this reason, the intended investment **of the FTIP 2030** will, to the extent that this is economically justifiable and practicable, be shifted towards the third scenario to the **benefit of the waterway and rail modes**. Table 9 shows the finalized distribution of investment of the FTIP 2030. Compared with the Draft, the total level of funding for upgrading and new construction has risen to €98.3 billion. Of this, the roads account for around 52 %, the railways for 43 % and the waterways for 5 %. In the period from 2016 to 2030 (excluding the reserve), €63.6 billion of this will be required (53.6 % for the roads, 42.1 % for the railways and 4.3 % for the waterways). For a more detailed account, see also Chapter 4.

Level of investment for upgrading and new construction (incl. reserve)

	FTIP 2030
Total funding for upgrading and new construction	**98.3**
Roads	50.9 (52 %)
Railways	42.5 (43 %)
Waterways	4.9 (5 %)
Of which for ongoing and definitely planned projects	
Roads	15.8
Railways	8.4
Waterways	0.9
Of which for new VB/VB-E+ projects	
Roads	35.1
Railways	34.1
Waterways	4.0

Table 9: **Distribution of the levels of investment for upgrading and new construction for the FTIP 2030 in billions of euros**

The selected distribution of funding in the FTIP 2030 also takes technical constraints into account. These result in particular from the fact that capital maintenance investment and investment in replacement infrastructure plus upgrading and new construction schemes entail transport capacity constraints on the existing network. These can only be compensated for (for instance by using alternative routes) if work is not underway simultaneously at too many places on the network. The distribution of funding in the FTIP 2030 provides for an annual average of €7.6 billion to be invested in the roads, €6.1 billion in the railways and €1.4 billion in the waterways over the period from 2016 to 2030 for capital maintenance investment and investment in replacement infrastructure plus upgrading and new construction. Compared with 2016, this is equivalent to a rise of 20 % for the rail mode and 40 % for the waterway mode.

7.2 | Federal trunk roads

How the study was conducted

Today, the bulk of traffic – in both the passenger and freight transport sectors – goes by the road mode, and this will continue to be the case in the future. The traffic forecasts show that it will be necessary to improve the infrastructure, especially for those parts of the road network that carry high volumes of traffic. To this end, the FTIP draws heavily on the local knowledge of the federal states, which, under the Basic Law, act as agents of the Federal Government for the planning, construction and maintenance of the federal trunk roads. In addition, the federal states were provided with the results of systematic network assessments by the Federal Ministry of Transport and Digital Infrastructure, especially with regard to forecast bottlenecks on the motorway network.

On this basis, the federal states notified a total of **over 2,300 complete projects or sub-projects** for appraisal. The requirements set by the Ministry to be met by the project notifications were significantly more stringent than in previous federal transport infrastructure planning. In particular, the notifications had to state a specific alignment with the necessary civil engineering structures (bridges, noise abatement walls, etc.), the protected areas affected and the probable costs. Some of the notifications submitted by the federal states also contained alternative projects or – if the plans are still at an early stage of planning and there is still no preferred option – other conceivable options to provide an aid to decision-making for the future process (see Section 12.5)

All the road projects notified were reviewed by external consultants with regard to their environmental sustainability and the stated costs. Subsequently, all projects were studied on the basis of the FTIP's appraisal procedure (see Chapter 12). The appraisal results form the basis for the priority categorization of the notified projects.

Prioritization and results

In the FTIP 2030, the focus of the investment is in the sphere of projects with significant impacts on large areas. In the case of road projects, a distinction is made between federal motorways and federal highways of link function levels 0 and 1 on the one hand and the other federal highways on the other hand. **75 % of the funds for investment in all upgrading and new construction road projects will be used for the projects with significant impacts on large areas** and 25 % for other federal highways. The trunk routes used by long-distance traffic will have to absorb the bulk of the forecast growth in traffic. With this approach, the Federal Ministry of Transport and Digital Infrastructure is discharging its responsibility for all federal trunk roads. Both the long-distance links and the other federal highways perform important functions on the German trunk road network, and this function must be preserved in the future.

The upgrading and new construction projects in the road mode are divided into "ongoing and definitely planned projects" and "new projects". The ongoing projects and the projects that are definitely planned as a result of funding commitments have been included for information purposes in the FTIP 2030 without being subjected to a new appraisal. In the road mode, the total level of funding required to complete these projects is around **€23.9 billion**.

The main prioritization criterion for the new road projects is the **benefit-cost ratio**. Given the large number of road projects with a high level of value for money, they were normally classified in the first priority category upon reaching a high benefit-cost ratio. Within these first priority projects, those motorway upgrading projects that usually exhibit a high benefit-cost ratio and at the same time no high environmental impact are labelled VB-E. By widening existing transport infrastructure, these projects make a major contribution towards removing bottlenecks (see Section 12.5.4). These projects have a level of funding totalling around **€15.4 billion**. In addition, within the ongoing and definitely planned projects, those road projects that can be assumed to generate special benefit for the removal of bottlenecks despite the lack of a new appraisal are labelled in a similar manner to the VB-E category. The projects have a level of investment totalling around €5 billion. The total level of funding of the projects that are especially important for the removal of bottlenecks is thus around €20 billion.

The vast majority of the new upgrading projects labelled VB-E are projects that are still at an early stage of planning and that it will not be possible to deliver until they have passed through the various planning stages. Priority planning is necessary for the priority implementation of the VB-E projects. It will be necessary to increase the planning capacity for the planning of the VB projects as a whole.

Projects with great spatial planning significance have also been classified in the first priority category. These are projects that make a major contribution towards mitigating or removing accessibility deficiencies. Many projects with great spatial planning significance have in any case been classified in the VB category because of their high level of value for money. However, there are also road projects which, while exhibiting a comparatively low BCR, have been classified in the VB category because of their great spatial planning significance. The same applies in the road sector to **projects with great urban development significance**. In particular, these are bypasses that relieve the pressures on built-up areas, thereby significantly improving the quality of housing and life.

When the projects were being classified in priority categories, **synergies between structural maintenance planning and upgrading planning** were also taken into account. Upgrading projects on road sections that also, in the lifetime of the FTIP, have a great need for renewal of the existing carriageways and structures as a result of their condition are to be given implementation priority. This meets the objective of giving priority to addressing maintenance of the structural fabric and making use of the scope for optimization wherever this is appropriate. As is the case with the "spatial planning" and "urban development" criteria, this is done by upgrading these projects into the VB category if they should in fact have been classified as WB on the basis of their BCR. In some cases they are labelled WB* so that planning can commence immediately.

The removal of bottlenecks on the motorway network cannot always be done using the classic upgrading method, i.e. widening to six or more lanes. For this reason, upgrading projects studied in the FTIP have been coordinated with road transport telematics schemes. In particular, the extent to which **temporary hard shoulder running** could be appropriate – in anticipation of the upgrade – was explored. If there is already temporary hard shoulder running or if it is actually planned, it was examined whether this would be sufficient in the medium term and the upgrade could be deferred.

The criteria and priority areas set out here form the basis for the priority categorization of the projects. By way of departure from this, in some cases projects that make a significant contribution to accessibility, for instance of seaports and airports, were also upgraded even though this cannot be directly derived from their macroeconomic appraisal. For all priority categorizations, the aspects specific to the projects are available in the Project Information System (PRINS).

Annex 1 lists the FTIP road projects by priority categorization. In addition, 15 projects are listed at the end of the annex which are to be appraised again and studied to determine their potential within the scope of the next requirement plan review (in accordance with Section 4 of the Federal Trunk Roads Upgrading Act).

	Total	Upgrading and new construction share
Ongoing and definitely planned projects	23,853	15,756
New projects		
VB-E	15,363	7,512
VB	30,608	27,635
WB*	22,697	15,484
WB	11,773	8,609
Total: VB/VB-E	45,972	**35,147**
Total: ongoing and definitely planned projects plus VB/VB-E	**69,824**	**50,902**
Share of the total level of funding accounted for by "motorways and federal highways with a link function level of 0/1" ("ongoing and definitely planned projects" plus "VB/VB-E").		**75 %**

Table 10: Investment (in millions of euros) in federal trunk roads broken down by priority category

Federal state	Ongoing and definitely planned projects (FD)	New VB/VB-E projects	Total FD+VB	Share
Baden-Württemberg	3,180	6,247	9,427	13.6 %
Bavaria	4,864	7,165	12,029	17.3 %
Berlin	823	21	844	1.2 %
Brandenburg	1,079	959	2,037	2.9 %
Bremen	112	506	618	0.9 %
Hamburg	933	1,567	2,500	3.6 %
Hesse	2,896	5,340	8,236	11.9 %
Lower Saxony	1,885	6,484	8,368	12.1 %
Mecklenburg-Western Pomerania	241	313	554	0.8 %
North Rhine-Westphalia	2,946	10,728	13,674	19.7 %
Rhineland-Palatinate	1,323	1,853	3,176	4.6 %
Saarland	32	103	135	0.2 %
Saxony	307	703	1,011	1.5 %
Saxony-Anhalt	507	1,501	2,008	2.9 %
Schleswig-Holstein	1,556	1,481	3,037	4.4 %
Thuringia	974	802	1,776	2.6 %
Total	**23,657**	**45,772**	**69,429**	**100.0 %**

Table 11: Investment for upgrading and new construction projects in federal trunk roads (total Federal Government costs excluding third parties' costs) broken down by federal state (in millions of euros)

	Upgrading and new construction [€ millions]	Number of projects	Length [km]
Construction of new motorways	15,105	50	899
Upgrading of motorways incl. junctions	15,160	170	1,741
Bypasses	12,604	514	2,424
Other federal highways	8,034	202	1,060
Total	**50,902**	**936**	**6,124**

Table 12: Overview of the new and upgrading projects in the federal trunk road sector (VB/VB-E plus ongoing and definitely planned projects)

7.3 | Federal railway infrastructure

How the study was conducted

In the case of the rail mode, project proposals for the FTIP 2030 were collected by the Federal Ministry of Transport and Digital Infrastructure. DB Netz AG, the federal states, trade associations, initiatives, other railway infrastructure companies and members of the public made full use of the opportunity to recommend projects for the upgrading and construction of railway lines to the Ministry. Around 1,100 proposals for upgrading and new construction projects in the rail sector were submitted to the Federal Ministry of Transport and Digital Infrastructure in the notification period for the FTIP 2030. After an adjustment to eliminate duplication, around 400 projects were left. These projects were screened to first identify those that were in principle suitable for inclusion in the FTIP 2030. Thus, all projects were subjected to an initial appraisal by consultants, with the depth of the study varying depending on individual requirements. If the consultants were of the opinion that a project proposal clearly did not represent value for money, it was studied less intensively than in the case of a proposal whose value for money was difficult to assess. Local transport projects were not included in the plan, since these measures are the responsibility of the federal states.

Following conclusion of the initial appraisals, around 60 projects for railway lines remained that satisfied the basic requirements for inclusion in the FTIP. Of these, 20 projects were in turn selected from the core areas of the rail network in which higher capacity (derived from bottleneck analyses) and/or shorter journey times are most urgently required. In a **first phase**, these projects were completely appraised for the Draft FTIP 2030 in the form of benefit-cost analyses plus environmental, nature conservation and spatial planning assessments.

The remaining rail projects will, in the current opinion of consultants, have significantly less impact, especially with regard to the removal of bottlenecks in the core areas of the rail network. They will be appraised in a **second phase** of project appraisals as a follow-up to the FTIP. These projects can be upgraded to the first priority category if they turn out to be a useful addition to the rail network. Until their value for money has been proven, these projects will remain in the "potential first priority" category (see Annex 2). In the potential first priority category, provision is made for a budget as a wildcard for the potential first priority projects.

Taking an overall view of all first priority projects of the first phase, the traffic flows have changed in such a way that whereas the bulk of the bottlenecks identified in the "without" scenario will be removed, other smaller bottlenecks will occur. The appraisal consultants have already developed ideas for the removal of these bottlenecks. The final study of the remaining bottlenecks will be conducted together with the projects of the second phase.

The key major junctions on the German rail network will also not be studied until the second phase. These junction projects will probably be able to make a major contribution towards removing bottlenecks on the rail network. Because of their transport complexity, these junctions will be studied in detail as a follow-up to the FTIP in order to identify the specific measures required at the junctions and to demonstrate their value for money. The same applies to the area of "combined transport/marshalling yards". Provision is made in the first priority category for a budget for both areas.

Prioritization and results

The 20 priority projects of the first phase, which had been identified in the multi-stage review process, were studied using the detailed FTIP appraisal procedure and prioritized on the basis of the results. In addition, as a follow-up to the publication of the Draft FTIP, a further five projects were studied in detail. The most important prioritization criterion was the outcome of the benefit-cost analysis. Projects with a benefit-cost ratio of less than 1 were removed and are thus not part of the FTIP. Of the 25 projects appraised in detail, 22 were included in the first priority category. In addition, there are the major junctions of Cologne, Frankfurt, Hamburg, Mannheim and Munich. These projects are key to ensuring properly functioning transport operations on the rail network. On the basis of junction studies and consultants' estimates conducted in the past, the aforementioned major junctions will exhibit an investment level of around €2.5 billion. Funding of this level has thus been included in the VB category. In addition, the VB category also earmarks funding totalling €0.5 billion for "combined transport/marshalling yards". Here, too, a detailed study will be conducted as a follow-up to demonstrate their value for money.

As described in the section headed "How the study was conducted", further projects will be studied in the second phase to determine whether they represent value for money. On the basis of previous studies, it is likely that only some of these projects will meet the requirements of the VB category. On the basis of these empirical values, the VB category earmarks a level of investment of €2.75 billion for these projects. These projects could, if necessary through a decision by the German Bundestag, be included in the requirement plan of the Federal Railway Infrastructure Upgrading Act.

The funds available for the first priority projects totalling €40.5 billion in the rail mode are thus composed of the investment costs of the 22 projects already appraised

in detail with a level of funding totalling around €34.75 billion, the investment costs for the major junctions, the combined transport/marshalling yard projects and the investment in the VB category for the potential first priority projects.

Within these first priority projects, those projects that make a major contribution towards removing bottlenecks and at the same time exhibit no high environmental impact are labelled VB-E. These are five upgrading projects and the major junctions. The total level of funding for these VB-E projects is €3.4 billion. Because of their especially great transport significance, the planning and implementation of these projects is to commence as soon as possible.

In addition to the aforementioned new projects, the ongoing projects are additionally included in the FTIP 2030 for information purposes. These projects, which are already under construction, were not subjected to a new appraisal. In the rail mode, the total level of funding required to complete these projects is around €12 billion.

	Total investment	Of which upgrading and new construction	Of which structural maintenance and replacement
Ongoing projects	12.0	8.4	3.6
New projects			
VB-E	6.0	4.9	1.1
VB	34.5	29.2	5.3
Total: VB/VB-E	40.5	34.1	6.4
Total ongoing projects and VB/VB-E	**52.5**	**42.5**	**10.0**
Proportion of projects of supraregional significance	100 %	100 %	100 %

Table 13: **Investment in federal railway infrastructure in priority categories (in billions of euros)**

Type of construction:		Total investment [€ billions]	Of which upgrading and new construction [km]
New construction		**18.6**	**496**
Upgrade		**21.8**	**2,609**
Of which	1 or 2 additional tracks	10.5	558
	Raising line speeds*	1.9	195
	Electrification	3.8	934
	Shortening block lengths	1.0	664
	Junctions, supplementary work in connection with the nationwide integrated regular interval timetable	3.3	-
	Combined transport terminals, marshalling yards	0.5	-
	Miscellaneous (e.g. tunnel widening)	0.8	258

*The provision of additional tracks also frequently comprises a rise in line speed on the existing track(s). To avoid counting items twice, this is not reflected in the table. Speeds will be raised on a total of 500 km of existing tracks.

Table 14: **Overview of the new construction projects on the federal railway infrastructure (VB/VB-E).**

Taking the nationwide integrated regular interval timetable into account in the FTIP 2030

The feasibility study commissioned by the Federal Ministry of Transport and Digital Infrastructure into a nationwide integrated regular interval timetable[9] showed that an integrated regular interval timetable for passenger services on the German rail network is operationally, technically and legally feasible. For its implementation, the study suggests timetable-based infrastructure development with focused upgrading and new construction schemes with the objective of finding an optimum solution for regular interval services.

The core objective of a nationwide integrated regular interval timetable is to achieve shorter journey times by means of fast links and optimum connections at numerous stations. In addition, long-distance and regional passenger services are to operate at more regular intervals – at least every 30 minutes on mainlines with two or more trains per hour. The aim is also to create systematized timetables for freight lines in order to make rail freight more attractive. The feasibility study shows that the nationwide integrated regular interval timetable can result in a significant increase in demand for traffic in terms of passenger and tonne kilometres on the railways.

For implementation of the strategy, infrastructure is required that is dovetailed in the right places to permit shorter journey times and that creates more capacity in bottleneck zones. Thus, when developing the strategy for the nationwide integrated regular interval timetable, models were used to identify infrastructure bottlenecks by means of operational simulations and to develop timetable-based solutions.

All the proposed measures of the feasibility study into a nationwide integrated regular interval timetable were included in the multi-stage appraisal procedure for the Federal Transport Infrastructure Plan. The proposed infrastructure schemes of the feasibility study into the nationwide integrated regular interval timetable with significant impacts on a large area are part of the projects that were subjected to a detailed examination in the first phase of appraisal for the FTIP 2030. In the process, these schemes proved to represent value for money and have been classified in the VB category. It was also demonstrated that they represent value for money regardless of whether the nationwide integrated regular interval timetable is implemented or not.

The second-phase schemes were also reviewed to determine their significance for the nationwide integrated regular interval timetable and, if appropriate, optimized. To be able to introduce a nationwide integrated regular interval timetable, the next step will have to involve developing specific target timetables with coordinated intervals for passenger services and systemized train paths for rail freight services throughout Germany. It may be necessary to remove further infrastructure bottlenecks for this purpose. If required, this will involve identifying and appraising further schemes for the upgrading of lines and junctions.

7.4 | Federal waterways

How the study was conducted

For the waterway mode, project ideas and proposals were submitted by the federal states, trade associations and the Federal Waterways and Shipping Administration. From these, the Federal Ministry of Transport and Digital Infrastructure, together with the Federal Waterways and Shipping Administration, defined those projects that were subsequently subjected to an appraisal. This merely involved removing from the project list those project proposals that are of no relevance to the FTIP, for instance because there is no Federal Government responsibility, they are purely replacement schemes or they are not related to transport.

As with the rail mode, a multi-stage review procedure was selected. To reduce the effort required for appraisal, a pre-appraisal (also known as a "quick scan") was conducted for some projects, with the participation of an expert consultant. The purpose of this was to determine whether a project could reach the threshold of economic profitability – a BCR of 1 – in the first place and should thus be subjected to a complete appraisal within the scope of the FTIP 2030.

The "quick scan" only considered the most important cost and benefit flows. These are the two benefit components that are most relevant to the waterways: "benefits from reducing the cost of transport operations" and the "environmental benefits from lower exhaust emissions" – see Section 12.1 if more details are required. However, all assumptions were made in favour of the project, so that it was possible to consider all the appraisal results as "being on the safe side".

Waterway projects that reached a BCR of at least 0.5 (rounded) in the "quick scan" were incorporated into the main appraisal for the FTIP 2030. 14 projects (some of them with alternative versions) were eliminated from the further appraisal process on the basis of the pre-appraisal because it was not possible to demonstrate any need for them. A complete appraisal in the form of benefit-cost analyses and environmental and nature conservation assessments was conducted for a total of 28 waterway projects.

9 IGES Institut GmbH/Institute for Transport, Railway Construction and Operation at the Carolo-Wilhelmina University of Technology in Braunschweig. *Machbarkeitsstudie zur Prüfung eines Deutschland-Takts im Schienenverkehr*, Berlin, 2015

Prioritization and results

The promotion of environmentally friendly modes of transport is one of the priorities of transport policy. The investment policy set out in the FTIP also focuses on improving the quality of the hinterland connections to and from the German seaports and the Rhine Estuary ports, which are of importance for Germany. Waterways are an environmentally friendly mode of transport. In some cases, however, there is no high-capacity infrastructure that would enable competitive transport operations by inland waterway.

To achieve the aforementioned transport policy objectives, it is necessary for the Federal Government to upgrade the infrastructure, thereby making an offer that it might also deliver projects that represent value for money in the long term. This is designed, for instance, to motivate third parties to likewise implement complementary schemes, in particular investment in vessels and cargo handling infrastructure plus logistics strategies. The age and condition of the installations call for timely action to reduce the risk of a loss of function. For this reason, projects with a BCR that is low from a present-day perspective will be further pursued. Thus, all projects studied in the main appraisal have been included in the FTIP 2030. One crucial factor for the classification of the projects in the VB and WB categories – alongside the BCR, the improvement of the quality of inland links to and from seaports and the fulfilment of contractual obligations – was also the network category of the waterway. As part of the network categorization, the most important origin-destination pairs with a high level of transport significance were identified and categorized on the basis of the amount of freight lifted. With this categorization, the available resources can be focused on projects that exhibit a high level of transport significance for origin-destination pairs on the federal waterway networks (for details of the network categorization, see Annex 4).

A total of 22 waterway projects with a total level of funding of €6.39 billion have been classified in priority category VB/VB-E. The upgrading and new construction share of these 22 projects is €4.0 billion. The most important criterion for their inclusion in the VB/VB-E category was the result of the benefit-cost analysis. 18 of the 22 VB/VB-E projects reached benefit-cost ratios between 1.3 and 31.6. They comprise a total level of funding of around €3.52 billion with an upgrading and new construction share of around €1.72 billion.

Four waterway projects with a BCR below 1 have also been included in the VB category. They comprise a total level of funding of around €2.87 billion with an upgrading and new construction share of around €2.29 billion. The construction of a new replacement lock at Lüneburg-Scharnebeck, the lengthening of the Neckar locks and the construction of seven 2nd lock chambers on the Moselle were classified in this way because of their great network significance (location within the core network) and to reduce the risk of a loss of function. To improve the quality of the inland links to and from the seaports, the projects for upgrading the Elbe-Lübeck Canal and the Coastal Canal were also classified in the VB category.

Within these first priority projects, the especially important projects are labelled VB-E on the basis of the "network significance", "value for money" and "environmental impact" criteria. These are a total of seven projects with a total level of funding of €1.1 billion with an upgrading and new construction share of €0.58 billion. The projects are part of the category A/B core network with a transport-related network significance and also exhibit very high benefit-cost ratios (greater than 5) (optimization of the fairways on the Middle Rhine to enable greater laden draughts, deepening of the fairways on the Lower Main from the Rhine/Main confluence to Aschaffenburg, adaptation of the Outer Weser fairways, deepening of the Kiel Canal, adaptation of the fairways on the Lower Weser (south) and adaptation of the fairways on the Lower Weser (north). The project to widen the Wesel-Datteln Canal also achieves a high benefit-cost ratio (over 3) and at the same time contains a relevant (urgent) replacement share. When the projects were classified in the VB-E category, it was also taken into account that all seven projects exhibit no great environmental impact.

Six projects with a total level of funding of around €0.7 billion were classified in the second priority category. All six projects were studied in the main appraisal for the FTIP and achieved a BCR below 1. The upgrading and new construction share of the WB projects is around €0.6 billion. Second priority projects are not normally scheduled for delivery during the lifetime of the FTIP 2030 and thus remain accessible to subsequent requirement reviews.

In addition, a further eleven projects have been included in the FTIP for information purposes as "ongoing and definitely planned projects". Work has already commenced on ten of these projects. For the eleven ongoing and definitely planned projects, a further approximately €1.5 billion will be invested until all projects have been completed, with an upgrading and new construction share of around €0.9 billion. This includes the pledge to commence work on the project to widen the fairways on the Lower and Outer Elbe, with investment totalling around €0.4 billion.

The Elbe between Geesthacht Weir and the German-Czech border is an inland waterway of international significance. The aim is to preserve the use of the Elbe as a shipping route and, by taking measures within the scope of the "Overall Strategy for the Elbe" (which is currently being developed), improve the reliability of the waterway's navigability.

	Total investment	Of which upgrading and new construction	Of which structural maintenance and replacement
Ongoing and definitely planned projects	1,452	931	521
New projects			
VB-E	1,101	558	543
VB	5,285	3,451	1,835
WB	689	612	78
Total: VB/VB-E	**6,386**	**4,009**	**2,378**
Total: ongoing and definitely planned projects plus VB/VB-E	**7,838**	**4,940**	**2,898**
Share of the total level of funding accounted for by projects of supraregional significance (ongoing and definitely planned projects/VB/VB-E)	100 %	100 %	100 %

Table 15: Investment in federal waterways in priority categories (in millions of euros)

	VB/VB-E projects		
	Total investment [€ bn]	Number of projects	Length [km]
Type of construction:			
New construction	-	-	-
Upgrade	6,385	22	1,155
Waterway category			
A	2,390	10	460
B	769	6	234
C	3,226	6	461
Type of project			
Inland waterways	5,821	14	852
Waterways navigable by sea-going ships	564	8	303

Table 16: Overview of the new construction projects on the federal waterways (VB/VB-E).

8 | Participation of the authorities and the public – how can members of the public, the expert community and the authorities contribute towards the preparation of the FTIP?

8.1 | The public participation approach

A high degree of transparency and extensive opportunities to participate have become key demands made by the public on policymakers and authorities, especially in the planning and development of public infrastructure. The Federal Ministry of Transport and Digital Infrastructure has met these expectations and significantly widened the participation of the expert community and the public in the preparation of the FTIP 2030 compared with previous federal transport infrastructure plans.

This relates to all phases in the development of the FTIP, which overlap time-wise. The phase in which the approach and forecast were developed started in 2011. In this phase, the appraisal methodology and the guiding principles of the FTIP were developed in a transparent process with the participation of experts and the public. In addition, an updated traffic forecast for 2030 was developed. The appraisal phase started in 2012. This involved reviewing and appraising the notified projects, which had been proposed by, among others, trade associations and members of the public. The Federal Ministry of Transport and Digital Infrastructure subsequently consulted, among others, the federal states, other government departments, trade associations and the public on the Draft FTIP 2030 in the participation, coordination and decision phase. Figure 12 shows the elements of this participation.

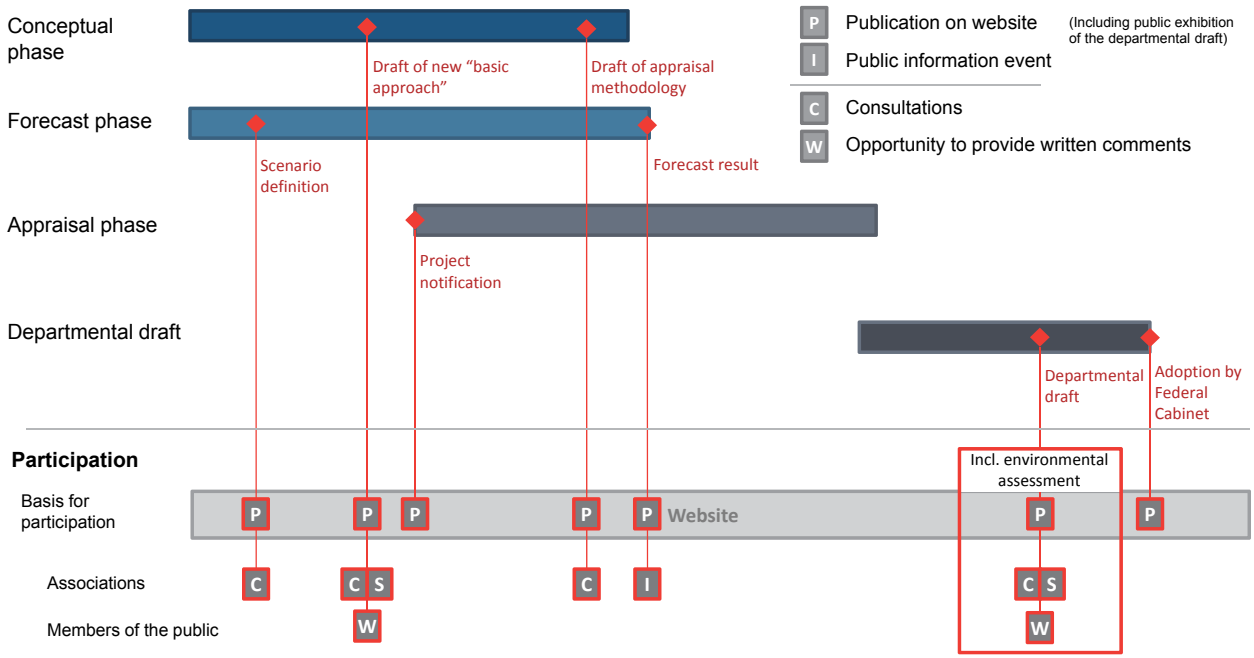


Figure 12: **Overview of public participation**

One of the main features of good participation is that it is conducted **at an early stage and in an open and continuous manner**. The Federal Ministry of Transport and Digital Infrastructure thus involved the public intensively as soon as work started on developing the basic approach. In addition, all members of the public and stakeholders, among others, were able to provide comments on the draft overall plan electronically and in writing.

However, the procedure for drawing up the FTIP is complex. And there are a large number of parties who potentially have to be involved. Thus, when conflicts of interest arise, it is not always possible to achieve a consensus with all players. The FTIP is, and will remain, a professionally substantiated determination of the need for transport infrastructure investment. **Broad-based acceptance of the FTIP** is an important objective, but it cannot become the sole criterion determining the decisions taken by the Federal Government. The task of participation is to introduce the different points of view into the development process in a meaningful manner, to weigh them against one another in an informed manner and to develop a solution that is fit for purpose.

The FTIP is the Federal Government's key planning tool for the development of the federal transport infrastructure. However, the FTIP is not of a statutory nature. Rather, the process of preparation ends when the Federal Government adopts the FTIP. Subsequently, the next steps leading up to the passage of the upgrading acts are the responsibility of the German Bundestag as the legislature and are outside the scope of a direct participatory procedure.

8.2 | Participation tools accompanying the process

In February 2013, the Federal Ministry of Transport and Digital Infrastructure published the **Draft Basic Approach for the New FTIP**. This was a policy paper that did not yet name or discuss any specific individual projects. Rather, in a first step, it initially formulated the guiding principles and investment priorities of the new Federal Transport Infrastructure Plan. In February 2013, after its publication, a total of 91 trade associations were invited to a consultation meeting. Of these, 46 attended the event, at which the Draft Basic Approach was discussed with the Federal Ministry of Transport and Digital Infrastructure. They included many associations from the fields of transport, environment and business, plus trade unions, professional bodies and societies. In addition, all participants were able to provide written comments on the Basic Approach following the consultation meeting. A total of 30 trade associations availed themselves of this opportunity.

In early 2013, the public were also invited – through a press release and on the Federal Ministry of Transport and Digital Infrastructure's website – to express their views on the Draft Basic Approach. Following this, the Federal Ministry of Transport and Digital Infrastructure received 150 representations from individuals, citizens' action groups and individual municipalities/local transport authorities.

From the comments, the Federal Ministry of Transport and Digital Infrastructure was able to derive a large number of helpful suggestions for the continuing process of developing the FTIP. Numerous remarks were directly included in the Basic Approach. Proposals which, after careful consideration, could not be taken into account were rejected and the reasons why they were rejected were stated. This affected especially comments on individual infrastructure projects, because no information on individual schemes was available at the time of the consultation. The Federal Ministry of Transport and Digital Infrastructure summarized the outcomes of the consultation exercise in a report, which was published at the same time as the final version of the Basic Approach in April 2014.[10]

In addition, to discuss the individual appraisal modules within the context of the project assessments of the FTIP 2030, two events were held in Berlin – a meeting with trade associations in April 2014 and a conference of academic experts in June 2014. At the end of the FTIP forecast phase, the outcomes of the scientific forecast process were published in June 2014.

8.3 | Participation of the authorities and the public on the Draft FTIP 2030

The Federal Ministry of Transport and Digital Infrastructure conducted a participation exercise involving the authorities and the public on the **Draft FTIP 2030**, including the associated **Environmental Report**. For a period of six weeks (21 March to 2 May 2016), the documents were made available for inspection by any person in 20 cities spread across the Federal Republic of Germany. In addition, the documents were available for inspection on the Federal Ministry of Transport and Digital Infrastructure's website.

In addition, a **Project Information System** – or PRINS for short – has been made available on the Internet and contains the detailed appraisal results at the level of the individual projects. PRINS can be downloaded from the Federal Ministry of Transport and Digital Infrastructure's website.

In this way, all interested parties were able to obtain comprehensive information on the Draft FTIP and, over a **period of six weeks**, express their views on the Draft in writing or electronically using an online form provided on the Federal Ministry of Transport and Digital Infrastructure's website. In addition, authorities and stakeholders from neighbouring countries were also able to provide comments in writing. The Federal Ministry of Transport and Digital Infrastructure collected and processed all the comments received within the specified period and reviewed their contents. The Federal Ministry of Transport and Digital Infrastructure was supported in this task by external consultants

Around 40,000 comments were received on the Draft FTIP 2030. Given the high number of comments, they were not answered or published individually, but were dealt with in a consolidated form in a **Report on the Participatory Process**. This report has been published by the Federal Ministry of Transport and Digital Infrastructure.

Participation of the authorities and the public on the Federal Transport Infrastructure Plan meets the statutory requirements of **Strategic Environmental Assessment**

10 *Bericht zum Konsultationsverfahren zur Grundkonzeption des neuen Bundesverkehrswegeplans*, Federal Ministry of Transport and Digital Infrastructure, Berlin, 2014.

(SEA) as set out in Sections 14h to 14j of the Act on Environmental Impact Assessment. SEA is an assessment procedure that is used to systematically study the environmental aspects of plans. The objective of SEA is to identify, describe and assess the impacts of a plan at an early stage so as to be able to take the findings obtained in this way into account when taking decisions on the plan. Accordingly, within the scope of the SEA on the FTIP 2030, the environmental impacts likely to occur if the overall plan is completely implemented are made transparent. However, the SEA on the FTIP 2030 does not replace any environmental impact assessments (EIAs) at the level of individual projects, such as those conducted in plan approval procedures.

Thus, despite the provision of PRINS, which provides information on the appraised projects at project level, the focus of the SEA's participatory process was on issues relating to the impact of the overall plan. It was thus not possible to discuss individual projects in detail. The exclusive object of the FTIP is the question as to whether there is a general transport need for a project. Comments relating to individual projects were thus only relevant if they had an impact on the overall plan. This was the case, for instance, if information came to light that would cast serious doubt on the proof of need for the projects, for instance flawed appraisals. How projects are to be shaped in detail is fleshed out in downstream planning procedures such as **the spatial impact assessment, the determination of the alignment and the plan approval procedure**. In the case of the last-mentioned, separate participation opportunities for the public are statutorily guaranteed in some cases.

Comments that were not related to the impact of the overall plan and purely judgemental expressions of opinion with no objective justification were not taken into account during the public participation exercise on the FTIP 2030. Nor was the participatory process a coordination procedure. There was thus no offsetting of comments "in favour" and comments "against". The contents of comments with identical contents that were submitted more than once were only taken into account once. Comments that were appropriate for technical or legal reasons were included in the final version of the FTIP 2030.

9 | Transport infrastructure beyond the FTIP– What else are we doing to evolve our transport system?

The Federal Transport Infrastructure Plan is the key planning basis for the long-term evolution of the federal transport infrastructure. However, the Federal Government goes beyond the Plan and takes numerous further measures that contribute to the evolution of transport infrastructure and its efficient use.

9.1 | Making intelligent use of modern roads

Acting on a proposal from the Federal Ministry of Transport and Digital Infrastructure and on the basis of recommendations made by the "Automated Driving" Round Table, the Federal Government published the **"Strategy for Automated and Connected Driving"**, thereby adopting guidelines on how to exploit the opportunities for growth and prosperity inherent in Mobility 4.0 on all road categories. Automated and connected vehicles are to exchange information with one another and with the infrastructure. **Intelligent Transport Systems (ITS)** capture, transmit and process traffic-related data and information by using innovative information and communications technologies.

Automation and connection in road traffic, in combination with Intelligent Transport Systems, will, in the years ahead, provide a crucial impetus to the enhancement of road safety, efficiency and environmental sustainability in private motorized transport, freight transport and local public transport. For instance, hazardous situations or traffics jams ahead can be detected, and traffic management and the flow of traffic can be made safer and more efficient.

The Federal Government is committed to creating an optimum regulatory framework and the necessary conditions for the introduction of appropriate innovations – at national, European and international level.

The Federal Ministry of Transport and Digital Infrastructure joined forces with other partners to establish the **"Digital Motorway Test Bed"** on the A 9 federal motorway in Bavaria. This can be used to trial and evolve digital innovations for automated and connected driving and intelligent road furniture individually and in complex interaction in a real-world setting. Among the innovations to be studied on the test bed are car-to-car communication and car-to-infrastructure communication plus telematics-based wrong-way driver warning systems. In addition, systems that enable intelligent infrastructure monitoring are to be trialled. This test bed offers the automotive industry, component suppliers, telecommunications companies and research establishments a unique experimental environment comprising modern intelligent road infrastructure and special communications and road furniture.

Intelligent mobility is not confined to motorways. We must use the potential inherent in the automated and connected driving technologies in suburban and urban areas. To progress the development steps for automated and connected driving in combination with ITS in urban and suburban areas, it is necessary to resolve further complex research issues and make it possible to trial technical solutions. Research projects on digital test beds in towns and cities are to be funded.

In addition, the Federal Government will push ahead with the deployment of modern **traffic management systems** on the federal trunk roads. This includes the targeted control of traffic by active and strategic traffic management systems and the use of the hard shoulder as a running lane during peak periods. Here, too, the objective is an intelligent motorway on which optimum use is made of the capacity and road safety is enhanced.

Against this background, the Federal Ministry of Transport and Digital Infrastructure, together with the federal states, is rolling forward beyond 2015 the **"2015 Project Plan for Road Transport Telematics"**, which contains around 140 specific schemes with a total level of funding of €300 million. The plan also comprises forward-looking Intelligent Transport Systems such as the cooperative systems for vehicle-to-vehicle and vehicle-to-infrastructure communication.

9.2 Digital technology in shipping and rail transport

In the **inland waterway** sector, modern telematics is used in particular to provide transport users with timely information on bottlenecks or disruption on and alongside the waterway. This supports ships' routing, optimizes traffic flows by preventing unnecessary delays at locks, achieves fuel savings and reduces emissions.

River Information Services (RIS) make a major contribution to this. They are used primarily for lock and bottleneck management, to provide traffic information and to support accident prevention and management. To enable optimum use to be made of these services, the Federal Ministry of Transport and Digital Infrastructure is currently establishing the shore-based infrastructure for an Automatic Identification System (AIS), whose data will in the future be widely used for RIS.

Through the deployment of RIS, more efficient use can be made of the existing infrastructure and the safety of vessel

traffic can be significantly enhanced. It is assumed that by 2030 it will be possible to use the benefits of RIS on the entire waterway network.

In the **rail** mode, too, work is underway to achieve more efficient use of the existing transport infrastructure. First of all, it is the core function of the FTIP to upgrade the infrastructure in order to increase the nominal capacity, i.e. the physical capacity of the rail network independent of the timetable. This also includes capacity enhancement by means of new command, control and signalling equipment, for instance by shortening the length of blocks in the conventional system or introducing the "European Rail Traffic Management System".

However, to be able to also make optimum use of the network's nominal capacity in actual timetabling and path allocation, DB Netz AG has launched a project entitled **"Digital Capacity Enhancement"**. Taking into account a nationwide integrated regular interval timetable for passenger services, the optimized planning of paths is also designed to enhance the line capacity that depends on the timetable, i.e. to ensure a higher degree of utilization of the infrastructure. By means of automated advance planning of optimized systemized train paths for freight services, the design capacity of the individual lines, i.e. capacity whose utilization is determined by the timetable, is to be increased in comparison with conventional manual train path design.

In the medium term, the methods of "digital capacity enhancement" are also to create new possibilities for the detection of bottlenecks on lines and at junctions on the rail network for the more targeted dimensioning of the infrastructure in federal transport infrastructure planning. In this way, it would be possible to forecast and demonstrate the benefit of specific infrastructure schemes even more precisely.

9.3 | Sustainable, ecological and safe mobility

Protection against train noise is one of the key elements of the Federal Government's sustainable transport policy. In accordance with the Coalition Agreement, the Federal Government intends to halve train noise by 2020 against 2008 levels. The human ear perceives a reduction of 10 dB (A) as a halving of the noise.

The focus of the Federal Ministry of Transport and Digital Infrastructure's Strategy for Quiet Railways is the reduction of noise at source by retrofitting existing freight wagons with low-noise braking systems. The retrofitting is funded by the Federal Ministry of Transport and Digital Infrastructure. Since 2013, noisy trains have also paid more than quiet trains. Another important building block is stationary noise mitigation. The Federal Ministry of Transport and Digital Infrastructure spends over €100 million each year on voluntary noise mitigation on existing railway lines. The Federal Government's Investing in the Future Programme for the period from 2016 to 2018 provides for additional investment for noise mitigation. This money is to be used in particular to reduce noise at hotspots and to develop innovative technologies.

With the revised "Schall 03" provision, the Federal Ministry of Transport and Digital Infrastructure is committed to a more accurate calculation of railway noise and abolished the rail bonus on 1 January 2015. A reduction of five decibels is no longer granted. A further reduction took place on 1 January 2016, when the thresholds for noise mitigation were reduced by three decibels. Thus, for the first time, the same limits and thresholds apply to rail and road noise. As of the 2020/21 timetable change, no noisy freight wagons are to be allowed to operate on the German rail network. An appropriate legal basis is currently being established.

Alternative drivetrains and fuels can make a major contribution to sustainable mobility going way beyond noise mitigation. To implement Germany's new energy strategy in the transport sector, the Federal Government adopted the **Mobility and Fuel Strategy** in 2013. This is to be evolved. The key objectives of the strategy are a reduction in CO_2 emissions and final energy consumption in the transport sector. One way in which we can achieve this is to electrify drivetrains using electricity generated from renewable sources or hydrogen.

Electric mobility is a key technology for developing a sustainable transport system. It can make a crucial contribution to us becoming less dependent on fossil fuels. In addition, electric vehicles help to create liveable towns and cities, because they are significantly quieter than internal combustion engined vehicles and produce no emissions at the point of use.

The Federal Government has set itself the objective of making Germany a lead market for and a lead provider of electric mobility. In recent years, therefore, more than €2 billion in research funding has been made available for the promotion of battery or hydrogen and fuel cell-based electric mobility. This funding has been used, in particular, to initiate regional electric mobility pilot projects in "pilot regions" and "showcases" and the National Hydrogen and Fuel Cell Technology Innovation Programme (NIP) has been launched.

In addition, the Federal Government has introduced the Electric Mobility Act. It regulates the marking of electric vehicles and makes it possible for local authorities to give them privileged treatment. They may now permit electric vehicles to use bus lanes and other dedicated lanes, lift

access restrictions and make provision for specific rules governing parking and stopping.

In addition, to transpose the European Directive on the deployment of alternative fuels infrastructure (also known as the "Clean Power for Transport" Directive), **charging and refuelling infrastructure** for electricity, hydrogen and natural gas is to be established. We will present a National Policy Framework by the end of 2016 setting out how we will create these structures in the years ahead.

We are currently establishing a network of around 400 high-speed charging points for electric vehicles at almost all motorway service areas in Germany, because they are absolutely essential for long-distance mobility.

In addition, we joined forces with the industry to launch the "50 Filling Stations Programme", which is to be used to establish a nationwide basic network of hydrogen filling stations for fuel cell powered vehicles. A network of 400 filling stations is to be established by 2023.

The Federal Government views hydrogen and fuel cells as an indispensable alternative and supplement to battery powered vehicles with their capacity and range limitations, especially for long-distance journeys, for large cars, for buses and coaches, but in the medium to long term also for shipping and air transport.

But sustainability is also a key objective of the Federal Government away from the sphere of motorized transport. Cycling, in particular, contributes to mobility that is environmentally sound and at the same time beneficial to health, and accounts for a major share of the traffic volume in Germany.

The Federal Government thus attaches great importance to cycling as part of a modern transport system and promotes it with the **National Cycling Plan**, the Federal Government's strategic cycling policy document. It sets out the guiding principles for the promotion of cycling, such as the promotion of cycling in rural and urban areas, the elimination of capacity problems in towns and cities and the increasing electric mobility in the field of cycling. With the National Cycling Plan, the Federal Government has assumed an active role as a facilitator, coordinator and catalyst for the nationwide promotion of cycling.

Around 19,000 km of cycle tracks already run along federal highways. In 2016, the Federal Government is providing around €98 million for the structural maintenance and enlargement of this network. This is supplemented by €3.2 million to funding pilot projects for implementation of the National Cycling Plan and €1.3 million for the strengthening of towpaths along federal waterways for cycling In addition, the funds provided under the Unbundling Act can also be invested by the federal states in cycle infrastructure.

Just what potential is inherent in cycling will be shown in the future by the **German Unity Cycle Route** launched by the Federal Ministry of Transport and Digital Infrastructure, which will run from the Federal City of Bonn to the Federal Capital of Berlin. In addition to the presentation of around 100 tourist and cultural highlights, this modern cycle route will focus in particular on digital functionalities and electric mobility infrastructure. All along the route there will be service points for cyclists – four versions with a modular design. They will offer a range of services that meet the requirements of present-day cyclists – free Wi-Fi access, integrated touchpads and assistance for e-bike users.

In the future, the Federal Government will – within the scope of its constitutional possibilities – participate to an even greater extent in the construction of cycle superhighways. The bases that need to be modified are currently being considered by the Federal Government.

Another factor that is making our transport system more sustainable is that, despite great success in the past, we are systematically continuing our work to improve **road safety**. In the road traffic sector, more than anywhere else, the number of persons killed and injured is to be significantly reduced. The mid-term review of the 2011 Road Safety Programme shows that many of the measures in the "human factors", "automotive engineering" and "infrastructure" action areas exhibit great potential. Given that the volume of traffic will continue to increase sharply, improvements to safety will also be of great importance in the future.

The Federal Ministry of Transport and Digital Infrastructure currently has around €13 million per annum at its disposal for publicity campaigns to improve road safety. Investment in prevention saves lives and reduces the costs of traffic accidents to the national economy. These campaigns target, for instance, children, young drivers and senior citizens. In addition, the Federal Ministry of Transport and Digital Infrastructure funds campaigns such as "Runter vom Gas" (kill your speed).

To this end, the Federal Ministry of Transport and Digital Infrastructure has, for many years, been actively promoting the development and updating of the sets of technical regulations governing the design and construction of roads. As a result, not only are motorways and federal highways constructed to be as safe as possible, but rural roads and roads within built-up areas are evolved in keeping with the state of the art

In the field of automotive engineering, we are also active at national and international level in order to frame the safety-related construction, equipment and operational provisions in such a way that innovative automotive technologies are promoted.

9.4 | Boosting freight transport

In Germany, because of its location at the heart of Europe, the expected growth in traffic will result in a disproportionately high increase in the level of freight traffic, especially transit traffic and inland traffic to and from seaports. To be able to manage this growth, the Federal Government also provides financial assistance to freight transport beyond the FTIP projects. The carriage of goods is to become more efficient and as high a share as possible of the growth in the level of freight transport is to be shifted to the more environmentally friendly road and rail modes. At the same time, intermodal connectivity is to be improved.

Combined transport optimizes intermodal connectivity and makes it possible to incorporate the more environmentally friendly rail and waterway modes into the logistics chains to a greater extent. The Federal Government thus provides financial assistance for the construction of terminals operated by private undertakings in the form of grants covering up to 80 % of the eligible investment costs and for the terminals operated by Deutsche Bahn AG via the Federal Railway Infrastructure Upgrading Act. The terminals constructed with the help of the Combined Transport Funding Guidelines alone resulted in around 14,000 fewer HGV journeys or around 5.7 million HGV kilometres per day in the reference year 2013.

Beyond this, the Federal Government has set itself the general objective of providing major support to the logistics sector. Against this background, the **Freight Transport and Logistics Action Plan** has been evolved, one of the new features being a strategy for clean and energy-efficient freight transport. The objectives pursued by the Action Plan are to boost Germany as a centre for logistics, to renew and modernize high-capacity transport infrastructure, to better interconnect all modes of transport and to foster environmentally friendly and energy-efficient freight transport. It will also make a contribution towards ensuring recruitment and preserving good working conditions in the industry. The Action Plan is regularly revised to reflect the progress made in implementing the measures. The first update was published on the Federal Ministry of Transport and Digital Infrastructure's website in June 2016.

In the rail mode, the **Immediate Action Programme for Inland Traffic to and from Seaports** has been used in the past to implement numerous minor works with a capacity-enhancing impact on the rail network using comparatively few resources, thereby giving a boost to rail freight. The programme will thus be continued in two slices to 2020 as the Second Immediate Action Programme to remove further bottlenecks in a targeted manner.

Another important infrastructure-related point of the Freight Transport and Logistics Action Plan is the **upgrading of existing and construction of new rest areas**. The last nationwide survey of HGV parking areas in 2013 identified a need for an additional approximately 11,000 HGV parking spaces. The Federal Government is thus investing around €130 million per annum in the rest areas.

In addition, it is to be possible in the future to make even better use of existing parking facilities along the motorway. This is to be achieved by HGV parking guidance and information systems and intelligent parking methods, for instance parking in columns and compact parking. The Federal Ministry of Transport and Digital Infrastructure thus joined forces with the highway authorities of the federal states to implement various pilot projects on HGV parking controlled by telematics.

In one of the pilot projects, for instance, rest areas along a section of motorway are equipped with an HGV parking guidance and information system. Detection systems on the access and exit roads automatically count HGVs as they enter and leave and calculate the number of available parking spaces. The data collected are made available free of charge on the central "Mobility Data Marketplace" online portal. HGV drivers can receive this information directly in their vehicles, for instance by using smartphone apps, and head straight to vacant parking spaces. As a result, the statutorily required rest periods can be more reliably complied with, which also makes a major contribution to safety on our roads.

9.5 | Innovative approaches for Germany as a transport hub

To boost the sea and inland ports and thus also the competitiveness of the entire logistics sector, the **National Ports Strategy** for Sea and Inland Ports was evolved and adopted by the Federal Cabinet in January 2016. This strategy represents a nationwide strategy for the ports policy of the years ahead. The objective is for the German ports to continue to be able to master their economic and logistical challenges and further strengthen their role as hubs of the national and international trade in goods and as central freight distribution centres.

At the same time, the Federal Government is anxious to also boost Germany as an air transport hub, to create a level playing field and to support the German air carriers in preserving their economic efficiency. The Federal Ministry

of Transport and Digital Infrastructure is thus currently developing an **air transport strategy**. One of its objectives is to strengthen the Federal Government's role in planning a nationwide network of airports.

While developing the air transport strategy, the Federal Ministry of Transport and Digital Infrastructure is in engaged in a permanent dialogue with the appropriate federal government departments, the federal states and the relevant trade associations and organizations from the spheres of aviation, business and the environment. Since an air transport strategy has to be based on robust data, the first step was for an external consultant to analyse the competitive position of Germany as an air transport hub in the international context. The air transport strategy is currently being prepared on the basis of the findings of the consultancy study.

An innovative and sustainable transport policy also includes efficient stewardship of the funds available for transport infrastructure. In recent years, however, there have been an increasing number of public debates in Germany about major projects that did not comply with the budget and timeframe they had been set. The Federal Ministry of Transport and Digital Infrastructure thus launched a **"Construction of Major Projects" Reform Commission** which, in June 2015, presented recommendations for action as to how true-cost pricing, cost transparency, efficiency and on-schedule delivery can be improved for major projects.

Building on this, the Federal Cabinet adopted an **Action Plan for Major Projects** in December 2015. Its key components are timely and continuous risk management, clear project structures, more partnership working between all parties involved in a project, an agreement to settle disputes out of court and greater digitalization of building.

To tangibly promote the digitalization of building, the Federal Ministry of Transport and Digital Infrastructure presented, in December 2015, a **Phased Plan for the Introduction of Building Information Modelling** (BIM) at the Ministry and its executive agencies. Starting at the end of 2020, all new projects to be planned are, as a rule, to be planned and delivered using this digital method. The introduction of BIM will be supported by pilot projects. On this basis, planning and building "made in Germany" are to remain successful in the global digital era.

Part III:
The scientific foundations – methodological basis for a transparent FTIP

10 | Traffic forecast for 2030 – how much traffic will there be in the future?

10.1 | Basic assumptions and forecasting procedures

One indispensable prerequisite for appraisal of the transport infrastructure projects, and thus for the preparation of the new FTIP 2030, was an up-to-date forecast, as robust as possible, of future traffic trends. Since transport infrastructure projects have a long preparatory planning stage and the delivery of projects can take several years, the Federal Ministry of Transport and Digital Infrastructure commissioned a forecast of passenger and freight services with a forecast horizon of 2030 for the FTIP 2030. This comprises:

- the transport interconnectivity within Germany at district level as well as with other countries;
- the use of the different modes of transport;
- the distribution of these traffic levels across the transport infrastructure; and
- the final energy consumption as well as CO_2 emissions of the modes of transport.

As preliminary work for and a basis of the traffic forecast, separate sub-projects were conducted in which socio-economic and demographic master data were predicted, statements on trends in user and transport costs were derived and further items of the transport policy framework were defined.

The demographic master data of the forecast were predicted by the Federal Institute for Research on Building, Urban Affairs and Spatial Development. According to this forecast, the population of Germany will fall from 80.2 million in 2010 by just over two percent to 78.2 million by 2030. The number of inhabitants aged 18 or over, i.e. the population eligible to drive a motor vehicle, will decline by one percent. Within the adult population, the number of inhabitants of working age (18 to 64 years) will fall by twelve percent, while the number of persons aged 65 or over will increase by 31 percent.

The macro-economic structural data were forecast by the Dresden Office of the ifo Institute, in cooperation with Helmut Schmidt University (Hamburg). According to this forecast, annual average of growth of 1.14 percent over the period to 2030 is expected for Germany's gross domestic product (GDP), The fact that this rise is so moderate is due to the decline in the number of economically active persons, which will limit the number of people in employment. For Germany's external trade, growth rates averaging 3.8 percent per annum were forecast.

The next step in the forecasting procedure involved manipulating the nationwide transport interconnectivity data into source-destination matrices for freight and passenger traffic for the baseline year 2010 and deriving them for the 2030 forecast horizon. This also took the relevant network elements of the neighbouring countries into account. Likewise, international traffic, especially transit traffic, was included to the extent that it was relevant to Germany.

Taking account of the results from the structural data and maritime traffic forecast, traffic in terms of passenger and tonne kilometres and in terms of volume was determined for all branches of transport. In the passenger sector, the following types of traffic were considered: private motorized traffic, road-based public transport services, rail traffic, air traffic, cycling and pedestrian traffic. In the freight sector, the following types of traffic were included: road haulage, rail traffic, inland navigation, air cargo, combined transport and maritime shipping from and to the relevant German and European ports.

In the process, a nationwide traffic forecast at an aggregated level was developed – the macro-forecast. In addition, the transport interconnectivities in the different modes of transport were forecast for small areas (district level) as part of a micro-forecast – for different journey purposes in the passenger sector and for different goods categories in the freight sector. As part of the subsequent "network apportionment", the annual traffic volumes (tonnes and passengers) calculated at the district interconnectivity level were broken down further into traffic levels specific to lines and sections on the different types of transport infrastructure.

To be able to counter the uncertainty of a forecast – which is always given in principle and structurally – a "top" scenario and a "bottom" scenario were also developed alongside the "core" scenario. For this purpose, the way in which the economy develops – which is by far the greatest "driver" of traffic trends – was varied such that annual GDP growth in the two alternative scenarios is 0.3 percentage points above or below that of the core scenario.

10.2 | Main results

There is likely to be a sharp rise in traffic in terms of passenger and tonne kilometres in Germany over the period to 2030. Compared with 2020, freight moved will increase by 38 percent and passenger kilometres travelled will increase by 13 percent.

Freight traffic

In the freight transport sector, the high level of dynamism in international trade will continue to make itself felt over the period to 2030. There will be a significant rise in cross-border traffic (+ 42 percent) and transit traffic (+ 52 percent). Domestic traffic will also rise sharply (+ 31 percent). The greatest growth in terms of passenger and tonne kilometres will be on the railways (43 percent), followed by road haulage (39 percent) and inland navigation (23 percent). The fact that growth on the railways will be slightly higher than on the roads is due in particular to trends in combined transport. Freight moved by the railways in combined transport will increase by 74 percent over the period to 2030.

Freight traffic [tkm bn]	2010	2030	Growth by 2030 over 2010 [%]
Railways	107.6	153.7	42.9
Roads	437.3	607.4	38.9
Inland waterways	62.3	76.5	22.8
Total	**607.1**	**837.6**	**38.0**

Table 17: **Freight moved by mode of transport**

Because of their great importance for the volume of domestic traffic and Germany's competiveness as a place for business and investment, the trends in maritime traffic and the volume of cargo handled by ports were forecast in a separate sub-project and subsequently integrated into the overall forecast. The total volume of cargo handled by German ports will increase from 269 million tonnes in 2010 to 468 million tonnes in 2030 (see Figure 13). This is equivalent to a growth rate of 74 percent. The German North Sea ports will grow at a greater rate (+ 80 percent) than the German Baltic Sea ports (+ 50 percent). There will be above-average growth at Hamburg and Bremerhaven (86 percent and 91 percent respectively). Even more dynamic overall growth is likely in the volume of containers handled. In 2030, significantly more than twice as many units will be handled (+ 131 percent) than in the baseline year 2010.

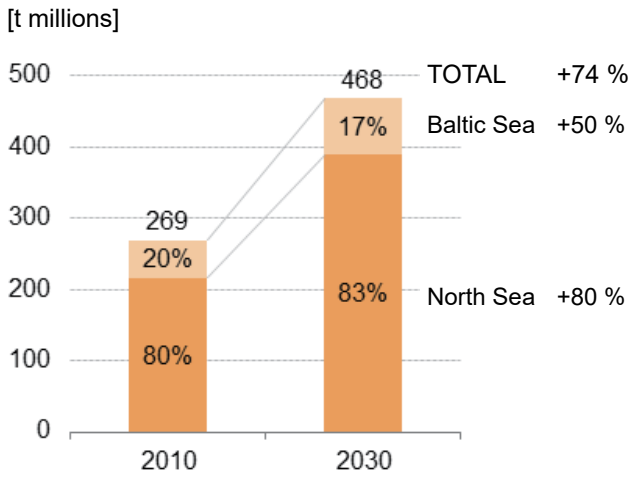


Figure 13: **Forecast of the volume of cargo handled by German seaports over the period to 2030**

Passenger Traffic

Motorized passenger traffic will continue to increase – despite a declining population. The growth in passenger car traffic of around 10 percent is due primarily to a higher level of car ownership among older people. Road-based public transport, including the regular long-distance coach services, will grow by 6 %. Rail traffic will increase by around 19 %. By far the highest growth will be in the air transport sector (65 %).

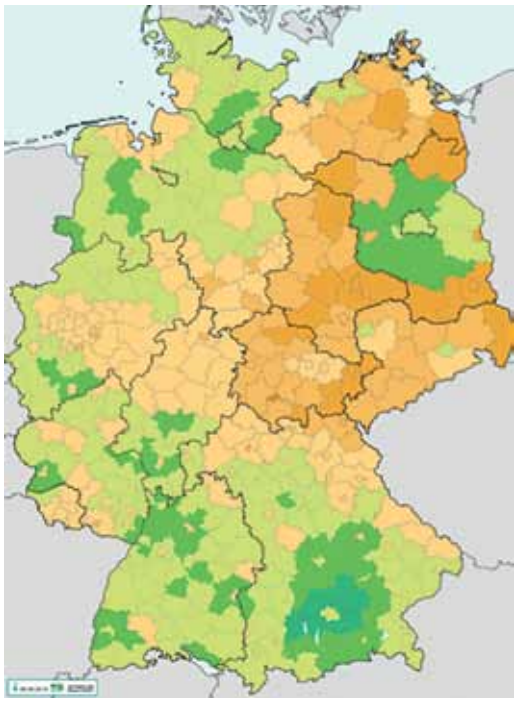
Passenger traffic [pkm bn]	2010	2030	Growth by 2030 over 2010 [%]
Private motorized transport	902.4	991.8	9.9
Railways	84.0	100.1	19.2
Road-based public transport	78.1	82.8	6.0
Air transport	52.8	87.0	64.8
Total	**1117.3**	**1261.7**	**12.9**

Table 18: Passenger kilometres travelled in motorized passenger traffic by mode of transport

As is the case with population change, the trend in the volume of passenger traffic will vary greatly from one region to the next (see Figure 14). There will be above-average growth in the south of Germany, especially in the urban hinterlands of the major cities. On the other hand, there will be a decline in the population in many parts of the new federal states. Exceptions here are Leipzig and Dresden plus the Greater Berlin area, where significant increases can be seen.

Further results can be found in the Final Report of the Traffic Forecast for 2030.[11]

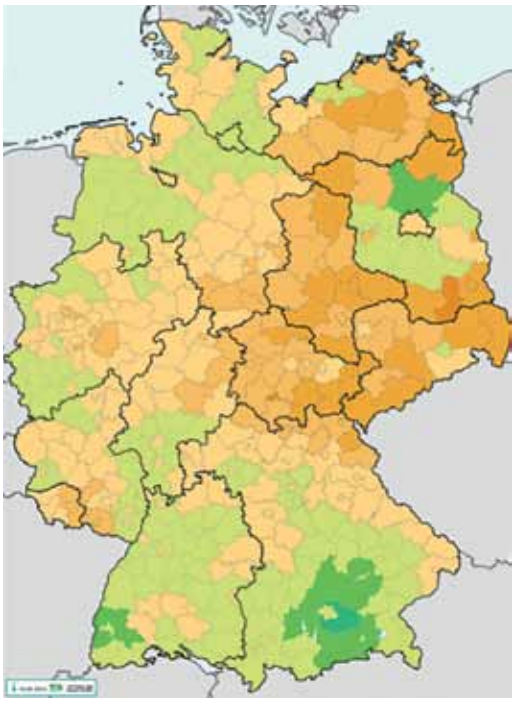
Change in traffic volume



Change in traffic volume
Total change

- ≤ - 50 %
- > - 50 % to - 40 %
- > - 40 % to - 30 %
- > - 30 % to - 20 %
- > - 20 % to -10 %
- > - 10 % to < 0 %
- 0 %
- > 0 % to 10 %
- > 10 % to 20 %
- > 20 % to 30 %
- > 30 % to 40 %
- > 40 % to 50 %
- > 50 %

Population trends



Population trends
Change in population in %

- > - 40 % to -30 %
- > - 30 % to - 20 %
- > - 20 % to -10 %
- > - 10 % to < 0 %
- 0 %
- > 0 % to 10 %
- > 10 % to 20 %
- > 20 % to 30 %

Figure 14: Change in traffic volumes and population trends in 2030 compared with 2010

11 http://www.bmvi.de/verkehrsprognose2030

11 | Methodology for identifying the need for structural maintenance and replacement

Roads
The need for structural maintenance and replacement for the entire federal trunk road network has been calculated for the period from 2016 to 2030 using better forecasting and the latest data.

On the basis of the German development of the computerized Pavement Management System for the federal trunk roads, condition-related forecasts have been made for carriageway pavement ever since the forecast of structural maintenance requirements for the FTIP 2003. Since the update of the forecast of structural maintenance requirements in 2010, the need for structural maintenance of the civil engineering structures has also been identified on a condition-related basis using the current development of a computerized structural management system for structures (Structure Management System).

For the **carriageway pavements**, the data sources include, in particular, the results of the 2013/2014 condition survey and assessment of the federal motorways and the 2011/2012 condition survey and assessment of the federal highways, which were used to capture the surface properties of the carriageways. For the assessment of the fabric of the whole pavement structure, data from the entire federal networks regarding the age and type of the individual layers of the road pavement continue to inform the calculations.

In the forecasting procedure, the current conditions of the carriageway fabric are analysed and sizeable sections with a homogeneous condition are identified. For every single one of these sections, the way in which the major condition features will develop is simulated with help of behavioural functions. As the forecasting procedure continues, the times at which intervention will be required and the effectiveness of possible structural maintenance work are assessed and optimized.

For the **bridges** with load bearing deficiencies or other structural deficiencies, additional calculations and estimates regarding the need for funding for bridge strengthening work were provided by the Federal Ministry of Transport and Digital Infrastructure with the assistance of the Federal Highway Research Institute and the federal states. In the case of the other **civil engineering structures**, it was possible to draw on updated condition data. With these data and with behavioural curves describing how the condition of the structural elements will develop, the need for structural maintenance and replacement was identified using facility type-specific forecasting methods for the civil engineering structures.

The need for structural maintenance and replacement of all **other miscellaneous components** was estimated using retirement and depreciation methods.

The need for structural maintenance and replacement can be met by carrying out both work consisting solely of structural maintenance and replacement and work combined with upgrading projects.

Railways
In the rail sector, the Federal Government, with the help of independent consultants, has calculated the investment in replacement infrastructure required for the lifetime of the SLFA II.

The quantities of the various existing assets on the rail network, such as the number of points and the length of the rails on the network, were taken from the databases of the railway infrastructure companies. Every unit of an asset was then allocated a specific cost rate from empirical values from the past. After being submitted to a plausibility check by consultants, the two factors were multiplied by each other to calculate the replacement cost of the individual assets. Finally, these were divided by the average technical service life of the respective assets, which were available as empirical values from many years of data collection by the railway infrastructure companies. This quotient reflects the annual replacement needs for the structural maintenance of the total stock of the asset.

The calculation just described presupposes a balance between the replacement of capital assets and preventive maintenance, in other words it is assumed that the full operational readiness of the existing installations is maintained until they are exchanged.

The funding in the period from 2016 to 2020 comprises, on the one hand, the expenditure that is purely on structural maintenance and replacement infrastructure and, on the other hand, the replacement shares of the FTIP 2030 upgrading projects that are relevant to the existing network. For the FTIP expenditure that is purely on replacement in the period from 2016 to 2019, the figures relating to the Federal Government's infrastructure contribution were carried over from the SLFA II. For the post-2019 period, the values of the current SLFA II will initially be updated as part of the FTIP planning activities. The replacement shares of the upgrading projects that are relevant to the existing network were determined on a project-by-project basis for the period from 2016 to 2030 using the FTIP 2030 projects earmarked for the first priority category. The specific replacement shares per project

are shown in the annexes to the FTIP and in the Project Information System (see Section 8.3 for more details).

Waterways
Two methods are used to estimate the need for investment in replacement infrastructure on the waterways. Both estimates arrive at similar results.

Need for investment in replacement infrastructure calculated from the fixed assets
The gross stock of fixed assets of the federal waterways is calculated on the basis of the annual investment in accordance with the budget estimates and annual linear depreciation taking annual price inflation into account.

The foundations and solid components of river and canal structures are designed for a service life of 70 to a maximum of 100 years. Other components have shorter service lives. The weighted average technical/economic useful life of all installations and components, including, but not limited to, electrical systems, control systems, mechanical systems, hydraulic steel structures, bank stabilization, solid structures and foundations is around 50 years.

If an average useful life (taking the mean across all components) of around 50 to 60 years and a similarly distributed age structure are taken as a basis, the theoretical mean annual need for investment in replacement infrastructure is around €1 billion in the case of an assumed service life of 50 years (gross stock of fixed assets of around €50 billion x 1/50) and around €0.83 billion euros in the case of a service life of 60 years (around €50 billion x 1/60). The need for investment in replacement infrastructure of around €900 million calculated in this way with a lump-sum approach shows the order of magnitude of the level of investment required in the long term simply to offset the annual structural deterioration.

Need for investment in replacement infrastructure as a statistical forecast from the condition of the structures
In addition to this, the condition of the predominant civil engineering structures (locks, weirs, pumping stations and bridges) is evaluated and forecast on the basis of the regular structural inspections. On this basis, the time at which investment in replacement infrastructure will be necessary and the level of funding that will be required are forecast. In addition, the need for investment in replacement infrastructure is estimated for installations that are not covered by these regular structural inspections (including bank revetments and sheet piling, aids to navigation, river regulation structures, berths).

On the basis of statistically backed results, it is likely that, over the next ten years, numerous structures will have to be replaced entirely or will require major restoration. From these results, it can be forecast that the need for investment in replacement infrastructure for locks and boat lifts alone will be around €5.2 billion in the next ten years. For the siphons, culverts, pumping stations and bridges, there is an arithmetic need for investment in replacement infrastructure of at least €1.4 billion in the next ten years. Thus, an arithmetic total of around €660 million per annum will have to be invested for these structures. In addition, a need of at least €200 million for other installations (including bank revetments and pile sheeting, dykes and embankments, aids to navigation, river regulation structures, berths) has to be assumed. On the basis of this estimate, the annual need for investment in replacement infrastructure of around €900 million, as calculated using the lump-sum approach of depreciation of the fixed assets to compensate for the annual structural deterioration, is considered realistic.

The need for structural maintenance and replacement can be met by carrying out both work consisting solely of structural maintenance and replacement and work combined with upgrading projects.

12 | Methodology for the appraisal of upgrading and new construction projects

The methodology of the appraisal procedure used for the FTIP 2030 has been extensively evolved compared with previous Federal Transport Infrastructure Plans with regard to international standards, scientific evidence gained and efficiency of application. This was done on the basis of several research projects. The transparency, robust technical base and quality assurance of the FTIP procedure and its results played a key role in the revision process. The following provides a brief description of the methodology of the four appraisal modules of the FTIP 2030. A more detailed account of the calculation methodology of all modules can be found in the Methodology Manual[12] on the Appraisal Procedures used for the FTIP 2030.

12.1 | Benefit-cost analysis (Module A)

The key appraisal module of the FTIP 2030 is the benefit-cost analysis, which compares all the positive and negative project impacts that can be expressed in monetary units with the investment costs of a project. Table 19 lists the 13 components in which the effects of the individual project proposals of the FTIP 2030 were monetized.

Benefit component	Abbreviation (German)	Brief description
Investment costs		Total of all project-specific costs
Change in operating costs	NB	Changes in transport costs in passenger and freight transport
Change in journey time	NRZ	Benefits from changed journey times in passenger transport
Change in the benefits in terms of the time required to transport cargo	NTZ	Benefits from changed transport times in freight transport
Change in reliability	NZ	Project-induced benefits resulting from changes in the reliability of traffic flows
Change in implicit benefit	NI	Implicit benefit resulting from additional mobility
Change in transport safety	NS	Change in accident costs in terms of injuries to persons and damage to property
Change in noise pollution	NG	Benefits from project-induced changes in noise pollution/ exposure
Change in exhaust emissions	NA	Benefits from project-induced changes in the level of exhaust emissions (air pollutants and greenhouse gas emissions)
Life cycle emissions of greenhouse gases from infrastructure	NL	Total greenhouse gas emissions resulting from construction, maintenance and operation of the infrastructure project ("life cycle emissions")
Change in community severance	NT	Change in community severance (delays and detours for pedestrians)
Benefits in competing modes of transport	NK	Impacts of a project on the benefit resulting from the use of modes of transport
Change in the operating and maintenance costs of the transport infrastructure	NW	Benefits from project-induced changes in the renewal and maintenance costs

Table 19: Benefit and cost components of the FTIP 2030 appraisal methodology

The benefits and costs listed were calculated in each case for the years of the "period under consideration". The period under consideration consists of the planning phase, the construction phase and the operating phase of a project and starts in 2015 for all projects in the road and rail modes. This simplifying statement implies that the further planning activities for all projects start uniformly in 2015. It is due to the fact that the actual timescale for delivery of the projects concerned and the time at which they will be commissioned are unknown at the time of

12 PTV et. al (2016): *Methodenhandbuch zum Entwurf des Bundesverkehrswegeplans 2030. Entwurfsfassung.* Karlsruhe, Berlin, Waldkirch, Munich.

project appraisal. For the waterway mode, the period under consideration starts in different years because for these projects, the Waterways and Shipping Administration is able to estimate detailed timescales for delivery and times at which the project will be commissioned.

All the benefits and costs identified were discounted to the reference year 2015 so as to be able to compare them with one another. For the FTIP 2030, a uniform discount rate of 1.7 % per annum was calculated by consultants. The reason for the discounting is the assumption that future benefits and costs will, from a present-day perspective, have less significance than benefits and costs of the same amount arising today.

Investment costs

The investment costs of the projects to be appraised are of key importance for the outcome of the BCR. Given that the costs of transport infrastructure projects rise – sometimes dramatically – over the course of time, special importance was attached in the FTIP 2030 to estimating realistic investment costs. Notified projects thus had to meet certain mode-specific minimum standards that were significantly more stringent than in the FTIP 2003. Thus, for instance, the project notifiers were requested to provide the Federal Ministry of Transport and Digital Infrastructure with not only a project description but also any studies already carried out. For the road mode, the federal states, acting as agents of the Federal Government, were requested to provide more in-depth information, for instance digital site plans and, if appropriate, also digital topographic maps, locations and dimensions of structures and detailed cost estimates.

In addition, all the road projects notified were reviewed by external consultants with regard to their environmental sustainability and the stated costs. From this review, it was possible, for instance, to derive any alignment adaptations, for instance rerouting, tunnels or additional bridges over protected areas. For the rail projects, external consultants estimated plausible alignments and their costs. This made it possible to estimate significantly more realistic investment costs for the individual projects than in the past.

Benefit components

Basic transport-related data for the forecast year 2030 were required to be able to determine the benefit components of module A. These data, which are called a "quantitative transport framework", include, for instance, information on the traffic levels on the individual sections of a transport network for the "without" and "with" scenarios. The quantitative transport framework was determined on the basis of the multi-modal traffic forecast for 2030 and its apportionment to the networks of the three modes of transport under consideration. With the help of these quantitative transport frameworks, the following benefit components were appraised.

→ Change in operating costs (NB)

The operating costs of the benefit-cost analysis comprise those costs that are incurred from the operation of vehicles, aircraft, sea-going ships and inland waterway vessels. Transport projects can influence these operating costs by, for instance, reducing mileages.

→ Change in journey time (NRZ)

Travellers in passenger transport cannot use, or can only partly use, their journey times for other, possibly productive, purposes. Thus, from a macroeconomic perspective, they entail costs. Transport projects can contribute in different ways to a change in journey times and the associated benefits on the transport network.

→ Change in the benefits in terms of the time required to transport cargo (NTZ)

The NTZ benefit component takes into account changes in the transport time in the freight sector. Freight ties down capital, for instance during transport operations, which cannot be used productively elsewhere. The transport times thus entail costs. Project-induced changes in these costs are interpreted as benefits of the projects.

→ Change in reliability (NZ)

Transport projects may not only change the journey or transport time on a route but also influence reliability on this route. Here, in a first approximation, reliability, or more precisely unreliability, is taken to mean a deviation from an expected mean journey or transport time. Transport users often compensate for unreliable routes by choosing an earlier departure time in order to absorb potential delays. Thus, within the meaning of the explanations on the NRZ and NTZ benefit components, macroeconomic costs are involved. Project-induced changes in reliability can reduce these costs and thus generate benefits.

→ Change in implicit benefit (NI)

This benefit component takes into account the fact that, if they have a range of mobility options to choose from, transport users do not take their decisions solely on the basis of journey time and cost comparisons. Other additional factors influence our travel choices. These include, for instance, the quality of the equipment of the means of transport available, or the personal attitude of the individual towards these means of transport. These properties of the mobility options cannot be measured,

or can only be measured with difficulty, but they are taken into account by transport users when making their decisions. They thus account for part of the benefit that a transport user attributes to the options available.

The NI benefit component takes into account these properties and benefits of the mobility options, as they can be influenced by transport projects. Their integration results in a consistent capture of induced and shifted traffic resulting from implementation of the transport projects to be appraised.

→ Change in transport safety (NS)

Although there has been a continuous drop in the number of accidents on Germany's transport infrastructure over the past few decades, traffic accidents continue to occur on the federal transport infrastructure. The injuries to persons and damage to property associated with these accidents result in costs to the whole economy, for instance in the health system or because of necessary repairs. The impacts of transport projects on transport safety are thus to be taken into account during their assessment.

→ Change in noise pollution (NG)

Noise pollution from traffic results, for instance, in harm to the health of the population affected and thus entails costs to the whole economy. Transport projects can help to reduce these costs and generate corresponding benefit, for instance by shifting traffic.

→ Change in the level of exhaust emissions (NA)

Exhaust emissions from vehicles, aircraft, sea-going ships and inland waterway vessels contain various air pollutants that have a harmful impact on humans, flora and fauna plus materials. In addition, the exhaust emissions release greenhouse gases. Emissions of both air pollutants and greenhouse gases result in costs to the whole economy, for instance in the health system or through reduced crop yields. Transport projects can bring about a change in the level of exhaust emissions, for instance by changing mileages.

→ Life cycle emissions of greenhouse gases from infrastructure (NL)

The NA benefit component already mentioned takes into account exhaust emissions resulting from the operation of vehicles, aircraft, sea-going ships and inland waterway vessels. In addition, the NL benefit component is used to capture the greenhouse gas emissions during the lifecycle of the transport infrastructure. "Life cycle emissions" means all greenhouse gas emissions associated with initial investment, reinvestment for the maintenance of routes and lines and the operation of the infrastructure scheme to be appraised. Compared with the "without scenario", they usually occur as additional emissions and thus as disbenefits of the project.

→ Change in community severance (NT)

Transport projects can contribute to a reduction in the volume of traffic on transport infrastructure within built-up areas. On built-up roads, this reduction can help their community severance impact, since pedestrians can cross these roads more easily and more safely if there is a lower level of traffic. These project-induced changes in the journey time of pedestrians are captured as a benefit within the meaning of the explanations on the NRZ benefit component.

→ Benefits in competing modes of transport (NK)

Impacts that a transport project of a specific mode of transport has on the other modes are also generally taken into account in the FTIP. Thus, for instance, it is taken into account that a transport project for rail freight can result in freight traffic being shifted from the roads to the railways, resulting in lower operating costs being incurred in the road haulage sector. Corresponding impacts are taken into account for the NA, NB and NS benefit components within the scope of the standard calculation.

In addition to these impacts already captured, the NK benefit component takes into account the fact that shifting traffic from the roads to other modes of transport can result in shorter journey times in road traffic as a result of the reduced traffic levels and thus higher average travel speeds. In addition, the NK benefit component takes into account that transport projects providing for the removal of level railway crossings can produce shorter journey times in road traffic as a result of vehicles not having to wait at level crossings.

→ Change in the operating and maintenance costs of the transport infrastructure (NW)

The operation and maintenance of the transport infrastructure entails costs. Transport projects change the level of these costs and, if savings are made, produce a corresponding project-related benefit.

12.2 | Environmental and nature conservation appraisal (Module B)

The environmental impacts of the FTIP 2030 were, for the first time, identified, described and assessed within the scope of a **Strategic Environmental Assessment (SEA)**. At the **project level**, this replaces the environmental risk assessment and Habitats Directive assessment from the last Federal Transport Infrastructure Plan. In addition, the environmental impacts of the **overall plan** were assessed for the first time as part of the SEA.

Two different approaches were used to assess the environmental impacts of the transport projects notified for the FTIP 2030. The "noise", "air pollutants" and "CO_2 emissions" factors (see the NG, NA and NL benefit components in Table 19) were monetized and incorporated into the **benefit-cost analyses** of the individual projects. The elements of environmental assessment were supplemented by further relevant appraisal criteria which, for purposes of comparability, were also quantified but not monetized. These non-monetized environmental impacts are the object of the **environmental and nature conservation assessment**. They were assessed verbally using a three-level ordinal scale. The projects were certified as having a low, medium or high impact on the environment.

This appraisal module focused primarily on the question as to whether, and if so to what extent, areas worthy of protection, which, like Natura 2000 sites and priority nature conservation areas, are of particular importance or are sensitive to encroachment by transport infrastructure projects, would, as a result of the transport projects studied, be affected by land take, severance or traffic passing through. Whereas a full assessment of these criteria is conducted for new construction projects, only a reduced assessment is normally carried out for upgrading projects. The reason for this is that these projects have already had an impact in terms of severance and encroachment on priority nature conservation areas and are thus in most cases significantly less relevant in terms of encroachment. Table 20 provides an overview of the individual environmental criteria studied and the scope of the reduced assessment.

Non-monetized environmental criteria		Unit of measurement	New construction (full assessment)	Upgrading (reduced assessment)
2.1	Encroachment/adverse impacts on priority nature conservation areas of outstanding significance (Natura 2000 sites, nature reserve, national park, biosphere reserve, core and buffer zones of biosphere reserves, Federal Government's large scale nature conservation project, UNESCO World Natural Heritage, Ramsar wetlands)	Area in [ha]	X	
2.2	Significant adverse impact on Natura 2000 sites (Natura 2000 impact assessment)	Number of sites affected	X	X
2.3	Land take on unfragmented core areas (UFA 250) of the Federal Agency for Nature Conservation's habitat networks	Area in [ha]	X	
2.4	2.4.1 a) Severance of large unfragmented areas (UFA 1,000/1,500) of the Federal Agency for Nature Conservation's habitat networks (wetland, dryland and woodland habitats)	Severance length in [km]		
	2.4.1 b) Severance of large unfragmented areas (UFA 1,500) of the Federal Agency for Nature Conservation's habitat networks (large mammals' habitats)	Severance length in [km]	X	
	2.4.1 c) Severance of nationally important habitat arteries/corridors	Number of severances		
	2.4.2 Reconnection of habitat networks in upgrading projects	Number of reconnections		X
2.5	Land take in accordance with the Sustainable Development Strategy (sealed and non-sealed areas)	Area in [ha]	X	X
2.6	Traffic passing through floodplains	Length of section carrying traffic in [km]	X	
2.7	Traffic passing through water protection zones	Length of section carrying traffic in [km]	X	
2.8	Severance of unfragmented areas with a low density of traffic (>100 km² in accordance with Federal Agency for Nature Conservation)	Area in [ha]	X	
2.9	Encroachment/adverse impacts on priority cultural heritage and landscape conservation areas (nature parks, areas of outstanding natural beauty, UNESCO World Heritage, biosphere reserves – unless covered by criterion 2.1)	Area in [ha]	X	

Table 20: Overview of non-monetized environmental criteria

The criterion of land take (2.5) was identified and described for each project in the first phase, but was subsequently only assessed at the overall plan level. Its primary purpose was to check, for the overall plan, whether the Federal Government's objective of limiting new land take for settlement and transport purposes to a maximum of 30 hectares a day had been met.

Environmental impacts at project level

The quantified **environmental impacts of the individual projects** were classified as "high", "medium" or "low" for each of the criteria studied and appraised using a system of points in which the points are to be interpreted negatively. As Table 21 shows, a higher weight was attributed to criteria 2.1 to 2.4, because of their special environmental relevance, than to criteria 2.6 to 2.9.

Result category of the appraisal per criterion	Appraisal points for criteria with a high weighting (2.1 to 2.4)	Appraisal points for criteria with a simple weighting (2.6 to 2.9)
High level of environmental impact	5 points	3 points
Medium level of environment impact	3 points	2 points
Low level of environmental impact	1 point	1 point

Table 21: Appraisal points per result category, broken down by category weighting

Subsequently, for each project, the points awarded across all categories were added up. The total of the (negative) points achieved determined the overall appraisal of the projects. Depending on the number of points, these were than attributed an overall "high", "medium" or "low" level of environmental impact. As Table 22 shows, a "high" level of environmental impact in individual criteria also, in some cases, resulted in the overall level of environmental impact of a project being raised to the next level irrespective of the total number of points.

Result category	Criteria weighting
High level of environmental impact	22-32 appraisal points *or* "high level of environmental impact" in the case of at least 2 criteria with high weighting *or* "high level of environmental impact" in the case of at least 3 criteria with simple weighting
Medium level of environment impact	13-21 appraisal points *or* "high level of environmental impact" in the case of at least 1 criterion
Low level of environmental impact	8-12 appraisal points

Table 22: Framework for the overall appraisal of the individual projects

Going beyond the formalized appraisal, a supplementary plausibility check was carried out which, in individual cases, resulted in an upgrading or downgrading of the formal appraisal result. Additional facts relevant to the appraisal that resulted in a change in the overall level of environmental impact were documented in the project dossiers. One of the possible causes of this was, for instance, alignments that cause only indirect impacts or result in advantages by being consolidated with existing impacts. It was also possible for a very high level of impact in the case of individual criteria to have an effect here and, for instance, an advanced status of planning.

Environmental impacts of the overall plan

The non-monetized environmental contribution of the overall plan was likewise determined for each of the individual criteria. To this end, the resources consumed by all projects of the VB category (including VB-E) were placed in relation to a reference value derived from the current environmental objectives. This drew on the totality of the special areas existing in Germany (e.g. in criterion 2.1) and on existing environmental encroachments (e.g. in 2.4.1 a) or the total length of the projects under consideration (e.g. in 2.6). In the case of criterion 2.5, the Federal Government's objective of limiting new land take served as a reference, as described.

The degree to which the objectives were achieved was then appraised for all criteria in accordance with the result categories from Table 23. In the case of some criteria, it was theoretically possible for all five contribution levels to be achieved, whereas in the case of other criteria, only negative or neutral contributions to the achievement of the objective were possible.

++	Significant positive contribution to achievement of the objective	or	objective very significantly achieved
+	Positive contribution to achievement of the objective	or	objective significantly achieved
o	No significant contribution to achievement of the objective	or	objective achieved
-	Negative contribution to achievement of the objective	or	objective not achieved
--	Significant negative contribution to achievement of the objective	or	objective not achieved by a long way

Table 23: Framework for the appraisal of overall plan impacts

For detailed explanations of the methodology of the environmental and nature conservation assessment and/or the strategic environmental assessment, reference is made to the Environmental Report on the FTIP 2030.

12.3 | Spatial planning assessment (Module C)

Spatial planning also places demands on the planning of transport networks that have been studied within the scope of the spatial planning assessment of the FTIP 2030. The focus here was on analyses of deficiencies in the **connection and link qualities** relative to centres of the system of central places and of spatially pronounced **accessibility deficiencies** on the basis of minimum spatial planning standards.

The key approach to assessing aspects of federal transport infrastructure planning that are relevant to spatial development is an analysis of deficiencies (cf. Figure 15) for the "without" scenario, which is carried out before the individual project appraisals. This strengthens the holistic network planning approach of the FTIP.

As the process continues, any deficiencies identified in the "without" scenario are defined more precisely and weighted on the basis of the expected spatial development and related to demographic trends. The result is that high-quality evidence is available as to where, and on what scale, shortcomings that are significant in terms of spatial planning exist and upgrading new or new federal transport in infrastructure schemes can contribute to improvements.

These appraisals are only carried out for passenger transport, because at the present point in time there are no corresponding procedures for such analyses relating to freight transport.

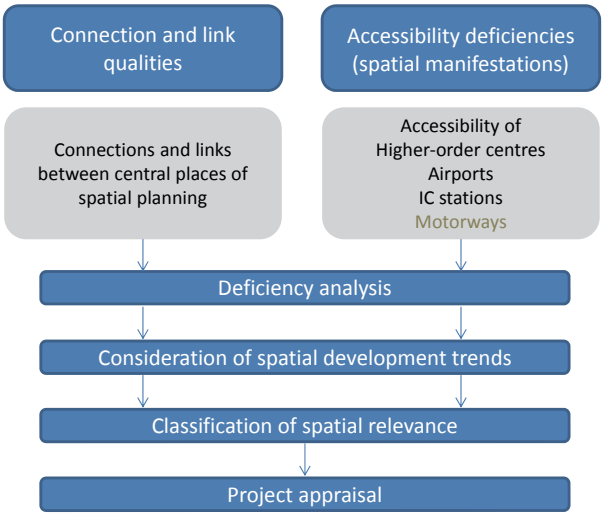


Figure 15: **Structure and components of the spatial planning assessment**

Connection and link qualities

The objectives of spatial planning and transport network planning are closely interlinked through the system of central places. Transport networks support the central places in performing their function of providing goods and services. At the same time, transport infrastructure makes it possible to exchange goods and services between central places.

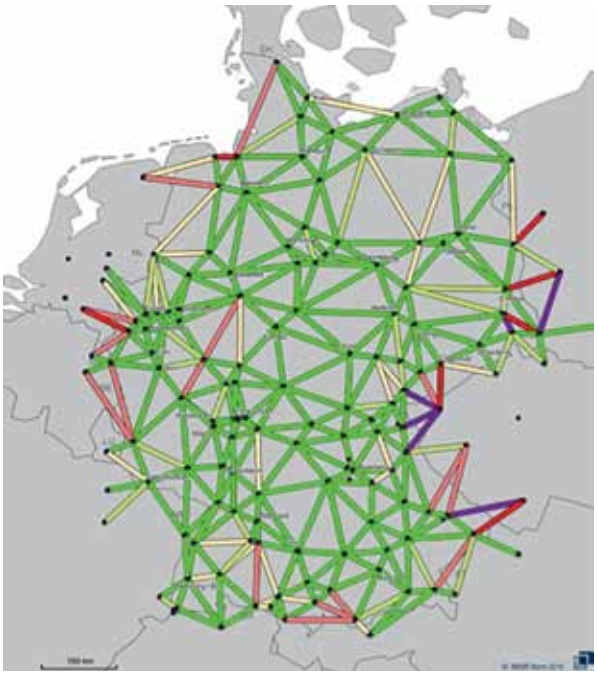
For the FTIP 2030 project appraisals, only the links and origin-destination pairs of spatial planning relevance between the higher-order centres and the metropolitan regions – the highest two levels in the hierarchy – were considered. Deficiencies in the connection and link qualities were identified using the criteria in the currently valid Guidelines for Integrated Network Design on the basis of direct travel speeds between such centres.

These were calculated from the quotient of straight-line distance identified and the journey time. The latter was identified for the road mode by determining the shortest possible route in private motorized transport by passenger car. For passenger rail services, forecast journey and transfer times on the reference network were added together.

The indicators identified for each link were classified according to six levels of service quality, from "very good" to "unsatisfactory". This took account of the fact that the requirements to be met by the quality of services in terms of speed and, possibly, the number of transfers change as the distance changes. Figure 16 illustrates the classified direct travel speeds between the higher-order centres in passenger rail transport.

No current need for action was deemed to exist in the case of origin-destination pairs whose connection and link quality was classified as at least "satisfactory". In the case of a poorer classification, an origin-destination pair was given valuation points.

Links between higher-order centres



Appraisal of the link quality in passenger rail transport along the lines of the RIN – in the "without scenario"

- Very good
- Good
- Satisfactory
- Adequate
- Inadequate
- Unsatisfactory

Database: BBSR accessibility model
Geometric basis: BKG, federal states, 31 December 2010

Figure 16: **Appraisal of direct travel speed from higher-order centre to higher-order centre in passenger rail transport**

Accessibility deficiencies

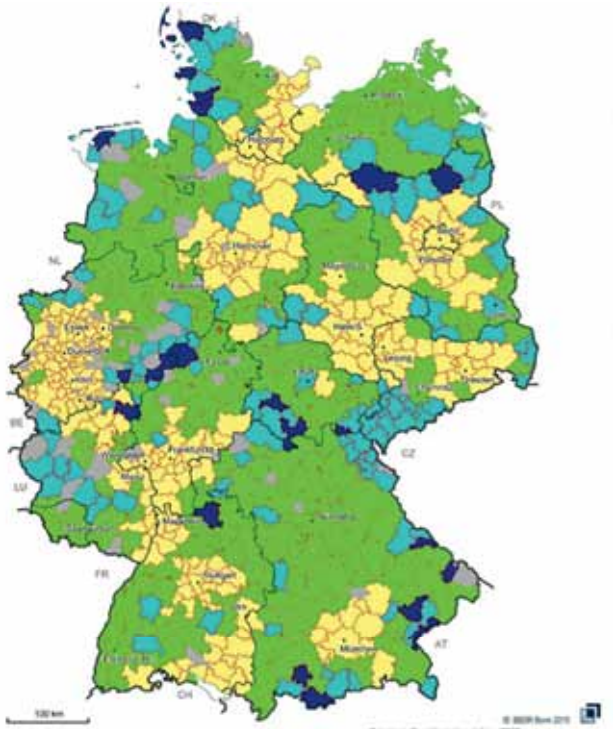
The spatial manifestations of accessibility deficiencies were also considered with regard to minimum spatial planning standards for various destinations. For *private motorized transport/road passenger transport*, journey times between the spatial planning level of the middle-order centres and the nearest motorway junctions, international airports, higher-order centres and Inter City railway stations were taken into account. The journey time studied was that on a road network without congestion.

Passenger car journey times of more than 30 minutes to the nearest motorway junction, more than 60 minutes to the nearest airport, more than 45 minutes to the nearest IC railway station and over 45 minutes to the nearest higher-order centre were defined as deficient. If the passenger car journey time to the nearest higher-order centre was more than 60 minutes, this deficiency was given a significantly heavier weighting because, from the perspective of spatial planning, the higher-order centres represent the outstanding destinations.

Similar deficiencies were also identified in passenger rail transport. Here, the journey times to airports, higher-order centres and IC stations were taken into account. In this case, the basis was journey times calculated on the basis of the timetable and network data. Journey times of more than 90 minutes to the nearest airport, over 60 minutes to the nearest IC station and more than 60 minutes to the nearest higher-order centre were deemed to be deficient. If the journey time to the nearest higher-order centre was more than 90 minutes, this deficiency was again given a heavier weighting.

The deficiencies identified were quantified, added together and likewise converted into valuation points using a uniform system for both modes of transport. For purposes of illustration, Figure 17 shows the aggregated accessibility deficiencies of the German middle-order centres for the rail mode.

Accessibility indicators



Summary of accessibility deficiencies in passenger rail transport

- No relevant deficiency
- Low deficiency
- Medium deficiency
- High deficiency

Database: BBSR accessibility model
BVU Wirtschaft + Verkehr GmbH
Geometric basis: BKG, intermediate spheres of influence, 31 December 2012
Weighting of the deficiencies identified:

Accessibility of airports	0.5
Accessibility of IC, ICE and EC stations	0.5
Accessibility of higher-order centres – 60 minutes	0.5
Accessibility of higher-order centres – 90 minutes	2.0

Figure 17: **Spatial manifestations of accessibility deficiencies in passenger rail transport**

Spatial development trends
Both the accessibility deficiencies appraised at the level of the middle-order centres and the connection- and link-related deficiencies were weighted with forecast spatial development trends. To this end, the demographic trends on the ground were estimated so as to be able to better assess the future relevance of spatial planning policies. The regional population potential based on the population forecast for 2030 was used as weighting criteria.

Project-specific appraisals
To appraise the spatial impact of individual projects, a pre-selection was made and the impacts of these projects on the existing deficiencies were analysed. Subsequently, all the calculated valuation points of an upgrading or new construction projects were added up.

It was possible for one project to generate improvements in the connection and link quality on several origin-destination pairs and also have impacts on different accessibility deficiencies. This resulted in a differentiated points appraisal whose scale of values had no upper limit. It constituted the basis for a categorized appraisal of the overall spatial planning significance of the project. The projects were finally allocated a high, medium, low or no level of spatial impact.

Further details on the appraisal system and numerous diagrams can be found in the Methodology Report on the FTIP 2030.

12.4 | Urban development assessment (Module D)

In the FTIP 2030, the appraisal of road construction projects concerning federal highways of link function level II or lower according to the Guidelines for Integrated Network Design also considered the urban development impacts of the projects. This involved studying three types of effects for each project.

The term **"effects on the road environment"** was used to describe the effects of a project which, when there is a change in the volume of traffic, impact primarily on the road environment – chiefly along roads passing through built-up areas – and open up the possibility of redesigning this environment. Thus, the shift in traffic usually results in congestion relief on the former road passing through the built-up area, which creates scope for its redesign or reduction in size. This makes it possible to mitigate or even eliminate situations that are incompatible with urban development. The only roads where such effects can occur are those that are located within built-up areas and have a direct access function.

The term **"land use and access effects"** was used to describe the study of those consequences of the projects where changes in traffic impact on the accessibility of adjacent urban sites or built-up areas in the area surrounding these projects. The reduction in traffic levels means that the quality of built-up areas affected can, as a result of new or modified connections, be enhanced, for instance by better accessibility through less congestion. These enhancements can contribute towards adjacent areas developing better or can help to increase the demand for hitherto unpopular residential or commercial areas by improving accessibility.

The term **"refurbishment and renewal effects"** was used to describe possible changes in the value of properties abutting on roads within built-up areas which may be triggered by shifts in traffic as part of the delivery of an FTIP project. The appraisal assumes that the entire structure of a street lined with houses where the frontage development is impaired by persistently high levels of traffic can be upgraded by reducing the volume of traffic. In this way, it is possible to prevent or curb a traffic-induced refurbishment backlog or even vacant dwellings. Thus, not only improvements in the image presented by the urban environment but also improvements in living and working conditions are regarded as refurbishment and renewal effects.

For all three effect categories, a number of small-scale road sections were studied per project on which a traffic shift would occur as a result of the project under consideration. First, urban development indicators were identified for each of these road sections. In particular, "activatables" and "potential impacts" were determined. From the large number of motives on the basis of which local stakeholders take decisions on capital investment projects relevant to urban development, activability is used to estimate the probability share that the actual traffic shift will contribute to this decision. In contrast, the potential impact reflects the extent of the urban development possibilities. In this procedure, the product of the two indicators is referred to as the "activatable potential impact".

The procedure described differs in the three effect categories only in details. After all road sections with relevant effects had been calculated, the lengths of those sections on which their activatable potential impact exceeded a pre-determined level were placed in relation to the total length of all road sections in a project that had any relevant effects at all. Those road sections whose activatable potential impact exceeded the pre-determined level were identified as locations at which either intensive development possibilities could be generated or at which there is a risk of structural deterioration. The outcome was that an urban development "degree of effectiveness" (for the positive impacts of the project) and a "degree of impairment" (for the adverse impacts of the project) were produced for each project and each effect category.

The degrees of effectiveness and degrees of impairment of the refurbishment and renewal effects and those of the spatial and access effects of a project were then integrated into a "secondary degree of effectiveness" and "secondary degree of impairment" respectively using a special averaging procedure (Hölder mean). Subsequently, the two integrated efficiency measurements were classified into five adjacent intervals, which are numbered "0" to "4" in Table 24. The two efficiency measurements of the effects on the road environment, which are considered to be primary, were classified into intervals in the same way.

Finally, the overall assessment of a project from an urban development perspective was done by comparing the interval categories identified. Thus, an appraisal figure can be derived from the 5x5 appraisal matrix shown in Table 24 both for the secondary efficiency measurements and for the primary efficiency measurements. The maximum of the two figures produced in this way, to which the ranking adjectives used in Table 24 are allocated, was finally allocated to the project under consideration as an urban development significance.

		Integrated impairment				
	Interval category	**0**	**1**	**2**	**3**	**4**
Integrated effectiveness	**0**	0/I	0/I	0/I	0/I	0/I
	1	1/L	0/I	0/I	0/I	0/I
	2	2/M	1/L	1/L	0/I	0/I
	3	3/H	2/M	2/M	1/L	1/L
	4	3/H	3/H	2/M	2/M	2/M

Urban development significance: H – high; M – medium; L – low; I – insignificant

Table 24: Appraisal matrix for the urban development significance of road construction projects

12.5 | Further analyses

12.5.1 | Intermodal and intramodal interdependencies

Transport infrastructure projects influence the flows of traffic. Depending on the scope of work and the location of construction projects, they usually result in a change in the level of traffic not only on the road sections directly affected but also on parts of the rest of the transport infrastructure network. The spatial extent of the sphere of impact of a project can be assessed by comparing the levels of traffic on sections on a network on which a specific project is included and a network on which this project is not included.

Beyond the described impacts of a project on the existing transport network, there is sometimes interaction between several projects to be appraised. If the spheres of impact of two or more projects overlap significantly, consideration of the package of projects will, compared with the appraisal of individual projects, produce an increase or reduction in beneficial effects. These interdependencies between projects to be appraised may result both within a mode of transport (intramodal interdependencies) and across modes of transport (intermodal interdependencies). The following looks at the relevance and consideration of these interdependencies in the FTIP 2030.

Intramodal interdependencies
To be able to identify possible intramodal interdependencies in the **road** mode, all projects for which a requirement was identified on the basis of the individual benefit-cost analyses were consolidated into a target network. The volumes of traffic for this target network were calculated. Subsequently, these traffic volumes from the target network calculation were compared with the traffic volumes from the individual project appraisals. The comparison of the two volumes of traffic, measured in vehicle mileage, produce for each project origin-destination pairs which point to possibly existing interdependencies. These are relevant because experience has shown that there is a close correlation between the level of vehicle mileage and the beneficial effects of the projects.

On the origin-destination pairs affected by interdependencies, the total over all projects is a vehicle mileage on the target network that is on average around 3 % lower than the total of all vehicle mileages calculated for all individual projects. On the basis of the project-specific deviations, an examination was conducted to determine the extent to which competition between projects resulted in appreciable changes in the project benefit of the individual benefit-cost analyses. This examination revealed that there are no significant changes in the BCR and that it is thus not necessary to modify the envisaged requirement classification.

In the case of the **rail** mode, too, all project appraisals were initially conducted individually without taking into account possible intramodal interdependencies between the projects to be studied. In the subsequent target network calculations, the projects were reviewed by the consultants to determine whether there are any competitive relationships between projects. It became apparent that in some projects there are overlaps between the demand segments benefiting from the schemes concerned. This is the case, for instance, in the following two projects: construction of a new line from Gelnhausen to Mottgers (project no 2-002-V02) and upgrading of the Gelnhausen – Kalbach/Aschafenburg – Nantenbach lines/construction of new lines (project no 2-007-V01). Since implementation of both projects would not represent overall value for money, a decision on which option to pursue will be taken by the developer in the course of further planning. As far as other intramodal interdependencies that exist from the consultants' perspective are concerned, detailed examinations will be conducted subsequent to the FTIP to determine the extent to which these are relevant to the precise project definitions.

In the case of the **waterway** mode, examinations were conducted as part of the project appraisals to determine the extent to which intramodal interdependencies between the individual projects could be relevant to decision-making. The consultants came to the conclusion that there are no interdependencies relevant to decision-making between the appraised waterway projects. This is a logical consequence of the low density of the waterway network, which means that the possibility of selecting an alternative route is usually limited.

Intermodal interdependencies
To examine possible interdependencies between FTIP 2030 projects, the project-induced modal shift impacts between the modes of transport were compared. Here, the only interdependencies that were of importance were those that question the final business case of individual projects.

For the **road** mode, modal shift calculations were conducted in the benefit-cost analysis to quantify the potential shifts from long-distance passenger rail services to private motorized transport. The results of the project-related calculations show around 100 million shifted passenger kilometres per annum for the total number of around 390 relevant projects. Against the background of a total of around 9,000 million passenger kilometres per year in the field of private motorized transport in Germany, the shifts calculated can be classified as insignificant on the whole.

In addition, the potential shifts from private motorized transport to passenger rail services were calculated and the shifted journey flows were used to examine the impacts on the BCAs of the road projects. The figure here is around 1 billion passenger kilometres per annum that would be shifted from the roads to the railways. The results of an apportionment of the journey flows transferring from private motorized transport to passenger rail services as a consequence of rail projects to the road network show that the shifted traffic produces only marginal reductions in the levels of traffic and/or the benefit-cost ratios. The maximum reduction recorded in the traffic levels of the individual road projects is below 2 % of the values otherwise expected. The shifted traffic thus has no significant impact on the results of the benefit-cost analyses. Accordingly, there are not likely to be any interdependencies impacting on the projects' value for money.

For an examination of intermodal impacts in **passenger rail transport**, the demand quantities shifted from the railways to the roads on the target network of the road mode were passed on to the "road" consultant by the "rail" consultant. On this basis, possible impacts on the rail project appraisals were examined. The outcome was that demand on the railways is reduced as a result of the road projects studied in the FTIP by 2,710 passenger journeys per working day (Monday to Saturday), distributed over around 25,100 origin-destination pairs. Extrapolated to one year, demand is thus reduced by 963,000 passenger rail journeys. This is equivalent to around 0.04 % of the total demand forecast for the railways. In terms of passenger kilometres, there is a drop of around 97.7 million, which is equivalent to a reduction of 0.1 %. In total, therefore, relevant intermodal impacts by the roads on the railways are not apparent.

In addition, a closer look was taken at the impact of road projects in the FTIP on individual rail projects. This showed that the fall in demand resulting from the road projects exceeded an order of magnitude of 1 % on the railways in only a very few cases. An estimate of the reduction in benefit for the rail project hit hardest by such falls in demand (upgrading the Hamburg/Bremerhaven – Hanover line/construction of a new line) showed that the total benefit, and thus also the BCR, will be reduced by a maximum of 2 % even under the least favourable assumptions. From the point of view of passenger transport, there is thus likely to be no major change in the existing appraisal results as a consequence of an intermodal appraisal of the rail projects in the FTIP 2030.

Around 98 % of the benefits in **rail freight** from project-induced shifts from other modes of transport, based on tonne kilometres, result from shifts from the roads. By contrast, the proportion of shifts between the rail and waterway modes is focused on a very small number of projects and, with an overall average of 2 %, is very low. Intermodal interdependencies between the railways and waterways that are relevant to appraisal can thus be ruled out. The decisions to shift from the roads to the railways are dominated by capacity-related shifts (85 %) resulting from the improvement in the bottleneck situation. The only reason why this traffic goes by HGV is that the demand cannot be met on the railways. The capacity enhancement resulting from the rail projects means that this demand can move from HGVs to the railways. This level of traffic would still go predominantly by rail if the road network were to be improved at the same time. There is thus not likely to be a major change in the appraisal results in rail freight as a result of taking intermodal network effects into account.

In the case of **waterway** projects, there are almost no intermodal interdependencies with road or rail projects. A slight impact on the appraisal result can only be observed in one inland waterway project. This is the upgrading of the Danube on the section between Straubing and Vilshofen (project W31). Here, there is likely to be a shift totalling 338,000 tonnes to inland waterway vessels. Since, however, the benefit from the modal shift accounts for a mere 3 % of the project benefit, the appraisal result is not dependent on intermodal interdependencies.

12.5.2 | Sensitivities

Like any other long-term planning process, the ascertainment of needs within the framework of federal transport infrastructure planning is subject to some uncertainties. And there are a large number of variables that can have an impact. In the FTIP, appropriate studies focused on those variables that were likely to involve the greatest uncertainties or have the greatest impact on the appraisal results.

Demography

Demographic trends are frequently cited as an example of a risk factor regarding the stability of project appraisal results. In some regions, there are likely to be far-reaching changes in the demographic structure, which may have an impact on transport infrastructure needs, especially after 2030. To examine the stability of the BCR results, the population trends over the period to 2050 were considered. For this purpose, a special transport interconnectivity matrix for 2050 was developed, based on the Federal Institute for Research on Building, Urban Affairs and Spatial Development's spatial planning forecast for 2050. The change in transport demand from 2030 to 2050 was done solely for passenger traffic. It was assumed that freight traffic would be constant from 2030 to 2050.

The Spatial Planning Forecast for 2050 states that the population in Germany will decline by around 6 % from 2030 to 2050 (old federal states: - 4 %, new federal states: - 17 %), although regional forecasts vary significantly around this mean value.

In their appraisal of the need for sensitivity analyses in relation to the population decline forecast over the period to 2050, the consultants assume that this decline will not have any impact relevant to appraisal on the benefits from the freight transport sector. The fall in consumption resulting from population decline, and the related decrease in production in the goods categories concerned, is likely to be more than offset by the growth in freight moved (tonne km/year) as the economy continues to become even more based on the division of labour and productivity is enhanced.

For the benefit-cost analysis of the notified projects in the road mode, the transport demand in the target forecast year 2030 was used. The most important basis of the transport interconnectivity forecast for 2030 is the structural data forecast for 2030, which was prepared as part of the Federal Institute for Research on Building, Urban Affairs and Spatial Development's spatial planning forecast. To quantify the changes in traffic levels from 2030 to 2050 linked to the matrix for 2050, the matrix was apportioned to the defined target network. From the results of the network calculation, mileage reductions were derived for both the overall network and for every appraised project. As expected, the reductions correspond to the changes in the population forecast.

For the whole of Germany, there is likely to be a reduction in passenger car mileages of around 10 % from 2030 to 2050 for the case studied, with the "losses" being greater in the traffic levels on the federal highways (- 11 %) than on the motorways (- 7 %). In a first approximation, the beneficial contributions of passenger transport will thus be around 10 % lower in 2050 than in 2030. Here, it should be borne in mind that beneficial contributions reduced as a result of demographic trends only relate to part of the useful life of the infrastructure projects and will not start to have their full impact until 2050 or later. Viewed over the entire useful life of the project, possible reductions in benefits are on average well below 10 %. This is all the more true since beneficial impacts are of less consequence in later years of the project life cycle, because of the need to discount in the appraisal, than benefits in earlier years. Sensitivity analyses related to individual projects in the sphere of demography are therefore not deemed necessary in the road mode.

In the **rail** mode, the bulk of the benefit for the wider economy, averaged over all projects, is in the rail freight and long-distance passenger service sectors. Reasons have already been given as to why, in the rail freight sector, there is no relevance to appraisal with regard to the population decline forecast over the period to 2050. This also applies to long-distance passenger rail services. One of the main reasons for this is that much of the demand in the long-distance passenger rail service sector is determined by transport links between conurbations. In the totality of all district types in this category, population decline in 2050 compared with 2030 is only just under 3 %. If further GDP growth in the years after 2030 is assumed, the growth in mileages in long-distance passenger rail services produced by this is likely to more than offset the population-related decline in demand that is to be expected depending on the origin-destination pair.

In individual cases, impacts beneficial across the whole economy and relevant to appraisal are also likely from the local passenger rail service sector, for instance in the case of junction or upgrading schemes whose purpose is to segregate long-distance passenger rail services, local passenger rail services and rail freight. Sensitivity analyses in infrastructure projects for the rail mode may be necessary if these projects are in sub-regions with high population decline and simultaneously exhibit a share of benefits in local passenger rail services that is way above average. In phase 1 of the FTIP appraisals, no sensitivity analyses are required in the rail mode because of the infrastructure projects to be studied there, local transport benefits relevant to appraisal are only likely in the case of the projects to upgrade the Munich – Mühldorf – Freilassing line and the Ulm – Friedrichshafen – Lindau line. In the transport areas concerned, the Federal Institute for Research on Building, Urban Affairs and Spatial Development forecasts only below-average population decline between 2030 and 2050. As is the case in the road mode, it is also true of the rail mode that beneficial contributions reduced as a result of demographic trends only relate to part of the useful life of the infrastructure projects and will not start to have their full impact until 2050 or later.

In the **waterway** mode, the benefits occur exclusively in the freight sector, which means that sensitivity analyses in the sphere of demography are not necessary.

Time gains

The benefit to the national economy resulting from project-induced time gains for transport users strongly influences the appraisal results. In this context, there is vigorous debate on, in particular, whether transport users in private transport appreciate "minor" time gains (for instance less than 1 to 2 minutes per user). It is argued, for example, that "minor" time gains below a perceptibility

threshold are not noticed and, for this reason, are of no value. This issue was explicitly examined in a research project into how people appreciate time gains in passenger transport. The outcome is that the consultants recommend that "minor" time gains should not be given special treatment. Moreover, an international comparison showed that this approach is similar to that adopted by most countries when applying benefit-cost analyses in the field of transport infrastructure projects.

Academic studies advance various arguments for this. One major reason is that new infrastructure projects have to be seen as part of a whole. It is true that improving a section may in some cases only allow a minor time gain. However, several improvements taken together can also produce a major additional benefit. It would not be logical to give a lower value to small differences occurring in partial steps than to the total of minor differences in the overall model. Non-appraisal would thus lead to inconsistent results.

Another key argument is that no scientific reasons can be given for the thresholds for the non-consideration of minor individual journey time differences. The choice of a threshold for a reduction in the time value would appear to be arbitrary. If, for instance, a person has not so far used a certain proportion of their time budget, for instance three minutes, they could, after an improvement such as the construction of a new road, have generated a time gain of over five minutes. At the limits of the thresholds, therefore, there are likely to be distortions of the appraisal results. In addition, it has to be assumed that people will adapt their activity patterns over time and, at least in the longer term, make use of "minor" time gains.

For the FTIP appraisal procedure, the synopsis of all the arguments mentioned in the research project followed the consultants' recommendation that all the identified project-induced time changes be taken into account. Independently of this – and in the interests of transparency – the Project Information System displays, for each of the individual projects, the benefit shares generated by very short time gains. In the case of the road mode, these are benefits resulting from time gains in private transport of less than one minute, and in the case of the rail mode of less than two minutes. A higher value is selected for the railways because it is usually the case that only major projects with higher time effects per user are implemented.

Economic growth

An examination was also conducted to determine the extent to which uncertainties in relation to the forecast economic growth over the period to 2030 could be relevant to the stability of the appraisal results. This drew on the scenario calculations conducted as part of the traffic forecast for 2030. In the core scenario, on which the project appraisals are based, an annual growth in gross domestic product of 1.14 % is assumed. In two alternative scenarios, the impact on traffic in terms of passenger and tonne kilometres and traffic volume is studied if the assumed annual growth in gross domestic product in Germany were around 0.3 percentage points higher or lower than in the core scenario of the traffic forecast. Accordingly, motorized traffic in terms of passenger kilometres is around 4.8 % higher in the higher scenario and around 4.5 % lower in the lower scenario. In the freight sector, the forecast tonne kilometres in 2030 are 3.6 % above the core scenario in the higher scenario and 3.7 % below the core scenario in the lower scenario. The deviations from the core scenario are thus very moderate, which means that the appraisal results exhibit a high level of stability.

12.5.3 | Consideration of alternatives

The objective of the consideration of alternatives during the preparation of the FTIP is to study alternatives at as early a planning stage as possible and to allow the findings to inform the process of development of the transport infrastructure. The object of the consideration of alternatives is to assess whether plan alternatives exist that, for instance, involve lower environmental impacts or investment costs.

The only options considered were those that were reasonable, could be identified without too much effort and were serious contenders as alternatives to the actual draft plan. Non-relevant alternatives, for instance those that it would only be possible to deliver with a disproportionately high effort, were ruled out at an early stage after a brief review.

The consideration of alternatives for the FTIP 2030 took place at two levels. First, at the project level, taking account of sub-networks and corridors, and second, at the overall plan level. The **consideration of alternatives at the overall plan level** forms the basis for the strategic decision on the division of funds between the three modes of transport. It is described in section 7.1.

At the **project level**, alternative project types are considered as a matter of principle. In the road mode, projects are deemed to be alternatives if they have the same objective, for instance the removal of a bottleneck on a motorway, but intend to achieve it in different ways – by widening the motorway through the construction of additional lanes or by upgrading the secondary federal highway network, for instance through the end-to-end routing of a federal highway that does not pass through the centres of towns and villages. In the case of rail projects,

a decision to upgrade a line or construct a new line with the number of tracks, upgrading the line for a certain speed or electrification is usually taken. Waterway projects regularly involve the upgrading of an existing transport route for larger vessel dimensions and/or for vessels with larger laden draughts plus, in individual cases, capacity enhancement by constructing additional ship-lifting installations. The upgrading can relate to both a reach (canal, river, fairway in coastal waters) and individual transport structures (locks, boatlifts, bridges). There is virtually no construction of new waterways, i.e. new canals, and where there is, it is confined to very short feeder sections, so that it is not relevant to look at alternative routes for waterways. If different design options are possible for individual waterway projects, these were considered during the appraisal and the option selected was described.

In the case of **road projects**, an initial consideration of alternatives took place before the federal states notified their projects. This involved comparing individual project alternatives to identify the option that would ultimately be included in the project appraisal as an individual project. Given the large number of projects and the federal states' planning responsibilities, the latter were obliged to consider "alternative possible solutions" before notifying road projects and to base the notification on the outcomes of the consideration of alternatives. Especially in cases where there were environmental conflicts, they had to set out whether alternative plans, in particular the upgrading of existing sections rather than the construction of a new road, had been considered and why such a solution had not been notified (if this was the case). If appropriate, alternative modes of transport were to be explored. In a few cases, the federal states did notify alternative projects for appraisal. Information on the consideration of alternatives can be found in the project dossiers.

Project variants are not the subject of federal transport infrastructure planning. Variants are alignments of the same project, for instance a bypass, that deviate from one another either wholly or in part, have essentially the same objective (in this case congestion relief on a road passing through a built-up area, road safety enhancement, etc.) and carry the same traffic. Decisions concerning variants are taken in downstream planning procedures. However, in some cases – if the plans are still at an early stage of planning and there is still no preferred option – conceivable other variants were notified by the federal states for appraisal to provide an aid to decision-making for the future process.

In the **rail mode**, the federal states, Deutsche Bahn AG and the public submitted project proposals. In some cases, it happened that various proposals contributed to the solution of the same transport problem. In these cases, the review of the notified projects considered alternatives with regard to the preselection of projects. When the requirement plan for the railways was reviewed, the experience of studying sub-networks or corridors was positive, and this experience was also drawn on in the FTIP 2030. This involved analysing how alternative packages of projects can help to solve transport problems on corridors. This included, for instance, studying various projects or packages of projects in the area of the seaport hinterland in the Hamburg – Bremen – Hanover region. The findings of these studies informed the FTIP 2030.

Project alternatives on corridors were also studied ahead of the FTIP 2030. Since the review of the requirement plan for the railways has not yet been able to find any satisfactory solutions to resolve the capacity constraints existing on the Rhine/Ruhr – Rhine/Main – Rhine/Neckar corridor, a corresponding **corridor study** for the Middle Rhine was commissioned. This study examined various problem-solving approaches for removing the forecast bottlenecks on the rail network. The findings of this study likewise informed the development of the FTIP 2030.

As another form of consideration of alternatives, many rail projects were "project optimized". This involved studying different sizes of a project, for instance in the form of different levels of development, especially if different requirements resulting from bottleneck analyses had been identified or if the original project configuration had proved to not represent value for money.

12.5.4 | Bottleneck analyses (roads)

Within the scope of the FTIP 2030, bottleneck analyses were prepared for the federal trunk road network using the following procedures:

- section-by-section identification of quality levels of traffic flow in accordance with the 2015 German Highway Capacity Manual for all road projects notified for the FTIP 2030;

- bottleneck analysis for the federal motorway network on the target network.

In the bottleneck analysis, the annual number of hours with congestion on the target network (priority category VB including VB-E) as described in the Draft FTIP 2030 were identified for each section of road and for both directions.

The project-related bottleneck assessment drew on the section-by-section identification of quality levels of traffic flow in accordance with the 2015 German Highway Capacity Manual. The quality levels of traffic flow were identified in connection with the project-specific macroeconomic appraisals for upgrading projects on federal motorways and federal trunk roads, in other words for each individual project. As a result, project-related statements regarding the removal of congestion were provided for every project to be appraised, irrespective of the subsequent priority categorization.

In accordance with the 2015 German Highway Capacity Manual, the quality levels of traffic flow were identified for the 50 hours of the year with the highest congestion levels. A bottleneck is usually deemed to have been removed or significantly mitigated if the number of road kilometres affected by congestion (quality level F) can be reduced by 50 % or more.

Annex 1 -
Lists of road projects

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
			1	2																		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Baden-Württemberg																						
Ongoing and definitely planned projects (FD) plus ongoing and definitely planned projects for removal of bottlenecks (FD-E)																						
1	BW		A 003		LGr. BY/BW	LGr. BW/BY	E 6	7.0	22.6	**12.0**	10.6	0.0	0		**FD**							In preparation/under construction
2	BW		A 005		AS Offenburg	AS Baden-Baden	E 6	-	469.1	**187.6**	281.5	0.0	0		**FD**							Refinancing of a PPP project
3	BW		A 006		AS Wiesloch/ Rauenberg	AK Weinsberg	E 6	25.5	840.3	**336.1**	504.2	0.3	0		**FD-E**					Yes		Ongoing PPP procurement procedure
4	BW		A 008		AS Mühlhausen	Hohenstadt	E 6	8.0	467.8	**397.2**	70.6	0.0	0		**FD**							Completion of overall project
5	BW		A 008		Hohenstadt	Ulm-West	E 6	22.0	102.7	**56.3**	46.4	0.0	0		**FD**							Under construction (incl. AS Eiselauer Weg)
6	BW		A 008		Ulm-West	Ulm-Ost	E 6	4.7	33.9	**20.3**	13.6	0.0	0		**FD**							Completion of overall project
7	BW		A 008		AS Pforzheim-N	AS Pforzheim-S	E 6	3.0	146.7	**102.8**	36.7	7.2	0		**FD-E**					Yes		Completion of overall project
8	BW		A 081		AS Böblingen-Hulb	AS Sindelfingen-O	E 6	7.2	226.3	**104.4**	69.7	52.2	0		**FD-E**					Yes		Completion of overall project
9	BW		A 098		AD Hochrhein	Rheinfelden- Karsau	N 4	2.0	89.0	**89.0**	0.0	0.0	1		**FD**							Under construction
10	BW		B 010		Süßen-O	Gingen-O	N 3/4	2.6	16.1	**16.1**	0.0	0.0			**FD**							Start of construction pledged
11	BW		B 014		Backnang-West	Nellmersbach (BA 1.1+1.2)	N 4+E 4	1.6	63.6	**63.6**	0.0	0.0			**FD**							Start of construction pledged
12	BW		B 014	B 019	Relocation in Schwäbisch Hall		N 4	0.6	33.8	**33.8**	0.0	0.0			**FD**				High			Start of construction pledged
13	BW		B 027		Donaueschingen	Hüfingen	E 4	4.0	25.1	**17.7**	7.4	0.0	1		**FD**							Start of construction pledged
14	BW		B 027		OU Behla		N 2	1.9	7.1	**7.1**	0.0	0.0	1		**FD**							Start of construction pledged
15	BW		B 028		Grünmettstetten (L 370)	L 355a	N 2	5.0	17.6	**17.4**	0.0	0.2			**FD**							Completion of overall project - combined with large-scale reclassification
16	BW		B 028n		Rottenburg	Tübingen (L 370 alt)	N 2	6.7	24.7	**24.7**	0.0	0.0	1		**FD**							Start of construction pledged
17	BW		B 029		Essingen	Aalen	E 4	3.6	32.9	**32.9**	0.0	0.0			**FD**							Start of construction pledged
18	BW		B 029		OU Mögglingen		N 4	7.0	65.4	**65.4**	0.0	0.0			**FD**							In preparation/under construction
19	BW		B 030		OU Ravensburg/ Eschach	Baindt	N 4	6.0	60.3	**60.3**	0.0	0.0	1		**FD**							Under construction

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
20	BW		B 031		Immenstaad	Friedrichshafen/ Waggershausen	N 4	7.0	94.9	**94.9**	0.0	0.0	1		**FD**							In preparation/under construction
21	BW		B 031		Überlingen/W	Nellmersbach (BA 1.1+1.2)	N 3	4.5	33.3	**33.3**	0.0	0.0	1		**FD**							Start of construction pledged
22	BW		B 033		Konstanz (airfield)	Allensbach/W	E 4	10.6	128.4	**128.4**	0.0	0.0	0		**FD**							Under construction
23	BW		B 034		OU Wyhlen		N 2	4.2	17.2	**16.7**	0.0	0.5			**FD**							Start of construction pledged
24	BW		B 292		OU Adelsheim		N 2	4.0	13.3	**13.3**	0.0	0.0			**FD**							Under construction
25	BW		B 294		OU Winden		N 2	3.9	66.0	**66.0**	0.0	0.0			**FD**							Start of construction pledged
26	BW		B 311	B 030	Erbach	Dellmensingen (B 30)	N 2/3	6.3	31.1	**31.1**	0.0	0.0	1		**FD**							Start of construction pledged
27	BW		B 311		OU Unlingen		N 2	4.0	16.4	**16.4**	0.0	0.0	1		**FD**							Under construction
28	BW		B 312		OU Reutlingen	(Scheibengipfe Tunnel)	N 2	3.1	27.3	**27.3**	0.0	0.0	1		**FD**							Under construction
29	BW		B 313		OU Grafenberg		N 2	1.7	7.7	**7.7**	0.0	0.0	1		**FD**							Start of construction pledged
30	BW		B 463		Pforzheim Western ring road	(BA 1.02)	N 2	1.0	50.2	**50.2**	0.0	0.0			**FD**							Start of construction pledged
31	BW		B 464		OU Holzgerlingen		E 4	3.0	6.0	**6.0**	0.0	0.0			**FD**							In preparation/under construction
32	BW		B 466		Süßen	Donzdorf	N 2	2.1	2.8	**2.8**	0.0	0.0			**FD**							Under construction - Donzdorf
Total level of funding for ongoing and defintely planned projects (FD/FD-E)									**3,239.6**	**2,138.8**	**1,040.7**	**60.4**										
New projects - first priority category (VB) and first priority category for removal of bottlenecks (VB-E)																						
33	BW	A5-G30-BW	A 005		AK Heidelberg	AK Walldorf	E 6	16.5	280.1	**230.6**	49.5	0.0	1	VE	**VB-E**	**5.0**				Yes		
34	BW	A6-G10-BW	A 006		AK Mannheim	AS Schwetzingen/ Hockenheim	E 6	11.5	190.0	**142.7**	47.3	0.0	0	OP	**VB-E**	**>10**				Yes		
35	BW	A6-G60-BW-BY	A 006	A 081	AK Weinsberg	Lgr. BY/BW	E 6	64.4	714.7	**222.5**	492.2	0.0	0		**VB-E**	**3.0**				Yes		
36	BW	A6-G60-BW-BY-T1-BW	A 006	A 081	AK Weinsberg	AS Kupferzell	E 6							VP						Yes		
37	BW	A6-G60-BW-BY-T2-BW	A 006	A 081	AS Kupferzell	Lgr. BY/BW	E 6							OP						Yes		
38	BW	A8-G30-BW	A 008		AD Leonberg	AK Stuttgart	E 8	8.8	97.6	**54.6**	43.0	0.0	0	OP	**VB**	**>10**						
39	BW	A8-G40-BW	A 008		AK Stuttgart	AS Stuttgart-Degerloch	E 8	8.6	61.5	**42.1**	19.4	0.0	0	OP	**VB-E**	**>10**				Yes		Temporary HSR in places
40	BW	A8-G50-BW	A 008		AS Stuttgart-Degerloch	AS Wendlingen	E 8	14.1	128.1	**60.0**	68.1	0.0	0	OP	**VB-E**	**7.0**				Yes		Temporary HSR in operation/planned
41	BW	A81-G50-BW	A 081		AK Stuttgart	AS Sindelfingen-Ost	E 6	2.6	12.4	**5.9**	6.5	0.0	0	VE	**VB**	**8.6**						
42	BW	A98-G110-BW-T1-BW	A 098		Rheinfelden	Tiengen (1st carriageway)	N 2	32.5	581.3	**581.3**	0.0	0.0	1	PA/VP	**VB**	**2.6**	High					1st carriageway 70% cost share

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
43	BW	A860/B31-G20-BW-T1-BW	A 860		Freiburg	AS Freiburg-Mitte	N 4	2.0	325.5	**325.5**	0.0	0.0	1	VEA	**VB**	**3.0**			High			
44	BW	A860/B31-G20-BW-T2-BW	B 031		Kirchzarten	Buchenbach	E 4	3.0	12.9	**6.5**	6.4	0.0	1	VEA	**VB**	**3.0**				Yes		
45	BW	B3-G20-BW	B 003		B 535	L 594a (Wiesloch-N)	E 4	5.7	66.1	**57.0**	9.1	0.0		OP	**VB**	**3.4**				Yes		
46	BW	B10-G10-BW	B 010		Pforzheim/Eutingen	Niefern	E 4	1.8	11.0	**6.5**	4.3	0.2		PA	**VB**	**6.0**						
47	BW	B10-G20-BW	B 010		OU Berghausen		N 2	2.2	67.0	**67.0**	0.0	0.0		PE	**VB**	**4.6**			High			
48	BW	B10-G30-BW	B 010		Relocation in Enzweihingen	(Bypass option)	N 2	2.5	32.1	**32.1**	0.0	0.0		VEG	**VB**	**>10**						
49	BW	B10-G40-BW	B 010		Enzweihingen	AS Stuttgart-Zuffenhausen (A 81)	E 4	12.0	90.1	**77.6**	10.5	2.0		VP	**VB**	**3.4**				Yes		
50	BW	B10-G50-BW	B 010		AS Stuttgart-Zuffenhausen (A 81)	AS Stuttgart-Neuwirtshaus	E 6	1.4	7.0	**4.9**	2.1	0.0		OP	**VB**	**>10**				Yes		
51	BW	B10-G60-BW	B 010		Dreieck Stuttgart-Neckarpark	Plochinger Dreieck	E 6	17.0	107.4	**70.9**	32.5	4.0		OP	**VB**	**7.1**						
52	BW	B10-G80-BW-T1-BW	B 010		Gingen-O	Geislingen-M	N 2/3	5.2	76.2	**76.2**	0.0	0.0		VE	**VB**	**>10**	High					
53	BW	B10-G80-BW-T3-BW	B 010		OU Amstetten		N 2	4.3	47.0	**47.0**	0.0	0.0		OP	**VB**	**3.0**	High		High			
54	BW	B10-G80-BW-T4-BW	B 010		OU Urspring		N 2	2.8	31.3	**31.3**	0.0	0.0		OP	**VB**	**3.0**			High			
55	BW	B012-G10-BW	B 012		OU Großholzleute		N 2	3.0	11.4	**11.4**	0.0	0.0	1	OP	**VB**	**6.6**	High		High			
56	BW	B14-G10-BW	B 014		Backnang-West	Nellmersbach	N 4+E 4	6.0	136.0	**131.2**	4.8	0.0		PU	**VB**	**6.2**			High			
57	BW	B14-G20-BW	B 014		OU Michelfeld		N 2	3.0	10.2	**10.2**	0.0	0.0		OP	**VB**	**6.0**						
58	BW	B14-G30-BW	B 014		OU Oppenweiler		N 2	2.8	43.5	**43.5**	0.0	0.0		VEG	**VB**	**5.0**			High			
59	BW	B14-G40-BW	B 014		Rottweil	Tuttlingen	N 2	11.2	80.2	**80.2**	0.0	0.0			**VB**	**4.5**						
60	BW	B14-G40-T1-BW	B 014		OU Spaichingen		N 2							VEG								
61	BW	B14-G40-T2-BW	B 014		OU Rietheim-Weilheim		N 2							OP					High			
62	BW	B14-G50-BW	B 014		OU Stockach		N 2	3.0	31.4	**31.4**	0.0	0.0		VP	**VB**	**4.1**						
63	BW	B19-G10-BW	B 019	B 298	OU Gaildorf	(SE section)	N 2	2.3	16.8	**16.8**	0.0	0.0		VE	**VB**	**6.6**			High			
64	BW	B027-G110-BW	B 027	B 028	Tübingen (Bläsibad)	B 28 (Schindhau Base Tunnel)	N 4	3.5	217.1	**217.1**	0.0	0.0		VE	**VB**	**4.8**						
65	BW	B027-G40-BW	B 027		Neukirch	Balingen	N 2	10.7	97.2	**92.4**	0.0	4.8			**VB**	**3.9**			High			
66	BW	B027-G40-BW-T1-BW	B 027		OU Neukirch		N 2							VP								
67	BW	B027-G40-BW-T2-BW	B 027		OU Schömberg		N 2							LB								
68	BW	B027-G40-BW-T3-BW	B 027		Dotternhausen	Balingen	N 2							LB					High			

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
69	BW	B27-G10-BW	B 027		OU Neckarburken		N 2+E 2	1.6	22.4	**22.4**	0.0	0.0		VE	**VB**	**3.0**			High			
70	BW	B27-G30-BW	B 027		Bodelshausen (L 389)	Nehren (L 394)	N 4+E 4	6.9	88.3	**86.7**	0.7	0.9		VE	**VB**	**5.1**			High			
71	BW	B27-G50-BW	B 027		AS Leinfelden-Echterdingen-Nord	AS Aich	E 6	8.7	59.4	**40.0**	18.4	1.0	1	VP	**VB**	**>10**				Yes		
72	BW	B27-G60-BW	B 027		AS Neckarsulm	B27/L1095	E 4	1.8	34.9	**30.2**	4.7	0.0		OP	**VB**	**4.5**				Yes		
73	BW	B27-G70-BW	B 027		OU Offenau		N 2	3.8	34.9	**34.9**	0.0	0.0		VP	**VB**	**6.1**						
74	BW	B27-G80-BW	B 027		OU Jagstfeld		N 2	1.0	39.6	**39.6**	0.0	0.0		OP	**VB**	**2.7**			High			
75	BW	B27-G90-BW	B 027		OU Jestetten		N 2	3.5	26.4	**26.4**	0.0	0.0		VE	**VB**	**6.1**			High			
76	BW	B28-G70-BW	B 028		OU Unterjesingen		N 2	2.6	86.3	**86.3**	0.0	0.0		OP	**VB**	**2.8**			High			
77	BW	B29-G50-BW	B 029		Schwäbisch Gmünd	Aalen	E 4	9.6	69.5	**65.9**	3.6	0.0			**VB**	**3.9**			High	Yes		
78	BW	B29-G50-BW-T1-BW	B 029		Schwäbisch Gmünd	Hussenhofen	E 4							VE								
79	BW	B29-G50-BW-T2-BW	B 029		Hussenhofen	Böbingen	E 4							VE								
80	BW	B29-G50-BW-T3-BW	B 029		Böbingen	Mögglingen	E 4							VP								
81	BW	B29a-G30-BW	B 029a		Unterkochen	Ebnat	N 2	6.2	25.4	**25.4**	0.0	0.0		VP	**VB**	**6.5**	High		High			
82	BW	B29n-G50-BW-BY	B 029n		Röttingen	Nördlingen	N 3	16.0	105.5	**96.3**	0.0	9.2		VP	**VB**	**2.2**	High					
83	BW	B030-G10-BW	B 030		Friedrichshafen (B 31)	Ravensburg/Eschach	N 4	11.3	111.8	**111.8**	0.0	0.0	1	LB	**VB**	**8.3**						
84	BW	B030-G20-BW	B 030		Enzisreute	Gaisbeuren	N 4+E 4	9.2	92.9	**91.5**	1.4	0.0	1		**VB**	**6.9**			High			
85	BW	B030-G20-BW-T01	B 030		OU Gaisbeuren		N 4+E 4							OP								
86	BW	B030-G20-BW-T02	B 030		OU Enzisreute		N 4+E 4							OP								
87	BW	B30-G30-BW	B 030		Biberach (Jordanbad)	Hochdorf	E 4	5.2	34.6	**34.5**	0.1	0.0	1	VU	**VB**	**1.8**			High			
88	BW	B 31-G20-BW	B 031		Friedrichshafen/ Waggershausen	Friedrichshafen (B 30 alt)	E 4	2.1	29.2	**29.2**	0.0	0.0	1	OP	**VB**	**4.6**				Yes		
89	BW	B31-G10-BW	B 031		Überlingen	Immenstaad	N 3+E 4	20.9	274.3	**271.1**	3.2	0.0	1	LB	**VB**	**8.8**	High		High			
90	BW	B31-G30-BW	B 031		Breisach	Freiburg	N 2	11.6	49.5	**47.9**	0.0	1.6		PE	**VB**	**3.6**	High					
91	BW	B032-G20-BW	B 032		OU Ravensburg	(Molldiete Tunnel)	N 2	3.6	107.7	**107.1**	0.4	0.2		VEA	**VB**	**4.0**						
92	BW	B28n_B32-G60-BW-T2-BW	B 032		OU Horb (Neckar Valley Crossing)		N 2	2.1	50.8	**50.0**	0.0	0.8		VEG	**VB**	**2.9**						
93	BW	B32-G10-BW-T2-BW	B 032		OU Blitzenreute		N 2	2.0	21.1	**21.1**	0.0	0.0	1	OP	**VB**	**5.5**			High			
94	BW	B32-G10-BW-T3-BW	B 032		OU Staig		N 2	1.8	25.9	**25.9**	0.0	0.0	1	OP	**VB**	**3.4**						
95	BW	B33-G20-BW	B 033		OU Elgersweier		N 3	2.9	21.8	**21.8**	0.0	0.0	1	VE	**VB**	**5.9**						
96	BW	B33-G40-BW	B 033		OU Haslach		N 2/3	3.4	45.1	**45.1**	0.0	0.0	1	VE	**VB**	**>10**			High			
97	BW	B 34-G10-BW-T1-BW	B 034		OU Grenzach		N 2	2.8	18.0	**11.2**	0.0	6.8		PU	**VB**	**5.6**			High			

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
98	BW	B 34-G20-BW	B 034		OU Oberlauchringen		N 2	2.1	12.5	**12.5**	0.0	0.0		PE	**VB**	**8.3**						
99	BW	B35-G10-BW	B 035		OU Bruchsal-Ost		N 2	4.8	51.0	**51.0**	0.0	0.0		OP	**VB**	**>10**			High			
100	BW	B36/B293-G10-RP-BW-T3-BW	B 036		Link road 2nd Rhine Bridge Karlsruhe		N 4	3.5	70.7	**70.7**	0.0	0.0		OP	**VB**	**1.7**			High			In connection with B 293 Rhine Crossing
101	BW	B39-G10-BW	B 039		OU Willsbach	OU Ellhofen	N 2	4.3	47.7	**47.7**	0.0	0.0			**VB**	**3.6**						
102	BW	B39-G10-BW-T1-BW	B 039		OU Willsbach		N 2							VEA					High			
103	BW	B39-G10-BW-T2-BW	B 039		OU Ellhofen		N 2							UVS								
104	BW	B290-G10-BW	B 290		OU Königshofen		N 2	3.0	35.3	**35.3**	0.0	0.0		VP	**VB**	**3.8**						
105	BW	B292-G10-BW	B 292		OU Östringen		N 2	4.9	25.5	**25.5**	0.0	0.0		OP	**VB**	**4.9**	High		High			
106	BW	B293-G30-BW	B 293		Berghausen	Bretten	N 2/3	4.6	48.1	**48.1**	0.0	0.0			**VB**	**4.6**			High			
107	BW	B293-G30-BW-T1-BW	B 293		OU Berghausen		N 2							VE					High			
108	BW	B293-G30-BW-T2-BW	B 293		OU Jöhlingen		N 2/3							VE								
109	BW	B36/B293-G10-RP-BW-T2-BW	B 293		Lgr. RP/BW	B 10 (2nd Rhine Bridge)	N 4	1.4	39.3	**39.3**	0.0	0.0		PE	**VB**	**1.8**						Rhine Crossing
110	BW	B294-G10-BW	B 294		OU Bauschlott		N 2	2.8	19.8	**19.2**	0.6	0.0		VEG	**VB**	**>10**						
111	BW	B294-G20-BW	B 294		SW-OU Bretten		N 2	2.6	38.1	**38.1**	0.0	0.0		OP	**VB**	**9.1**						
112	BW	B296-G10-BW	B 296		Kernstadtentlastung Calw		N 2	0.8	28.0	**28.0**	0.0	0.0		VP	**VB**	**1.6**			High			
113	BW	B311-G20-BW	B 311		OU Obermarchtal		N 2	2.6	11.7	**11.7**	0.0	0.0	1	LB	**VB**	**3.5**						
114	BW	B311-G30-BW	B 311		OU Deppenhausen		N 2	1.9	9.9	**9.9**	0.0	0.0	1	UVS	**VB**	**6.7**						
115	BW	B311-G40-BW	B 311		OU Riedlingen		N 3	4.0	23.9	**23.9**	0.0	0.0	1	OP	**VB**	**9.6**						
116	BW	B311-G60-BW	B 311		Immendingen		N 2	3.6	19.8	**19.8**	0.0	0.0	1	VE	**VB**	**3.7**			High			
117	BW	B312-G20-BW	B 312		Lichtenstein	Engstingen	N 2	8.7	138.9	**138.5**	0.4	0.0	1		**VB**	**6.0**	High					
118	BW	B312-G20-BW-T01-BW	B 312		Relocation near Lichtenstein	(Alb Incline)	N 2							VP			High					

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
119	BW	B312-G20-BW-T02-BW	B 312		OU Engstingen		N 2							OP								
120	BW	B312-G30-BW	B 312		Ringschnait	Edenbachen	N 2/3	12.4	72.5	**72.5**	0.0	0.0		UVS	**VB**	**3.0**						
121	BW	B 27/B 314-G10-BW	B 314		Donaueschingen	Waldshut-Tiengen	N 2/3	4.0	46.0	**46.0**	0.0	0.0	1		**VB**	**6.1**	High		High			
122	BW	B 27/B 314-G10-BW-T2-BW	B 027		OU Zollhaus		N 2							VE					High			
123	BW	B 27/B 314-G10-BW-T3-BW	B 027		OU Randen		N 2							VE			High					
124	BW	B 27/B 314-G10-BW-T4-BW	B 314		OU Grimmelshofen		N 2							VEG			High					
125	BW	B415-G10-BW	B 415		OU Lahr		N 2	4.0	34.5	**34.5**	0.0	0.0		VE	**VB**	**7.2**						
126	BW	B462-G10-BW	B 462		Freudenstadt (Tunnel)		N 2	1.9	86.2	**86.2**	0.0	0.0		VP	**VB**	**2.2**			High			
127	BW	B462-G20-BW	B 462		Bad Rotenfels	Rotherma (link road)	E 4	0.9	4.9	**4.4**	0.5	0.0		OP	**VB**	**4.1**						
128	BW	B462-G30-BW	B 462		OU Schramberg		N 2	3.4	116.9	**116.9**	0.0	0.0		VE	**VB**	**2.2**						
129	BW	B463-G10-BW-T1-BW	B 463		Pforzheim ring road	1. BA (W-OU)	N 2	1.6	56.5	**56.5**	0.0	0.0		PU	**VB**	**2.1**						Partly already under construction
130	BW	B463-G20-BW	B 463		OU Lautlingen		N 2/3	4.4	43.2	**43.2**	0.0	0.0		VEA	**VB**	**9.7**						
131	BW	B464-G10-BW	B 464		OU Reutlingen		N 2	2.5	46.9	**46.9**	0.0	0.0	1	LBV	**VB**	**>10**						
132	BW	B465-G10-BW	B 465		OU Owen		N 2	3.2	19.6	**19.6**	0.0	0.0		OP	**VB**	**5.8**	High					
133	BW	B465-G40-BW	B 465		OU Warthausen		N 2	1.8	13.6	**13.6**	0.0	0.0		OP	**VB**	**4.9**						
134	BW	B466-G21-BW	B 466		OU Böhmenkirch	(Option)	N 2	3.8	8.9	**8.9**	0.0	0.0		OP	**VB**	**5.4**			High			
135	BW	B467-G10-BW	B 467		Querspange Tettnang		N 2	2.4	9.1	**9.1**	0.0	0.0	1	OP	**VB**	**>10**						
136	BW	B500-G10-BW	B 500		A 5	L 75	E 4	2.5	15.2	**14.1**	1.1	0.0	1	OP	**VB**	**7.7**				Yes		
137	BW	B523-G10-BW	B 523		OU Villingen-Schwenningen		N 2	5.5	25.9	**25.9**	0.0	0.0		VEA	**VB**	**3.1**	High					
Total level of funding for first priority projects and first priority projects for removal of bottlenecks									**6,278.5**	**5,416.2**	**830.8**	**31.5**										

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
			1	2																		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
New projects - second priority category with planning go-ahead (WB*)																						
138	BW	A5-G10-BW	A 005		AS Hemsbach	AK Weinheim	E 6	8.9	103.6	**77.0**	26.6	0.0	1	OP	**WB***	**3.6**				Yes		
139	BW	A5-G20-BW	A 005		AK Weinheim	AK Heidelberg	E 6	14.3	193.1	**139.3**	53.8	0.0	1	OP	**WB***	**2.7**				Yes		
140	BW	A5-G40-BW	A 005		AK Walldorf	AD Karlsruhe	E 8	35.7	536.7	**364.3**	172.4	0.0	0	OP	**WB***	**5.9**				Yes		
141	BW	A5-G80-BW	A 005		AS Offenburg	AS Freiburg-M	E 6	53.0	499.0	**158.3**	337.5	3.2	0	VEG	**WB***	**2.5**				Yes		
142	BW	A5-G80-BW-T1-BW	A 005		AS Offenburg	AS Riegel	E 6							VEG						Yes		
143	BW	A5-G80-BW-T2-BW	A 005		AS Riegel	AS Freiburg-M	E 6							VEG						Yes		
144	BW	A6-G20-BW	A 006		AD Hockenheim	AK Walldorf	E 8	5.7	61.9	**40.5**	21.4	0.0	0	OP	**WB***	**>10**						
145	BW	A007-G020-BY-BW-T02-BY	A 007		AS Illertissen	AS Memmingen-S (portion in BW)	E 6	12.6	105.7	**46.8**	58.9	0.0	0	OP	**WB***	**1.1**						
146	BW	A81-G10-BW	A 081		AS Pleidelsheim	AS Stuttgart-Zuffenhausen	E 8	14.6	141.4	**87.8**	53.6	0.0	0	OP	**WB***	**6.8**				Yes		Temporary HSR in operation/planned
147	BW	A81-G30-BW	A 081		AK Weinsberg	AS Ilsfeld	E 8	10.4	110.6	**63.8**	46.8	0.0	0	OP	**WB***	**4.2**				Yes		
148	BW	A98-G110-BW-T2-BW	A 098		Rheinfelden - Tiengen	(2nd carriageway)	N 4	40.8	300.6	**300.6**	0.0	0.0	1	PA/VP	**WB***	**2.6**	High					2nd carriageway 30% cost share
149	BW	B3-G10-BW	B 003		Lückenschluss bei Kuppenheim		N 2	5.3	47.6	**47.6**	0.0	0.0		OP	**WB***	**2.8**						
150	BW	B10-G80-BW-T2-BW	B 010		Geislingen-M	Geislingen-O	N 2	2.8	155.1	**155.1**	0.0	0.0		VE	**WB***	**1.4**						
151	BW	B028-G20-BW	B 028		OU Blaubeuren/Gerhausen		N 2	2.0	23.6	**23.6**	0.0	0.0		OP	**WB***	**2.9**	High					
152	BW	B28-G10-BW	B 028		Freudenstadt (Tunnel)		N 2	1.4	65.4	**65.4**	0.0	0.0		VP	**WB***	**2.3**						
153	BW	B28n_B32-G60-BW-T1-BW	B 028n		OU Horb		N 2	3.6	22.5	**22.5**	0.0	0.0		VP	**WB***	**2.0**						
154	BW	B29-G990-BW	B 029		NO-Ring Stuttgart	(B 27 - B14)	N 4+E 4	11.5	209.2	**209.2**	0.0	0.0		LB	**WB***	**>10**			High			
155	BW	A860/B31-G20-BW-T3-BW	B 031		OU Falkensteig		N 4	2.5	125.8	**125.8**	0.0	0.0	1	VEA	**WB***	**3.0**						
156	BW	A860/B31-G20-BW-T4-BW	B 031		OU Falkensteig	(Hirschsprung Tunnel)	N 4	3.3	171.8	**171.8**	0.0	0.0	1	VEA	**WB***	**3.0**						
157	BW	B311n-B313-G50-BW	B 311n	B 313	Mengen	Engelswies	N 2/3	13.6	106.0	**106.0**	0.0	0.0	1		**WB***	**4.0**						

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
158	BW	B311n-B313-G50-T1-BW	B 311n	B 313	Sigmaringen	Mengen	N 3							LB			High					
159	BW	B311n-B313-G50-T2-BW	B 311n	B 313	Vilsingen	Engelswies	N 2							LB								
160	BW	B317-G10-BW	B 317		Lörrach	Schopfheim	E 4	8.8	105.8	**96.6**	9.2	0.0		VP	**WB***	**2.1**			High	Yes		
161	BW	B462-G50-BW	B 462	A 005	Upgrade near Rastatt	(With reconstruction of AS A 5/B 462)	KN	2.3	51.0	**49.0**	2.0	0.0	0	VP	**WB***	**1.2**				Yes		
162	BW	B463-G10-BW-T2-BW	B 463		Pforzheim western ring road	2. BA (W-OU)	N 2	3.3	137.7	**137.7**	0.0	0.0		OP	**WB***	**2.1**						
Total level of funding for second priority projects with planning go ahead									**3,274.1**	**2,488.7**	**782.2**	**3.2**										
New projects - second priority category (WB)																						
163	BW	A5-G60-BW	A 005		AS Freiburg-M	AS Bad Krozingen	E 6	12.1	119.5	**81.6**	36.3	1.6	0	VE	**WB**	**1.5**				Yes		
164	BW	A860/B31-G20-BW-T5-BW	B 031		OU Hinterzarten		N 4	3.8	224.1	**224.1**	0.0	0.0	1	VE	**WB**	**1.3**						
165	BW	B27-G100-BW	B 027		OU Hardheim		N 2+E 2	4.4	35.7	**35.7**	0.0	0.0		OP	**WB**	**2.8**			High			
166	BW	B28-G50-BW	B 028		OU Blaustein		N 2	3.4	105.8	**105.8**	0.0	0.0		OP	**WB**	**1.4**			High			
167	BW	B32-G10-BW-T1-BW	B 032		OU Boms		N 2	1.6	4.9	**4.9**	0.0	0.0	1	OP	**WB**	**2.4**						
168	BW	B033-G10-BW	B 033		Relocation near Meersburg		N 2	1.2	38.8	**38.8**	0.0	0.0		OP	**WB**	**1.6**			High			
169	BW	B33-G51-BW	B 033		OU Gutach		N 2	3.1	83.9	**83.9**	0.0	0.0	1	VP	**WB**	**1.0**			High			
170	BW	B294-G30-BW	B 294		OU Loßburg		N 2	3.9	46.6	**46.6**	0.0	0.0		OP	**WB**	**3.1**						
171	BW	B465-G20-BW	B 465		OU Ehingen		N 2	4.1	29.6	**29.6**	0.0	0.0		OP	**WB**	**3.5**						
172	BW	B465-G30-BW	B 465		OU Ingerkingen		N 2	3.4	16.8	**16.8**	0.0	0.0		OP	**WB**	**1.6**			High			
173	BW	B466-G10-BW	B 466		Heidenheim (Tunnel)		N 2	0.5	25.2	**25.2**	0.0	0.0		OP	**WB**	**1.7**						
Total level of funding for second priority projects									**730.9**	**693.0**	**36.3**	**1.6**										

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Bavaria																						
Ongoing and definitely planned projects (FD) plus ongoing and definitely planned projects for removal of bottlenecks (FD-E)																						
1	BY		A 003		w AS Wertheim (LGr, BW/BY)	AS Weibersbrunn	E 6	32.0	206.0	**68.4**	137.6	0.0	0		**FD**							Completion of overall project/ Wertheim-Marktheidenfeld section in preparation/under construction
2	BY		A 003		Würzburg-Heidingsfeld	Main bridge in Randersacker	E 6	6.0	151.5	**67.8**	80.8	2.9	0		**FD**							Under construction
3	BY		A 003		AK Biebelried	AK Fürth/Erlangen	E 6	74.3	1,050.0	**420.0**	630.0		0		**FD-E**					Yes		PPP procurement procedure in preparation
4	BY		A 006		AK Nürnberg-S	AK Nürnberg-O	E 6	5.0	45.7	**26.0**	19.1	0.6	0		**FD**							In preparation/under construction
5	BY		A 006		AS Schwabach-W	AS Roth	E 6	6.0	110.9	**64.2**	46.7	0.0	0		**FD-E**					Yes		Start of construction pledged
6	BY		A 008		AS Augsburg-West	AD München-Allach	E 6	-	597.7	**239.1**	358.6	0.0	0		**FD**							Refinancing of a PPP project
7	BY		A 008		AS Ulm-Elchingen	AS Augsburg-West	E 6	-	817.7	**327.1**	490.6	0.0	0		**FD**							Refinancing of a PPP project
8	BY		A 008		Ulm-Ost	Ulm-Elchingen	E 6	11.7	80.4	**50.7**	29.7	0.0	0		**FD**							Completion of overall project
9	BY		A 094		AS Forstinning	AS Marktl	N 4	33.0	770.5	**539.4**	231.2	0.0	0		**FD**							PPP procurement procedure completed
10	BY		A 094		AS Malching	Kirchham	N 4	6.0	81.0	**81.0**	0.0	0.0	0		**FD**							Start of construction pledged, in preparation
11	BY		A 096		AS Oberpfaffenhofen	AS Germering-S	E 6	8.9	98.1	**64.7**	33.4	0.0	0		**FD-E**					Yes		Start of construction pledged
12	BY		A 099		AK München-N	AS Aschheim/Ismaning	E 8	7.3	99.0	**37.6**	61.4	0.0	0		**FD-E**					Yes		Start of construction pledged
13	BY		B 002		OU Dettenheim		N 3	3.0	7.4	**7.4**	0.0	0.0	1		**FD**							In preparation/under construction
14	BY		B 002n		OU Oberau		N 4	5.0	174.5	**174.5**	0.0	0.0	1		**FD**							In preparation/under construction
15	BY		B 015		Rosenheim wetsem ring road	(1,-4,BA)	N 2	7.7	78.9	**78.9**	0.0	0.0	1		**FD**							Under construction
16	BY		B 015n		Ergoldsbach	Essenbach (A 92)	N 4	7.0	151.6	**151.6**	0.0	0.0	1		**FD**							In preparation/under construction
17	BY		B 016		OU Dillingen		N 2	9.4	3.3	**3.3**	0.0	0.0			**FD**							Under construction
18	BY		B 023		OU Saulgrub		N 2	2.7	4.8	**4.8**	0.0	0.0			**FD**							Under construction
19	BY		B 023		W-OU Garmisch-Partenkirchen	(With KramerTunnel)	N 2	5.0	190.0	**190.0**	0.0	0.0	1		**FD**							Under construction
20	BY		B 025		OU Greiselbach		N 2	3.8	7.6	**5.4**	0.0	2.2			**FD**							Start of construction pledged
21	BY		B 085		OU Neubäu		N 3	3.0	16.0	**16.0**	0.0	0.0	1		**FD**							In preparation/under construction
22	BY		B 085		Wetterfeld	Untertraubenbach	E 4	4.0	10.3	**10.3**	0.0	0.0	1		**FD**							Under construction
23	BY		B 173		OU Zeyern		N 2/3	2.6	12.1	**12.1**	0.0	0.0	1		**FD**							Start of construction pledged
24	BY		B 289		OU Untersteinach		N 2	3.0	44.0	**44.0**	0.0	0.0			**FD**							Start of construction pledged
25	BY		B 300		AS Dasing (A 8)	Aichach	E 4	5.5	17.6	**17.6**	0.0	0.0	1		**FD**							In preparation/under construction
26	BY		B 301		N-OU Freising		N 2	4.4	25.2	**25.2**	0.0	0.0			**FD**							Start of construction pledged

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
27	BY		B 303		Sonnefeld	Johannisthal (3, BA)	N 2	4.0	11.7	**11.7**	0.0	0.0			**FD**							Completion of overall project
28	BY		B 472		OU Hohenpeißenberg		N 2	5.0	6.4	**6.4**	0.0	0.0			**FD**							Under construction
Total level of funding for ongoing and definitely planned projects									**4,869.9**	**2,745.2**	**2,119.1**	**5.7**										
New projects - first priority category (VB) and first priority category for removal of bottlenecks (VB-E)																						
29	BY	A003-G030-BY	A 003		AS Nittendorf	AS Rosenhof	E 6	27.1	371.2	**113.8**	257.4	0.0	0		**VB-E**	**1.6**				Yes		
30	BY	A003-G030-BY-T01-BY	A 003		AS Nittendorf	AK Regensburg	E 6							OP								Temporary HSR planned
31	BY	A003-G030-BY-T02-BY	A 003		AK Regensburg	AS Rosenhof	E 6							VEG						Yes		
32	BY	A003-G040-BY	A 003		AK Deggendorf	AS Hengersberg	E 6	10.4	202.6	**43.8**	158.8	0.0	0	OP	**VB**	**1.0**						Temporary HSR planned
33	BY	A006-G020-BY	A 006		AK Nürnberg-O		KN	3.7	59.4	**43.5**	15.9	0.0	0	VE	**VB-E**	**>10**				Yes		
34	BY	A007-G020-BY-BW-T01-BY	A 007		AD Hittistetten	AS Illertissen	E 6	12.4	119.1	**56.0**	63.1	0.0	0	OP	**VB**	**2.4**						
35	BY	A008-G010-BY-T1-BY	A 008		AK München-S	AS Holzkirchen	E 8	15.8	167.2	**98.8**	68.4	0.0	0	OP	**VB-E**	**1.2**				Yes	High	
36	BY	A008-G010-BY-T2-BY	A 008		AS Holzkirchen	AD Inntal	E 8	29.8	413.8	**181.5**	232.3	0.0	0	VP	**VB-E**	**1.2**				Yes		
37	BY	A008-G010-BY-T3-BY	A 008		AD Inntal	AS Traunstein/Siegsdorf	E 6/8	44.9	703.3	**423.5**	278.0	1.8	0	VEG	**VB-E**	**1.2**				Yes		
38	BY	A009-G030-BY	A 009		AS München-Frankfurter Ring	AS München-Schwabing	E 6	1.5	22.4	**16.2**	6.2	0.0		OP	**VB-E**	**9.7**				Yes		
39	BY	A073-G020-BY	A 073		AS Nürnberg-Hafen-O	AK Nürnberg-S	E 6	5.7	54.6	**32.9**	21.4	0.3	1	VEG	**VB-E**	**>10**				Yes		
40	BY	A092-G020-BY	A 092		AK Neufahrn	AD Flughafen-München	E 8	6.4	92.9	**44.7**	48.2	0.0	1	OP	**VB-E**	**2.0**				Yes		
41	BY	A094-G010-BY	A 094		AS München-Steinhausen	AS Feldkirchen-West	E 6	7.1	114.4	**65.1**	49.3	0.0		OP	**VB-E**	**>10**				Yes		
42	BY	A094-G020-BY	A 094		AK München-O	AS Markt Schwaben	E 6	5.5	46.5	**25.6**	20.9	0.0	0	OP	**VB-E**	**6.8**				Yes		Temporary HSR planned in places
43	BY	A094-G040-BY	A 094		AK München-O	AS Pocking	N 4+E 4	40.9	526.3	**485.6**	40.3	0.0	0	PA	**VB**	**4.0**	High					
44	BY	A096-G010-BY-T01-BY	A 096		AS Wörthsee	AS Oberpfaffenhofen	E 6	4.5	43.7	**23.0**	20.7	0.0	0	OP	**VB**	**3.5**						
45	BY	A099-G010-BY	A 099		AD München-SW	AK München-W	E 6	5.4	69.4	**30.5**	38.9	0.0	0	OP	**VB-E**	**6.3**				Yes		
46	BY	A099-G020-BY	A 099		AK München-W	AK München-N	E 8	7.0	339.8	**300.5**	39.3	0.0	0	OP	**VB-E**	**2.4**				Yes		Temporary HSR planned in places
47	BY	A099-G030-BY	A 099		AK München-N	AK München-S	E 8/9	20.8	348.0	**129.7**	218.3	0.0	0	PU	**VB-E**	**>10**				Yes		
48	BY	B002-G010-BY	B 002		OU Garmisch-Partenkirchen		N 2	4.9	158.9	**158.9**	0.0	0.0	1	VE	**VB**	**3.8**						
49	BY	B002-G030-BY	B 002		N-OU Murnau		N 2	1.7	29.4	**29.4**	0.0	0.0		OP	**VB**	**2.5**						
50	BY	B002-G040-BY	B 002		OU Weilheim		N 2/3	5.0	35.3	**35.3**	0.0	0.0		OP	**VB**	**2.3**			High			
51	BY	B002-G060-BY	B 002		Fürstenfeldbruck	Mering	N 2	9.3	28.7	**28.7**	0.0	0.0			**VB**	**5.2**			High			
52	BY	B002-G060-BY-T01-BY	B 002		OU Mammendorf		N 2							OP					High			

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
53	BY	B002-G060-BY-T02-BY	B 002		OU Hattenhofen		N 2							OP					High			
54	BY	B002-G060-BY-T03-BY	B 002		OU Althegnenberg		N 2							OP					High			
55	BY	B002-G080-BY	B002		Osttangente Augsburg		N 3/4+E 4	16.6	133.0	**118.8**	14.2	0.0	1	OP	**VB**	**6.1**	High					
56	BY	B002-G080-BY-T01-BY	B 002		AS Friedberg	B 300	E 4						1	OP								
57	BY	B002-G080-BY-T02-BY	B 002		w Friedberg (s B 300)		E 4						1	OP								
58	BY	B002-G080-BY-T03-BY	B 002		OU Kissing		N 3/4						1	OP					High			
59	BY	B002-G095-BY	B 002		Augsburg - Donauwörth	Nürnberg	N 3/4	8.6	36.2	**36.2**	0.0	0.0	1		**VB**	**3.1**	High					
60	BY	B002-G095-BY-T01-BY	B 002		OU Dietfurt		N 3							OP			High					
61	BY	B002-G095-BY-T03-BY	B 002		OU Wernsbach		N 4							PA								
62	BY	B002-G100-BY	B 002		OU Forth		N 2	2.2	5.6	**5.6**	0.0	0.0		OP	**VB**	**7.8**						
63	BY	B004-G020-BY	B 004		Upgrade iCoburg	(Weichengereuth)	E 4	1.7	21.0	**17.5**	3.5	0.0		VP	**VB**	**1.5**				Yes		
64	BY	B008-G010-BY-T02-BY	B 008		OU Neustadt-Diebach		N 2	6.3	14.0	**14.0**	0.0	0.0		OP	**VB**	**9.0**	High		High			
65	BY	B008-G020-BY	B 008		OU Postbauer-Heng		N 2	2.2	8.0	**8.0**	0.0	0.0		VU	**VB**	**2.7**			High			
66	BY	B010-G020-BY	B 010		Neu-Ulm	AS Nersingen (A 7)	E 4	5.5	29.3	**26.1**	3.2	0.0	1	PE	**VB**	**5.8**						
67	BY	B011-G020-BY	B 011		Relocation near Schweinhütt		N 2/3	2.6	10.0	**10.0**	0.0	0.0	1	VEG	**VB**	**2.1**						
68	BY	B011-G030-BY-T02-BY	B 011		OU Ruhmannsfelden		N 2/3	3.2	18.1	**18.1**	0.0	0.0	1	VEG	**VB**	**3.7**			High			
69	BY	B011-G040-BY	B 011		Relocation west of Geretsried		N 2+E 4	2.5	17.7	**17.5**	0.2	0.0		VP	**VB**	**3.3**						
70	BY	B012-G011-BY-T02-BY	B 012		Marktoberdorf (B 472)	AS Jengen/Kaufbeuren (A 96)	E 4	35.0	176.4	**125.0**	51.4	0.0	1	OP	**VB**	**3.3**						
71	BY	B013-G050-BY	B 013		AS Ansbach (A 6)	Gunzenhausen (B 466)	N 2	8.4	22.1	**20.9**	0.0	1.2			**VB**	**5.6**						
72	BY	B013-G050-BY-T01-BY	B 013		OU Merkendorf		N 2							VU					High			
73	BY	B013-G050-BY-T02-BY	B 013		OU Stadeln		N 2							OP					High			
74	BY	B013-G050-BY-T03-BY	B 013		OU Schlungenhof		N 2							OP								
75	BY	B013-G070-BY	B 013		St 2214 (Gabel)	Friedrichshofen	N 2+E 4	2.4	24.7	**18.2**	0.6	5.9		OP	**VB**	**4.2**						
76	BY	B013-G080-BY-T01-BY	B 013		OU Unsernherm		N 2	2.4	35.7	**35.4**	0.0	0.3		OP	**VB**	**7.9**						
77	BY	B013-G080-BY-T03-BY	B 013		OU Pfaffenhofen		N 2	12.4	82.3	**82.3**	0.0	0.0		OP	**VB**	**4.2**						
78	BY	B013-G080-BY-T05-BY	B 013		OU Hohenkammer		N 2	2.9	8.4	**8.4**	0.0	0.0		ROV	**VB**	**4.1**						
79	BY	B013-G080-BY-T06-BY	B 013		OU Fahrenzhausen		N 2	4.4	20.4	**20.4**	0.0	0.0		LB	**VB**	**6.3**			High			
80	BY	B013-G080-BY-T07-BY	B 013		AS Unterschleißheim (A 92)	St 2339 (Maisteig)	E 4	1.1	5.6	**5.1**	0.5	0.0		OP	**VB**	**6.9**						
81	BY	B013-G090-BY-T02-BY	B 013		OU Holzkirchen		N 2	3.0	11.0	**11.0**	0.0	0.0		UVS	**VB**	**3.8**						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
82	BY	B014-G010-BY-T04-BY	B 014		OU Großweismannsdorf		N 3	2.7	14.6	**14.6**	0.0	0.0		OP	**VB**	**6.0**			High			
83	BY	B014-G020-BY	B 014		OU Reichenschwand (Tunnel)		N 2	2.8	67.3	**67.3**	0.0	0.0		OP	**VB**	**3.2**			High			
84	BY	B015-G040-BY	B 015		AS Landshut/Essenbach	St 2074/A 92 near Landshut	E 4	1.3	6.1	**5.5**	0.6	0.0	1	VP	**VB**	**4.4**						
85	BY	B015-G070-BY-T01-BY	B 015		O-OU Landshut (A92 - B299)		N 4	10.9	213.9	**213.9**	0.0	0.0	1	VEG	**VB**	**4.0**	High					
86	BY	B015-G070-BY-T02-BY	B 015		S-OU Landshut (B299 - B15)		N 2	6.5	45.8	**45.8**	0.0	0.0	1	OP	**VB**	**>10**						
87	BY	B016-G010-BY-T01-BY	B 016		OU Marktoberdorf	Bertoldshofen (B 472)	N 2	6.3	29.5	**29.5**	0.0	0.0		PF	**VB**	**4.3**			High			
88	BY	B016-G020-BY	B 016		N-OU Kaufbeuren		N 2	3.7	10.4	**10.4**	0.0	0.0		VU	**VB**	**4.3**						
89	BY	B016-G031-BY-T01V-BY	B 016		OU Ichenhausen / Kötz (Ost)		N 2/3	10.3	38.3	**38.3**	0.0	0.0		LBV	**VB**	**>10**						
90	BY	B016-G031-BY-T02-BY	B 016		OU Wattenweiler / Höselhurst		N 2/3	6.4	17.6	**17.6**	0.0	0.0		OP	**VB**	**2.4**						
91	BY	B016-G031-BY-T05-BY	B 016		OU Pfaffenhausen		N 2	1.7	4.5	**4.5**	0.0	0.0		OP	**VB**	**5.2**			High			
92	BY	B016-G031-BY-T06-BY	B 016		OU Hausen		N 2/3	1.7	5.9	**3.9**	0.0	2.0		OP	**VB**	**7.9**						
93	BY	B016-G031-BY-T07-BY	B 016		OU Mindelheim		N 2	3.0	7.1	**7.1**	0.0	0.0		OP	**VB**	**5.0**						
94	BY	B016-G040-BY	B 016		Günzburg (A 8)	Donauwörth	N 2/3	18.6	85.0	**85.0**	0.0	0.0			**VB**	**6.6**						
95	BY	B016-G040-BY-T01-BY	B 016		OU Höchstädt		N 3							VEA								
96	BY	B016-G040-BY-T02-BY	B 016		OU Schwenningen / Tapfheim		N 2/3							VE					High			
97	BY	B016-G051-BY-T03-BY	B 016		B 13	A 9	E 4	3.2	32.4	**27.5**	4.9	0.0		VE	**VB**	**5.8**			High			
98	BY	B016-G051-BY-T04-BY	B 016		St 2043	B 13	N 4+E 4	16.3	110.3	**97.5**	11.5	1.3		OP	**VB**	**2.0**						
99	BY	B016-G051-BY-T01V-BY	B 016		Relocation near Marienheim		N 4	4.7	30.7	**30.7**	0.0	0.0		OP	**VB**	**1.2**						
100	BY	B016-G070-BY	B 016		AS Gallingkofen	AS Haslbach	E 4	2.5	9.5	**4.5**	5.0	0.0	1	VU	**VB**	**7.3**						
101	BY	B019-G010-BY	B 019		OU Giebelstadt - Euerhausen		N 2	8.0	21.2	**21.2**	0.0	0.0		VE	**VB**	**2.8**	High		High			
102	BY	B019-G030-BY	B 019		AS Leubas (A 7)	Dieselstraße	E 4	1.4	12.3	**3.2**	7.3	1.8		OP	**VB**	**4.5**						
103	BY	B020-G010-BY	B 020		OU Hammerau		N 2	2.5	12.5	**12.5**	0.0	0.0		VP	**VB**	**6.2**			High			
104	BY	B020-G030-BY	B 020		Freilassing/Salzburg (B304)	Marktl (A 94)	N 2/3	9.0	49.2	**49.2**	0.0	0.0	1		**VB**	**>10**						
105	BY	B020-G030-BY-T01-BY	B 020		OU Laufen		N 2/3							PA								
106	BY	B020-G030-BY-T02-BY	B 020		OU Burghausen		N 2							VE								
107	BY	B020-G040-BY	B 020		OU Gumpersdorf		N 2	2.6	14.9	**14.9**	0.0	0.0	1	VEA	**VB**	**3.0**			High			
108	BY	B020-G050-BY	B 020		Straubing (A 3)	Landau (A 92)	E 4	29.5	187.3	**155.4**	31.9	0.0	1	OP	**VB**	**1.9**						
109	BY	B020-G100-BY	B 020		Cham-S	Chameregg (B 85)	E 4	3.2	15.1	**10.5**	4.6	0.0	1	OP	**VB**	**2.6**						
110	BY	B021-G010-BY	B 021		OU Bad Reichenhall		N 2	5.1	174.9	**174.9**	0.0	0.0		PA	**VB**	**3.6**						

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111	BY	B022-G030-BY	B 022		OU Eckersdorf		N 2	5.2	16.0	**16.0**	0.0	0.0		OP	**VB**	**3.2**			High			
112	BY	B023-G010-BY-T03-BY	B 023		OU Oberau		N 2	1.0	9.1	**9.1**	0.0	0.0		VE	**VB**	**>10**			High			
113	BY	B025-G010-BY-T01-BY	B 025		OU Möttingen		N 3	5.1	16.4	**16.4**	0.0	0.0		VU	**VB**	**>10**			High			
114	BY	B025-G010-BY-T06-BY	B 025		OU Dinkelsbühl		N 2	3.5	11.5	**11.5**	0.0	0.0		VEA	**VB**	**8.4**						
115	BY	B025-G020-BY-T01-BY	B 025		OU Lehengütingen		N 2	1.6	3.2	**3.2**	0.0	0.0		OP	**VB**	**7.5**						
116	BY	B026-G010-BY	B 026		Aschaffenburg	B 469	E 4	3.4	22.1	**12.9**	8.2	1.0		OP	**VB**	**4.7**						
117	BY	B026-G030-BY	B 026		OU Gemünden		N 2	4.5	19.5	**19.5**	0.0	0.0		VU	**VB**	**3.3**	High					
118	BY	B026-G044-BY-T01-BY	B 026n		AK Schweinfurt/ Werneck (A 7)	Karlstadt	N 2/3	15.3	63.5	**63.5**	0.0	0.0	1	OP	**VB**	**5.6**	High		High			
119	BY	B032-G010-BY-T01-BY	B 032		OU Opfenbach		N 2	0.9	3.8	**3.8**	0.0	0.0		OP	**VB**	**>10**						
120	BY	B085-G051-BY-T01-BY	B 085		AS Amberg-Ost (A 6)	Pittersberg	E 4	2.6	8.9	**7.5**	1.4	0.0	1	PU	**VB**	**1.8**						
121	BY	B173-G011-BY	B 173		Lichtenfels (A 73)	Zettlitz (B 289)	N 4	10.2	109.8	**103.3**	1.6	4.9	1	PE	**VB**	**1.5**	High					
122	BY	B173-G020-BY-T01-BY	B 173		OU Zettlitz	Oberlangenstadt	E 4	3.0	18.9	**18.9**	0.0	0.0	1	OP	**VB**	**1.5**						
123	BY	B173-G530-BY	B 173		Johannisthal	Kronach	E 4	2.9	15.3	**15.3**	0.0	0.0	1	PA	**VB**	**4.5**						
124	BY	B279-G020-BY-T02-BY	B 279		OU Saal a, d, Saale		N 2	3.1	12.4	**12.4**	0.0	0.0		OP	**VB**	**1.8**	High		High			
125	BY	B279-G030-BY	B 279		OU Wegfurt		N 2	1.5	3.8	**3.8**	0.0	0.0		VE	**VB**	**3.2**			High			
126	BY	B286-G010-BY	B 286		Bad Kissingen	B 19	N 2	6.6	25.4	**25.1**	0.0	0.3		LB	**VB**	**2.4**			High			
127	BY	B286-G020-BY	B 286		Schweinfurt (A 70)	Schwebheim	E 4	4.3	27.4	**16.2**	11.2	0.0		VEA	**VB**	**1.7**						
128	BY	B287-G010-BY	B 287		OU Nüdlingen		N 2	4.1	11.1	**11.1**	0.0	0.0		OP	**VB**	**3.4**			High			
129	BY	B289-G015-BY	B 289		OU Mainroth/Rothwind	And OU Fassoldshof	N 2	5.0	22.3	**21.3**	0.0	1.0		VEA	**VB**	**6.1**						
130	BY	B289-G021-BY-T03-BY	B 289		OU Münchberg		N 2	1.0	3.0	**3.0**	0.0	0.0		PE	**VB**	**8.8**						
131	BY	B289-G030-BY-T01-BY	B 289		OU Weissdorf		N 2	1.1	5.7	**5.7**	0.0	0.0		OP	**VB**	**1.9**						
132	BY	B299-G010-BY	B 299		OU Waldsassen/Kondrau		N 2	4.9	39.9	**38.7**	0.0	1.2		PA	**VB**	**1.9**			High			
133	BY	B299-G060-BY	B 299		OU Mühlhausen i. d. Opf.		N 2/3	5.4	24.2	**21.5**	0.0	2.7		PA	**VB**	**4.8**	High		High			
134	BY	B299-G100-BY	B 299		Neustadt/Donau (B 16)	Landshut	N 2	9.8	28.3	**28.3**	0.0	0.0			**VB**	**3.2**						
135	BY	B299-G100-BY-T01-BY	B 299		OU Neuhausen		N 2							VEG								
136	BY	B299-G100-BY-T02-BY	B 299		OU Weihmichl		N 2							VEG								
137	BY	B299-G130-BY-T01-BY	B 299		OU Garching a.d. Alz		N 2/3	7.7	31.5	**31.5**	0.0	0.0		VP	**VB**	**1.2**						
138	BY	B299-G130-BY-T02-BY	B 299		OU Tacherting/Trostberg		N 2/3	10.6	45.2	**45.2**	0.0	0.0		VE	**VB**	**5.6**			High			
139	BY	B300-G020-BY-T04-BY	B 300		OU Diedorf/Vogelsang		N 3+E 4	5.1	62.1	**60.5**	1.6	0.0		VEG	**VB**	**8.3**			High			

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140	BY	B300-G045-BY-T03-BY	B 300		OU Weichenried		N 2	0.9	6.3	**6.3**	0.0	0.0	1	PA	**VB**	**>10**						
141	BY	B301-G010-BY-T02-BY	B 301		AS Freising-Ost (A 92)	B 11	E 4	2.6	29.2	**21.9**	7.3	0.0		OP	**VB**	**3.4**				Yes		
142	BY	B301-G021-BY-T02-BY	B 301		Munich Airport	A 92	E 4	2.2	13.2	**8.8**	4.4	0.0		OP	**VB**	**>10**				Yes		
143	BY	B301-G030-BY-T03-BY	B 301		OU Rudelzhausen / Puttenhausen		N 2	6.6	20.3	**20.3**	0.0	0.0		VP	**VB**	**3.2**			High			
144	BY	B301-G030-BY-T04-BY	B 301		OU Mainburg		N 2	7.5	21.7	**21.7**	0.0	0.0		VP	**VB**	**5.3**						
145	BY	B303-G031-BY-T03-BY	B 303		OU Stadtsteinach		N 2	3.5	13.8	**13.8**	0.0	0.0		VEG	**VB**	**3.6**			High			
146	BY	B299-G130-BY-T03-BY	B 304		OU Altenmarkt	(With Auberg Tunnel)	N 2/3	7.8	52.6	**52.6**	0.0	0.0		PF	**VB**	**4.9**						
147	BY	B299-G130-BY-T04-BY	B 304		OU Nunhausen/Matzing		N 2/3	6.2	21.7	**16.3**	0.0	5.4		VP	**VB**	**7.4**						
148	BY	B304-G020-BY	B 304		OU Obing		N 2	4.1	12.9	**12.9**	0.0	0.0		PA	**VB**	**3.6**			High			
149	BY	B013-G090-BY-T01-BY	B 318		AS Holzkirchen (A 8)	B 13 (OU Holzkirchen)	E 4	3.2	13.8	**11.4**	2.4	0.0		OP	**VB**	**3.8**						
150	BY	B318-G010-BY	B 318		W-OU Gmund		N 2	3.8	47.9	**47.9**	0.0	0.0		OP	**VB**	**6.2**						
151	BY	B388-G010-BY	B 388		Ismaning (B 471)	Fischerhäuser (B 301)	E 4	3.1	22.2	**11.5**	10.0	0.7		OP	**VB**	**7.4**				Yes		
152	BY	B388-G020-BY	B 388		Ismaning	Taufkirchen	N 2/3	21.0	86.0	**84.6**	0.0	1.4			**VB**	**7.2**	High		High			
153	BY	B388-G020-BY-T01-BY	B 388		OU Moosinning		N 2							UVS			High		High			
154	BY	B388-G020-BY-T02-BY	B 388		OU Erding	(Connection to uni.)	N 2/3							UVS								
155	BY	B388-G020-BY-T03-BY	B 388		OU Grünbach		N 2							OP					High			
156	BY	B388-G020-BY-T04-BY	B 388		OU Taufkirchen/Vils		N 2							PA					High			
157	BY	B388-G050-BY	B 388		N-OU Passau		N 2/3	8.5	61.9	**61.9**	0.0	0.0	1	UVS	**VB**	**>10**	High					
158	BY	B426-G010-BY	B 426		OU Mömlingen		N 2	2.4	4.7	**4.7**	0.0	0.0		OP	**VB**	**>10**			High			

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
159	BY	B466-G030-BY	B 466		S-OU Nördlingen		N 2	3.5	6.2	**6.2**	0.0	0.0		OP	**VB**	**>10**						
160	BY	B469-G010-BY-HE	B 469		A 3	A 45	E 4	1.2	3.5	**1.8**	1.7	0.0		OP	**VB**	**5.2**						
161	BY	B469-G020-BY	B 469		A 3	Kreisstraße AB 16	E 6	1.2	15.9	**9.4**	6.5	0.0		OP	**VB**	**3.3**						
162	BY	B470-G010-BY-T02-BY	B 470		OU Lenkersheim		N 2	2.3	3.9	**3.9**	0.0	0.0		OP	**VB**	**2.4**						
163	BY	B470-G010-BY-T07-BY	B 470		S-OU Gremsdorf		N 2	3.5	11.2	**11.2**	0.0	0.0		OP	**VB**	**2.4**						
164	BY	B470-G020-BY	B 470		A 3	Forchheim	N 2	2.5	9.8	**9.8**	0.0	0.0			**VB**	**4.4**			High			
165	BY	B470-G020-BY-T01-BY	B 470		OU Oesdorf		N 2							OP					High			
166	BY	B470-G020-BY-T02-BY	B 470		OU Wimmelbach		N 2							OP					High			
167	BY	B470-G030-BY	B 470		O-OU Forchheim		N 2/4	6.9	38.4	**38.4**	0.0	0.0		UVS	**VB**	**3.7**	High					
168	BY	B471-G015-BY-T02-BY	B 471		Fürstenfeldbruck-Ost	Esting	E 4	3.5	11.5	**9.2**	2.3	0.0		OP	**VB**	**4.9**				Yes		
169	BY	B471-G015-BY-T03-BY	B 471		Esting	Geiselbullach	E 4	3.8	17.4	**15.7**	1.7	0.0		OP	**VB**	**5.9**				Yes		
170	BY	B471-G020-BY	B 471		Dachau	A 92	E 4	2.2	9.9	**6.9**	3.0	0.0		OP	**VB**	**>10**				Yes		
171	BY	B471-G030-BY	B 471		B 13	Garching-Hochbrück	E 4	2.2	19.6	**17.0**	2.6	0.0		OP	**VB**	**3.6**						
172	BY	B471-G040-BY	B 471		B 11	Ismaning	E 4	3.0	31.5	**23.3**	8.1	0.1		OP	**VB**	**4.9**				Yes		
173	BY	B471-G050-BY	B 471		ö Ismaning		E 4	4.2	33.3	**22.0**	11.0	0.3		OP	**VB**	**6.2**						
174	BY	B472-G020-BY-T01-BY	B 472		OU Waakirchen		N 2	2.1	6.6	**6.6**	0.0	0.0		VP	**VB**	**>10**			High			
175	BY	B472-G020-BY-T02-BY	B 472		N-OU Bad Tölz		N 2	2.6	23.5	**23.5**	0.0	0.0		VEG	**VB**	**2.3**			High			
176	BY	B533-G010-BY-T01-BY	B 533		OU Auerbach		N 2	1.4	25.5	**25.5**	0.0	0.0		VEA	**VB**	**1.1**						
Total level of funding for first priority projects and first priority projects for removal of bottlenecks									**7,198.9**	**5,363.1**	**1,801.8**	**33.6**										
New projects - second priority category with planning go-ahead (WB*)																						
177	BY	A003-G061-BY	A 003		AS Hengersberg (B 533)	AS Aicha vorm Wald	E 6	19.6	263.2	**109.2**	154.0	0.0	0	OP	**WB***	**1.0**						
178	BY	A006-G015-BY	A 006		Lgr, BW/BY	AS Roth	E 6	69.3	780.8	**419.9**	360.5	0.4	0		**WB***	**1.2**						
179	BY	A006-G015-BY-T01-BY	A 006		Lgr, BW/BY	AK Feuchtwangen	E 6							VE							High	
180	BY	A006-G015-BY-T02-BY	A 006		AK Feuchtwangen	AS Roth	E 6							Teil PU						Yes	High	Part of pledged new construction
181	BY	A007-G010-BY	A 007		AD Schweinfurt/ Werneck) (A 70)	AK Biebelried (A 3)	E 6	30.2	498.7	**133.8**	364.9	0.0	0	OP	**WB***	**1.4**						
182	BY	A007-G020-BY-BW-T02-BY	A 007		AS Illertissen	AS Memmingen-S (portion in BY)	E 6	17.0	155.4	**68.8**	86.6	0.0	0	OP	**WB***	**1.1**						

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
183	BY	A008-G010-BY-T4-BY	A 008		AS Traunstein/Siegsdorf	Bgr. D/A	E 6	25.5	567.9	**376.5**	191.4	0.0	0	VEG	**WB***	**1.2**					High	
184	BY	A009-G010-BY	A 009		AK Nürnberg	AK Nürnberg-O	E 8	5.1	61.2	**37.0**	24.2	0.0	0	OP	**WB***	**2.2**						Temporary HSR planned
185	BY	A009-G020-BY	A 009		AD Holledau	AK Neufahrn	E 8	32.0	413.5	**216.5**	197.0	0.0	0	OP	**WB***	**2.0**				Yes		Temporary HSR in operation
186	BY	A092-G010-BY	A 092		AD München-Feldmoching	AK Neufahrn	E 6	11.5	87.9	**42.6**	44.4	0.9	1	VEG	**WB***	**1.4**				Yes		
187	BY	B002-G020-BY	B 002		Eschenlohe	Oberau-N	N 4	3.8	108.2	**99.9**	8.3	0.0	1	PE	**WB***	**1.1**	High					
188	BY	B002-G050-BY	B 002		Starnberg	(Relief tunnel)	N 2-E 4	3.1	162.1	**157.1**	0.0	5.0		PU	**WB***	**4.1**			High			
189	BY	B002-G080-BY-T04-BY	B 002		Kissing	Oberottmarshausen (B 17)	N 3/4	8.0	77.7	**77.7**	0.0	0.0	1	OP	**WB***	**6.1**	High					
190	BY	B004-G010-BY	B 004		Flughafen Nürnberg	A 3	N 2	3.5	116.7	**116.7**	0.0	0.0		PF	**WB***	**3.9**						
191	BY	B008-G035-BY	B 008		OU Straßkirchen		N 2	5.0	16.1	**16.1**	0.0	0.0		VP	**WB***	**1.2**			High			
192	BY	B011-G030-BY-T01-BY	B 011		Deggendorf	Grafling	N 2/3	3.0	14.8	**13.2**	0.0	1.6	1	VE	**WB***	**1.9**	High					
193	BY	B012-G011-BY-T01-BY	B 012		Kempten (A 7)	Marktoberdorf (B 472)	E 4	16.4	89.1	**61.7**	27.4	0.0	1	OP	**WB***	**3.5**						
194	BY	B013-G020-BY	B 013		OU Oberickelsheim		N 2	2.3	5.7	**5.7**	0.0	0.0		OP	**WB***	**3.0**	High					
195	BY	B013-G030-BY	B 013		OU Gollhofen/Uffenheim	und OU Rudolzhofen	N 2	11.9	27.0	**27.0**	0.0	0.0		OP	**WB***	**2.4**	High		High			
196	BY	B013-G060-BY-T01-BY	B 013		OU Rothenstein		N 2	2.2	4.4	**4.4**	0.0	0.0		OP	**WB***	**2.4**						
197	BY	B013-G060-BY-T02-BY	B 013		OU Rupertsbuch		N 2	2.6	9.3	**9.3**	0.0	0.0		OP	**WB***	**1.6**						
198	BY	B013-G060-BY-T03-BY	B 013		OU Eichstätt		N 2	5.3	32.6	**32.6**	0.0	0.0		OP	**WB***	**5.8**	High		High			
199	BY	B013-G090-BY-T03-BY	B 013		OU Großhartpenning		N 2	2.7	10.1	**10.1**	0.0	0.0		OP	**WB***	**3.8**			High			
200	BY	B013-G090-BY-T04-BY	B 013		OU Kurzenberg		N 2	1.4	3.7	**3.7**	0.0	0.0		OP	**WB***	**3.8**						
201	BY	B014-G010-BY-T03-BY	B 014		OU Buchschwabach		N 3	3.1	22.5	**22.5**	0.0	0.0		OP	**WB***	**1.9**						
202	BY	B014-G010-BY-T05-BY	B 014		OU Stein/Eibach	with Rednitz Tunnel	N 2/3	5.1	131.8	**131.8**	0.0	0.0		OP	**WB***	**3.0**			High			
203	BY	B015-G070-BY-T06-BY	B 015n		OU Lengdorf		N 3	4.8	33.1	**33.1**	0.0	0.0	1	OP	**WB***	**7.0**						
204	BY	B015-G999-BY	B 015n		s Landshut	Rosenheim	N 2/4	55.0	216.9	**216.9**	0.0	0.0	1	OP	**WB***	**(5,2)**						Decision on option to be chosen will be taken after further planning activity
205	BY	B016-G010-BY-T03-BY	B 016		OU Steinbach		N 2	2.1	7.6	**7.6**	0.0	0.0		VP	**WB***	**1.5**						
206	BY	B016-G051-BY-T02-BY	B 016		OU Neuburg Süd	Oberhausen (Sehensand)	N 3	7.1	42.9	**42.9**	0.0	0.0		OP	**WB***	**2.0**	High					
207	BY	B019-G040-BY	B 019		Sonthofen	Oberstdorf	N 2	3.3	68.9	**66.9**	0.0	2.0			**WB***	**1.0**			High			
208	BY	B019-G040-BY-T01-BY	B 019		Fischen (relief tunnel)		N 2							VU					High			
209	BY	B019-G040-BY-T02-BY	B 019		OU Langenwang		N 2							OP					High			

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
210	BY	B020-G060-BY	B 020		Rissmannsdorf	Traitsching	N 2/3	5.2	26.8	**24.5**	2.3	0.0	1	PA	**WB***	**1.1**						
211	BY	B020-G070-BY	B 020		Straubing (A 3)	Cham (B 85)	E 4	29.9	156.4	**133.1**	23.3	0.0	1	OP	**WB***	**1.3**						
212	BY	B025-G020-BY-T02-BY	B 025		OU Feuchtwangen		N 2	3.9	9.0	**9.0**	0.0	0.0		OP	**WB***	**4.3**						
213	BY	B026-G043-BY-T02-BY	B 276		Lohr feeder road		N2	17.0	34.0	**34.0**	0.0	0.0			**WB***	**3.3**	High		High			
214	BY	B026-G044-BY-T02-BY	B 026n		Karlstadt	A 3	N 2/3	26.2	108.5	**108.5**	0.0	0.0	1	OP	**WB***	**5.6**	High					
215	BY	B031-G010-BY	B 031		Lgr. BW/BY	A 96	E 4	7.6	97.0	**59.8**	37.2	0.0	1	OP	**WB***	**4.8**			High			
216	BY	B032-G010-BY-T02-BY	B 032		OU Auers/Riedhirsch		N 2	1.4	4.0	**4.0**	0.0	0.0		OP	**WB***	**1.2**						
217	BY	B085-G030-BY	B 085		OU Heinersreuth/ Altenplos		N 2/3	7.6	24.9	**24.9**	0.0	0.0		VP	**WB***	**5.6**						
218	BY	B085-G051-BY-T02-BY	B 085		Pittersberg	Schwandorf (St 2397)	E 4	2.6	9.0	**9.0**	0.0	0.0	1	OP	**WB***	**1.8**						
219	BY	B085-G051-BY-T03-BY	B 085		Schwandorf (St 2397)	AS Schwandorf Nord (A 93)	E 4	5.2	41.7	**23.2**	18.5	0.0	1	OP	**WB***	**1.8**						
220	BY	B085-G070-BY	B 085		AS Schwandorf (A 93)	Altenkreith (B 16)	N 4+E 4	22.6	137.6	**132.6**	4.9	0.1	1	OP	**WB***	**3.1**						
221	BY	B085-G080-BY	B 085		Altenkreith	Wetterfeld	N 2/4	9.0	49.8	**44.2**	5.5	0.1	1	PA	**WB***	**1.1**			High			
222	BY	B173-G040-BY	B 173		OU Unterrodach		N 3	4.3	25.9	**25.9**	0.0	0.0	1	OP	**WB***	**4.4**	High		High			
223	BY	B279-G012-BY-T01-BY	B 279		OU Baunach (O)		N 2	3.6	23.6	**23.6**	0.0	0.0		UVS	**WB***	**2.2**	High					
224	BY	B279-G020-BY-T01-BY	B 279		Voccawind	Ermershausen	N 2	8.2	27.8	**27.8**	0.0	0.0		VU	**WB***	**1.8**	High					
225	BY	B285-G010-BY-T01-BY	B 285		OU Stockheim		N 2	3.7	12.0	**12.0**	0.0	0.0		OP	**WB***	**6.0**	High		High			
226	BY	B289-G021-BY-T01V-BY	B 289		OU Kauerndorf		N 2	2.0	47.9	**47.9**	0.0	0.0		PU	**WB***	**3.4**						
227	BY	B299-G020-BY	B 299		OU Grafenwöhr		N 2	4.1	13.1	**13.1**	0.0	0.0		OP	**WB***	**2.1**						
228	BY	B299-G030-BY-T04-BY	B 299		OU Tanzfleck		N 2	2.0	5.9	**5.9**	0.0	0.0		PA	**WB***	**1.3**						
229	BY	B299-G110-BY	B 299		A 92	Landshut	E 4	4.6	72.4	**57.8**	14.6	0.0		VP	**WB***	**3.5**				Yes		
230	BY	B300-G010-BY-T01-BY	B 300		OU Heimertingen		N 2	4.2	12.0	**12.0**	0.0	0.0		OP	**WB***	**2.0**						
231	BY	B300-G010-BY-T04-BY	B 300		OU Babenhausen		N 2	4.0	13.5	**13.5**	0.0	0.0		OP	**WB***	**2.0**						
232	BY	B300-G020-BY-T03-BY	B 300		OU Gessertshausen		N 3	5.1	35.5	**35.5**	0.0	0.0		VP	**WB***	**2.4**						
233	BY	B300-G030-BY	B 300		OU Friedberg		N 3	4.9	17.4	**17.4**	0.0	0.0		VU	**WB***	**>10**						Part of Augsburg western ring road
234	BY	B300-G045-BY-T02-BY	B 300		Aichach - Kühbach		E 4	12.1	42.2	**24.4**	17.8	0.0	1	OP	**WB***	**>10**						
235	BY	B301-G021-BY-T01V-BY	B 301		Relocation near Hallbergmoos		N 2+E 4	4.3	27.5	**18.4**	9.1	0.0		VP	**WB***	**2.9**						
236	BY	B303-G010-BY	B 303		AS Wasserlosen (A 7)	Schweinfurt	N 2	8.5	19.2	**19.2**	0.0	0.0		OP	**WB***	**8.5**	High		High			

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
237	BY	B303-G050-BY-T02-BY	B 303		OU Schirnding		E 4	4.1	29.1	**27.7**	1.4	0.0	1	PU	**WB***	**1.3**						
238	BY	B304-G010-BY-T01-BY	B 304		OU Eglharting/Kirchseeon		N 2	9.2	48.0	**48.0**	0.0	0.0		UVS	**WB***	**4.7**			High			
239	BY	B304-G010-BY-T02-BY	B 304		OU Steinhöring		N 2	4.0	22.3	**22.3**	0.0	0.0		OP	**WB***	**>10**						
240	BY	B304-G031-BY	B 304		Karlsfeld relief tunnel		N 2	1.2	81.9	**81.9**	0.0	0.0		OP	**WB***	**1.1**						
241	BY	B388-G040-BY	B 388		OU Brombach		N 2	5.1	23.7	**23.7**	0.0	0.0		UVS	**WB***	**1.4**						
242	BY	B466-G020-BY-T02-BY	B 466		OU Ostheim		N 2	3.2	5.4	**5.4**	0.0	0.0		OP	**WB***	**1.2**						
243	BY	B466-G020-BY-T03-BY	B 466		OU Westheim		N 2	2.6	4.5	**4.5**	0.0	0.0		VU	**WB***	**1.8**						
244	BY	B588-G010-BY	B 588		OU Reischach		N 2	2.5	25.5	**25.5**	0.0	0.0		VP	**WB***	**1.5**			High			
Total level of funding for second priority projects with planning go-ahead									**5,364.8**	**3,761.4**	**1,593.3**	**10.1**										
New projects - second priority category (WB)																						
245	BY	B008-G010-BY-T01-BY	B 008		OU Markt Bibart		N 2	2.3	5.0	**5.0**	0.0	0.0		OP	**WB**	**9.0**						
246	BY	B008-G040-BY	B 008		OU Künzing		N 2	3.1	9.1	**9.1**	0.0	0.0		VP	**WB**	**3.5**						
247	BY	B010-G010-BY	B 010		AD Neu-Ulm (B 28/B 30)	ö Neu-Ulm	N 4	4.4	63.5	**63.5**	0.0	0.0	1	OP	**WB**	**3.1**						
248	BY	B013-G040-BY	B 013		Ansbach	AS Ansbach (A 6)	E 4	4.1	15.6	**14.0**	1.6	0.0		OP	**WB**	**3.5**						
249	BY	B013-G080-BY-T02-BY	B 013		OU Pörnbach		N 2	2.6	7.2	**7.2**	0.0	0.0		OP	**WB**	**2.5**						
250	BY	B013-G080-BY-T04-BY	B 013		OU Reichertshausen a,d, Ilm		N 2	3.1	27.9	**27.9**	0.0	0.0		OP	**WB**	**1.8**			High			
251	BY	B014-G010-BY-T01-BY	B 014		OU Katterbach		N 3	2.6	10.9	**10.9**	0.0	0.0		VEG	**WB**	**6.4**			High			
252	BY	B014-G010-BY-T02-BY	B 014		OU Wicklesgreuth		N 3	2.4	7.5	**7.5**	0.0	0.0		OP	**WB**	**4.0**						
253	BY	B014-G030-BY	B 014		OU Sulzbach-Rosenberg		N 2	2.9	20.8	**20.8**	0.0	0.0		VEA	**WB**	**3.8**						
254	BY	B016-G010-BY-T02-BY	B 016		OU Rieder		N 2	2.2	8.6	**8.6**	0.0	0.0		OP	**WB**	**2.0**						
255	BY	B016-G031-BY-T03-BY	B 016		OU Niederraunau / Aletshausen		N 2	5.5	17.2	**17.2**	0.0	0.0		OP	**WB**	**1.2**			High			
256	BY	B017-G010-BY	B 017		Augsburg	Füssen	N 2/3	11.9	61.6	**61.6**	0.0	0.0			**WB**	**1.8**						
257	BY	B017-G010-BY-T01-BY	B 017		OU Hohenfurch		N 2/3							OP								
258	BY	B017-G010-BY-T02-BY	B 017		Relocation north of Steingaden		N 2							OP								
259	BY	B017-G010-BY-T03-BY	B 017		OU Steingaden		N 2							OP					High			
260	BY	B020-G020-BY	B 020		Border bridge south of Laufen		N 2	0.9	18.8	**6.7**	0.0	12.1		VP	**WB**	**2.0**						

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
261	BY	B022-G010-BY	B 022		AS Kitzingen/ Schwarzach (A 3)	Gerolzhofen (B 286)	N 2	6.2	13.8	**13.8**	0.0	0.0		VU	**WB**	**1.9**						
262	BY	B022-G010-BY-T01-BY	B 022		OU Düllstadt		N 2							VU								
263	BY	B022-G010-BY-T02-BY	B 022		OU Reupelsdorf		N 2							VU								
264	BY	B022-G010-BY-T03-BY	B 022		OU Stadelschwarzach		N 2							VU								
265	BY	B022-G020-BY	B 022		OU Mönchsambach		N 2	1.3	4.2	**4.2**	0.0	0.0		OP	**WB**	**1.0**						
266	BY	B022-G040-BY	B 022		OU Wirbenz		N 2/3	2.5	8.1	**8.1**	0.0	0.0		OP	**WB**	**3.0**						
267	BY	B023-G010-BY-T02-BY	B 023		OU Ettal		N 2	2.0	36.4	**36.4**	0.0	0.0		OP	**WB**	**2.1**						
268	BY	B025-G010-BY-T03-BY	B 025		OU Wengenhausen		N 2	2.0	4.6	**4.6**	0.0	0.0		OP	**WB**	**3.0**						
269	BY	B025-G010-BY-T05-BY	B 025		OU Neustädtlein/ Knittelsbach		N 2	3.2	11.1	**11.1**	0.0	0.0		OP	**WB**	**3.9**						
270	BY	B025-G020-BY-T03-BY	B 025		OU Banzenweiler		N 2	1.8	3.2	**3.2**	0.0	0.0		OP	**WB**	**1.7**						
271	BY	B025-G020-BY-T04-BY	B 025		OU Dorfgütingen		N 2	2.5	4.9	**4.9**	0.0	0.0		OP	**WB**	**2.8**						
272	BY	B026-G020-BY	B 026		Lohr	AS Hösbach (A 3)	N 2/3	10.0	77.8	**77.8**	0.0	0.0			**WB**	**1.9**	High		High			
273	BY	B026-G020-BY-T01-BY	B 026		OU Rechtenbach		N 2/3							VU			High		High			
274	BY	B026-B020-BY-T02-BY	B 026		Relocation in Hain i.Sp. Laufach	And Frohnhofen	N 2							OP					High			
275	BY	B047-G010-BY	B 047		OU Schneeberg		N 2	2.9	18.3	**18.3**	0.0	0.0		OP	**WB**	**2.7**	High		High			
276	BY	B085-G010-BY-T02-BY	B 085		OU Stockheim/ Gundelsdorf		N 2/3	7.4	29.8	**29.8**	0.0	0.0		OP	**WB**	**2.7**	High					
277	BY	B085-G090-BY-T02-BY	B 085		Relocation near Saldenburg		N 2/3	3.8	17.8	**17.8**	0.0	0.0		OP	**WB**	**2.2**						
278	BY	B131-G010-BY	B 131n	A 009	A 9	Gunzenhausen	N 2	31.8	79.1	**79.1**	0.0	0.0	0		**WB**	**4.0**	High	High				
279	BY	B131-G010-BY-T01-BY	B 131n	A 009	AS Thalmässing (A 9)		KN							OP				High				
280	BY	B131-G010-BY-T02-BY	B 131n		OU Alfershausen / Thalmässing		N 2							OP				High				
281	BY	B131-G010-BY-T03-BY	B 131n		OU Laibstadt / Aberzhausen		N 2							OP				High				
282	BY	B131-G010-BY-T04-BY	B 131n		Fiegenstall	Ellingen	N 2							OP				High				
283	BY	B131-G010-BY-T05-BY	B 131n		OU Stopfenheim		N 2							OP				High				
284	BY	B131-G010-BY-T06-BY	B 131n		OU Theilenhofen		N 2							OP				High				
285	BY	B131-G010-BY-T07-BY	B 131n		OU Dornhausen		N 2							OP				High				
286	BY	B131-G010-BY-T08-BY	B 131n		OU Unterasbach		N 2							OP				High				
287	BY	B131-G020-BY	B 131n		Gunzenhausen	AS Dinkelsbühl/Fichtenau (A 7)	N 2	9.4	17.9	**17.9**	0.0	0.0		OP	**WB**	**2.0**		High				
288	BY	B279-G012-BY-T02-BY	B 279		OU Reckendorf		N 2	4.1	18.7	**18.7**	0.0	0.0		UVS	**WB**	**1.5**	High		High			
289	BY	B279-G012-BY-T03-BY	B 279		OU Junkersdorf/ Pfarrweisach		N 2	3.8	9.6	**9.6**	0.0	0.0		OP	**WB**	**1.8**						

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290	BY	B285-G010-BY-T02-BY	B 285		OU Ostheim		N 2	5.7	17.3	**17.3**	0.0	0.0		OP	**WB**	**1.1**	High		High			
291	BY	B289-G030-BY-T03-BY	B 289		OU Rehau		N 2	3.3	11.9	**11.9**	0.0	0.0		OP	**WB**	**1.3**						
292	BY	B289-G040-BY	B 289		OU Heinersberg		N 2	1.6	4.2	**4.2**	0.0	0.0		VEA	**WB**	**2.2**						
293	BY	B299-G030-BY-T03-BY	B 299		OU Seugast		N 2	3.4	8.8	**8.8**	0.0	0.0		OP	**WB**	**2.2**			High			
294	BY	B299-G050-BY	B 299		OU Ursensollen		N 2	2.2	8.8	**8.8**	0.0	0.0		OP	**WB**	**1.4**			High			
295	BY	B299-G120-BY	B 299		OU Egglkofen		N 2	3.0	10.5	**10.5**	0.0	0.0		OP	**WB**	**1.3**			High			
296	BY	B300-G010-BY	B 300		Memmingen	Krumbach	N 2	19.8	61.9	**61.9**	0.0	0.0			**WB**	**2.0**			High			
297	BY	B300-G010-BY-T02-BY	B 300		OU Boos/ Niederrieden		N 2							OP					High			
298	BY	B300-G010-BY-T03-BY	B 300		OU Winterrieden		N 2							OP								
299	BY	B300-G010-BY-T05-BY	B 300		OU Kettershausen		N 2							OP								
300	BY	B300-G010-BY-T06-BY	B 300		OU Ebershausen		N 2							OP								
301	BY	B300-G010-BY-T07-BY	B 300		OU Krumbach		N 2							VP								
302	BY	B300-G020-BY-T01-BY	B 300		OU Ried/Breitenbronn		N 2	3.8	10.7	**10.7**	0.0	0.0		OP	**WB**	**1.7**						
303	BY	B300-G020-BY-T02-BY	B 300		OU Ustersbach		N 2	2.3	7.8	**7.8**	0.0	0.0		OP	**WB**	**1.5**						
304	BY	B301-G030-BY-T02-BY	B 301		OU Reichertshausen		N 2	2.5	6.2	**6.2**	0.0	0.0		OP	**WB**	**1.8**			High			
305	BY	B303-G031-BY-T02-BY	B 303		OU Zaubach		N 2	2.5	9.2	**9.2**	0.0	0.0		VEG	**WB**	**1.1**	High		High			
306	BY	B304-G010-BY-T03-BY	B 304		OU Tulling		N 2	2.8	9.7	**9.7**	0.0	0.0		OP	**WB**	**1.4**						
307	BY	B304-G010-BY-T04-BY	B 304		OU Forsting		N 2	3.9	11.2	**11.2**	0.0	0.0		OP	**WB**	**2.2**						
308	BY	B310-G010-BY	B 310		OU Füssen	(2,BA)	N 2	2.8	45.3	**45.3**	0.0	0.0		OP	**WB**	**1.0**						
309	BY	B388-G030-BY	B 388		OU Wolferding/Trauterfing	And OU Johannesk	N 2	3.9	10.9	**10.9**	0.0	0.0		VP	**WB**	**2.6**						

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
310	BY	B466-G010-BY	B 466		OU Obererlbach		N 2	2.9	6.7	**6.7**	0.0	0.0		OP	**WB**	**1.3**						
311	BY	B466-G020-BY-T01-BY	B 466		OU Gnotzheim		N 2	2.5	4.9	**4.9**	0.0	0.0		OP	**WB**	**1.7**						
312	BY	B466-G020-BY-T04-BY	B 466		OU Oettingen		N 2	7.2	21.0	**21.0**	0.0	0.0		OP	**WB**	**2.6**	High					
313	BY	B470-G010-BY	B 470		Rothenburg (A 7)	Höchstadt/B 505 Bamberg	N 2	18.4	46.1	**46.1**	0.0	0.0			**WB**	**2.4**	High		High			
314	BY	B470-G010-BY-T01-BY	B 470		OU Steinach bei Rothenburg		N 2							OP								
315	BY	B470-G010-BY-T03-BY	B 470		OU Oberndorf/ Ipsheim	And OU Dottenheim	N 2							OP					High			
316	BY	B470-G010-BY-T04-BY	B 470		OU Birkenfeld		N 2							OP								
317	BY	B470-G010-BY-T05-BY	B 470		OU Uehlfeld/ Demantsfürth		N 2							VP								
318	BY	B470-G010-BY-T06-BY	B 470		OU Mailach		N 2							OP								
319	BY	B471-G015-BY-T01-BY	B 471		Buchenau	Fürstenfeldbruck-Ost	E 4	6.2	28.1	**21.7**	6.4	0.0		OP	**WB**	**2.8**						
320	BY	B472-G010-BY	B 472		OU Huglfing		N 2	3.9	14.1	**11.2**	0.0	2.9		OP	**WB**	**1.3**						
321	BY	B472-G020-BY-T03-BY	B 472		OU Bad Heilbrunn		N 2	3.0	15.0	**15.0**	0.0	0.0		VP	**WB**	**3.1**						
322	BY	B533-G010-BY-T02-BY	B 533		Grafenau	Hohenau	N 2	4.3	27.2	**27.2**	0.0	0.0		VP	**WB**	**1.6**						
Total level of funding for second priority projects									**1,026.5**	**1,003.5**	**8.0**	**15.0**										

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Berlin																						
Ongoing and definitely planned projects																						
1	BE		A 100		AD Neukölln	Storkower Str.	N 4/6	7.3	848.3	**823.1**	0.0	25.2	1		**FD**							Under construction
New projects - first priority (VB)																						
2	BE	B2-G20-BE	B 002n		OU Malchow		N 2/4	3.2	20.6	**20.6**	0.0	0.0		VP	**VB**	**>10**						
New projects - second priority category with planning go-ahead (WB*)																						
3	BE	A 115-G40-BE	A 115		AK Zehlendorf (Lgr BB/BE)	AS Hüttenweg	E 6	7.1	126.5	**31.3**	95.2	0.0	1	OP	**WB***	**>10**				Yes		Further planning required

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Brandenburg																						
Ongoing and definitely planned projects																						
1	BB		A 010		AD Havelland	AD Pankow	E 6	29.6	791.9	**316.8**	475.1	0.0	0		FD							PPP procurement procedure in preparation
2	BB		A 010		AD Nuthetal	AD Potsdam	E 8	9.0	142.2	**71.0**	71.2	0.0	0		FD							Completion of overall project
3	BB		A 010		Lgr. BB/BE	AD Barnim	E 6	1.8	16.6	**7.3**	6.0	0.0	0		FD							Under construction
4	BB		A 014		AS Groß-Warnow	AS Karstädt (B 5)	N 4	11.5	23.1	**23.1**	0.0	0.0	0		FD							Open to traffic
5	BB		A 014		LGr.MV/BB	AS Groß-Warnow	N 4	0.8	5.7	**5.7**	0.0	0.0	0		FD							Under construction
6	BB		B 001		OU Herzfelde		N 2	4.5	4.0	**4.0**	0.0	0.0	1		FD							Under construction
7	BB		B 097	B 168	OU Cottbus	(A 15 – B 168)	N 3	7.0	30.6	**30.6**	0.0	0.0			FD							Completion of overall project
8	BB		B 101		Trebbin	s Kerzendorf (OU Thyrow)	N 4	5.1	24.8	**24.8**	0.0	0.0			FD							In preparation/under construction
9	BB		B 102		OU Schmerzke		N 2	3.0	13.0	**13.0**	0.0	0.0			FD							Altered network design
10	BB		B 112		OU Brieskow-Finkenheerd	And Wiesenau	N 3	9.9	4.1	**4.1**	0.0	0.0	1		FD							Under construction
11	BB		B 183		OU Bad Liebenwerda		N 2	5.2	25.8	**25.8**	0.0	0.0	1		FD							Under construction
Total level of funding for ongoing and definitely planned projects									**1,081.8**	**526.2**	**552.3**	**0.0**										
New projects - first priority category (VB)																						
12	BB	A14-G20-ST-BB-T2-BB	A 014		Lgr. ST/BB	AS Karstädt	N 4	19.5	174.8	**174.8**	0.0	0.0	0	PE	VB	**3.0**	High	High					
13	BB	B1-G10-BB	B 001		OU Tasdorf		N 2	2.1	9.7	**9.7**	0.0	0.0	1	OP	VB	**>10**							
14	BB	B87-G70-BB	B 087		OU Duben		N 2	4.2	10.7	**10.7**	0.0	0.0	1	OP	VB	**2.8**							
15	BB	B87-G80-BB-T7-BB	B 087		OU Markendorf		N 3	4.0	9.6	**9.6**	0.0	0.0	1	LB	VB	**7.4**							
16	BB	B96-G10-BB	B 096		Kreuz Oranienburg (A 10)	Lgr. BB/MV	N 2/4	36.1	152.7	**152.3**	0.0	0.4	1		VB	**4.6**	High	High	High				
17	BB	B96-G10-BB-T1-BB	B 096		OU Teschendorf	And OU Löwenberg	N 2/4							PA			High	High	High				
18	BB	B96-G10-BB-T2-BB	B 096		OU Gransee	And OU Altlüdersdorf	N 2							LB				High	High				
19	BB	B96-G10-BB-T3-BB	B 096		OU Fürstenberg		N 2							LB			High	High					
20	BB	B96-G20-BB	B 096		OU Groß Machnow		N 2	4.5	9.7	**9.7**	0.0	0.0		OP	VB	**3.4**							
21	BB	B97-G10-BB	B 097		OU Groß Oßnig		N 2	4.1	7.9	**7.9**	0.0	0.0	1	OP	VB	**1.8**							
22	BB	B101-G10-BB	B 101		OU Elsterwerda		N 2	6.5	17.1	**17.1**	0.0	0.0	1	ROV	VB	**4.9**		High					

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23	BB	B102-G10-BB	B 102		OU Premnitz		N 2	9.3	33.9	**33.2**	0.0	0.7		VE	**VB**	**3.6**	High	High	High			
24	BB	B112-G10-BB	B 112		OU Forst		N 2	6.2	14.6	**14.6**	0.0	0.0		LB	**VB**	**4.5**						
25	BB	B112-G20-BB	B 112		OU Neuzelle	And OU Eisenhüttenstadt	N 3	14.3	61.0	**61.0**	0.0	0.0	1	LB	**VB**	**8.7**						
26	BB	B112-G30-BB	B 112		Güldendorf	A 12	E 4	1.5	6.9	**4.2**	2.3	0.4	1	OP	**VB**	**6.0**						
27	BB	B167/B112-G40-BB-T1-BB	B 112		OU Frankfurt (Oder) (3. BA)		N 3	8.4	23.2	**23.2**	0.0	0.0	1	VE	**VB**	**3.9**		High				
28	BB	B158-G10-BB-BE	B 158		OU Ahrensfelde		N 4+E 4	4.6	44.7	**43.7**	0.0	1.0		PA	**VB**	**9.4**						
29	BB	B158-G20-BB	B 158		OU Blumberg		N 2	3.3	7.9	**7.9**	0.0	0.0		OP	**VB**	**>10**			High			
30	BB	B158-G30-BB	B 158		OU Seefeld		N 2	4.2	7.2	**7.2**	0.0	0.0		OP	**VB**	**7.0**			High			
31	BB	B167/B112-G40-BB-T3-BB	B 167		OU Gusow	And OU Platkow	N 2	8.0	16.8	**16.8**	0.0	0.0	1	OP	**VB**	**4.3**		High				
32	BB	B167/B112-G40-BB-T4-BB	B 167		OU Neuhardenberg		N 2	5.7	8.9	**8.9**	0.0	0.0	1	OP	**VB**	**3.8**		High	High			
33	BB	B167/B112-G40-BB-T5-BB	B 167		OU Vevais		N 2	2.8	5.1	**5.1**	0.0	0.0	1	OP	**VB**	**4.6**		High				
34	BB	B167/B112-G40-BB-T8-BB	B 167		OU Finowfurt	And OU Eberswalde	N 2	20.8	82.3	**80.2**	0.0	2.1	1	PA	**VB**	**10.0**	High	High	High			
35	BB	B167/B158-G50-BB	B 167	B 158	OU Bad Freienwalde (West)		N 2	5.2	21.9	**21.9**	0.0	0.0	1	LB	**VB**	**4.1**						
36	BB	B167-G20-BB	B 167		AS Neuruppin (A 24)	Neulöwenberg (B 96)	N 2	28.3	67.4	**67.4**	0.0	0.0	1	OP	**VB**	**3.4**			High			
37	BB	B167-G20-BB-T1-BB	B 167		OU Neuruppin	And OU Alt Ruppin	N 2							OP					High			
38	BB	B167-G20-BB-T2-BB	B 167		OU Wulkow		N 2							OP					High			
39	BB	B167-G20-BB-T3-BB	B 167		OU Herzberg		N 2							OP								
40	BB	B167-G20-BB-T4-BB	B 167		OU Grieben		N 2							OP								
41	BB	B167-G20-BB-T5-BB	B 167		OU Löwenberg	And OU Neulöwenberg	N 2							OP								
42	BB	B167-G30-BB-T2-BB	B 167		OU Liebenwalde		N 2	5.0	31.6	**31.6**	0.0	0.0	1	OP	**VB**	**4.6**	High					

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43	BB	B169-G10-BB	B 169		OU Plessa		N 2	5.5	16.2	**16.2**	0.0	0.0	1	ROV	**VB**	**2.4**						Necessary in connection with Elsterwerda
44	BB	B169-G20-BB	B 169		OU Schwarzheide-Ost		N 2/3	3.4	9.3	**9.3**	0.0	0.0	1	OP	**VB**	**8.3**						
45	BB	B169-G30-BB	B 169		B 96	AS Cottbus-W (A 15)	N 3	11.9	35.8	**35.8**	0.0	0.0	1	LBV	**VB**	**3.8**						
46	BB	B169-G30-BB-T1-BB	B 169		OU Allmosen		N 3							LBV								
47	BB	B169-G30-BB-T2-BB	B 169		OU Lindchen		N 3							OP								
48	BB	B169-G30-BB-T3-BB	B 169		OU Neupetershain Nord		N 3							OP								
49	BB	B169-G30-BB-T4-BB	B 169		OU Klein Oßnig	And OU Annahof/ Klein Gaglow	N 3							OP								
50	BB	B169-G30-SN-BB-T5-BB	B 169		OU Elsterwerda		N 2	6.5	19.7	**19.7**	0.0	0.0		ROV	**VB**	**1.5**		High				Network completion along the B 169
51	BB	B189-G10-BB	B 189		OU Heiligengrabe		N 2	4.3	11.8	**11.8**	0.0	0.0	1	LB	**VB**	**3.7**		High				
52	BB	B189n-G30-MV-BB	B 189n		Mirow	AS Wittstock/ Dosse (A 19)	N 2	19.7	45.0	**45.0**	0.0	0.0		VEG	**VB**	**1.8**	High					
Total level of funding for first priority projects									**963.4**	**956.5**	**2.3**	**4.6**										
New projects - second priority category with planning go-ahead (WB*)																						
53	BB	A10-G10-BB	A 010		AD Werder	AD Havelland	E 6	45.1	568.0	**131.8**	433.9	2.3	0	OP	**WB***	**2.6**						
54	BB	A12-G10-BB	A 012		AD Spreeau	AS Frankfurt (Oder)-M	E 6	53.0	218.2	**155.2**	60.3	2.7	0	OP	**WB***	**2.4**						
55	BB	A24-G10-BB	A 024		AS Kremmen	AD Wittstock/Dosse	E 6	59.0	396.8	**125.9**	269.3	1.6	0	PU	**WB***	**1.7**						
56	BB	B87-G80-BB-T1-BB	B 087		OU Lübben		N 2	9.9	52.2	**52.2**	0.0	0.0	1	LB	**WB***	**1.2**	High					
57	BB	B87-G21-SN-BB-T5-BB	B 087n		OU Löhsten		N 2	2.2	4.2	**4.2**	0.0	0.0		ROVV	**WB***	**2.2**						See SN
58	BB	B246-G20-BB-BGPL	B 246		Eisenhüttenstadt (B 112)	Bgr. D/Pl	N 2	4.0	20.9	**20.9**	0.0	0.0		LBA	**WB***	**1.9**						
Total level of funding for second priority projects with planning go-ahead									**1,260.3**	**490.2**	**763.5**	**6.6**										
New projects - second priority category																						
59	BB	A13-G10-BB	A 013		AK Schönefelder Kreuz	AD Spreewald	E 6	62.0	179.2	**133.5**	41.9	3.8	0	OP	**WB**	**2.0**						
60	BB	B167/B5-G10-BB-T1-BB	B 005		OU Bückwitz (B 5)		N 2	2.6	5.3	**5.3**	0.0	0.0	1	OP	**WB**	**1.8**		High				
61	BB	B87/B101-G10-BB	B 087	B 101	OU Herzberg		N 2	10.5	33.5	**33.5**	0.0	0.0		LB	**WB**	**1.1**	High					
62	BB	B87-G30-BB	B 087		OU Schlieben		N 2	4.7	8.4	**8.4**	0.0	0.0		OP	**WB**	**1.0**						
63	BB	B87-G50-BB	B 087		OU Hohenbucko		N 2	3.9	5.6	**5.6**	0.0	0.0		OP	**WB**	**1.0**						

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
64	BB	B87-G60-BB	B 087		OU Wüstermarke	And OU Langengrassau	N 2	6.0	11.3	**11.3**	0.0	0.0		OP	**WB**	**2.1**						
65	BB	B87-G80-BB-T2-BB	B 087		OU Biebersdorf		N 2	2.7	4.7	**4.7**	0.0	0.0	1	OP	**WB**	**1.6**						
66	BB	B87-G80-BB-T5-BB	B 087		OU Trebatsch	And OU Sabrodt	N 2	3.3	13.5	**13.5**	0.0	0.0	1	OP	**WB**	**1.0**						
67	BB	B97-G20-BB	B 097		OU Cottbus (3. BA)		N 2	4.9	18.3	**18.3**	0.0	0.0		LB	**WB**	**2.8**	High					
68	BB	B101-G20-BB	B 101		OU Welsickendorf		N 2	2.3	3.4	**3.4**	0.0	0.0		OP	**WB**	**1.2**		High				
69	BB	B101-G40-BB	B 101		OU Kloster Zinna		N 2	3.5	9.0	**9.0**	0.0	0.0		OP	**WB**	**2.7**		High				
70	BB	B167/B112-G40-BB-T2-BB	B 167		OU Libbenichen	And OU Dolgelin	N 3	7.1	14.5	**14.5**	0.0	0.0	1	LB	**WB**	**1.4**		High				
71	BB	B167/B112-G40-BB-T6-BB	B 167		OU Bad Freienwalde (West)		N 2	3.0	14.9	**14.9**	0.0	0.0	1	LB	**WB**	**2.3**		High				
72	BB	B167/B112-G40-BB-T7-BB	B 167		OU Hohenfinow	And OU Falkenberg	N 2	10.9	25.4	**25.4**	0.0	0.0	1	LB	**WB**	**1.1**	High	High				
73	BB	B167/B5-G10-BB-T3-BB	B 167		OU Metzelthin		N 2	2.4	4.8	**4.8**	0.0	0.0	1	OP	**WB**	**1.6**		High				
74	BB	B167/B5-G10-BB-T4-BB	B 167		OU Ganzer		N 2	2.7	4.4	**4.4**	0.0	0.0	1	OP	**WB**	**1.1**		High				
75	BB	B167/B5-G10-BB-T5-BB	B 167		OU Wildberg	And OU Kerzlin	N 2	6.7	20.6	**20.6**	0.0	0.0	1	OP	**WB**	**1.0**		High				
76	BB	B167/B5-G10-BB-T6-BB	B 167		OU Dabergotz		N 2	2.7	7.3	**7.3**	0.0	0.0	1	OP	**WB**	**2.9**		High				
77	BB	B168-G10-BB	B 168		Beeskow	AS Fürstenwalde-O (A 12)	N 2	6.9	9.9	**9.9**	0.0	0.0		OP	**WB**	**2.1**						
78	BB	B168-G10-BB-T1-BB	B 168		OU Groß Rietz		N 2							OP								
79	BB	B168-G10-BB-T2-BB	B 168		OU Pfaffendorf		N 2							OP								
80	BB	B246-G10-BB	B 246		OU Schneeberg-Beeskow		N 2	4.8	9.8	**9.8**	0.0	0.0		OP	**WB**	**1.3**						
Total level of funding for second priority projects									**403.8**	**358.1**	**41.9**	**3.8**										

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Bremen																						
Ongoing and definitely planned projects (FD) plus ongoing and definitely planned projects for removal of bottlenecks (FD-E)																						
1	HB		A 281		Kattenturm	AS Bremen/ Airport-Stadt	N 4	2.2	112.1	**112.1**	0.0	0.0	1		**FD**							Completion of overall project
Total level of funding for ongoing and defintely planned projects									**112.1**	**112.1**	**0.0**	**0.0**										
New projects - first priority category (VB) and first priority category for removal of bottlenecks (VB-E)																						
2	HB	A27-G10-HB-NI	A 027		AK Bremen	AS HB-Überseestadt	E 6	13.0	112.7	**41.8**	70.9	0.0	0	OP	**VB-E**	**4.0**				Yes		
3	HB	A281-G10-HB	A 281		Weser Crossing		N 4	4.9	260.4	**245.0**	0.0	15.4	1	PF	**VB**	**1.7**						Network impact, completion of started federal motorway
4	HB	B6n-G11-HB-NI	B 006n		A 281	Bremen/Brinkum	N 4	2.2	147.9	**147.9**	0.0	0.0		OP	**VB**	**7.1**			High			
Total level of funding for first priority projects and first priority projects for removal of bottlenecks									**521.0**	**434.7**	**70.9**	**15.4**										
New projects - second priority category with planning go-ahead (WB*)																						
5	HB	A1-G30-NI-HB-T3-HB	A 001		AK Bremen	Lgr. HB/NI	E 8	9.1	112.9	**28.9**	84.0	0.0	0	OP	**WB***	**6.2**				Yes		See NI
6	HB	B212-G21-NI-HB-T3-HB	B 212n		A 20 (n Rodenkirchen)	A 281	N 2	1.4	10.3	**10.3**	0.0	0.0		LB	**WB***	**4.5**	High		High			See NI
Total level of funding for second priority projects with planning go-ahead									**123.2**	**39.2**	**84.0**	**0.0**										

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Hamburg																						
Ongoing and definitely planned projects																						
1	HH		A 007		AD Hamburg/NW (A 23)	LGr. SH/HH	E 6/8	5.3	293.0	**92.6**	138.8	61.6	0		**FD**							Under construction
2	HH		A 007		AS Hamburg-Othmarschen	AD Hamburg/NW (A 23)	E 8	6.3	463.0	**411.0**	52.0	0.0	0		**FD-E**					Yes		Completion of overall project
3	HH		A 026		AK HH-Süderelbe (Moorburg)	Rübke (Lgr. NI/HH)	N 4	8.0	238.5	**238.5**	0.0	0.0	1		**FD**							Completion of overall project
Total level of funding for ongoing and defintely planned projects									**994.5**	**742.1**	**190.8**	**61.6**										
New projects - first priority category (VB) and first priority category for removal of bottlenecks (VB-E)																						
4	HH	A1-G20-HH-SH-NI-T03-HH	A 001		AD Hamburg-SO	AS Hamburg-Stillhorn	E 8	5.3	295.4	**125.9**	169.5	0.0	0	OP	**VB**	**7.6**					High	
5	HH	A7-G10-HH	A 007		Hochstraße Elbmarsch		E 8	3.8	368.5	**93.3**	275.2	0.0	0	VEA	**VB-E**	**>10**				Yes		
6	HH	A23-G10-SH-HH	A 023		AS Tornesch	AS Eidelstedt	E 6	2.0	18.2	**11.4**	6.8	0.0	1	VP	**VB-E**	**2.6**				Yes		As in SH
7	HH	A26-G10-HH	A 026		AK Hamburg-Süderelbe	AD/AS Hamburg-Stillhorn	N 4	9.7	895.9	**885.1**	0.0	10.8	1	LB	**VB**	**3.3**						Link to and from seaport
Total level of funding for first priority projects and first priority projects for removal of bottlenecks									**1,578.0**	**1,115.7**	**451.5**	**10.8**										
New projects - second priority category with planning go-ahead (WB*)																						
8	HH	A1-G20-HH-SH-NI-T04-HH	A 001		AS Hamburg-Stillhorn	Lgr. HH/NI	E 8	4.4	197.4	**50.3**	147.1	0.0	0	OP	**WB***	**4.4**				Yes		
Total level of funding for second priority projects with planning go-ahead									**197.4**	**50.3**	**147.1**	**0.0**										

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Hesse																						
Ongoing and definitely planned projects																						
1	HE		A 044		AD Kassel-O	AD Wommen (A 4)	N 4	30.0	1,167.0	**1,167.0**	0.0	0.0	0		FD							Completion of overall project/ Waldkappel-Wehretal und Riedmühle-Kirchham sections In preparation/under construction
2	HE		A 049		AS Neuental	AS Schwalmstadt	N 4	11.8	178.1	**178.1**	0.0	0.0	1		FD							Under construction
3	HE		A 049		AS Schwalmstadt	AD A 5/A 49	N 4	30.8	696.8	**487.8**	209.0	0.0	1		FD							PPP procurement procedure in preparation
4	HE		A 066		AS Neuhof-S	AS Fulda-S	N 4		4.1	**4.1**	0.0	0.0	1		FD							Residual funding
5	HE		A 066		Frankfurt/Erlenbruch	AS Frankfurt/ Bergen-Enkheim	N 6	6.9	286.2	**284.4**	0.0	1.8	1		FD							Under construction
6	HE		A 643		AK Wiesbaden/ Schierstein	Rhine Bridge in Schierstein - AD Mainz	N 6+E 6	3.0	216.6	**51.0**	165.6	0.0	1		FD							Under construction
7	HE		B 003	B 45	OU Wöllstadt	Nieder- und Oberwöllstadt	N 2	6.0	37.1	**37.1**	0.0	0.0			FD							Under construction
8	HE		B 007		OU Calden		N 2	5.0	38.4	**38.4**	0.0	0.0			FD							Start of construction pledged
9	HE		B 027		OU Hauneck/ Unterhaun	And H.-Oberhaun/ H./Sieglos	N 2	5.0	16.7	**16.7**	0.0	0.0			FD							Under construction
10	HE		B 044		OU Gernsheim/Klein-Rohrheim		N 2	2.4	9.9	**9.9**	0.0	0.0			FD							Start of construction pledged
11	HE		B 049		AS Löhnberg	Altenberg Monastery	E 4	12.0	113.6	**113.6**	0.0	0.0	1		FD							Completion of overall project
12	HE		B 252		OU Münchhausen/ Simtshausen/	And Todenhausen/ Wetter-Lahntal	N 2	17.6	101.0	**101.0**	0.0	0.0			FD							Under construction
13	HE		B 252		OU Vöhl/Dorfitter		N 2	3.0	18.6	**18.6**	0.0	0.0			FD							Start of construction pledged
14	HE		B 457		OU Büdingen Büches		N 2	2.5	14.0	**14.0**	0.0	0.0			FD							Start of construction pledged
Total level of funding for ongoing and definitely planned projects									**2,898.1**	**2,521.7**	**374.6**	**1.8**										
New projects - first priority category (VB) and first priority category for removal of bottlenecks (VB-E)																						
15	HE	A003-G20-HE-T2-HE	A 003		Wiesbadener Kreuz		KN	0.0	54.9	**48.5**	6.4	0.0	0	OP	**VB-E**	**5.8**				Yes		
16	HE	A003-G20-HE-T3-HE	A 003		Wiesbadener Kreuz	AD Mönchhof	E 8	8.5	117.2	**25.6**	91.6	0.0	0	OP	**VB-E**	**4.6**				Yes		
17	HE	A3-G30-HE-T04-HE	A 003		AS Flughafen Stadt Frankfurt/Main	AD Mönchhof	E 8	7.5	160.2	**82.5**	77.7	0.0	0	PA	**VB-E**	**9.8**				Yes		
18	HE	A3-G30-HE-T06-HE	A 003		AK Offenbach	AK Frankfurter Kreuz	E10	6.7	164.5	**88.9**	75.6	0.0	0	OP	**VB-E**	**2.3**				Yes		
19	HE	A3-G30-HE-T07-HE	A 003		AK Offenbacher Kreuz		KN	5.9	147.1	**74.7**	72.4	0.0	0	OP	**VB-E**	**>10**				Yes		
20	HE	A5-G11-HE-T10-HE	A 005	A 648	WK Frankfurt		KN	4.1	152.4	**84.2**	68.2	0.0	0	OP	**VB-E**	**1.9**				Yes		
21	HE	A5-G20-HE-T10-HE	A 005		AK Westkreuz	AK Frankfurter Kreuz	E10	6.0	197.3	**105.4**	91.9	0.0	0	OP	**VB-E**	**3.1**				Yes		
22	HE	A5-G20-HE-T13-HE	A 005	A 067	AK Darmstadt		KN	2.5	57.7	**36.2**	21.5	0.0	0	OP	**VB-E**	**5.6**				Yes		
23	HE	A5-G20-HE-T2-HE	A 005		AD Reiskirchen	AD A 5/A 49	E 6	22.6	316.9	**179.2**	137.7	0.0	0	OP	**VB-E**	**4.9**				Yes		
24	HE	A5-G20-HE-T5-HE	A 005		AK Bad Homburg	AS Friedberg	E 8	7.7	131.9	**74.6**	57.3	0.0	0	LB	**VB-E**	**>10**				Yes		Temporary HSR in operation

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
25	HE	A5-G20-HE-T6-HE	A 005	A 661	AK Bad Homburg		KN	5.5	108.5	**61.7**	46.8	0.0	0	LB	**VB-E**	**>10**				Yes		
26	HE	A5-G20-HE-T7-HE	A 005		NWK Stadt Frankfurt/Main	AK Bad Homburg	E 8	6.3	143.8	**78.0**	65.8	0.0	0	LB	**VB-E**	**>10**				Yes		
27	HE	A5-G20-HE-T8-HE	A 005	A 066	NWK Frankfurt		KN	3.2	117.2	**67.3**	49.9	0.0	0	OP	**VB-E**	**6.6**				Yes		
28	HE	A5-G20-HE-T9-HE	A 005		WK Stadt Frankfurt	NWK Stadt Frankfurt	E10	1.2	33.4	**23.0**	10.4	0.0	0	OP	**VB-E**	**8.4**				Yes		
29	HE	A44-G60-NW-HE-T9-HE	A 044		AK Kassel-West	AD Kassel-Süd	E 6	5.2	216.9	**135.9**	81.0	0.0	0	UVS	**VB**	**1.3**						Because of necessary bridge renewals
30	HE	A0045-G10-NW-HE	A 045		AS Haiger/Burbach	AK Gambach	E 6	63.2	1,091.0	**323.3**	767.7	0.0	0	OP	**VB-E**	**1.7**				Yes		Because of necessary bridge renewals
31	HE	A45-G50-NW-HE-T1-NW-HE	A 045		AS Haiger/Burbach	AS Wilnsdorf	E 6	3.7	72.3	**19.9**	52.4	0.0	0	OP	**VB-E**	**1.9**				Yes		Bridge renewal
32	HE	A60-G10-HE	A 060		AD Mainspitz	AD Rüsselsheim	E 6	9.4	147.5	**87.6**	59.9	0.0	0	OP	**VB-E**	**5.4**				Yes		
33	HE	A66-G10-HE-T1-HE	A 066		AK Wiesbaden-Schierstein	Wiesbadener Kreuz	E 6/8	12.5	126.4	**50.3**	76.1	0.0	1	OP	**VB-E**	**5.2**				Yes		
34	HE	A67-G10-HE	A 067		AD Mönchhof	AS Lorsch	E 6	42.7	579.1	**322.3**	256.8	0.0	0	VEG	**VB-E**	**9.4**				Yes		
35	HE	A661-G30-HE-T1-HE	A 661		AK Bad Homburger Kreuz	AS Bad Homburg	E 6	1.6	18.5	**9.8**	8.7	0.0		OP	**VB-E**	**9.9**				Yes	High	
36	HE	B3-G10-HE-T2-HE	B 003		OU Karben/Kloppenheim		N 2	1.7	7.6	**7.6**	0.0	0.0		LB	**VB**	**>10**			High			
37	HE	B3-G10-HE-T3-HE	B 003		OU Karben/Okarben		N 2	3.4	13.6	**13.6**	0.0	0.0		LB	**VB**	**>10**						
38	HE	B3-G10-HE-T4-HE	B 003		OU Butzbach	(A 5 - Windhof)	N 2	4.3	23.2	**23.2**	0.0	0.0		OP	**VB**	**9.4**						
39	HE	B8-G20-HE	B 008		Limburg / Lindenholzhausen	Bad Camberg	N 2	11.5	74.2	**74.2**	0.0	0.0			**VB**	**7.1**						
40	HE	B8-G20-HE-T01-HE	B 008		Limburg	Lindenholzhausen	N 2							LBV					High			
41	HE	B8-G20-HE-T02-HE	B 008		Brechen	Niederbrechen	N 2							OP								
42	HE	B8-G20-HE-T03-HE	B 008		Bad Camberg	Erbach	N 2							PA								
43	HE	B8-G40-HE	B 008		OU Glashütten		N 2	2.5	24.3	**24.3**	0.0	0.0		OP	**VB**	**5.4**			High			
44	HE	B8-G50-HE	B 008		OU Waldems/Esch		N 2	0.9	7.8	**7.8**	0.0	0.0		VU	**VB**	**4.0**			High			
45	HE	B27_B452-G10-HE	B 027	B 452	Eschwege (A 44)	Reichensachsen-Etmannsh. (B 27)	N 2+E 4	7.7	52.3	**48.2**	4.1	0.0			**VB**	**2.9**			High			
46	HE	B27_B452-G10-HE-T01-HE	B 027		Eschwege (A 44)	OU Reichensachsen	E 4							PA								
47	HE	B27_B452-G10-HE-T02-HE	B 027		OU Eltmannshausen	And OU Niddawitzhausen	N 2							OP					High			
48	HE	B27_B452-G10-HE-T03-HE	B 452	B 027	OU Reichensachsen		N 2							PA					High			
49	HE	B27-G20-HE-T1-HE	B 027		OU Ludwigsau/ Friedlos		N 3	3.6	31.8	**31.8**	0.0	0.0		UVS	**VB**	**1.5**			High			
50	HE	B38-G10-HE-T1-HE	B 038		OU Mörlenbach		N 2	3.9	69.2	**69.2**	0.0	0.0		PF	**VB**	**4.0**			High			
51	HE	B38-G10-HE-T2-HE	B 038		OU Rimbach	And Fürth/Lörzenbach	N 2	4.0	34.6	**34.6**	0.0	0.0		OP	**VB**	**8.6**			High			
52	HE	B38-G20-HE	B 038		OU Groß-Bieberau		N 2	2.1	12.9	**12.9**	0.0	0.0		OP	**VB**	**5.6**						
53	HE	B42-G10-HE	B 042		TOU Rüdesheim	(Auf der Lach)	N 2	1.1	5.5	**5.5**	0.0	0.0		OP	**VB**	**3.6**			High			

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
54	HE	B44-G30-HE	B 044		Groß-Gerau/ Dornheim		N 2	5.1	17.0	**17.0**	0.0	0.0		VEA	**VB**	**1.7**			High			
55	HE	B45-G10-HE	B 045		Dieburg	Groß-Umstadt	E 4	5.9	43.4	**28.6**	14.8	0.0		OP	**VB**	**5.0**			High	Yes		
56	HE	B47-G10-HE-T1-HE	B 047		OU Bürstadt	Lorsch	E 4	3.0	20.6	**14.9**	5.7	0.0		VEA	**VB**	**3.8**				Yes		
57	HE	B47-G10-HE-T2-HE	B 047		OU Bürstadt		E 4	5.7	28.2	**14.0**	14.2	0.0		PF	**VB**	**5.4**						
58	HE	B47-G10-HE-T3-HE	B 047		OU Rosengarten		N 4	3.6	25.8	**25.8**	0.0	0.0		PF	**VB**	**5.8**			High			
59	HE	B49-G10-HE	B 049		Reiskirchen	Grünberg	N 2	7.7	31.1	**31.1**	0.0	0.0			**VB**	**4.4**			High			
60	HE	B49-G10-HE-T1-HE	B 049		OU Reiskirchen	And OU Lindenstruth	N 2							PF					High			
61	HE	B49-G10-HE-T2-HE	B 049		OU Grünberg		N 2							OP					High			
62	HE	B062-G10-HE-T01-HE	B 062		OU Eckelshausen		N 2	2.7	19.1	**19.1**	0.0	0.0	1	VP	**VB**	**1.9**			High			
63	HE	B062-G10-HE-T02-HE	B 062		OU Buchenau		N 2	3.2	30.6	**30.6**	0.0	0.0	1	OP	**VB**	**2.2**	High		High			
64	HE	B62-G40-HE-T2-HE	B 062		Lahntal/Göttingen	B 3	E 4	1.7	14.6	**8.3**	6.3	0.0	1	OP	**VB**	**4.0**						
65	HE	B62-G60-HE-TH-T2-HE	B 062		OU Philipsthal/ Röhrigshof		N 2	1.9	12.7	**12.7**	0.0	0.0		OP	**VB**	**3.5**						
66	HE	B83-G10-NW-HE-NI-T2-NW-HE	B 083		Bad Karlshafen	Beverungen/ Herstelle	N 2	3.3	17.7	**17.7**	0.0	0.0		PU	**VB**	**3.0**						
67	HE	B83-G20-HE	B 083		OU Rotenburg/ Lispenhausen		N 2	2.8	19.2	**19.2**	0.0	0.0		VP	**VB**	**2.7**			High			
68	HE	B249-G10-HE-T2-HE	B 249		OU Eschwege		N 2	2.9	19.2	**19.2**	0.0	0.0		PA	**VB**	**2.5**						
69	HE	B252-G10-HE-T02-HE	B 252		OU Twiste		N 2	4.6	24.9	**24.9**	0.0	0.0		OP	**VB**	**3.8**	High	High	High			
70	HE	B252-G20-HE-T02-HE	B 252		OU Ernsthausen		N 2	9.3	37.1	**37.1**	0.0	0.0		UVS	**VB**	**2.1**	High					
71	HE	B253-G10-HE-T01-HE	B 253		OU Breidenbach		N 2	1.8	6.9	**6.9**	0.0	0.0		VE	**VB**	**2.5**			High			
72	HE	B253-G10-HE-T02-HE	B 253		OU Frohnhausen/ Wissenbach		N 2	4.7	17.9	**17.9**	0.0	0.0		OP	**VB**	**8.3**	High		High			
73	HE	B254-G40-HE-T2-HE	B 254		OU Lauterbach/Maar und Lauterbach		N 2	4.5	25.3	**25.3**	0.0	0.0		PA	**VB**	**2.4**						
74	HE	B254-G40-HE-T3-HE	B 254		OU Wartenberg/ Angersbach		N 2	3.1	23.4	**23.4**	0.0	0.0		PA	**VB**	**2.4**						
75	HE	B254-G40-HE-T4-HE	B 254		OU Wartenberg/ Landenhausen		N 2	4.3	20.4	**20.4**	0.0	0.0		PA	**VB**	**2.4**						
76	HE	B260-G10-HE-T2-HE	B 260		OU Schlangenbad	Wambach	N 2	1.7	21.4	**21.4**	0.0	0.0		PA	**VB**	**2.0**			High			
77	HE	B275-G40-HE	B 275		OU Idstein/Eschenhahn		N 2/3	3.3	28.2	**28.2**	0.0	0.0		PA	**VB**	**3.1**						
78	HE	B275-G60-HE	B 275		OU Friedberg	OU Ortenberg/Selters	N 2	13.0	66.7	**66.7**	0.0	0.0			**VB**	**4.3**						
79	HE	B275-G60-HE-T1-HE	B 275		OU Friedberg/OU Ossenheim		N 2							OP								
80	HE	B275-G60-HE-T2-HE	B 275		OU Florstadt/Nieder-Mockstadt		N 2							OP								
81	HE	B275-G60-HE-T3-HE	B 275		OU Nieder-Florstadt	And Ober-Florstadt	N 2							OP					High			
82	HE	B275-G60-HE-T4-HE	B 275		OU Ranstadt/Ober-Mockstadt		N 2							OP					High			

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
83	HE	B275-G60-HE-T5-HE	B 275		OU Ortenberg/Selters		N 2							FNP					High			
84	HE	B275-G70-HE	B 275		OU Ober-Mörlen		N 2	1.8	16.5	**16.5**	0.0	0.0		OP	**VB**	**6.1**						
85	HE	B276-G20-HE	B 276		OU Bieber		N 2	0.6	0.9	**0.9**	0.0	0.0		PF	**VB**	**4.3**						
86	HE	B455-G10-HE	B 455		OU Wiesbaden-Fichten		N 2	0.9	4.0	**4.0**	0.0	0.0		OP	**VB**	**>10**			High			
87	HE	B455-G20-HE	B 455		AS Friedberg		E 4	1.0	5.5	**3.2**	2.3	0.0		OP	**VB**	**9.0**				Yes		
88	HE	B456-B275-G10-HE	B 456	B 275	OU Usingen	Northeastern bypass betw. B 275 und B 456	N 2/3	5.8	37.7	**37.7**	0.0	0.0		PA	**VB**	**4.2**						
89	HE	B456-G20-HE	B 456		OU Wehrheim/ Oberursel		E 4	7.9	41.7	**19.7**	22.0	0.0		OP	**VB**	**>10**				Yes		
90	HE	B469-G010-BY-HE	B 469		A 3	A 45	E 4	1.2	8.2	**5.1**	3.1	0.0		OP	**VB**	**5.2**						
91	HE	B486-G10-HE	B 486		OU Rödermark-Urberach		N 2	5.2	25.8	**25.8**	0.0	0.0		OP	**VB**	**5.4**			High			
92	HE	B486-G20-HE	B 486		Mörfelden	OU Langen	N 2+E 4	6.6	47.7	**39.3**	4.0	4.4			**VB**	**7.0**	High		High			
93	HE	B486-G20-HE-T1-HE	B 486		Mörfelden-Walldorf (A 5)	OU Langen	E 4							VEA						Yes		
94	HE	B486-G20-HE-T2-HE	B 486		OU Mörfelden		N 2							PA			High		High			
95	HE	B519-G10-HE	B 519		OU Flörsheim-Weilbach	And OU Hofheim/Kriftel	N 2	8.4	63.8	**62.6**	0.0	1.2			**VB**	**5.6**						
96	HE	B519-G10-HE-T1-HE	B 519		OU Weilbach		N 2							OP								
97	HE	B519-G10-HE-T2-HE	B 519		OU Hofheim/Kriftel		N 2							PA								
98	HE	B521-G30-HE	B 521		OU Altenstadt		N 2	2.9	10.6	**10.6**	0.0	0.0		LB	**VB**	**4.1**			High			
Total level of funding for first priority projects and first priority projects for removal of bottlenecks									**5,345.5**	**3,087.6**	**2,252.3**	**5.6**										
New projects - second priority category with planning go-ahead (WB*)																						
99	HE	A3-G30-HE-T08-HE	A 003		AS Hanau	AK Offenbach	E 8	9.6	195.2	**110.4**	84.8	0.0	0	OP	**WB***	**2.3**				Yes		Temporary HSR in operation
100	HE	A3-G30-HE-T05-HE	A 003		AK Stadt Frankfurt / Main	AS Flughafen Stadt Frankfurt/Main	E 8	1.3	47.0	**27.4**	19.6	0.0	0	OP	**WB***	**9.8**				Yes		
101	HE	A5-G20-HE-T14-HE	A 005		AS Seeheim-Jugenheim	AK Darmstadt	E 6	9.8	137.0	**79.4**	57.6	0.0	1	OP	**WB***	**>10**				Yes		Temporary HSR in operation in places
102	HE	A5-G20-HE-T15-HE	A 005		Lgr. HE/BW	AS Seeheim-Jugenheim	E 6	17.1	287.9	**166.5**	121.4	0.0	1	OP	**WB***	**4.6**				Yes		Temporary HSR in operation in places
103	HE	A5-G20-HE-T4-HE	A 005		AS Friedberg	AK Gambach	E 8	22.3	380.5	**205.4**	175.1	0.0	0	OP	**WB***	**2.1**				Yes		Temporary HSR in operation
104	HE	A44-G60-NW-HE-T6-HE	A 044		AS Breuna	w AS Zierenberg	E 6	13.4	85.0	**23.4**	61.6	0.0	0	OP	**WB***	**2.6**						
105	HE	A44-G60-NW-HE-T7-HE	A 044		w AS Zierenberg	AS Kassel-Wilhelmshöhe	E 6	9.7	81.6	**13.3**	68.3	0.0	0	OP	**WB***	**3.2**						
106	HE	A44-G60-NW-HE-T8-HE	A 044		AS Kassel-Wilhelmshöhe	AK Südkreuz Kassel	E 6	4.0	59.7	**8.6**	51.1	0.0	0	OP	**WB***	**2.6**						
107	HE	A66-G10-HE-T2-HE	A 066		Wiesbadener Kreuz	Nordwestkreuz Frankfurt	E 8	18.8	153.1	**40.4**	112.7	0.0	1	OP	**WB***	**>10**				Yes		
108	HE	A661-G30-HE-T2-HE	A 661		AK Bad Homburger Kreuz	AS Offenbach-Kaiserlei	E 6	13.9	473.5	**272.4**	201.1	0.0	1	OP	**WB***	**9.5**				Yes	High	

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
			1	2																		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
109	HE	A661-G30-HE-T3-HE	A 661		AS Offenbach-Kaiserlei	AK Offenbacher Kreuz	E 8	4.2	139.9	**74.8**	65.1	0.0	1	OP	**WB***	**3.6**				Yes		
110	HE	B3-G10-HE-T1-HE	B 003		Karben/Kloppenheim	Massenheim	E 4	4.0	32.1	**20.6**	11.5	0.0		OP	**WB***	**2.7**				Yes		
111	HE	B26-G10-HE	B 026		OU Babenhausen		N 2	3.8	17.1	**17.1**	0.0	0.0		OP	**WB***	**3.1**						
112	HE	B54/417-G30-HE-RP-T01-HE	B 054n		OU Limburg		N 2/4	1.6	55.8	**55.8**	0.0	0.0		UVS	**WB***	**2.8**						
113	HE	B252-G10-HE-T01-HE	B 252		OU Berndorf		N 2	3.4	18.0	**18.0**	0.0	0.0		OP	**WB***	**2.1**		High	High			
114	HE	B252-G20-HE-T01-HE	B 252		OU Bottendorf		N 2	3.2	14.9	**14.9**	0.0	0.0		OP	**WB***	**7.5**			High			
115	HE	B456-G30-HE	B 456		OU Grävenwiesbach		N 2/3	3.6	17.3	**17.3**	0.0	0.0		OP	**WB***	**2.9**						
116	HE	B508-G20-HE	B 508n		Schameder	Frankenberg	N 3	10.0	189.4	**189.4**	0.0	0.0		UVS	**WB***	**1.3**	High					
Total level of funding for second priority projects with planning go-ahead									**2,385.0**	**1,355.1**	**1,029.9**	**0.0**										
New projects - second priority category (WB)																						
117	HE	A003-G20-HE-T1-HE	A 003		AS Limburg-Süd	Wiesbadener Kreuz	E 8	44.9	317.3	**118.6**	198.7	0.0	0	OP	**WB**	**3.2**				Yes		
118	HE	A4-G10-HE-TH	A 004		AD Kirchheim	AD A 4/A 44	N 6+E 6	38.8	518.8	**248.8**	270.0	0.0	0	OP	**WB**	**1.0**	High					
119	HE	A5-G20-HE-T3-HE	A 005		AK Gambach	AD Reiskirchen	E 6	16.6	248.0	**142.0**	106.0	0.0	0	OP	**WB**	**1.0**						
120	HE	A7-G40-HE	A 007		AD Kirchheimer Dreieck	AD Hattenbacher Dreieck	E 8	5.9	78.7	**26.9**	51.8	0.0	0	OP	**WB**	**1.3**						
121	HE	A7-G60-HE	A 007		AS Kassel-N	AD Kassel-S	E 8	6.7	133.3	**30.5**	102.8	0.0	0	OP	**WB**	**2.9**						
122	HE	A44-G60-NW-HE-T3-NW-HE	A 044		AS Marsberg	AS Diemelstadt	E 6	4.0	46.8	**16.2**	30.6	0.0	0	OP	**WB**	**1.1**					High	
123	HE	A44-G60-NW-HE-T4-HE	A 044		AS Diemelstadt	AS Warburg	E 6	6.2	41.6	**11.3**	30.3	0.0	0	OP	**WB**	**1.7**						
124	HE	A44-G60-NW-HE-T5-HE	A 044		AS Warburg	AS Breuna	E 6	6.8	75.7	**15.7**	60.0	0.0	0	OP	**WB**	**1.5**						
125	HE	A45-G30-HE-BY-T1-HE-BY	A 045		AK Hanauer Kreuz	Seligenstädter Dreieck (incl. BY)	E 6	19.7	383.8	**37.8**	346.0	0.0	0	OP	**WB**	**1.6**						
126	HE	A049-G10-HE	A 049		AS Kassel-Waldau	AS Baunatal-S	E 6	9.1	163.6	**42.0**	121.6	0.0	1	OP	**WB**	**1.1**						
127	HE	A66-G10-HE-T3-HE	A 066		Nordwestkreuz Frankfurt	AS Frankfurt-Miquellallee	E 8	5.2	105.8	**31.7**	74.1	0.0		OP	**WB**	**1.0**						
128	HE	A648-G10-HE	A 648		AS Katharinenkreisel	AD Eschborner Dreieck	E 6	4.9	55.3	**23.5**	31.8	0.0	1	OP	**WB**	**1.6**						
129	HE	A659-G20-HE	A 659		AK Viernheimer Kreuz	AS Viernheim Ost	E 6	3.1	53.5	**31.0**	22.5	0.0	1	OP	**WB**	**1.1**						
130	HE	B3-G20-HE	B 003		OU Heppenheim		N 2	3.0	12.5	**12.5**	0.0	0.0		OP	**WB**	**2.5**						
131	HE	B008-G10-HE	B 008		OU Elz		N 2	1.3	5.9	**5.9**	0.0	0.0		OP	**WB**	**1.6**			High			
132	HE	B27-G30-HE	B 027		OU Neu Eichenberg/-Hebenshausen		N 2	1.6	15.8	**15.7**	0.0	0.1		VEA	**WB**	**1.0**						
133	HE	B37-G10-HE	B 037		OU Neckarsteinach		N 2	1.9	88.5	**88.5**	0.0	0.0		OP	**WB**	**1.1**						
134	HE	B38-G10-HE-T3-HE	B 038		OU Fürth (Odw.)		N 2	4.2	34.5	**34.5**	0.0	0.0		OP	**WB**	**1.2**			High			

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
135	HE	B44-G10-HE	B 044		OU Lampertheim		N 2	6.5	33.5	**33.5**	0.0	0.0		OP	**WB**	**2.8**			High			
136	HE	B45-G20-HE	B 045		Niddatal/Kaichen	Niddatal/Ilbenstadt	N 2	6.2	29.5	**29.5**	0.0	0.0			**WB**	**1.3**			High			
137	HE	B45-G20-HE-T1-HE	B 045		OU Niddatal/Kaichen		N 2							OP					High			
138	HE	B45-G20-HE-T2-HE	B 045		OU Niddatal/Ilbenstadt		N 2							OP								
139	HE	B054-G20-HE	B 054		Hadamar	Dornburg	N 2	9.1	47.0	**47.0**	0.0	0.0	1		**WB**	**2.1**			High			
140	HE	B054-G20-HE-T01-HE	B 054		Hadamar	Oberzeuzheim	N 2							OP					High			
141	HE	B054-G20_HE-T02-HE	B 054		OU Langendernbach		N 2							OP					High			
142	HE	B054-G20-HE-T03-HE	B 054		OU Elbtal		N 2							OP					High			
143	HE	B62-G60-HE-TH-T1-HE	B 062		OU Philipsthal/ Heimboldshausen		N 2	2.0	35.0	**35.0**	0.0	0.0		OP	**WB**	**2.8**			High			
144	HE	B251-G10_HE	B 251		OU Willingen		N 2	1.3	19.0	**19.0**	0.0	0.0		VU	**WB**	**1.0**			High			
145	HE	B251-G20-HE-T01-HE	B 251		OU Meineringhausen		N 2	3.8	10.4	**10.4**	0.0	0.0		OP	**WB**	**2.2**			High			
146	HE	B253-G20-HE-T01-HE	B 253		OU Geismar		N 2	2.1	9.2	**9.2**	0.0	0.0		OP	**WB**	**2.0**			High			
147	HE	B253-G40-HE	B 253		T-OU Melsungen		N 2	1.6	16.3	**16.3**	0.0	0.0		OP	**WB**	**2.0**						
148	HE	B254-G10-HE	B 254		OU Alsfeld/Eudorf		N 2	2.4	13.7	**13.7**	0.0	0.0		OP	**WB**	**1.4**			High			
149	HE	B254-G30-HE	B 254		OU Wabern/Unshausen	And OU Wabern/Hebel	N 2	5.1	18.4	**18.4**	0.0	0.0		VP	**WB**	**2.9**						
150	HE	B254-G40-HE-T1-HE	B 254		OU Lauterbach/Reuters		N 2	1.5	6.5	**6.5**	0.0	0.0		OP	**WB**	**2.4**						
151	HE	B254-G40-HE-T5-HE	B 254		OU Großenlüder/Müs		N 2	1.6	7.8	**7.8**	0.0	0.0		OP	**WB**	**2.4**						
152	HE	B255-G10-HE	B 255		OU Gladenbach		N 2	3.8	73.6	**73.6**	0.0	0.0		OP	**WB**	**1.4**			High			
153	HE	B260-G10-HE-T1-HE	B 260		OU Eltville/Martinsthal		N 2	1.6	19.1	**19.1**	0.0	0.0		OP	**WB**	**1.7**			High			
154	HE	B275-G10-HE	B 275		Relocation near Bad Schwalbach		N 2	1.6	9.9	**9.9**	0.0	0.0		OP	**WB**	**1.0**						
155	HE	B275-G50-HE	B 275		OU Lauterbach/Blitzenrod		N 2	4.1	14.4	**14.4**	0.0	0.0		OP	**WB**	**2.6**						
156	HE	B276-G10-HE	B 276		OU Brachtal Schlierbach		N 2	3.0	18.0	**18.0**	0.0	0.0		OP	**WB**	**2.5**						
157	HE	B426-G10-HE	B 426		OU Reinheim		N 2	1.9	6.6	**6.6**	0.0	0.0		OP	**WB**	**2.3**						
158	HE	B451-G10-HE	B 451		OU Witzenhausen		N 2	4.4	32.1	**32.1**	0.0	0.0		OP	**WB**	**2.1**	High		High			
159	HE	B454-G20-HE	B 454		OU Neukirchen/ Asterode		N 2	2.3	11.5	**11.5**	0.0	0.0		OP	**WB**	**1.6**	High					
160	HE	B455-G30-HE	B 455		OU Nidda/Borsdorf		N 2	1.2	5.9	**5.9**	0.0	0.0		OP	**WB**	**1.8**			High			
161	HE	B455-G40-HE	B 455		OU Wiesbaden-Fichten	B54	E 4	3.2	37.1	**27.4**	9.7	0.0		OP	**WB**	**1.3**						
162	HE	B489-G10-HE	B 489		Hungen	AS Wölfersheim	N 2	3.5	17.4	**17.4**	0.0	0.0			**WB**	**1.9**	High		High			
163	HE	B489-G10-HE-T1-HE	B 489		OU Inheiden		N 2							OP					High			

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
164	HE	B489-G10-HE-T2-HE	B 489		OU Utphe		N 2							OP			High		High			
165	HE	B521-G10-HE	B 521		Schöneck	Büdesheim	N 2	3.4	15.2	**15.2**	0.0	0.0		OP	**WB**	**3.2**						
Gesamtvolumen Weiterer Bedarf									**2,886.5**	**1,430.5**	**1,455.9**	**0.1**										

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Mecklenburg-Western Pomerania																						
Ongoing and definitely planned projects																						
1	MV		A 014		A 24	Grabow	N 4	16.2	11.7	**11.7**	0.0	0.0	0		**FD**							Open to traffic
2	MV		A 014		Grabow	LGr.MV/BB	N 4	9.8	80.9	**80.9**	0.5	0.0	0		**FD**							Under construction
3	MV		B 096		OU Neubrandenburg		N 2	3.5	40.6	**40.6**	0.0	0.0	1		**FD**							Under construction
4	MV		B 096n		AS Samtens-O	Bergen	N 3	20.5	62.3	**62.3**	0.0	0.0	1		**FD**							Under construction
5	MV		B 198		OU Mirow		N 2	6.0	26.0	**26.0**	0.0	0.0			**FD**							Start of construction pledged
6	MV		B 321		BAB feeder road in Schwerin		E 4	2.0	19.0	**19.0**	0.0	0.0	1		**FD**							Completion of overall project
Total level of funding for ongoing and definitely planned projects									**240.5**	**240.5**	**0.5**	**0.0**										
New projects - first priority category (VB)																						
7	MV	B96_B104_B197-G20-MV	B 096		Weisdin	Warlin	N 2	8.4	37.9	**37.9**	0.0	0.0	1		**VB**	**4.0**	High	High				
8	MV	B96_B104_B197-G20-MV-T1-MV	B 096		OU Weisdin		N 2							VP			High	High				
9	MV	B96_B104_B197-G20-MV-T2-MV	B 096		OU Usadel		N 2							VP			High	High				
10	MV	B96_B104_B197-G20-MV-T3-MV	B 096		OU Warlin		N 2							VP				High				
11	MV	B104-G10-MV-T3-MV	B 104		OU Schwerin		N 2	3.9	33.0	**26.0**	7.0	0.0		VP	**VB**	**1.6**	High					
12	MV	B104-G20-MV	B 104		OU Sternberg		N 2	3.8	9.6	**9.6**	0.0	0.0		OP	**VB**	**6.3**	High		High			
13	MV	B105-G10-MV	B 105		OU Mönchhagen		N 3	9.6	35.0	**35.0**	0.0	0.0		OP	**VB**	**6.4**			High			
14	MV	B110-G10-MV	B 110		OU Dargun		N 2	3.2	6.7	**6.7**	0.0	0.0		LB	**VB**	**7.2**						
15	MV	B111-G10-MV	B 111		Lühmannsdorf	Wolgast	N 2	10.2	99.9	**97.3**	0.0	2.6			**VB**	**3.2**	High					
16	MV	B111-G10-MV-T1-MV	B 111		OU Lühmannsdorf		N 2							OP								
17	MV	B111-G10-MV-T2-MV	B 111		OU Wolgast		N 2							VEG			High					
18	MV	B189n-G30-MV-BB	B 189n		Mirow	AS Wittstock/Dosse (A 19)	N 2	11.0	14.0	**14.0**	0.0	0.0		VEG	**VB**	**1.8**	High					Part of pledged new construction
19	MV	B191_B321-G10-MV	B 191	B 321	OU Parchim		N 2	12.0	32.7	**32.7**	0.0	0.0			**VB**	**4.1**	High					
20	MV	B191_B321-G10-MV-T1-MV	B 191	B 321	N-OU Parchim		N 2							VP			High					

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
21	MV	B191_B321-G10-MV-T2-MV	B 191	B 321	SW-OU Parchim		N 2							VP								
22	MV	B191-G20-MV	B 191		OU Plau		N 2	2.7	10.3	**10.3**	0.0	0.0		PA	**VB**	**1.4**			High			
23	MV	B192-G20-MV	B 192		OU Klink		N 2	3.8	12.1	**12.1**	0.0	0.0	1	VP	**VB**	**2.5**			High			
24	MV	B196-G10-MV	B 196		OU Bergen		N 2	5.2	16.1	**15.5**	0.0	0.6		LBA	**VB**	**4.1**						
25	MV	B321-G10-MV	B 321		Bandenitz	Warsow	N 2	5.1	8.9	**8.9**	0.0	0.0	1		**VB**	**6.0**						
26	MV	B321-G10-MV-T1-MV	B 321		OU Bandenitz		N 2							OP								
27	MV	B321-G10-MV-T2-MV	B 321		OU Warsow		N 2							OP								
Total level of funding for first priority projects									**316.2**	**306.0**	**7.0**	**3.2**										
New projects - second priority category with planning go-ahead (WB*)																						
28	MV	B104-G10-MV-T1-MV	B 104		OU Lützow		N 2	4.8	9.5	**9.5**	0.0	0.0	1	OP	**WB***	**7.3**			High			
Total level of funding for second priority projects with planning go-ahead									**9.5**	**9.5**	**0.0**	**0.0**										
New projects - second priority category (WB)																						
29	MV	B5-G10-MV	B 005		OU Ludwigslust		N 2	5.9	13.3	**13.3**	0.0	0.0		OP	**WB**	**2.9**						
30	MV	B104-G30-MV-N	B 104		OU Pasewalk		N 2	5.2	26.3	**26.3**	0.0	0.0		VP	**WB**	**2.5**						
31	MV	B109-G10-MV	B 109		Belling	Jatznick	N 2	7.6	18.4	**18.4**	0.0	0.0		OP	**WB**	**2.6**						
32	MV	B192-G10-MV	B 192		OU Goldberg		N 2	2.3	15.3	**15.3**	0.0	0.0		OP	**WB**	**1.2**	High		High			
33	MV	B194-G10-MV	B 194		OU Stavenhagen		N 2	2.1	4.3	**4.3**	0.0	0.0		OP	**WB**	**2.7**						
34	MV	B394n-G10-MV	B 394		OU Zurow		N 2	3.4	9.2	**9.2**	0.0	0.0		OP	**WB**	**2.1**						
Total level of funding for second priority projects									**86.8**	**86.8**	**0.0**	**0.0**										

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Lower Saxony																						
Ongoing and definitely planned projects																						
1	NI		A 001		AK Bremen	AD Buchholz	E 6	-	706.2	**282.5**	423.7	0.0	0		**FD**							Refinancing of a PPP project
2	NI		A 007		AD Walsrode	AS Fallingbostel	E 6	8.0	58.3	**23.8**	34.5	0.0	0		**FD**							Start of construction pledged
3	NI		A 007		AS Göttingen	AD Salzgitter	E 6	29.2	644.1	**257.6**	386.5	0.0	0		**FD**							PPP project - ongoing procurement procedure
4	NI		A 026		Horneburg (K 36n)	Rübke	N 4	14.1	156.1	**156.1**	0.0	0.0	1		**FD**							Completion of overall project/Buxtehude - L 235 section in preparation/under construction
5	NI		A 033	B 051	AS Osnabrück/ Schinkel	AS Osnabrück/ Belm - OU Belm	N 4	6.7	50.0	**50.0**	0.0	0.1	1		**FD**							Under construction
6	NI		B 001		OU Coppenbrügge und Marienau		N 2	6.3	33.0	**33.0**	0.0	0.0			**FD**							Start of construction pledged
7	NI		B 003		OU Hemmingen		N 2/4	7.5	43.9	**43.9**	0.0	0.7			**FD**							Start of construction pledged in 2014
8	NI		B 061		OU Barenburg		N 2	3.3	8.5	**8.5**	0.0	0.0			**FD**							Start of construction pledged
9	NI		B 064	B 240	OU Negenborn		N 3	3.8	16.5	**16.5**	0.0	0.0	1		**FD**							Start of construction pledged
10	NI		B 210		Relocation south of Emden		N 2	1.4	23.0	**23.0**	0.0	0.0			**FD**							Start of construction pledged
11	NI		B 211		OU Mittelort	Brake	N 2	7.5	27.5	**27.5**	0.0		1		**FD**							Under construction
12	NI		B 212		OU Berne		N 2	9.8	16.6	**16.6**	0.0	0.0			**FD**							Under construction
13	NI		B 240		OU Eschershausen		N 2	5.9	21.0	**21.0**	0.0	0.0	1		**FD**							Start of construction pledged
14	NI		B 241		Bollensen	Volpriehausen	N 2/3	4.7	32.8	**32.8**	0.0	0.0			**FD**							Start of construction pledged
15	NI		B 243		s Bad Sachsa	Lgr. NI/TH	N 3	3.7	22.9	**22.9**	0.0	0.0	1		**FD**							Start of construction pledged
16	NI		B 403		OU Nordhorn	With link road (B 213)	N 2	8.6	24.1	**24.1**	0.0	1.9			**FD**							In preparation/under construction
Total level of funding for ongoing and definitely planned projects									**1,884.5**	**1,039.8**	**844.7**	**2.7**										
New projects - first priority category (VB) and first priority category for removal of bottlenecks (VB-E)																						
17	NI	A1-G50-NI	A 001		AD Ahlhorner Heide	AK Lotte/Osnabrück	E 6	29.2	141.3	**42.9**	97.0	1.4	0		**VB-E**	**2.1**				Yes		6-lane completion of network
18	NI	A1-G50-NI-T1-NI	A 001		AS Lohne/Dinklage	AS Neuenkirchen/ Vörden	E 6							PE						Yes		
19	NI	A1-G50-NI-T2-NI	A 001		AS Neuenkirchen/Vörden	AS Bramsche	E 6							PA						Yes		
20	NI	A2-G11-NI-T3-NI	A 002		AS Hannover-Herrenhausen	AD Hannover-W	E 8	2.6	48.0	**15.8**	32.2	0.0	0	OP	**VB-E**	**>10**				Yes		Temporary HSR planned in places
21	NI	A2-G11-NI-T4-NI	A 002		AD Hannover-W		KN	0.5	18.9	**18.9**	0.0	0.0	0	OP	**VB-E**	**>10**				Yes		
22	NI	A2-G11-NI-T6-NI	A 002		AK Hannover-Buchholz (A37)		KN	0.5	8.5	**8.5**	0.0	0.0	0	OP	**VB-E**	**>10**				Yes		
23	NI	A7-G10-NI	A 007		AS Soltau-O	AS Fallingbostel	E 6	24.2	197.1	**79.7**	117.4	0.0	0	VE/PA	**VB**	**1.4**						6-lane completion of network
24	NI	A7-G30-NI-T1-NI	A 007		AS Hildesheim	AD Salzgitter	E 6	14.1	86.7	**20.9**	65.8	0.0		VE	**VB-E**	**2.8**				Yes		6-lane completion of network

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
25	NI	A20-G10-NI-SH	A 020		AD A28/A20 (Westerstede)	Hohenfelde (A 23) mit A 26	N 4	161.0	2,588.9	**2,584.2**	4.7	0.0	1	VEG	**VB**	**1.9**	High	High				Hinterland connection to and from seaports/spatial planning
26	NI	A27-G10-HB-NI	A 027		AK Bremen	AS HB-Überseestadt	E 6	2.0	11.4	**2.4**	9.0	0.0	0	OP	**VB-E**	**4.0**				Yes		
27	NI	A30-G10-NI-NW	A 030		AK Lotte/Osnabrück	AK Osnabrück-S	E 6	10.4	137.1	**54.6**	82.5	0.0	0		**VB-E**	**4.8**				Yes		
28	NI	A30-G10-NI-NW-T2-NI	A 030		ö AK Lotte/Osnabrück (Lgr. NI/NW)	AK Osnabrück-S	E 6							VE						Yes		
29	NI	A30-G10-NI-NW-T3-NI	A 030	A 033	AK Osnabrück-S		KN							OP						Yes		
30	NI	A33-G10-NI	A 033		Osnabrück/N (A 1)	Osnabrück/Belm	N 4	9.4	87.0	**87.0**	0.0	0.0	1	LB	**VB**	**3.8**	High					Completion of a started federal motorway
31	NI	A39-G10-NI	A 039		AS Lüneburg-N (B 216)	AS Weyhausen (B 188)	N 4	106.3	1,083.1	**1,051.6**	31.5	0.0	1	VE	**VB**	**2.1**	High	High				Hinterland connection to and from seaports/spatial planning
32	NI	B1-G10-NI-NW-T3-NI	B 001	B 217	S-OU Hameln		N 2	7.3	121.4	**121.3**	0.0	0.1		PF	**VB**	**3.4**						
33	NI	B1-G30-NI	B 001		OU Einum/Bettmar		N 2	4.0	13.5	**13.5**	0.0	0.0		OP	**VB**	**4.4**						
34	NI	B3-G10-NI	B 003		OU Elstorf		N 2	3.6	13.7	**13.7**	0.0	0.0		OP	**VB**	**5.3**						
35	NI	B3-G30-NI	B 003		Ehlershausen	Groß Hehlen	N 2/4	24.0	100.0	**100.0**	0.0	0.0	1		**VB**	**9.3**	High		High			
36	NI	B3-G30-NI-T1-NI	B 003		OU Groß Hehlen		N 2/3							VE								
37	NI	B3-G30-NI-T2-NI	B 003		OU Celle (Nordteil)		N 3							VEA								
38	NI	B3-G30-NI-T3-NI	B 003		OU Celle (Mittelteil)		N 3/4							PF					High			
39	NI	B4-G20-NI	B 004		n Gifhorn (B 188)	AK Braunschweig-Nord	N 4+E 4	20.6	105.8	**105.8**	0.0	0.0	1		**VB**	**7.1**				Yes		
40	NI	B4-G20-NI-T1-NI	B 004		n Rötgesbüttel	AS Meinerzhagen	N 4							VEG					High			
41	NI	B4-G20-NI-T2-NI	B 004		AS Braunschweig-Wenden	s Meine	E 4							OP						Yes		
42	NI	B6n-G11-HB-NI-T2-NI	B 006n		Lgr. HB/NI	Bremen/Brinkum	N 4	2.5	26.7	**26.7**	0.0	0.0		OP	**VB**	**7.1**			High			
43	NI	B51-G10-NI	B 051		OU Twistringen		N 3	7.7	25.5	**25.5**	0.0	0.0		OP	**VB**	**4.8**						
44	NI	B51-G50-NI	B 051		OU Bad Iburg		N 2	7.0	57.2	**57.2**	0.0	0.0		OP	**VB**	**7.5**			High			
45	NI	B3/B240/B64-G10-NI-T6-NI	B 064		W-OU Eschershausen		N 3	3.7	22.2	**22.2**	0.0	0.0	1	LBA	**VB**	**4.0**						
46	NI	B65-G20-NI	B 065		ö Bückeburg	ö Vehlen	N 2	2.6	12.4	**12.4**	0.0	0.0		OP	**VB**	**4.3**			High			
47	NI	B65-G30-NI	B 065		OU Nienstädt/Sülbeck		N 2	5.5	23.0	**23.0**	0.0	0.0		LB	**VB**	**7.1**						
48	NI	B65-G60-NI	B 065		ö Sehnde	w Peine	N 2	19.1	66.1	**66.1**	0.0	0.0		OP	**VB**	**3.0**			High			
49	NI	B65-G70-NI	B 065		OU Dungelbeck		N 2	3.0	9.4	**9.4**	0.0	0.0		OP	**VB**	**7.4**						
50	NI	B71-G20-NI	B 071		OU Zeven		N 2	3.3	9.8	**9.8**	0.0	0.0		OP	**VB**	**3.4**						
51	NI	B71-G50-NI	B 071		w Uelzen	B 4n	N 2	3.7	14.4	**14.4**	0.0	0.0		OP	**VB**	**5.1**	High					
52	NI	B73-G20-NI-T1-NI	B 073		Otterndorf	Cadenberge	N 2	9.5	29.6	**29.6**	0.0	0.0		VE	**VB**	**4.8**						
53	NI	B73-G20-NI-T2-NI	B 073		OU Cadenberge		N 2	8.5	24.1	**24.1**				VE	**VB**	**6.8**			High			

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
54	NI	B74-G10-NI	B 074		OU Ritterhude		N 2	4.6	27.9	**27.9**	0.0	0.0		LBA	**VB**	**>10**	High					
55	NI	B75-G10-NI	B 075		OU Scheeßel		N 2	4.8	15.1	**15.1**	0.0	0.0		VE	**VB**	**4.1**						
56	NI	B79-G20-NI	B 079		OU Wolfenbüttel		N 2	9.8	34.7	**34.7**	0.0	0.0		OP	**VB**	**4.8**						
57	NI	B83-G10-NI	B 083		OU Steinbergen		N 2	2.1	9.1	**9.1**	0.0	0.0		OP	**VB**	**>10**			High			
58	NI	B83-G40-NI	B 083		OU Grohnde		N 2	3.1	10.8	**10.8**	0.0	0.0		OP	**VB**	**4.6**			High			
59	NI	B191-G10-NI	B 191		OU Eschede		N 2	4.4	15.4	**15.4**	0.0	0.0	1	OP	**VB**	**3.2**			High			
60	NI	B210-G10-NI	B 210		AS Riepe (A 31)	n Aurich	N 2/3	33.6	114.2	**114.2**	0.0	0.0	1		**VB**	**3.9**	High		High			
61	NI	B210-G10-NI-T1-NI	B 072		Georgsheil (B 72)	Bangstede	N 2							OP			High					
62	NI	B210-G10-NI-T2-NI	B 210		OU Aurich		N 2/3							VE					High			
63	NI	B210-G10-NI-T3-NI	B 210		Aurich	Riepe (A 31)	N 3							VE					High			
64	NI	B212-G21-NI-HB-T2-NI	B 212n		Harmenhausen (L 875)	Lgr. NI/HB	N 2	12.2	69.8	**69.8**	0.0	0.0		VE	**VB**	**4.5**	High		High			
65	NI	B213-G10-NI	B 213	E 233	AS Meppen (A 31)	AS Cloppenburg (A 1)	N 4+E 4	76.7	719.1	**715.9**	0.0	3.2	1	VE	**VB**	**2.1**	High	High				Completion of network A 1 - NL
66	NI	B213-G10-NI-T1-NI	B 213		AS Meppen (A 31)	Meppen (B 70)	N 4+E 4							VE			High					
67	NI	B213-G10-NI-T2-NI	B 213		Meppen (B 70)	w Haselünne	N 4+E 4							VP			High					
68	NI	B213-G10-NI-T3-NI	B 213		w Haselünne	Kgr. Emsland/Cloppenburg	N 4+E 4							VP								
69	NI	B213-G10-NI-T4-NI	B 213		Kgr. Emsland/Cloppenburg	ö Löningen (OU Löningen)	N 4+E 4							VP								
70	NI	B213-G10-NI-T5-NI	B 213		ö Löningen	ö Lastrup (OU Lastrup)	E 4							VE								
71	NI	B213-G10-NI-T6-NI	B 213		ö Lastrup	Cloppenburg (B 68)	E 4							VE								
72	NI	B213-G10-NI-T7-NI	B 072		Cloppenburg (B 68)	AS Cloppenburg (A 1)	E 4							VE								
73	NI	B213-G20-NI	B 213		Relocation near Lohne		N 2	1.9	8.4	**8.4**	0.0	0.0		OP	**VB**	**>10**						
74	NI	B213-G30-NI	B 213		OU Bawinkel		N 2	3.9	13.1	**13.1**	0.0	0.0		OP	**VB**	**5.9**			High			
75	NI	B214-G70-NI	B 214		OU BS-Watenbüttel		N 4	1.8	10.3	**10.3**	0.0	0.0		OP	**VB**	**>10**						
76	NI	B214-G50-NI-T4-NI	B 215		Rohrsen	Nienburg	N 2	7.5	28.6	**28.6**	0.0	0.0		LB	**VB**	**>10**						

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
77	NI	B215-G20-NI	B 215		OU Landesbergen		N 2	4.0	17.8	**17.8**	0.0	0.0		OP	**VB**	**3.3**			High			
78	NI	B215-G30-NI	B 215		OU Leese		N 2	5.4	23.6	**23.6**	0.0	0.0		UVS	**VB**	**4.8**			High			
79	NI	B248/B216-G10-NI-T1-NI	B 216		OU Barendorf		N 2	3.0	8.7	**8.7**	0.0	0.0		OP	**VB**	**9.1**			High			
80	NI	B248/B216-G10-NI-T2-NI	B 216		OU Bavendorf		N 2	2.2	6.0	**6.0**	0.0	0.0		OP	**VB**	**5.1**						
81	NI	B218-G20-NI	B 218		OU Ueffeln		N 2	2.2	6.9	**6.9**	0.0	0.0		OP	**VB**	**5.4**						
82	NI	B238-G10-NW-NI-T3-NI	B 238		OU Möllenbeck		N 2	1.8	7.7	**7.7**	0.0	0.0		OP	**VB**	**4.5**			High			
83	NI	B238-G10-NW-NI-T4-NI	B 238		OU Steinbergen		N 2/4	1.5	16.1	**16.1**	0.0	0.0		OP	**VB**	**4.5**	High		High			
84	NI	B239-G10-NI	B 239		OU Wagenfeld		N 2	4.2	11.2	**11.2**	0.0	0.0		OP	**VB**	**3.3**			High			
85	NI	B3/B240/B64-G10-NI-T3-NI	B 240	B 003	n Marienhagen	Weenzen (L 462)	N 2	3.6	39.4	**39.4**	0.0	0.0	1	VEG	**VB**	**1.8**						Network completion with Marienhagen
86	NI	B247-G10-NI-TH-T1-NI	B 247		N-OU Duderstadt		N 2	5.8	20.3	**20.3**	0.0	0.0		LB	**VB**	**1.1**						
87	NI	B247-G10-NI-TH-T2-NI	B 247		S-OU Duderstadt		N 2	3.3	33.8	**33.8**	0.0	0.0		VEG	**VB**	**2.0**						
88	NI	B248/B216-G10-NI-T5-NI	B 248		OU Dannenberg	(B 216/B 248)	N 2	3.6	11.3	**11.3**	0.0	0.0		OP	**VB**	**4.7**			High			
89	NI	B248/B216-G10-NI-T6-NI	B 248		OU Schaafhausen		N 2	2.4	8.1	**8.1**	0.0	0.0		OP	**VB**	**7.5**						
90	NI	B248/B216-G10-NI-T7-NI	B 248		OU Jameln		N 2	2.8	8.2	**8.2**	0.0	0.0		OP	**VB**	**4.4**						
91	NI	B248/B216-G10-NI-T8-NI	B 248		OU Grabow		N 2	1.8	5.1	**5.1**	0.0	0.0		OP	**VB**	**6.6**						
92	NI	B248-G10-NI	B 248		OU Brome		N 2	5.1	9.0	**9.0**	0.0	0.0		VE	**VB**	**5.4**						
93	NI	B248-G20-NI	B 248		OU Lobmachtersen		N 2	2.1	6.9	**6.9**	0.0	0.0		OP	**VB**	**3.1**			High			
94	NI	B248-G30-NI	B 248		OU Beinum		N 2	2.7	8.6	**8.6**	0.0	0.0		OP	**VB**	**3.4**			High			
95	NI	B322/B439-G10-NI-T1-NI	B 322		OU Groß Mackenstedt		N 2	1.5	5.3	**5.3**	0.0	0.0		OP	**VB**	**>10**			High			
96	NI	B408-G20-NI	B 408		Haren	Emmeln	N 2	2.9	12.0	**12.0**	0.0	0.0		OP	**VB**	**>10**			High			
97	NI	B436-G10-NI	B 436		OU Friedeburg		N 2	1.7	5.6	**5.6**	0.0	0.0		OP	**VB**	**4.7**			High			
98	NI	B441-G10-NI	B 441		OU Loccum		N 2	4.0	12.5	**12.5**	0.0	0.0		OP	**VB**	**4.1**						
99	NI	B441-G30-NI	B 441		OU Wunstorf		N 2/3	6.5	32.4	**32.4**	0.0	0.0		PE	**VB**	**>10**			High			
100	NI	B442-G20-NI	B 442		NW-OU Hachmühlen		N 2	1.5	3.9	**3.9**	0.0	0.0		OP	**VB**	**4.7**			High			
101	NI	B443-G20-NI	B 443		OU Koldingen		N 2	2.6	8.9	**8.9**	0.0	0.0		OP	**VB**	**>10**	High		High			
Total level of funding for first priority projects and first priority projects for removal of bottlenecks									**6,488.6**	**6,043.8**	**440.1**	**4.7**										

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
			1	2																		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
New projects - second priority category with planning go-ahead (WB*)																						
102	NI	A1-G20-NI	A 001		AD Horster Dreieck (A 7)	AD Buchholz (A 261)	E 6	11.4	58.0	**20.1**	37.9	0.0	0	OP	**WB***	**1.4**						
103	NI	A1-G30-NI-HB-T1-NI	A 001		Lgr. HB/NI	AS Bremen/Brinkum	E 8	1.0	12.6	**5.0**	7.6	0.0	0	OP	**WB***	**6.2**						
104	NI	A1-G30-NI-HB-T2-NI	A 001		AS Bremen/Brinkum	AD Stuhr	E 8	6.0	70.3	**27.4**	42.9	0.0	0	OP	**WB***	**6.2**						
105	NI	A1-G30-NI-HB-T3-HB	A 001		AK Bremen	Lgr. HB/NI	E 8	2.3	16.7	**4.5**	12.2	0.0	0	OP	**WB***	**6.2**				Yes		
106	NI	A1-G20-HH-SH-NI-T05-NI	A 001		Lgr. HH/NI	Horster Dreieck	E 8	5.6	63.0	**24.9**	38.1	0.0	0	OP	**WB***	**4.2**				Yes		Temporary HSR planned
107	NI	A1-G40-NI	A 001		AD Stuhr	AD Ahlhorner Heide	E 6	35.2	203.5	**56.5**	147.0	0.0	0	OP	**WB***	**2.1**						
108	NI	A21-G20-SH-NI-T3-SH-NI	A 021		AD Geesthacht (A 25)	AS Rönne	N 4+E 4	1.2	40.1	**40.1**	0.0	0.0	1	OP	**WB***	**3.8**	High					
109	NI	A21-G20-SH-NI-T4-NI	A 021		AS Rönne	AD Handorf (A 39)	N 4+E 4	12.0	153.6	**126.2**	27.4	0.0	1	OP	**WB***	**3.8**						
110	NI	B1-G10-NI-NW	B 001		Barntrup	w Elze (B 3)	N 2	11.8	41.5	**41.7**	0.0	0.2			**WB***	**3.4**	High					
111	NI	B1-G10-NI-NW-T1-NI-NW	B 001		OU Reher		N 2							OP					High			
112	NI	B1-G10-NI-NW-T2-NI	B 001		OU Groß Berkel		N 2							OP								
113	NI	B1-G10-NI-NW-T5-NI	B 001		s Marienau	sw Mehle	N 2							OP								
114	NI	B1-G21-NI	B 001		w Elze (B 3)	Hildesheim - Himmelsthür	N 2+E 4	13.1	89.0	**89.0**	0.0	0.0	1		**WB***	**5.0**	High					
115	NI	B1-G21-NI-T1-NI	B 001		N-OU Elze		N 2							OP								
116	NI	B1-G21-NI-T2-NI	B 001		OU Burgstemmen		N 2							OP								
117	NI	B1-G21-NI-T3-NI	B 001		OU Mahlerten		N 2							OP								
118	NI	B1-G21-NI-T4-NI	B 001		w Heyersum	ö Gr. Escherde	E 4							OP								
119	NI	B1-G21-NI-T5-NI	B 001		OU Hildesheim-Himmelsthür		N 4							LBV			High					
120	NI	B3/B240/B64-G10-NI-T1-NI	B 003		OU Wülfingen		N 2	1.9	5.9	**5.9**	0.0	0.0		OP	**WB***	**2.9**						
121	NI	B3-G20-NI	B 003		OU Bergen		N 2	4.4	15.6	**15.6**	0.0	0.0	1	OP	**WB***	**5.4**						
122	NI	B3-G40-NI	B 003		OU Ammensen		N 2	2.0	5.4	**5.4**	0.0	0.0		OP	**WB***	**4.1**						
123	NI	B6-G20-NI	B 006		Hann.-Stöcken (K 321)	Stöck	N 2	2.1	64.0	**64.0**	0.0	0.0		OP	**WB***	**6.3**						
124	NI	B51-G20-NI	B 051		OU Barnstorf		N 2	6.1	19.9	**19.9**	0.0	0.0		VP	**WB***	**4.1**						
125	NI	B51-G40-NI	B 051		Ostercappeln	Belm	N 4	3.8	23.9	**23.9**	0.0	0.0		OP	**WB***	**3.3**						
126	NI	B51-G51-NI	B 051		s Bad Iburg (B 51)	Hilter (A 33)	N 2	9.7	41.4	**41.4**	0.0	0.0		OP	**WB***	**4.3**			High			

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
127	NI	B65-G10-NW-NI-T1-NI	B 065		OU Bad Essen/ Wehrendorf		N 2	13.3	59.1	**59.1**	0.0	0.0		OP	**WB***	**3.8**			High			
128	NI	B65-G41-NI	B 065		w Nordgoltern	ö Everloh	N 2	10.8	39.1	**39.1**	0.0	0.0		OP	**WB***	**8.7**						
129	NI	B65-G50-NI	B 065		OU Ilten		N 2	4.0	12.2	**12.2**	0.0	0.0		OP	**WB***	**10.0**			High			
130	NI	B71-G30-NI	B 071		OU Soltau		N 2	7.5	27.4	**27.4**	0.0	0.0		OP	**WB***	**5.7**						
131	NI	B72-G10-NI	B 072		OU Hesel		N 2	4.4	14.1	**14.1**	0.0	0.0		OP	**WB***	**4.0**			High			
132	NI	B73-G20-NI-T3-NI	B 073		Cadenberge	Drochtersen (A 20/A 26)	N 3/4	20.8	96.2	**96.2**	0.0	0.0		OP	**WB***	**6.8**						
133	NI	B75-G20-NI	B 075		OU Tostedt - Wistedt		N 2	6.9	22.7	**22.7**	0.0	0.0		OP	**WB***	**2.4**						
134	NI	B188-G10-NI-T1-NI	B 188		OU Ahnsen		N 2	2.4	8.7	**8.7**	0.0	0.0	1	OP	**WB***	**4.0**			High			
135	NI	B188-G20-NI-T1-NI	B 188		A 39	L 322	E 4	4.7	34.3	**34.3**	0.0	0.0		OP	**WB***	**3.5**				Yes		
136	NI	B190n-G10-ST-NI-T3-NI	B 190n		B 4	A 39	N 2	16.5	48.8	**48.8**	0.0	0.0	1	VE	**WB***	**1.6**		High				Not required until A 39 is completed, so to be delivered later
137	NI	B209-G20-NI	B 209		OU Walsrode		N 2	6.4	16.6	**16.6**	0.0	0.0		OP	**WB***	**5.2**			High			
138	NI	B212-G21-NI-HB-T1-NI	B 212		OU Elsfleth		N 2	6.0	27.6	**27.6**	0.0	0.0		OP	**WB***	**4.5**			High			
139	NI	B3/B240/B64-G10-NI-T2-NI	B 240		OU Eime	(W Eime - B 3)	N 2	4.6	14.4	**14.4**	0.0	0.0	1	LBA	**WB***	**1.2**						
140	NI	B3/B240/B64-G10-NI-T4-NI	B 240		Fölziehausen	Eschershausen	N 2	3.0	79.7	**79.7**	0.0	0.0	1	ROVB	**WB***	**1.2**	High					
141	NI	B241-G10-NI	B 241		OU Uslar		N 2	6.4	26.0	**26.0**	0.0	0.0		VE	**WB***	**1.1**						
142	NI	B403-G10-NI	B 403		OU Emlichheim		N 2	3.1	10.3	**10.3**	0.0	0.0		OP	**WB***	**2.2**			High			
143	NI	B437-G10-NI	B 437		OU Varel		N 2	5.7	26.0	**26.0**	0.0	0.0	1	OP	**WB***	**1.5**						
144	NI	B441-G20-NI	B 441		w Hagenburg		N 2	5.1	17.2	**17.2**	0.0	0.0		OP	**WB***	**3.8**			High			
Total level of funding for second priority projects with planning go-ahead									**1,504.8**	**1,191.9**	**313.1**	**0.2**										
New projects - second priority category (WB)																						
145	NI	A2-G11-NI-T2-NI	A 002		AS Bad Nenndorf	AS Hannover-Herrenhausen	E 8	19.6	255.5	**84.3**	171.2	0.0	0	OP	**WB**	**1.6**				Yes		Temporary HSR planned in places
146	NI	A2-G11-NI-T5-NI	A 002		AD Hannover-W	AK Hannover-O	E 8	17.2	269.2	**88.8**	180.4	0.0	0	OP	**WB**	**1.0**				Yes		Temporary HSR planned in places
147	NI	A7-G20-NI-T1-NI	A 007		AD Walsrode	AD Hannover-N	E 8	31.1	237.0	**53.5**	183.5	0.0	0	OP	**WB**	**5.0**						Temporary HSR planned
148	NI	B6-G10-NI	B 006		OU Syke		N 2	10.8	42.8	**42.8**	0.0	0.0		OP	**WB**	**3.2**						
149	NI	B27-G10-NI	B 027		ö Roringen	OU Waake	E 4	1.5	5.7	**5.7**	0.0	0.0		OP	**WB**	**2.4**						
150	NI	B27-G20-NI	B 027		OU Waake	B 446	E 4	2.8	16.4	**16.4**	0.0	0.0		OP	**WB**	**2.5**						

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
151	NI	B64-G30-NI	B 064		OU Mainzholzen		N 2	1.5	6.2	**6.2**	0.0	0.0		OP	**WB**	**1.5**	High					
152	NI	B64-G40-NI	B 064		OU Wenzen		N 2	2.8	11.0	**11.0**	0.0	0.0		OP	**WB**	**1.6**						
153	NI	B65-G40-NI	B 065		AS Bad Nenndorf	AS Hannover-Anderten	N 4+E 6	33.0	331.5	**331.5**	0.0	0.0		OP	**WB**	**2.1**						
154	NI	B71-G10-NI	B 071		OU Selsingen		N 2	5.5	20.1	**20.1**	0.0	0.0		OP	**WB**	**2.4**						
155	NI	B71-G40-NI	B 071		OU Munster		N 2	5.9	15.0	**15.0**	0.0	0.0		OP	**WB**	**2.9**	High					
156	NI	B71-G60-NI	B 071		OU Groß Liedern		N 2	2.5	10.7	**10.7**	0.0	0.0	1	OP	**WB**	**2.3**			High			
157	NI	B79-G30-NI	B 079		Relocation south of Wolfenbüttel	A 395	N 2	9.1	53.6	**53.6**	0.0	0.0		OP	**WB**	**3.0**						
158	NI	B83-G10-NW-HE-NI-T3-NW-NI	B 083		Würgassen	Beverungen	N 2	3.7	22.7	**22.7**	0.0	0.0		VE	**WB**	**1.5**						
159	NI	B83-G20-NI	B 083		OU Deckbergen		N 2	4.3	18.6	**18.6**	0.0	0.0		OP	**WB**	**1.8**						
160	NI	B83-G30-NI	B 083		W-OU Hameln		N 2	1.5	10.6	**10.6**	0.0	0.0		OP	**WB**	**6.9**						
161	NI	B83-G50-NI-NW	B 083		OU Stahle		N 2	1.1	9.2	**9.2**	0.0	0.0		OP	**WB**	**3.0**						
162	NI	B188-G10-NI	B 188		Schillerslage (B 3)	AS Weyhausen (A 39)	N 2	10.6	32.9	**32.9**	0.0	0.0	1		**WB**	**4.0**	High		High			
163	NI	B188-G10-NI-T2-NI	B 188		OU Dannenbüttel		N 2							OP					High			
164	NI	B188-G10-NI-T3-NI	B 188		OU Osloß		N 2							OP					High			
165	NI	B188-G10-NI-T4-NI	B 188		OU Weyhausen		N 2							OP					High			
166	NI	B188-G20-NI-T2-NI	B 188		OU Vorsfelde		N 2	2.9	19.3	**19.3**	0.0	0.0		OP	**WB**	**2.9**	High					
167	NI	B190n-G10-ST-NI-T2-NI	B 190n		A 39	Lgr. NI/ST	N 3	3.2	12.0	**12.0**	0.0	0.0	1	VE	**WB**	**1.6**		High				
168	NI	B191-G20-NI	B 191		OU Stöcken		N 2	1.6	5.4	**5.4**	0.0	0.0		OP	**WB**	**2.0**						
169	NI	B209-G10-NI	B 209		OU Rethem		N 2	2.7	13.7	**13.7**	0.0	0.0		OP	**WB**	**2.0**	High		High			
170	NI	B209-G30-NI	B 209		OU Amelinghausen		N 2	3.5	9.9	**9.9**	0.0	0.0		OP	**WB**	**3.8**			High			
171	NI	B212-G10-NI	B 212		OU Ellwürden		N 2	1.8	11.0	**11.0**	0.0	0.0	1	OP	**WB**	**3.1**						
172	NI	B214-G10-NI	B 214		OU Fürstenau		N 3	7.5	26.3	**26.3**	0.0	0.0		OP	**WB**	**3.9**		High	High			
173	NI	B214-G20-NI	B 214		OU Schwagstorf		N 2	2.3	9.1	**9.1**	0.0	0.0		OP	**WB**	**2.1**		High	High			
174	NI	B214-G30-NI	B 214		OU Ankum		N 2	5.1	18.9	**18.9**	0.0	0.0		OP	**WB**	**2.9**		High	High			
175	NI	B214-G40-NI	B 214		OU Bersenbrück		N 2	2.6	11.9	**11.9**	0.0	0.0		OP	**WB**	**3.5**		High				
176	NI	B214-G50-NI-T1-NI	B 214		OU Steinfeld		N 2	6.4	20.6	**20.6**	0.0	0.0		OP	**WB**	**1.0**			High			
177	NI	B214-G50-NI-T2-NI	B 214		OU Rehden	Wetschen	N 2	6.8	22.7	**22.7**	0.0	0.0		OP	**WB**	**2.6**			High			

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
178	NI	B214-G50-NI-T3-NI	B 214		OU Borstel		N 2	3.2	10.6	**10.6**	0.0	0.0		OP	**WB**	**2.7**			High			
179	NI	B214-G50-NI-T5-NI	B 214		OU Steimbke		N 2	6.4	16.5	**16.5**	0.0	0.0		OP	**WB**	**1.5**			High			
180	NI	B214-G50-NI-T6-NI	B 214		OU Schwarmstedt		N 2	7.2	26.6	**26.6**	0.0	0.0		OP	**WB**	**2.2**	High		High			
181	NI	B248/B216-G10-NI-T3-NI	B 216		OU Oldendorf		N 2	1.8	6.0	**6.0**	0.0	0.0		OP	**WB**	**1.7**						
182	NI	B248/B216-G10-NI-T4-NI	B 216		OU Metzingen		N 2	2.4	7.0	**7.0**	0.0	0.0		OP	**WB**	**1.7**						
183	NI	B218-G10-NI	B 218		OU Merzen		N 2	2.6	7.9	**7.9**	0.0	0.0		OP	**WB**	**1.9**						
184	NI	B218-G30-NI	B 218		OU Venne		N 2	3.0	11.5	**11.5**	0.0	0.0		OP	**WB**	**2.1**						
185	NI	B240-G10-NI	B 240		OU Halle		N 2	1.8	6.7	**6.7**	0.0	0.0		OP	**WB**	**2.2**	High					
186	NI	B241-G30-NI	B 241		OU Hammenstedt	(Northeim - Katlenburg)	N 2	1.4	4.7	**4.7**	0.0	0.0		OP	**WB**	**3.4**						Negative intradependency impact
187	NI	B241-G40-NI	B 241		OU Katlenburg		N 2	3.7	16.1	**16.1**	0.0	0.0		OP	**WB**	**2.4**						
188	NI	B241-G50-NI	B 241		OU Dorste		N 2	3.3	11.3	**11.3**	0.0	0.0		OP	**WB**	**1.5**						
189	NI	B242-G10-NI	B 242		OU Clausthal-Zellerfeld		N 2	3.3	9.0	**9.0**	0.0	0.0		OP	**WB**	**1.9**						
190	NI	B243-G30-NI-TH-T1-NI	B 243		OU Herzberg		N 3	8.5	45.3	**45.3**	0.0	0.0	1	OP	**WB**	**1.0**	High		High			
191	NI	B248/B216-G10-NI-T10-NI	B 248		OU Lübbow		N 2	2.6	8.1	**8.1**	0.0	0.0		OP	**WB**	**1.5**						
192	NI	B248/B216-G10-NI-T9-NI	B 248		OU Saaße		N 2	1.4	4.1	**4.1**	0.0	0.0		OP	**WB**	**2.5**						
193	NI	B248-G40-NI	B 248		A 39	A 395	E 4	4.9	36.5	**36.5**	0.0	0.0		OP	**WB**	**1.5**						
194	NI	B401-G10-NI	B 401		Dörpen	Bgr. D/NL	N 2	2.3	6.1	**6.1**	0.0	0.0		OP	**WB**	**3.4**						
195	NI	B322/B439-G10-NI-T2-NI	B 439		B 322	s Heiligenrode	N 2	4.0	11.4	**11.4**	0.0	0.0		OP	**WB**	**2.4**			High			
196	NI	B442-G10-NI	B 442		W-OU Neustadt am Rübenberge		N 2	6.3	18.9	**18.9**	0.0	0.0		OP	**WB**	**2.1**			High			
197	NI	B444-G10-NI	B 444		OU Groß Ilsede		N 2	4.0	13.2	**13.2**	0.0	0.0		OP	**WB**	**3.7**						
198	NI	B446-G10-NI	B 446		OU Lütgenrode		N 2	2.5	10.0	**10.0**	0.0	0.0		OP	**WB**	**1.5**						
Total level of funding for second priority projects									**1,837.0**	**1,301.9**	**535.1**	**0.0**										

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
North Rhine-Westphalia																						
Ongoing and definitely planned projects																						
1	NW		A 001		AS Münster-N	AK Lotte/Osnabrück	E 6	51.8	503.3	**201.3**	302.0	0.0	0		FD-E					Yes		PPP procurement procedure in preparation
2	NW		A 001		AK Köln-W	AK Köln-N (incl.)	E 6	10.0	84.1	**48.0**	36.1	0.0	0		FD							Under construction
3	NW		A 001		Köln/Niehl	AK Leverkusen	E 8	6.2	860.0	**370.0**	490.0	0.0	0		FD-E					Yes		Construction of replacement
4	NW		A 001		AS Wermelskirchen	Remscheid Services	E 6	4.4	18.7	**7.7**	11.0	0.0	0		FD							Under construction
5	NW		A 003		AS Köln/Mülheim	AK Leverkusen (incl.)	E 8	8.0	221.4	**92.4**	129.0	0.0	0		FD							Completion of overall project/ Köln-Mülheim - Leverkusen In preparation/under construction
6	NW		A 030		AK Löhne	Rehme with junction. A 30 towards Rehme	N 4	9.5	35.6	**35.6**	0.0	0.0	0		FD							Under construction
7	NW		A 033		Bielefeld/Brackwede	AS Borgholzhausen (incl. Ummeln feeder road)	N 4	20.0	159.1	**159.1**	0.0	0.0	0		FD							Under construction
8	NW		A 043		AK Herne	AS Recklinghausen/Herten	E 6	8.0	194.9	**82.7**	112.2	0.0	1		FD							Under construction
9	NW		A 044		Düsseldorf/Ratingen (A 3)	Velbert (B 227)	N 4	9.0	145.4	**145.4**	0.0	0.0	1		FD							Under construction
10	NW		A 044		Bochum (L705,Sheffieldring)	AK Bochum/Witten (A 43)	N 4	3.0	27.0	**27.0**	0.0	0.0	1		FD							Under construction
11	NW		A 045		AK Hagen (A 45)	AK Westhofen (A 1)	E 6	8.0	180.0	**72.0**	108.0	0.0	0		FD-E					Yes		Completion
12	NW		A 046		AS Bestwig	Bestwig/ Nuttlar incl. B 480n feeder road	N 4	5.0	68.7	**68.7**	0.0	0.0	1		FD							Under construction
13	NW		A 046		Westring	AK Sonnborn (L 418)	E 6	2.0	33.9	**15.9**	18.0	0.0	0		FD							Completion of overall project
14	NW		A 524	B 008	Duisburg/Serm (B 8)	AS Duisburg/ Rahm mit B 8 OU Düsseldorf/ Wittlaer (1.BA)	E 4	3.0	25.3	**25.3**	0.0	0.0	1		FD							Under construction
15	NW		B 051	B 481	OU Münster		N 2+E 4	3.0	88.6	**88.6**	0.0	0.0			FD							In preparation/under construction
16	NW		B 056		Gangelt	Heinsberg	N 2	6.6	11.1	**11.1**	0.0	0.0	1		FD							Under construction
17	NW		B 056		O-OU Düren		N 2	6.0	25.8	**25.8**	0.0	0.0			FD							Under construction
18	NW		B 056		OU Vettweiss/Soller		N 2	4.7	7.7	**7.7**	0.0	0.0			FD							Under construction
19	NW		B 058		OU Beckum		N 2	3.8	19.5	**19.5**	0.0	0.0			FD							Under construction
20	NW		B 062		Siegtalbrücke (A 45)	Mudersbacher Kreisel	N 2	3.1	21.4	**21.4**	0.0	0.0			FD							Under construction
21	NW		B 066		Hillegossen	Asemissen	N 4	2.1	18.1	**18.1**	0.0	0.0			FD							Start of construction pledged

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
22	NW		B 066		OU Barntrup		N 2	6.0	30.0	**30.0**	0.0	0.0			**FD**							Start of construction pledged
23	NW		B 221		OU Wassenberg		N 2	5.7	28.2	**28.2**	0.0	0.0			**FD**							Under construction
24	NW		B 236		Dortmund/Schwerte	AS Schwerte (A 1)	E 4	2.0	16.0	**16.0**	0.0	0.0	1		**FD**							Completion of overall project
25	NW		B 265		OU Hürth/Hermülheim	Köln-Militärring	E 4+N 4	5.5	39.8	**39.8**	0.0	0.0			**FD**							Under construction
26	NW		B 480		OU Bad Wünnenberg		N 2	7.0	50.1	**50.1**	0.0	0.0	1		**FD**							Under construction
27	NW		B 525		OU Nottuln		N 2	5.0	9.8	**9.8**	0.0	0.0			**FD**							Under construction
28	NW		B 611		Vlotho/Exter	Löhne/Wittel (A 2 - L 860)	N 2	5.2	22.0	**22.0**	0.0	0.0			**FD**							Under construction
Total level of funding for ongoing and definitely planned projects									**2,945.5**	**1,739.2**	**1,206.3**	**0.0**										
New projects - first priority category (VB) and first priority category for removal of bottlenecks (VB-E)																						
29	NW	A001-G10-NW-RP-T02-NW-RP	A 001		AS Adenau (L10)	AS Lommersdorf (L115z) (portion in NW)	N 4	5.0	126.9	**126.9**	0.0	0.0	0	PA	**VB**	**5.4**	High					
30	NW	A001-G10-NW-RP-T03-NW	A 001		AS Lommersdorf (L 115z)	AS Blankenheim (B 51)	N 4	6.0	49.6	**49.6**	0.0	0.0	0	PA	**VB**	**5.4**	High					
31	NW	A1-G100-NW-T1-NW	A 001	A 044	AK Dortmund/Unna	n AS Unna-Zentrum	KN	3.0	135.2	**115.0**	20.2	0.0	0	VEA	**VB-E**	**8.1**				Yes		
32	NW	A1-G120-NW-T1-NW	A 001		AK Kamen	n AS Hamm-Bockum/Werne	E 6	10.4	162.0	**64.0**	95.0	3.0	0	VEG	**VB-E**	**2.7**				Yes		
33	NW	A1-G120-NW-T2-NW	A 001		AS Hamm-BockumWerne	AS Ascheberg	E 6	11.4	74.3	**26.1**	48.2	0.0	0	VEG	**VB-E**	**5.4**				Yes		
34	NW	A1-G120-NW-T3-NW	A 001		AS Ascheberg	DEK-Brücke	E 6	9.5	58.5	**21.6**	36.9	0.0	0	VEG	**VB-E**	**7.2**				Yes		
35	NW	A1-G30-NW	A 001		AD Erfttal (A 61)	AK Köln West (A 4)	E 6	13.0	55.4	**18.3**	37.1	0.0	0	OP	**VB-E**	**>10**				Yes		
36	NW	A1-G50-NW	A 001	A 043	AK Wuppertal-N		KN	0.1	40.2	**27.0**	13.2	0.0	0	VE	**VB-E**	**4.4**				Yes		
37	NW	A1-G60-NW-T1-NW	A 001	A 045	AK Westhofen		KN	0.1	17.1	**15.9**	1.2	0.0	0	VE	**VB-E**	**8.5**				Yes		
38	NW	A2-G10-NW	A 002		AD Bottrop		KN	0.1	5.7	**3.8**	1.9	0.0	0	VP	**VB-E**	**>10**				Yes		
39	NW	A3-G10-NW	A 003		AS Königsforst	AD Köln-Heumar (A 4)	E 8	3.5	83.4	**71.2**	12.2	0.0	0	OP	**VB-E**	**4.0**				Yes	High	
40	NW	A3-G20-NW	A 003	A 046	AK Leverkusen (A 1)	AK Hilden (A 46)	E 8	19.7	285.9	**208.9**	77.0	0.0	0	VP	**VB-E**	**4.6**				Yes		
41	NW	A3-G30-NW	A 003		AK Hilden	AK Ratingen-O	E 8	11.2	136.7	**73.0**	63.7	0.0	0	VP	**VB-E**	**>10**				Yes		Temporary HSR approved
42	NW	A3-G40-NW	A 003		AK Ratingen-O	AK Breitscheid (A 52)	E 8	4.5	85.3	**39.6**	45.7	0.0	0	OP	**VB-E**	**6.8**				Yes		
43	NW	A3-G50-NW	A 003		AK Breitscheid (A 52)	AK Kaiserberg (A 40)	E 8	12.5	188.7	**113.7**	75.0	0.0	0	OP	**VB-E**	**2.5**				Yes		
44	NW	A3-G60-NW	A 003		AK Kaiserberg	AK Oberhausen-W	E 8	4.0	164.4	**88.1**	76.3	0.0	0		**VB**	**>10**						
45	NW	A3-G60-NW-T1-NW	A 003		AK Kaiserberg (A 40)		KN							OP						Yes		
46	NW	A3-G60-NW-T2-NW	A 003		AK Kaiserberg (A 40)	AK Oberhausen/ West (A 42)	E 8							OP								
47	NW	A3-G70-NW	A 003		AK Oberhausen-West (A 42)	AK Oberhausen (A 2/ A 516)	E 8	6.0	77.9	**52.9**	25.0	0.0	0		**VB-E**	**>10**				Yes		

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
48	NW	A3-G70-NW-T1-NW	A 003		AK Oberhausen-West (A 42)	AS Oberhausen-Holten	E 8							OP						Yes		
49	NW	A3-G70-NW-T2-NW	A 003		AS Oberhausen-Holten	AK Oberhausen (A 2/ A 516)	E 8							OP						Yes		
50	NW	A3-G70-NW-T3-NW	A 003		AK Oberhausen		KN							VP								
51	NW	A3-G80-NW	A 003		AK Oberhausen (A 2/A 516)	AS Dinslaken-N	E 6	6.1	79.3	**46.3**	33.0	0.0	0	OP	**VB-E**	**2.4**				Yes	High	
52	NW	A4-G30-NW	A 004		AK Köln-S (A 555)	AK Köln-Gremberg (A 559)	E 8	5.6	269.6	**112.5**	157.1	0.0	0	OP	**VB**	**4.9**					High	
53	NW	A4-G60-NW-T1-NW	A 004		AK Köln/Ost	AS Moitzfeld	E 6	9.1	122.4	**60.6**	61.8	0.0	0	OP	**VB-E**	**6.2**				Yes		Temporary HSR approved in places
54	NW	A4-G70-NW-T2-NW	A 004	A 555	AK Köln-S (A 555)		KN	0.1	24.4	**17.6**	6.8	0.0	0	VP	**VB-E**	**>10**				Yes		
55	NW	A30-G10-NI-NW-T1-NW	A 030		AK Lotte/Osnabrück (A 1)	AS Hasbergen/ Gaste (Lgr. NI/NW)	E 6	0.9	6.1	**2.6**	3.5	0.0	0	OP	**VB-E**	**4.8**				Yes		As in NI
56	NW	A40-G30-NW-T1-NW	A 040		AK Kaiserberg	AS Mülheim-Dümpten	E 6	7.3	149.1	**59.5**	89.6	0.0	1	VP	**VB-E**	**4.2**				Yes		
57	NW	A40-G30-NW-T2-NW	A 040		AS Mülheim-Dümpten	AS Mülheim-Heißen	E 6	3.8	59.0	**28.9**	30.1	0.0	1	VP	**VB-E**	**3.4**				Yes		
58	NW	A40-G30-NW-T3-NW	A 040		AS Mülheim-Heißen	AS Essen-Frohnhausen	E 6	2.6	45.8	**25.6**	20.2	0.0	1	VP	**VB-E**	**1.5**				Yes		
59	NW	A40-G40-NW	A 040		AS Bochum-W (A 448)	AK Bochum (A 43)	E 6	8.5	222.0	**151.0**	71.0	0.0	1	OP	**VB-E**	**4.5**				Yes		
60	NW	A40-G50-NW	A 040		AK Bochum (A 43)	AK Dortmund-West (A 45)	E 6	8.0	140.3	**97.4**	42.9	0.0	1	OP	**VB**	**9.5**						
61	NW	A40-G70-NW-T3-NW	A 040		AS Dortmund-Ost (B 236)	AK Dortmund/ Unna (A 1/A 44)	E 6	9.5	96.6	**21.4**	48.7	26.5	1	PE	**VB-E**	**>10**				Yes		
62	NW	A42-G30-NW	A 042		AK Essen-N (A 52)	AK Herne (A 43)	E 6	13.7	235.8	**78.5**	157.3	0.0	1	OP	**VB-E**	**>10**				Yes		
63	NW	A42-G40-NW-T3-NW	A 042		AS Bottrop-S	AK Essen-N (A 52)	E 6	4.5	121.9	**32.6**	89.3	0.0	1	OP	**VB-E**	**5.4**				Yes		
64	NW	A43-G30-NW	A 043		AS Witten-Heven	AS Marl-Sinsen	E 6	20.4	451.6	**298.0**	153.3	0.3	1	VEG	**VB-E**	**>10**				Yes		
65	NW	A44-G70-NW-T1-NW	A 044		AK Dortmund/Unna	AS Unna-O	E 6	5.3	68.4	**36.9**	31.5	0.0	0	VE	**VB**	**3.7**						
66	NW	A45-G10-NW	A 045		AK Olpe	AS Lüdenscheid-S	E 6	31.7	654.4	**202.8**	451.6	0.0	0	OP	**VB**	**1.5**						
67	NW	A45-G10-NW-T1-NW	A 045		AK Olpe (A 4)	AS Olpe	E 6							OP								Because of the necessary bridge renewals
68	NW	A45-G10-NW-T2-NW	A 045		AS Olpe	AS Drolshagen	E 6							OP							High	
69	NW	A45-G10-NW-T3-NW	A 045		AS Drolshagen	AS Meinerzhagen	E 6							OP								
70	NW	A45-G10-NW-T4-NW	A 045		AS Meinerzhagen	AS Lüdenscheid-S	E 6							OP								
71	NW	A45-G20-NW-T1-NW	A 045		AS Lüdenscheid-S	AS Lüdenscheid-S	E 6	5.0	173.8	**42.4**	131.4	0.0	0	OP	**VB**	**1.9**						
72	NW	A45-G20-NW-T2-NW	A 045		AS Lüdenscheid-S	AS Lüdenscheid-N	E 6	4.9	87.1	**32.7**	54.4	0.0	0	OP	**VB**	**3.4**					High	
73	NW	A45-G20-NW-T3-NW	A 045		AS Lüdenscheid-N	AS Hagen-S	E 6	12.1	233.2	**70.8**	162.4	0.0	0	VP	**VB-E**	**3.0**				Yes		
74	NW	A45-G20-NW-T4-NW	A 045		AS Hagen-S	AK Hagen (A 46)	E 6	3.9	45.6	**23.2**	22.4	0.0	0	OP	**VB-E**	**3.6**				Yes	High	
75	NW	A45-G50-NW-HE-T1-NW-HE	A 045		AS Haiger/Burbach	AS Wilnsdorf	E 6	5.5	66.2	**23.3**	42.9	0.0	0	OP	**VB-E**	**1.9**				Yes		Bridge renewal
76	NW	A45-G50-NW-HE-T2-NW	A 045		AS Wilnsdorf	AS Siegen-Süd	E 6	4.6	130.9	**36.0**	94.9	0.0	0	VP	**VB**	**1.9**						

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
			1	2																		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
77	NW	A45-G50-NW-HE-T3-NW	A 045		AS Siegen-Süd	AS Siegen	E 6	5.2	164.4	**47.9**	116.5	0.0	0	OP	**VB**	**1.9**					High	
78	NW	A45-G50-NW-HE-T4-NW	A 045		AS Siegen	AS Freudenberg	E 6	7.9	52.3	**30.2**	22.1	0.0	0	OP	**VB**	**1.9**						
79	NW	A45-G50-NW-HE-T5-NW	A 045		AS Freudenberg	AK Olpe	E 6	10.4	124.0	**48.8**	75.2	0.0	0	OP	**VB**	**1.9**						
80	NW	A45-G60-NW-T2-NW	A 045		AS Dortmund-Hafen	AK Dortmund-NW (A 2)	E 6	8.6	122.2	**51.5**	70.7	0.0	0	OP	**VB-E**	**3.6**				Yes		
81	NW	A46-B7-G41-NW-T1-NW	A 046		AS Hemer (B 7)	AS Menden (B 515)	N 4	7.6	351.3	**351.3**	0.0	0.0	1	VE	**VB**	**3.1**	High		High			Continuation of construction of a started federal motorway
82	NW	A52-G11-NW	A 052		AK Mönchengladbach (A 61)	AK Neersen (A 44)	E 6	7.5	84.9	**46.8**	38.1	0.0	0	VE	**VB-E**	**3.0**				Yes		Temporary HSR planned
83	NW	A52-G20-NW	A 052		AK Breitscheid (A 3)	AS Essen-Rüttenscheid (B 224)	E 6	13.5	285.1	**113.5**	171.6	0.0	1	OP	**VB-E**	**6.6**				Yes		
84	NW	A52-G60-NW-T1-NW	A 052		AK Essen-N	s AD Essen/Gladbeck	E 4	3.6	65.6	**43.2**	22.1	0.3	1	PA	**VB-E**	**3.1**				Yes		
85	NW	A52-G60-NW-T2-NW	A 052		AK Essen/Gladbeck	AD Essen/Gladbeck	KN	1.4	72.3	**59.9**	12.2	0.2	1	PA	**VB-E**	**3.8**				Yes		
86	NW	A52-G70-NW	A 052		AK Essen/Gladbeck (A 2)	AS Gelsenkirchen-Buer	N 4	2.6	129.9	**118.5**	11.4	0.0	0	UVS	**VB**	**2.0**						Network completion
87	NW	A57-G20-NW	A 057		AK Köln-N (A 1)	AD Neuss-S (A 46)	E 6	18.6	140.2	**95.7**	44.5	0.0	0	PA	**VB-E**	**8.3**				Yes		
88	NW	A57-G30-NW	A 057	A 052	AK Kaarst		KN	0.1	32.7	**21.1**	11.6	0.0	0	VP	**VB-E**	**3.7**				Yes		
89	NW	A57-G50-NW-T1-NW	A 057	A 040	AK Moers (A 40)		KN	0.1	12.6	**12.6**	0.0	0.0	0	VE	**VB-E**	**>10**				Yes		
90	NW	A57-G50-NW-T2-NW	A 057		AK Moers	AK Kamp-Lintfort (A 42)	E 6	7.2	47.5	**21.3**	26.2	0.0	1	VE	**VB-E**	**3.6**				Yes		
91	NW	A57-G60-NW	A 057		AK Meerbusch (A 44)	AK Moers (A 40)	E 6	16.5	263.3	**131.0**	130.2	2.1	0	VEG	**VB-E**	**3.8**				Yes		
92	NW	A59-G20-NW	A 059		AD Bonn-NO (A 565)	AD St. Augustin-W (A 560)	E 8	3.2	62.8	**44.0**	18.8	0.0	1	VEG	**VB-E**	**5.6**				Yes		
93	NW	A59-G70-NW-T1-NW	A 059		s AK Duisburg (A 40)	AS Duisburg-Ruhrort	E 6	2.9	199.0	**69.3**	129.7	0.0	1	VP	**VB-E**	**2.6**				Yes		
94	NW	A59-G70-NW-T2-NW	A 059		AS Duisburg-Ruhrort	AK Duisburg-N (A 42)	E 6	1.8	90.3	**27.9**	62.4	0.0	1	VP	**VB-E**	**6.9**				Yes		
95	NW	A59-G70-NW-T3-NW	A 059		AK Duisburg-N (A 42)		KN	0.1	9.9	**5.7**	4.2	0.0	1	VP	**VB-E**	**3.8**				Yes		
96	NW	A59-G70-NW-T4-NW	A 059		AK Duisburg-N (A 42)	AS Duisburg-Marxloh	E 6	1.6	33.8	**20.4**	13.4	0.0		VP	**VB-E**	**4.2**				Yes		
97	NW	A59-G80-NW	A 059		AD St. Augustin-W (A 560)	AD Köln-Porz (A 559)	E 6/8	14.9	263.7	**129.3**	134.4	0.0	1	PE	**VB-E**	**>10**				Yes		
98	NW	A59-G90-NW	A 059		AK Bonn-O (A 562)	AD Bonn-NO (A 565)	E 6	4.4	58.4	**22.5**	34.3	1.6	1	VEG	**VB-E**	**10.0**				Yes		
99	NW	A61-G60-NW	A 061		AK Meckenheim	AK Bliesheim	E 6	25.3	101.9	**31.9**	70.0	0.0	0	OP	**VB**	**>10**						
100	NW	A445-G10-NW	A 445		AS Werl-N	AS Hamm/Rhynern	N 4	8.1	61.2	**61.2**	0.0	0.0	1	PE	**VB**	**8.0**						
101	NW	A553-G10-NW	A 553		AK Köln-Godorf (A 555)	AD Köln-Lind (A59)	N 4	10.2	367.2	**361.4**	4.3	1.5	1		**VB**	**>10**						
102	NW	A553-G10-NW-T1-NW	A 553	A 555	AK Köln-Godorf (A 555)		KN							OP								
103	NW	A553-G10-NW-T2-NW	A 553		AK Köln-Godorf	AD Köln-Lind	N 4							OP								
104	NW	A553-G10-NW-T3-NW	A 553	A 059	AD Köln-Lind(A 59)		KN							OP								
105	NW	A559-G10-NW	A 559		AD Köln-Porz (A 59)	AK Köln-Gremberg (A 4)	E 6	3.4	54.9	**34.6**	20.3	0.0	1	OP	**VB-E**	**4.5**				Yes	High	

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
106	NW	A565-G10-NW	A 565		AS Bonn/Hardtberg	AK Bonn/Nord (A 555)	E 6	6.1	258.7	**139.8**	118.9	0.0	1		**VB**	**2.8**						
107	NW	A565-G10-NW-T1-NW	A 565		AS Bonn/Hardtberg	AS Bonn-Poppelsdorf	E 6							OP								
108	NW	A565-G10-NW-T2-NW	A 565		AS Bonn/Poppelsdorf	AK Bonn/N	E 6							OP						Yes		
109	NW	A565-G10-NW-T3-NW	A 565	A 555	AK Bonn/N (A 555)		KN							OP							High	
110	NW	B1/B66-G20-NW	B 001	B 066	Horn/ Bad Meinberg	Barntrup	N 2/3	9.8	26.6	**26.6**	0.0	0.0			**VB**	**5.7**	High		High			
111	NW	B1/B66-G20-NW-T1-NW	B 001		OU Blomberg/Herrentrup		N 2							OP								
112	NW	B1/B66-G20-NW-T2-NW	B 001		OU Blomberg/Istrup		N 3							UVS			High					
113	NW	B1/B66-G20-NW-T3-NW	B 066		Blomberg/ Großenmarpe (L 712)	Barntrup (B 66)	N 2							VE					High			
114	NW	B1-G11-NW	B 001		Erwitte	Paderborn (B 55 - A 33)	N 2	12.3	50.5	**50.5**	0.0	0.0			**VB**	**7.7**			High			
115	NW	B1-G11-NW-T1-NW	B 001		OU Erwitte		N 2							VE					High			
116	NW	B1-G11-NW-T2-NW	B 001		OU Salzkotten		N 2							VE								
117	NW	B1-G11-NW-T3-NW	B 001	B 055	OU Erwitte	Anschluss B 55	N 2							OP								
118	NW	A46-B7-G41-NW-T2-NW	B 007		Menden	Wimbern	N 3	6.8	86.1	**86.1**	0.0	0.0	1	OP	**VB**	**3.1**	High		High			Weiterführung im Zusammenhang mit A 46
119	NW	A46-B7-G41-NW-T3-NW	B 007		Wimbern	Arnsberg (OU Wickede)	N 3	5.4	72.8	**72.8**	0.0	0.0	1	OP	**VB**	**3.1**	High					
120	NW	B7/B480-G10-NW-T1-NW	B 007		Bestwig/Nuttlar (A 46)	Brilon (B 480n)	N 3	11.0	69.5	**69.5**	0.0	0.0	1	VE	**VB**	**3.4**		High				
121	NW	B7-G30-NW	B 007		OU Warburg/Scherfede		N 2	4.5	22.2	**22.2**	0.0	0.0		OP	**VB**	**3.5**	High					
122	NW	B8-G10-NW	B 008		Dinslaken (A 59)	Wesel (B 58)	N 2/4	14.9	108.1	**108.1**	0.0	0.0			**VB**	**7.7**	High					
123	NW	B8-G10-NW-T1-NW	B 008		Dinslaken (A 59)	Friedrichsfeld (K 12)	N 2							UVS			High					
124	NW	B8-G10-NW-T2-NW	B 008		Friedrichsfeld (K 12)	Wesel (B 58)	N 4							UVS								
125	NW	B8-G20-NW	B 008		OU Hennef/Uckerath		N 3	5.2	61.8	**61.8**	0.0	0.0	1	UVS	**VB**	**3.4**	High		High			Fortsetzung in RP
126	NW	B9-G10-NW	B 009		Westtangente Krefeld	(B 57 - B 9)	N 2	6.5	24.3	**24.3**	0.0	0.0		OP	**VB**	**>10**						
127	NW	B237_B51-G10-NW-T3-NW	B 051		OU Bergisch-Born (B 51)		N 2	2.7	8.9	**8.8**	0.0	0.1		VEA	**VB**	**7.5**			High			
128	NW	B51-G50-NW	B 051n		Brühl	Köln-Eifeltor (A 553 - A 4)	N 2/3	5.8	35.3	**35.3**	0.0	0.0	1		**VB**	**6.8**			High			
129	NW	B51-G50-NW-T1	B 051n		OU Köln/Meschenich		N 3							PE					High			
130	NW	B51-G50-NW-T2	B 051n		Köln/Meschenich		N 2							PE								
131	NW	B54/B483-G10-NW-T1-NW	B 054		OU Kierspe	(Lauseberg Incline)	N 2	3.7	28.9	**28.9**	0.0	0.0		OP	**VB**	**7.8**						
132	NW	B54-G20-NW	B 054		Lünen	(B 236 - DB line)	E 4	2.7	10.3	**6.4**	3.6	0.3		VEG	**VB**	**4.9**						
133	NW	B54-G30-NW-T1-NW	B 054		AS Münster/N	Altenberge (L 579)	E 4	8.8	30.8	**13.7**	17.1	0.0	1	OP	**VB**	**8.3**						
134	NW	B54-G30-NW-T2-NW	B 054		Altenberge (L 579)	Nordwalde	E 4	3.2	8.0	**5.4**	2.6	0.0	1	OP	**VB**	**6.1**						

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
135	NW	B56-G10-NW	B 056		Jülich	AS Düren (A 4)	E 4	12.0	52.2	**32.5**	19.7	0.0		OP	**VB**	**>10**	High					
136	NW	B56-G30-NW-T3-NW	B 056		OU Swisttal/Miel (m AS A 61)		N 2	2.3	11.7	**11.7**	0.0	0.0		VEG	**VB**	**5.5**						
137	NW	B57-G10-NW	B 057		Puffendorf (B 56)	Erkelenz-Süd (A 46)	N 2	5.4	14.7	**14.7**	0.0	0.0			**VB**	**4.3**			High			
138	NW	B57-G10-NW-T1-NW	B 057		OU Gereonsweiler		N 2							UVS					High			
139	NW	B57-G10-NW-T2-NW	B 057		OU Baal		N 2							UVS					High			
140	NW	B57-G20-NW	B 057		OU Marienbaum		N 2	4.5	6.4	**6.4**	0.0	0.0		OP	**VB**	**6.8**						
141	NW	B58-G10-NW	B 058	B 070	Alpen	Brünen	N 2/4	6.9	94.6	**94.6**	0.0	0.0			**VB**	**6.0**	High		High			
142	NW	B58-G10-NW-T1-NW	B 058		OU Wesel	(East of Rhine Bridge - B 8)	N 4							PE			High					
143	NW	B58-G10-NW-T2-NW	B 058		OU Wesel	(B 8 - B 70)	N 4							PE					High			
144	NW	B 58-G10-NW-T3-NW	B 070		OU Brünen		N 2							OP					High			
145	NW	B58-G40-NW-T1-NW	B 058		OU Ahlen		N 2	8.5	37.6	**37.6**	0.0	0.0		OP	**VB**	**4.3**						
146	NW	B59-G10-NW	B 059		AS Köln-Bocklemünd	Grevenbroich-Süd	N 2	3.5	14.5	**14.5**	0.0	0.0	1		**VB**	**>10**						
147	NW	B59-G10-NW-T1-NW	B 059		OU Sinsteden		N 2							PE								
148	NW	B59-G10-NW-T2-NW	B 059		OU Allrath		N 2							OP								
149	NW	B61-G10-NW	B 061		Rheda-Wiedenbrück (A 2)	Bielefeld/Ummeln	E 4	9.9	39.1	**27.5**	11.6	0.0			**VB**	**5.0**				Yes		
150	NW	B61-G10-NW-T1-NW	B 061		Rheda-Wiedenbrück (A 2)	Gütersloh	E 4							OP								
151	NW	B61-G10-NW-T2-NW	B 061		Gütersloh	Bielefeld/Ummeln	E 4							OP						Yes		
152	NW	B63-G20-NW	B 063		OU Hamm		N 2	9.4	59.5	**58.9**	0.0	0.6			**VB**	**7.9**						
153	NW	B63-G20-NW-T1-NW	B 063		OU Hamm	(A 2 - K 35n)	N 2							VE								
154	NW	B63-G20-NW-T2-NW	B 063		OU Hamm	(K 35n - centre)	N 2							VE								
155	NW	B64/B51-G10-NW	B 064	B 051	Münster	Rheda-Wiedenbrück (B 481-A 2)	N 3+E 4	29.0	137.1	**130.7**	6.4	0.0	1		**VB**	**5.9**						
156	NW	B64/B51-G10-NW-T1-NW	B 051		Münster (B 481)	ö Münster/Handorf	E 4							VE						Yes		
157	NW	B64/B51-G10-NW-T2-NW	B 051		ö Münster/Handorf	Telgte	E 4							LB								
158	NW	B64/B51-G10-NW-T3-NW	B 064		OU Warendorf		N 3							VE								
159	NW	B64/B51-G10-NW-T4-NW	B 064		OU Beelen		N 3							VE								
160	NW	B64/B51-G10-NW-T5-NW	B 064		OU Herzebrock/Clarholz		N 3							VE					High			
161	NW	B64-B83-G90-NW	B 064		Brakel	Holzminden	N 2/3	15.4	67.4	**67.4**	0.0	0.0	1		**VB**	**3.3**	High	High				
162	NW	B64-B83-G90-NW-T1-NW	B 064		Brakel-Hembsen	Höxter-Godelheim (B 83)	N 3											High				
163	NW	B64-B83-G90-NW-T2-NW	B 064		Höxter/Godelheim einschl. Anschluss B 8	Höxter	N 3											High				

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
164	NW	B64-B83-G90-NW-T3-NW	B 083		Beverungen/Wehrden	Höxter/Godelheim	N 2							VEG				High	High			
165	NW	B65-G10-NW-NI	B 065		Stirpe-Ölingen (B 51)	Bad Nenndorf (A 2)	N 2/3	27.8	84.0	**84.0**	0.0	0.0			**VB**	**3.8**	High					
166	NW	B65-G10-NW-NI-T2-NW	B 065		Pr.Oldendorf (Lgr.NI/NW)	Lübbecke (B 239)	N 2							VE								
167	NW	B65-G10-NW-NI-T3-NW	B 065		Lübbecke (B 239)	Hille/Eickhorst (L 803)	N 2							VE								
168	NW	B65-G10-NW-NI-T4-NW	B 065		OU Minden	(Stadtgrenze-Erbeweg)	N 3							VE								
169	NW	B67_B474-G20-NW-T1-NW	B 067	B 474	Reken	Dülmen	N 3	12.4	33.6	**33.6**	0.0	0.0	1	PE	**VB**	**3.7**			High			
170	NW	B67-G30-NW	B 067		OU Uedem	(A 57 - L 174)	N 2	9.4	35.9	**35.9**	0.0	0.0	1		**VB**	**>10**						
171	NW	B67-G30-NW-T1-NW	B 067		OU Uedem	(Southern section A 57-L 77)	N 2							VE								
172	NW	B67-G30-NW-T2-NW	B 067		OU Uedem	(Northern section L 77- L 174)	N 2							VE								
173	NW	B83-G10-NW-HE-NI-T2-NW-HE	B 083		Bad Karlshafen	Beverungen/Herstelle	N 2	1.2	5.9	**5.9**	0.0	0.0		PU	**VB**	**3.0**						
174	NW	B220-G10-NW	B 220		OU Kleve-Kellen		N 2	2.9	8.5	**8.5**	0.0	0.0		VE	**VB**	**>10**			High			
175	NW	B221-G10-NW	B 221		Geilenkirchen	AS Heinsberg (A 46)	E 4	3.1	18.9	**11.6**	7.3	0.0		OP	**VB**	**7.5**						
176	NW	B221-G20-NW-T1-NW	B 221		OU Unterbruch		N 2	4.6	33.2	**33.2**	0.0	0.0		PA	**VB**	**3.6**						
177	NW	B221-G30-NW	B 221		OU Scherpenseel		N 2	4.9	10.4	**10.4**	0.0	0.0		UVS	**VB**	**5.4**			High			
178	NW	B225-G10-NW	B 225		OU Alt-Marl		N 2	1.4	2.7	**2.7**	0.0	0.0		OP	**VB**	**6.3**						
179	NW	B229-G10-NW-T1-NW	B 229		OU Neuenrade		N 2	3.0	21.1	**21.1**	0.0	0.0		VEG	**VB**	**4.6**						
180	NW	B229-G10-NW-T2-NW	B 229		OU Balve		N 2	4.9	19.2	**19.2**	0.0	0.0		OP	**VB**	**4.3**			High			

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
181	NW	B237_B51-G10-NW-T1-NW	B 237		OU Hückeswagen		N 2	3.6	18.4	**17.3**	0.0	1.1		PA	**VB**	**6.7**						
182	NW	B238-G10-NW-NI	B 238		Lemgo	Bad Eilsen (B 66 - A 2)	N 2/4	7.3	26.3	**26.3**	0.0	0.0			**VB**	**4.5**	High		High			
183	NW	B238-G10-NW-NI-T1-NW TEIL	B 238		OU Lemgo	(L 712 - B 238 alt)	N 2							VEG					High			
184	NW	B238-G10-NW-NI-T2-NW	B 238		OU Kalletal/Hohenhausen		N 2							VEG								
185	NW	B239-G20-NW	B 239		Lage	Herford/Bad Salzuflen (A 2)	N 3	17.4	96.7	**96.7**	0.0	0.0			**VB**	**>10**			High			
186	NW	B239-G20-NW-T1-NW	B 239		OU Lage	(B239 S - B239 N)	N 3							VE								
187	NW	B239-G20-NW-T2-NW	B 239		Lage (B 239 N)	Bad Salzuflen/Schötmar (L712)	N 3							VE								
188	NW	B239-G20-NW-T3-NW	B 239		Bad Salzuflen	(L 712 - K 4)	N 3							VE								
189	NW	B239-G20-NW-T4-NW	B 239		Bad Salzuflen (K 4)	Herford (A 2)	N 3							PE								
190	NW	B239-G30-NW-T1-NW	B 239		Herford-Kirchlengern	(w L 545 - L 782)	N 2	6.1	36.1	**36.1**	0.0	0.0		UVS	**VB**	**7.5**						
191	NW	B66-G30-NW-T2-NW	B 239		S-OU Lage	(B 66-B 239 S)	N 3	3.9	22.7	**22.7**	0.0	0.0		VE	**VB**	**7.4**						
192	NW	B264-G10-NW	B 264		OU Golzheim		N 2	2.0	4.1	**4.1**	0.0	0.0		VE	**VB**	**5.6**			High			
193	NW	B265-G30-NW-T1-NW	B 265		OU Liblar	OU Hermülheim	E 4	5.9	14.8	**8.0**	6.8	0.0		OP	**VB**	**3.6**						
194	NW	B265-B266-G10-NW-T2-	B 266		OU Mechernich/ Roggendorf		N 2	3.0	6.6	**6.6**	0.0	0.0		VE	**VB**	**5.5**			High			
195	NW	B399-G20-NW	B 399		N-OU Düren		N 2/4	4.6	31.2	**23.2**	0.0	8.0			**VB**	**6.5**						
196	NW	B399-G20-NW-T1-NW	B 399		N-OU Düren, 1 BA (western section)		N 2							PE								
197	NW	B399-G20-NW-T2-NW	B 399		Mittelabschnitt (Stadt Düren)		N 2							PE								
198	NW	B399-G20-NW-T3-NW	B 399		N-OU Düren, 3 BA (eastern section)		N 4							PE								
199	NW	B474-G10-NW	B 474		AK Dortmund-NW (A 2)	Olfen (B 235)	N 2/4	12.4	99.9	**99.9**	0.0	0.0			**VB**	**5.3**	High		High			
200	NW	B474-G10-NW-T1-NW	B 474		OU Waltrop	(AK Dortmund-NW (A 2) - L 609)	N 2/4							VEG			High		High			
201	NW	B474-G10-NW-T2-NW	B 474		OU Datteln	(L 609 - B 235)	N 2							PF								
202	NW	B67_B474-G20-NW-T2-NW	B 474	A 043	OU Dülmen	(Northern section)	N 3	3.1	11.3	**11.3**	0.0	0.0	1	PE	**VB**	**>10**						
203	NW	B475-G10-NW	B 475		OU Lippetal (B 475)		N 2	5.3	13.0	**13.0**	0.0	0.0			**VB**	**4.0**			High			
204	NW	B475-G10-NW-T1-NW	B 475		OU Lippetal/ Oestinghausen		N 2							UVS					High			
205	NW	B475-G10-NW-T2-NW	B 475		OU Lippetal/Hultrop		N 2							UVS					High			
206	NW	B475-G20-NW	B 475		Beckum	Warendorf (A 2 - B 64)	N 2	6.5	17.2	**17.2**	0.0	0.0			**VB**	**9.4**						
207	NW	B475-G20-NW-T1-NW	B 475		OU Beckum-Neubeckum	(K 6-L 792)	N 2							VE								

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
208	NW	B475-G20-NW-T2-NW	B 475		OU Ennigerloh-Westkirchen		N 2							VE					High			
209	NW	B475-G30-NW	B 475		OU Saerbeck		N 2	2.7	6.8	**6.8**	0.0	0.0		LBV	**VB**	**3.5**						
210	NW	B477-G20-NW-T3-NW	B 477		OU Rommerskirchen/ Butzheim	And Frixheim	N 2	5.5	18.2	**18.2**	0.0	0.0		OP	**VB**	**2.1**						
211	NW	B482-G10-NW-T1-NW	B 482		Porta Westfalica (A 2)	Weserbrücke	E 4	4.7	16.0	**8.4**	7.6	0.0		OP	**VB**	**7.5**						
212	NW	B54/B483-G10-NW-T2-NW	B 483		OU Schwelm		N 2	8.6	75.5	**75.5**	0.0	0.0		VP	**VB**	**5.4**						
213	NW	B62/B508-G30-NW-T1-NW	B 508n		T-OU Kreuztal	(Link road)	N 3	3.1	37.1	**37.1**	0.0	0.0	1	PA	**VB**	**2.8**		High				
214	NW	B513-G10-NW	B 513		OU Harsewinkel		N 2	5.2	7.7	**7.7**	0.0	0.0		OP	**VB**	**>10**						
215	NW	B516-G10-NW	B 516		OU Ense/Ruhne		N 2	3.1	6.6	**6.6**	0.0	0.0		OP	**VB**	**2.8**			High			
216	NW	B528-G10-NW	B 528		S-OU Kamp-Lintfort		N 2	4.4	14.8	**14.3**	0.0	0.5		VEG	**VB**	**7.0**						
Total level of funding for first priority projects and first priority projects for removal of bottlenecks									**10,774.1**	**6,697.5**	**4,030.5**	**46.1**										
New projects - second priority category with planning go-ahead (WB*)																						
217	NW	A1-G130-NW-T2-NW	A 001		AK Köln-N (A 57)	AS Köln-Niehl	E 8	3.5	73.9	**33.8**	40.1	0.0	0	OP	**WB***	**1.2**				Yes		
218	NW	A1-G20-NW	A 001		AK Bliesheim (A 61)	AD Erfttal (A 61)	E 8	5.9	50.9	**24.2**	26.7	0.0	0	OP	**WB***	**3.0**					High	
219	NW	A1-G60-NW-T3-NW	A 001		AS Schwerte	AK Dortmund/Unna	E 8	9.8	231.9	**85.9**	146.0	0.0	0	OP	**WB***	**2.7**				Yes		
220	NW	A40-G11-NW	A 040		AK Moers (A 57)	AK Duisburg (A 59)	E 8	12.0	345.4	**96.1**	249.3	0.0	0	OP	**WB***	**1.8**						
221	NW	A40-G11-NW-T1-NW	A 040		AK Moers (A 57)	AS Duisburg/Homberg	E 8							OP								
222	NW	A40-G11-NW-T1-NW	A 040		AS Duisburg/Homberg	AK Duisburg (A 59)	E 8							OP								
223	NW	A40-G30-NW-T4-NW	A 040		AS Essen-Frohnhausen	AD Essen-O	E 6	5.9	409.0	**215.5**	193.5	0.0	1	OP	**WB***	**1.5**				Yes		
224	NW	A40-G70-NW-T1-NW	A 040		AS Dortmund (L 660)	AS Dortmund-Mitte (L 672)	N 6+E 6	3.1	343.8	**307.9**	35.9	0.0	1	VP	**WB***	**1.4**						
225	NW	A40-G70-NW-T2-NW	A 040		AS Dortmund-Mitte (L 672)	AS Dortmund-Ost (B 236)	N 6+E 6	3.1	350.6	**318.3**	32.3	0.0	1	VP	**WB***	**1.2**						
226	NW	A44-G30-NW	A 044		Essen-Ruhrallee Tunnel	(L 925 - AS E.-Bergerhausen (A 52))	N 4	3.1	363.6	**342.0**	21.6	0.0	1	LBV	**WB***	**6.9**						
227	NW	A44-G70-NW-T2-NW	A 044		AS Unna-O	AK Werl	E 6	13.1	123.3	**53.1**	70.2	0.0	0	VE	**WB***	**3.8**						
228	NW	A45-G30-NW	A 045		w AS Dortmund-S	AK Dortmund-W (A 40)	E 6	9.4	118.4	**60.2**	58.2	0.0	0	VP	**WB***	**2.0**				Yes		
229	NW	A46-G20-NW	A 046		AS Düsseldorf-Holthausen	AK Hilden (A 3)	E 8	7.4	59.4	**27.5**	31.9	0.0	0	VP	**WB***	**4.1**				Yes		
230	NW	A52-G30-NW	A 052		AD Essen-Ost (A 40)	AK Essen-Nord (A 42)	N 6	7.1	736.3	**736.0**	0.0	0.3	1	VEA	**WB***	**4.5**						
231	NW	A061-G70-NW	A 061		AD Erfttal (A 1)	AK Kerpen (A 4)	E 6	11.1	52.5	**13.4**	39.1	0.0	0	OP	**WB***	**3.8**						

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
232	NW	A061-G80-NW	A 061		AK Kerpen	AS Jackerath	E 6	24.0	140.3	**37.8**	102.5	0.0	0	OP	**WB***	**4.5**						
233	NW	A61-G41-NW	A 061a		AK Wanlo (A 46)	AK Mönchengladbach (A 52)	E 4/6	12.5	161.1	**80.4**	80.7	0.0	0	VP	**WB***	**3.4**						Temporary HSR planned
234	NW	B288_A524-G20-NW	A 524	B 288	OD Krefeld	Duisburg-Serm	E 4	6.9	224.5	**181.1**	43.4	0.0	1		**WB***	**2.1**			High	Yes		
235	NW	B288_A524-G20-NW-T1-NW	B 288		OD Krefeld	w Duisburg-Mündelheim	E 4							UVS						Yes		
236	NW	B288_A524-G20-NW-T2-NW	A 524		w Duisburg-Mündelheim	Duisburg-Serm	E 4							UVS					High			
237	NW	A560-G10-NW	A 560		AD Sankt Augustin/West (A59)	AS Sankt Augustin	E 6	4.0	69.7	**48.6**	21.1	0.0	1	OP	**WB***	**2.5**				Yes	High	
238	NW	A565-G20-NW	A 565		AK Bonn-N	AD Bonn-NO	E 6	3.7	261.5	**119.0**	142.5	0.0	1		**WB***	**4.0**						
239	NW	A565-G20-NW-T1-NW	A 565		AK Bonn-N	AS Bonn-Beuel	E 6							OP							High	
240	NW	A565-G20-NW-T2-NW	A 565		AS Bonn-Beuel	AD Bonn-NO	E 6							VE						Yes	High	
241	NW	B9-G30-NW	B 009		OU Kleve		N 2	1.4	2.9	**2.9**	0.0	0.0			**WB***	**>10**						
242	NW	B54-G30-NW-T3-NW	B 054		Nordwalde	Borghorst (K 78)	E 4	6.3	20.2	**10.3**	9.9	0.0	1	OP	**WB***	**3.2**						
243	NW	B54-G30-NW-T4-NW	B 054		AS Gronau/Ochtrup	Gronau (L 566)	E 4	4.1	9.5	**6.3**	3.2	0.0	1	OP	**WB***	**2.1**						
244	NW	B55-G10-NW-T7-NW	B 055		OU Warstein		N 2	3.2	30.8	**30.8**	0.0	0.0	1	UVS	**WB***	**1.4**						
245	NW	B56-G30-NW-T1-NW	B 056		OU Euskirchen		N 2	7.1	33.8	**33.5**	0.0	0.3		VE	**WB***	**3.4**						
246	NW	B56-G40-NW	B 056		Bonn/Hardtberg	Birlinghoven/Dambroich	N 4	11.5	683.4	**683.4**	0.0	0.0	1		**WB***	**6.6**	High					
247	NW	B56-G40-NW-T1-NW	B 056		AS Hardtberg (A 565)	Bonn (B 9)	N 4							OP								
248	NW	B56-G40-NW-T2-NW	B 056		Bonn/O (A 59)	Birlinghoven/Dambroich	N 4							OP								
249	NW	B56-G50-NW	B 056n		OU Much N		N 2	2.7	10.4	**9.9**	0.0	0.5		LBA	**WB***	**2.4**						
250	NW	B62/B508-G30-NW-T4-NW	B 062n		OU Erndtebrück		N 2/3	7.9	82.1	**82.1**	0.0	0.0	1	UVS	**WB***	**2.8**		High				
251	NW	B237_B51-G10-NW-T2-NW	B 237		OU Bergisch-Born (B 237)		N 2	3.0	18.8	**18.6**	0.0	0.2		VP	**WB***	**6.9**			High			
252	NW	B508-G20-HE	B 508n		Schameder	Frankenberg	N 3	12.8	164.1	**164.1**	0.0	0.0		UVS	**WB***	**1.3**	High					
253	NW	B62/B508-G30-NW-T2-NW	B 508n		OU Kreuztal-Ferndorf		N 2/3	6.0	67.2	**67.2**	0.0	0.0	1	UVS	**WB***	**2.8**	High	High				
254	NW	B62/B508-G30-NW-T3-NW	B 508n		OU Hilchenbach		N 2/3	3.7	56.7	**56.7**	0.0	0.0	1	UVS	**WB***	**2.8**	High	High				
Total level of funding for second priority projects with planning go-ahead									**5,296.0**	**3,946.6**	**1,348.1**	**1.3**										

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
			1	2																		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Neue Vorhaben - Weiterer Bedarf																						
255	NW	A1-G60-NW-T2-NW	A 001		AK Westhofen	AS Schwerte	E 8	3.5	47.2	**23.9**	23.3	0.0	0	OP	**WB**	**1.2**				Yes		
256	NW	A4-G10-NW	A 004		AS Aachen-Laurensberg	AK Aachen (A 44)	E 6	5.8	92.9	**47.0**	45.9	0.0	0	OP	**WB**	**1.7**						
257	NW	A4-G60-NW-T2-NW	A 004		AS Moitzfeld	AS Untereschbach	E 6	3.0	32.6	**16.2**	16.4	0.0	0	OP	**WB**	**1.6**						
258	NW	A4-G70-NW-T1-NW	A 004		AK Köln-W (A 1)	AK Köln-S (A 555)	E 8	10.1	168.0	**82.7**	85.3	0.0	0	OP	**WB**	**1.6**				Yes		
259	NW	A44-G10-NW	A 044		AS Broichweiden	AS Alsdorf	E 6	5.0	53.7	**32.5**	21.2	0.0	0	OP	**WB**	**1.3**						
260	NW	A44-G20-NW	A 044		AK Neersen (A52)	AK Meerbusch (A57)	E 6	13.6	121.4	**64.9**	56.5	0.0	1	OP	**WB**	**1.6**						
261	NW	A44-G60-NW-HE-T1-NW	A 044		AK Wünnenberg/Haaren	AS Lichtenau	E 6	9.8	92.4	**38.6**	53.8	0.0	0	OP	**WB**	**1.6**						
262	NW	A44-G60-NW-HE-T3-NW-HE	A 044		AS Marsberg	AS Diemelstadt	E 6	0.6	6.9	**2.3**	4.6	0.0	0	OP	**WB**	**1.1**						
263	NW	A44-G60-NW-HE-T4-HE	A 044		AS Diemelstadt	AS Warburg	E 6	1.0	8.3	**2.7**	5.6	0.0	0	OP	**WB**	**1.7**						
264	NW	A44-G60-NW-HE-T5-HE	A 044		AS Warburg	AS Breuna	E 6	3.0	27.7	**6.8**	20.9	0.0	0	OP	**WB**	**1.5**						
265	NW	A46-G10-NW	A 046		AD Holz (A 44)	AK Neuss-W (A 57)	E 6	17.9	143.8	**82.8**	61.0	0.0	0	OP	**WB**	**1.8**				Yes		
266	NW	A57-G10-NW	A 057		AS Bickendorf	AK Köln-N (A 1)	E 6	3.1	43.5	**29.1**	14.4	0.0		OP	**WB**	**1.1**						
267	NW	A59-G70-NW-T5-NW	A 059		AS Duisburg-Marxloh	AS Duisburg-Fahrn	E 6	1.7	86.5	**24.9**	61.6	0.0		VP	**WB**	**1.1**					High	
268	NW	B55-G10-NW-T1-NW	B 055		OU Lennestadt- Bilstein		N 2	4.7	93.7	**93.7**	0.0	0.0	1	OP	**WB**	**1.4**						
269	NW	B55-G10-NW-T2-NW	B 055		Lennestadt	(Bonzelerhammer-Maumke)	N 2	2.0	38.6	**38.6**	0.0	0.0	1	OP	**WB**	**1.4**						
270	NW	B55-G10-NW-T3-NW	B 055		OU Eslohe		N 2	3.9	30.5	**30.5**	0.0	0.0	1	UVS	**WB**	**1.4**						
271	NW	B55-G10-NW-T4-NW	B 055		OU Bremke		N 2	2.6	23.9	**23.9**	0.0	0.0	1	OP	**WB**	**1.4**						
272	NW	B55-G10-NW-T5-NW	B 055		OU Reiste		N 2	2.7	6.0	**6.0**	0.0	0.0	1	OP	**WB**	**1.4**			High			
273	NW	B55-G10-NW-T6-NW	B 055		OU Meschede		N 2	1.6	68.0	**68.0**	0.0	0.0	1	OP	**WB**	**1.4**						
274	NW	B55-G40-NW	B 055		Lippstadt	Rheda/Wiedenbrück (A 2)	E 4	11.0	59.6	**32.2**	27.4	0.0	1	OP	**WB**	**1.8**						
275	NW	B55-G40-NW-T1-NW	B 055		OU Lippstadt	(OU Erwitte - L 822)	E 4							OP								
276	NW	B55-G40-NW-T2-NW	B 055		OU Lippstadt	(L 822- L 586n)	E 4							OP								
277	NW	B56-G30-NW-T2-NW	B 056		OU Ludendorf/-Essig		N 2	1.6	5.8	**5.8**	0.0	0.0		OP	**WB**	**2.4**						

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
278	NW	B61-G20-NW	B 061		Bad Oeynhausen	Dehme (Vorm Berg)	N 2	3.8	13.4	**13.4**	0.0	0.0		OP	**WB**	**>10**			High			
279	NW	B66-G30-NW-T3-NW	B 066		Lage	Lage - Lemgo (B 238a - B 238n)	N 3	5.0	12.6	**12.6**	0.0	0.0		UVS	**WB**	**2.5**						
280	NW	B66-G40-NW	B 066		Bielefeld		N 4	6.2	101.7	**64.8**	0.0	36.9		OP	**WB**	**7.6**						
281	NW	B83-G10-NW-HE-NI-T3-NW-NI	B 083		Würgassen	Beverungen	N 2	2.4	22.7	**22.7**	0.0	0.0		VE	**WB**	**1.5**						
282	NW	B83-G50-NI-NW	B 083		OU Stahle		N 2	0.5	2.9	**2.9**	0.0	0.0		OP	**WB**	**3.0**						
283	NW	B265-B266-G10-NW-T1	B 265		OU Schleiden/Gemünd	Schleid feeder road	N 2	7.1	45.0	**45.0**	0.0	0.0		OP	**WB**	**2.2**						
284	NW	B265-G20-NW	B 265		OU Weiler i.d. Ebene		N 2	2.0	4.0	**4.0**	0.0	0.0		LB	**WB**	**2.5**						
285	NW	B477-G20-NW-T1-NW	B 477		OU Niederaußem		N 2	2.4	12.9	**12.9**	0.0	0.0		OP	**WB**	**2.1**						
286	NW	B477-G20-NW-T2-NW	B 477		Berghein/Rheidt		N 2	3.0	9.6	**9.6**	0.0	0.0		OP	**WB**	**2.1**			High			
287	NW	B236-B480-G10-NW-T4-NW	B 480		OU Olsberg/Wiemering-hausen		N 2	1.7	6.5	**6.5**	0.0	0.0		OP	**WB**	**2.3**			High			
288	NW	B7/B480-G10-NW-T2-NW	B 480		OU Brilon/Alme		N 3	9.6	70.6	**70.6**	0.0	0.0	1	OP	**WB**	**1.2**	High	High				
289	NW	B482-G10-NW-T2-NW	B 482		Porta Westfalica	(L 780 - L 764)	E 3	1.3	24.3	**22.4**	1.9	0.0		OP	**WB**	**1.5**						
290	NW	B482-G10-NW-T3-NW	B 482		Minden	Petershagen (L 764 - K 6)	E 4	8.1	44.1	**20.7**	23.4	0.0		OP	**WB**	**2.4**						
291	NW	B484-G10-NW	B 484		OU Overath		N 2/3	4.6	69.1	**68.6**	0.0	0.5	1	UVS	**WB**	**2.8**						
Total level of funding for second priority projects									**1,690.4**	**1,129.8**	**523.2**	**37.4**										

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Rhineland-Palatinate																						
Ongoing and definitely planned projects																						
1	RP		A 006		AS Kaiserslautern/W	AS Kaiserslautern/O	E 6	6.2	50.0	**0.0**	50.0	0.0	0		**FD**							Under construction
2	RP		A 061		AS Rheinböllen	Hunsrück Services	E 6	7.6	150.7	**49.8**	100.9	0.0	0		**FD**							Necessary construction of a new replacement bridge
3	RP		A 061		Lgr. RP/BW	AK Frankenthal	E 6	30.8	434.7	**173.9**	260.8	0.0	0		**FD-E**					Yes	High	PPP project Procurement procedure in preparation
4	RP		A 064		Biewertalbrücke		E 4	3.0	18.0	**18.0**	0.0	0.0	0		**FD**							Completion of overall project
5	RP		A 643		AK Wiesbaden/ Schierstein	Rhine Bridge in Schierstein - AD Mainz	N 6+E 6	4.0	190.1	**100.2**	87.9	0.0	1		**FD**							Under construction
6	RP		B 010		Wallmersbach	Hinterweidenthal	E 4	2.0	13.8	**13.8**	0.0	0.0	1		**FD**							Under construction
7	RP		B 038		OU Impflingen		N 2	2.9	17.0	**17.0**	0.0	0.0			**FD**							In preparation
8	RP		B 041		OU Hochstetten- Dhaun		N 2	1.6	19.5	**19.5**	0.0	0.0	1		**FD**							Under construction
9	RP		B 047		Südumgehung Worms		N 4+E 4	4.3	34.0	**34.0**	0.0	0.0			**FD**							In preparation
10	RP		B 050		A 1/A 60	Airport	E 4+N 4	40.5	282.5	**275.1**	2.4	5.0	1		**FD**							Under construction
11	RP		B 051		OU Konz-Könen		N 2	4.0	10.5	**10.5**	0.0	0.0			**FD**							Under construction
12	RP		B 255		OU Niederahr	Ettinghausen - Hahner Kreuz	N 2	6.0	4.7	**4.7**	0.0	0.0	1		**FD**							Under construction
13	RP		B 266		Bad Neuenahr	Bad Neuenahr/O	N 4	1.8	12.6	**12.6**	0.0	0.0			**FD**							Under construction
14	RP		B 271		OU Kirchheim a.d.W.		N 2	4.0	18.0	**18.0**	0.0	0.0			**FD**							Under construction
15	RP		B 327		OU Gödenroth		N 2	3.1	12.5	**12.5**	0.0	0.0			**FD**							In preparation
16	RP		B 427		OU Bad Bergzabern		N 2	2.6	61.7	**61.7**	0.0	0.0			**FD**							In preparation
Total level of funding for ongoing and defintely planned projects									**1,330.3**	**821.3**	**502.0**	**5.0**										
New projects - first priority category (VB) and first priority category for removal of bottlenecks (VB-E)																						
17	RP	A001-G10-NW-RP-T01-RP	A 001		AS Kelberg (B 410)	AS Adenau (L10)	N 4	10.5	204.9	**204.9**	0.0	0.0	0	PA	**VB**	**5.4**	High					
18	RP	A001-G10-NW-RP-T02-NW-RP	A 001		AS Adenau (L10)	AS Lommersdorf (L115z) (Anteil RP)	N 4	3.7	99.7	**99.7**	0.0	0.0	0	PA	**VB**	**5.4**	High					
19	RP	A60-G20-RP-T2-RP	A 060		AS Ingelheim-W	AS Heidesheim	E 6	8.2	59.7	**33.1**	26.6	0.0	0	VP	**VB-E**	**3.1**				Yes	High	
20	RP	A60-G20-RP-T3-RP	A 060		AS Heidesheim	AD Mainz	E 6	2.9	15.9	**7.5**	8.4	0.0	0	VP	**VB**	**4.2**						
21	RP	A60-G30-RP	A 060		AD Mainz	AK Mainz-S	E 6	6.5	121.7	**84.4**	37.3	0.0	0		**VB-E**	**1.2**				Yes		
22	RP	A60-G30-RP-T1-RP	A 060		AD Mainz	AS Mainz-Finthen	E 6							VEA						Yes		
23	RP	A60-G30-RP-T2-RP	A 060		AS Mainz-Finthen	AK Mainz-S	E 6							VEG						Yes	High	
24	RP	A61-G10-RP-T1-RP	A 061		Lgr. NW/RP	AD Sinzig	E 6	13.1	393.8	**104.1**	289.7	0.0	0	VP	**VB-E**	**2.6**				Yes		

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
25	RP	A61-G10-RP-T2-RP	A 061		AD Sinzig	AS Mendig	E 6	18.8	267.2	**46.4**	220.8	0.0	0	VP	**VB-E**	**2.6**				Yes		
26	RP	B8n-G10-RP	B 008n		Lgr. NW/RP	Altenkirchen	N 3	9.1	68.9	**68.9**	0.0	0.0	1		**VB**	**4.4**						
27	RP	B8n-G10-RP-T1-RP	B 008n		OU Kircheib		N 3							VP								
28	RP	B8n-G10-RP-T2-RP	B 008n		OU Hasselbach		N 3							VP								
29	RP	B8n-G10-RP-T3-RP	B 008n		OU Weyerbusch		N 3							VP								
30	RP	B8n-G10-RP-T4-RP	B 008n		OU Helmenzen		N 3							VP								
31	RP	B9n-G10-RP-T1-RP	B 009n		OU Nierstein (B 9)		N 2	2.1	64.2	**64.2**	0.0	0.0		ROV	**VB**	**6.0**						
32	RP	B10-G11-RP-T1-RP	B 010		Hinterweidenthal	Hauenstein	E 4	6.9	29.4	**27.4**	2.0	0.0	1	VE	**VB**	**1.4**						
33	RP	B10-G11-RP-T2-RP	B 010		Hauenstein	Wellbachtal (B 48)	E 4	6.6	69.3	**67.5**	1.8	0.0	1	OP	**VB**	**1.4**						
34	RP	B10-G11-RP-T5-RP	B 010		Godramstein	Landau (A 65)	E 4	4.1	27.3	**25.7**	1.6	0.0	1	PF	**VB**	**1.4**						
35	RP	B36/B293-G10-RP-BW-T1-RP	B 036	B 293	Wörth am Rhein (B 9)	Karlsruhe	N 4	3.7	75.5	**75.5**	0.0	0.0		PE	**VB**	**1.8**	High					Rhine Crossing, see BW
36	RP	B41-G40-RP	B 041		Steinhardt (L 233)	Waldböckelheim (L 108)	E 4	3.3	22.5	**19.5**	1.7	1.3	1	VE	**VB**	**3.4**						
37	RP	B48n-G20-RP	B 048n		OU Imsweiler		N 2	1.8	22.6	**22.6**	0.0	0.0		PA	**VB**	**2.2**						
38	RP	B49n-G10-RP-T2-RP	B 049n		OU Trier-Zewen		N 2	1.2	28.6	**28.6**	0.0	0.0		VP	**VB**	**3.0**			High			
39	RP	B51-G20-RP	B 051n		Trier Western Bypass		N 2/4	6.0	60.1	**60.1**	0.0	0.0		PF	**VB**	**>10**						
40	RP	B51n-G10-RP	B 051n		OU Ayl		N 2	2.3	19.3	**19.3**	0.0	0.0		ROV	**VB**	**3.0**			High			
41	RP	B54n-G10-RP	B 054n		OU Flacht-Niederneisen		N 2	3.7	18.9	**18.9**	0.0	0.0		ROVV	**VB**	**3.5**			High			
42	RP	B54n-G20-RP	B 054n		Rennerod	Waldmühlen	N 3	4.5	17.8	**17.6**	0.0	0.2	1		**VB**	**4.0**			High			
43	RP	B54n-G20-RP-T1-RP	B 054n		OU Waldmühlen		N 2							VP								
44	RP	B54n-G20-RP-T2-RP	B 054n		OU Rennerod		N 2							PA					High			
45	RP	B256n-G10-RP	B 256n		OU Willroth		N 2	1.2	1.8	**1.8**	0.0	0.0		VP	**VB**	**8.1**			High			
46	RP	B256n-G20-RP-T2-RP	B 256n		OU Straßenhaus		N 2/3	2.8	16.8	**16.8**	0.0	0.0		VE	**VB**	**>10**						
47	RP	B266n-G22-RP	B 266n		Ahr Crossing		N 4	2.4	74.3	**74.3**	0.0	0.0		VP	**VB**	**3.0**	High		High			
48	RP	B270n-G10-RP	B 270n		OU Olsbrücken		N 2	2.4	13.5	**13.5**	0.0	0.0		VEA	**VB**	**1.3**			High			
49	RP	B271n-G20-RP	B 271n		Grünstadt	Bad Dürkheim	N 2	8.0	43.7	**43.7**	0.0	0.0			**VB**	**4.1**						

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
50	RP	B271n-G20-RP-T1-RP	B 271n		OU Herxheim		N 2							VE								
51	RP	B271n-G20-RP-T2-RP	B 271n		OU Kallstadt-Ungstein		N 2							VE					High			
52	RP	B417n-G10-RP	B 417n		OU Diez		N 2	0.4	16.7	**16.6**	0.0	0.1		VEG	**VB**	**2.1**						
Total level of funding for first priority projects and first priority projects for removal of bottlenecks									**1,854.1**	**1,262.6**	**589.9**	**1.6**										
New projects - second priority category with planning go-ahead (WB*)																						
53	RP	A6-G20-RP	A 006		AK Landstuhl	AS Kaiserslautern-W	E 6	13.6	115.1	**49.9**	65.2	0.0	0	VP	**WB***	**1.2**						
54	RP	A60-G20-RP-T1-RP	A 060		AD Nahetal	AS Ingelheim-W	E 6	8.6	51.0	**24.0**	27.0	0.0	0	VP	**WB***	**1.3**						
55	RP	A61-G20-RP	A 061		AK Koblenz	AS Rheinböllen	E 6	48.4	459.6	**101.4**	358.2	0.0	0	VP	**WB***	**2.2**						
56	RP	A61-G30-RP	A 061		T+R Hunsrück	AD Nahetal	E 6	14.3	161.8	**49.0**	112.8	0.0	0	VP	**WB***	**2.0**						
57	RP	A61-G40-RP	A 061		AD Nahetal	AK Frankenthal	E 6	57.2	549.2	**159.3**	389.9	0.0	0	VP	**WB***	**4.6**						
58	RP	B10-G11-RP-T3-RP	B 010		Wellbachtal (B 48)	AS Annweiler-O	E 4	5.2	158.7	**158.7**	0.0	0.0	1	VP	**WB***	**1.4**						
59	RP	B10-G11-RP-T4-RP	B 010		AS Annweiler-O	Godramstein	E 4	7.3	85.3	**81.8**	3.5	0.0	1	VE	**WB***	**1.4**						
60	RP	B41n-G10-RP	B 041n		OU Niederbrombach - Oberbrombach	And Rötsweiler	N 2 + E3	10.7	52.0	**51.6**	0.4	0.0	1	ROVV	**WB***	**1.9**	High					
61	RP	B41n-G30-RP	B 041n		OU Martinstein		N 2	1.9	21.9	**21.9**	0.0	0.0	1	ROVV	**WB***	**1.4**						
62	RP	B42n-G10-RP	B 042n		OU Leutesdorf	(Parallel to railway)	N 2	1.9	18.3	**18.3**	0.0	0.0		VP	**WB***	**2.0**			High			
63	RP	B48n-G10-RP	B 048n		OU Klingenmünster		N 2	4.9	21.5	**21.5**	0.0	0.0		PA	**WB***	**1.0**			High			
64	RP	B62n-G10-RP	B 062n		OU Mudersbach		N 2	2.6	39.0	**39.0**	0.0	0.0		ROVV	**WB***	**1.2**			High			

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
			1	2																		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
65	RP	B256n-G20-RP-T1-RP	B 256n		OU Gierender Höhe		N 2	2.2	12.2	**12.2**	0.0	0.0		VP	**WB***	**>10**			High			
66	RP	B414n-G10-RP	B 414n		OU Kirburg		N 2	2.8	14.6	**14.6**	0.0	0.0	1	VP	**WB***	**1.5**	High					
67	RP	B420n-G20-RP-T2-RP	B 420n		OU Wörrstadt		N 2	3.7	29.6	**29.6**	0.0	0.0		UVS	**WB***	**3.4**						
68	RP	B9n-G10-RP-T2-RP	B 420n		OU Nierstein (B 420)		N 2	2.2	105.3	**105.3**	0.0	0.0		ROV	**WB***	**2.9**			High			Delivery of B 9 necessary first
69	RP	B423n-G10-RP	B 423n		OU Schönenberg-Kübelberg		N 2	2.1	12.5	**12.5**	0.0	0.0		ROV	**WB***	**2.4**						
Total level of funding for second priority projects with planning go-ahead									**1,907.6**	**950.6**	**957.0**	**0.0**										
New projects - second priority category (WB)																						
70	RP	A61-G10-RP-T3-RP	A 061		AS Mendig	AK Koblenz	E 6	16.5	245.1	**49.4**	195.7	0.0	0	VP	**WB**	**1.8**						
71	RP	A63-G10-RP	A 063		AS Klein-Winternheim	AS Saulheim	E 6	7.0	60.0	**31.4**	28.6	0.0	0	VP	**WB**	**1.3**						
72	RP	B49n-G10-RP-T1-RP	B 049n		OU Igel		N 2	2.2	59.9	**59.9**	0.0	0.0		VP	**WB**	**2.5**			High			
73	RP	B54/417-G30-HE-RP-T02-RP	B 054n	B 417	Lgr. HE/RP (L319)	Freiendiez	N 2	2.1	12.4	**12.4**	0.0	0.0		UVS	**WB**	**2.8**						
74	RP	B54/417-G30-HE-RP-T03-RP	B 054n	B 417	Lgr. HE/RP (L 319)	B 54	N 2	2.6	14.7	**14.7**	0.0	0.0		UVS	**WB**	**2.8**						
75	RP	B255n-G11-RP	B 255n		OU Rothenbach	And OU Langenhahn	N 3	4.8	28.2	**28.2**	0.0	0.0	1	VP	**WB**	**1.9**	High					
76	RP	B269n-G11-RP	B 269n		OU Birkenfeld		N 2	4.1	10.0	**10.0**	0.0	0.0		VP	**WB**	**1.3**	High					
77	RP	B413n-G10-RP	B 413n		OU Dierdorf		N 2	3.8	25.0	**25.0**	0.0	0.0		VU	**WB**	**1.3**			High			
78	RP	B414n-G20-RP	B 414n		OU Nister-Möhrendorf		N 3	1.9	20.0	**20.0**	0.0	0.0	1	VP	**WB**	**1.0**	High					
79	RP	B420n-G20-RP-T1-RP	B 420n		OU Gau-Bickelheim		N 2	2.6	8.3	**8.3**	0.0	0.0		VP	**WB**	**2.3**						
80	RP	B427n-G10-RP	B 427n		OU Hinterweidenthal		N 2	4.6	30.1	**30.1**	0.0	0.0		UVS	**WB**	**1.5**	High					
Total level of funding for second priority projects									**513.7**	**289.4**	**224.3**	**0.0**										

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Saarland																						
Ongoing and definitely planned projects																						
1	SL		A 008		AS Merzig/Wellingen	AS Merzig/ Schwemlingen	E 4	4.0	32.1	**18.8**	13.3	0.0	0		**FD**							Under construction
Total level of funding for ongoing and definitely planned projects									**32.1**	**18.8**	**13.3**	**0.0**										
New projects - first priority category (VB)																						
2	SL	B051-G10-SL	B 051		OU Saarlouis-Roden		N 2	2.4	11.8	**11.8**	0.0	0.0		VEG	**VB**	**6.0**						
3	SL	B268-G10-SL	B 268		OU Nunkirchen		N 2	5.7	28.7	**28.7**	0.0	0.0		VP	**VB**	**5.3**	High		High			
4	SL	B269-G10-SL	B 269		OU Lebach		N 2	4.0	20.8	**20.8**	0.0	0.0		LB	**VB**	**3.4**			High			
5	SL	B269-G20-SL	B 269		OU Saarlouis-Fraulautern		N 2	3.6	14.8	**14.8**	0.0	0.0		VP	**VB**	**4.6**			High			
6	SL	B423-G10-SL	B 423		OU Schwarzenbach	And OU Schwarzenacker	N 2	3.8	26.8	**26.8**	0.0	0.0		VEA	**VB**	**4.3**						
Total level of funding for first priority projects									**102.9**	**102.9**	**0.0**	**0.0**										
New projects - second priority category with planning go-ahead (WB*)																						
7	SL	A001-G10-SL	A 001		A 1	A 623	N 4	3.2	61.5	**61.5**	0.0	0.0	1	VP	**WB***	**4.1**	High					
8	SL	A623-G10-SL	A 623		A 623	A 620	E 4	3.2	66.6	**58.3**	8.3	0.0	1	VP	**WB***	**3.0**						
Total level of funding for second priority projects with planning go-ahead									**128.1**	**119.8**	**8.3**	**0.0**										
New projects - second priority category (WB)																						
9	SL	B269-G30-SL	B 269		OU Nalbach		N 2	1.5	21.1	**21.1**	0.0	0.0		VP	**WB**	**1.4**						
Total level of funding for second priority projects									**21.1**	**21.1**	**0.0**	**0.0**										

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
			1	2																		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Saxony																						
Ongoing and definitely planned projects																						
1	SN		A 014		AS Leipzig-O	AD Parthenaue	E 6	12.0	26.2	**26.2**	0.0	0.0	0		**FD**							Completion of overall project
2	SN		A 072		Borna-Nord	AD A 38/A 72	E 4+N 4	16.7	152.1	**97.8**	36.6	17.7	1		**FD**							Under construction
3	SN		B 096		OU Hoyerswerda		N 2	7.3	16.5	**13.9**	0.0	2.6	1		**FD**							Start of construction pledged
4	SN		B 107		OU Grimma	(3. BA)	N 2	5.1	14.2	**12.8**	0.0	1.4			**FD**							Completion of overall project
5	SN		B 169		OU Göltzschtal		N 2	10.4	31.0	**27.4**	0.0	3.6			**FD**							In preparation/under construction
6	SN		B 173		OU Flöha	(2. BA)	N 2	1.7	21.5	**21.2**	0.0	0.3			**FD**							Completion of overall project
7	SN		B 178		Niederoderwitz	Zittau	N 2	6.0	32.6	**32.6**	0.0		1		**FD**							Completion of overall project
8	SN		B 178		Nostitz	A 4	N 3	5.1	41.4	**38.8**	0.0	2.6	1		**FD**							Completion of overall project
Total level of funding for ongoing and definitely planned projects									**335.5**	**270.7**	**36.6**	**28.2**										
New projects - first priority category (VB)																						
9	SN	B2-G10-SN-T1-SN	B 002		OU Groitzsch/Audigast		N 2	3.1	15.5	**15.5**	0.0	0.0		VP	**VB**	**3.6**			High			
10	SN	B2-G20-SN-T1-SN	B 002		OU Hohenossig		N 2	2.8	6.5	**6.5**	0.0	0.0		OP	**VB**	**3.3**						
11	SN	B2-G20-SN-T4-SN	B 002		OU Wellaune		N 2	3.0	5.9	**5.9**	0.0	0.0		OP	**VB**	**1.8**						Network completion with Düben bypass
12	SN	B6-G20-SN	B 006		Relocation in Dresden-Cossebaude		N 2	4.2	62.7	**62.7**	0.0	0.0		VE	**VB**	**>10**			High			
13	SN	B95-G10-SN-T1-SN	B 095		OU Wiesa/Schönfeld		N 2	2.7	17.5	**17.5**	0.0	0.0		OP	**VB**	**5.0**			High			
14	SN	B97-G10-SN	B 097		OU Ottendorf-Okrilla with AS		N 2	6.4	37.6	**37.6**	0.0	0.0		OP	**VB**	**8.2**						
15	SN	B98-G10-SN	B 098		Riesa	A 13	N 2	8.4	27.2	**27.2**	0.0	0.0			**VB**	**5.1**	High		High			
16	SN	B98-G10-SN-T1-SN	B 098		OU Glaubitz		N 2							OP					High			
17	SN	B98-G10-SN-T2-SN	B 098		OU Wildenhain		N 2							VP			High		High			
18	SN	B98-G10-SN-T3-SN	B 098		OU Quersa		N 2							OP								
19	SN	B98-G10-SN-T4-SN	B 098		OU Schönfeld		N 2							VE					High			
20	SN	B101-G60-SN-T3-SN	B 101		OU Freiberg		N 2/3	13.3	101.0	**96.2**	0.0	4.8		PF	**VB**	**5.2**			High			
21	SN	B101-G60-SN-T4-SN	B 101		Grossvoigtsberg	AS Siebenlehn	N 2	5.3	33.9	**33.9**	0.0	0.0		VE	**VB**	**2.0**			High			
22	SN	B115-G10-SN	B 115		OU Krauschwitz		N 2	3.3	9.7	**9.7**	0.0	0.0		VP	**VB**	**3.6**						

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
23	SN	B156-G10-SN	B 156		OU Malschwitz/ Niedergurig	(B 156 (Spree)) - Abzw. Briesing	N 2	2.2	6.2	**6.2**	0.0	0.0		VE	**VB**	**2.9**	High					
24	SN	B169-G30-SN-BB-T1-SN	B 169		AS Döbeln-Nord	Salbitz	N 3	10.4	29.6	**29.6**	0.0	0.0		VP	**VB**	**2.9**		High				Network completion
25	SN	B169-G30-SN-BB-T2-SN	B 169		Salbitz	B 6	N 3	7.8	29.3	**29.3**	0.0	0.0		PA	**VB**	**3.6**		High				
26	SN	B172-G10-SN	B 172		OU Pirna		N 2/4	4.0	76.9	**76.9**	0.0	0.0		PA	**VB**	**5.8**						
27	SN	B173-G10-SN	B 173		Plauen	AS Plauen-O	E 4	2.0	22.3	**14.1**	8.2	0.0		VEG	**VB**	**4.1**				Yes		
28	SN	B107/B174-G20-SN	B 174	B 107	Reitzenhain	AS Chemnitz-Ost	N 2/4	16.5	140.9	**140.9**	0.0	0.0	1		**VB**	**4.8**	High					
29	SN	B107/B174-G20-SN-T1-SN	B 174		OU Großolbersdorf/ Hohndorf		N 3							VEG								
30	SN	B107/B174-G20-SN-T2-SN	B 107		Südverbund Chemnitz	Ebersdorf	N 3/4							VEG								
31	SN	B107/B174-G20-SN-T3-SN	B 107		Ebersdorf	A 4 AS Chemnitz Ost	N 3							VE								
32	SN	B107/B174-G20-SN-T4-SN	B 174		Reitzenhain		N 2							VEG								
33	SN	B175-G30-SN	B 175		AS Glauchau Ost (B 93)	w Glauchau (B 175)	E 4	4.5	49.6	**30.9**	18.5	0.2		PF	**VB**	**3.6**						
34	SN	B180-G20-SN	B 180		OU Oberlungwitz		N 2	0.3	3.3	**2.8**	0.5	0.0		OP	**VB**	**4.1**						
35	SN	B181-G10-SN	B 181		w Leipzig	AS Leipzig-W (A 9)	N 4+E 4	3.9	15.5	**13.5**	2.0	0.0		PE	**VB**	**6.5**			High			
36	SN	B186-G10-SN	B 186		Relocation west of Markranstädt		N 2	4.0	20.3	**17.3**	0.0	3.0		VP	**VB**	**5.4**			High			
Total level of funding for first priority projects									**711.4**	**674.2**	**29.2**	**8.0**										
New projects - second priority category with planning go-ahead (WB*)																						
37	SN	B2-G10-SN-T2-SN	B 002		Relocation near Zwenkau		N 2	4.4	11.5	**11.5**	0.0	0.0		OP	**WB***	**1.6**			High			
38	SN	B2-G20-SN-T2-SN	B 002		OU Krensitz		N 2	3.0	8.9	**5.7**	0.0	3.2		OP	**WB***	**1.5**						
39	SN	B87-G21-SN-BB	B 087n		Leipzig (A 14)	Löhsten (Lgr. SN/BB)	N 2/4	59.1	301.4	**264.0**	37.4	0.0	1		**WB***	**2.2**	High		High			Further planning required
40	SN	B87-G21-SN-BB-T1-SN	B 087n		Leipzig (A 14)	Eilenburg	N 4							ROV								
41	SN	B87-G21-SN-BB-T2-SN	B 087n		Eilenburg	w Torgau	N 3							ROV			High		High			
42	SN	B87-G21-SN-BB-T3-SN	B 087n		OU Torgau		N 3							ROV			High					
43	SN	B87-G21-SN-BB-T4-SN	B 087n		ö Torgau		N 2							ROV								
44	SN	B92-G10-SN	B 092		AS Plauen-S	Plauen	E 4	4.4	10.8	**10.5**	0.3	0.0		OP	**WB***	**2.0**						
45	SN	B95-G10-SN-T2-SN	B 095		OU Thum/Ehrenfriedersdorf		N 2/3	8.0	34.3	**34.3**	0.0	0.0		LBV	**WB***	**2.8**						
46	SN	B95-G10-SN-T3-SN	B 095		OU Burkhardtsdorf	Chemnitz-Harthau	N 2	2.7	26.0	**25.0**	1.0	0.0		VE	**WB***	**2.9**			High			

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
47	SN	B101-G30-SN	B 101		OU Wolkenstein		N 2/3	4.3	38.5	**38.5**	0.0	0.0		OP	**WB***	**2.3**			High			
48	SN	B101-G30-SN-TP1-SN	B 101		Relocation south of Wolkenstein		N 2/3							OP					High			
49	SN	B101-G30-SN-TP2-SN	B 101		OU Wolkenstein		N 2							OP								
50	SN	B101-G50-SN	B 101		Relocation in Priestewitz		N 2	2.7	12.4	**4.2**	0.0	8.2		VP	**WB***	**1.8**						
51	SN	B101-G60-SN-T1-SN	B 101		OU Brand-Erbisdorf		N 2	5.5	20.1	**20.1**	0.0	0.0		VP	**WB***	**2.9**						
52	SN	B169-G20-SN	B 169		OU Greifendorf		N 2	1.8	5.9	**5.9**	0.0	0.0		VP	**WB***	**1.8**						
53	SN	B173-G20-SN	B 173		OU Oederan		N 2	3.8	23.8	**23.8**	0.0	0.0		PA	**WB***	**2.5**			High			
54	SN	B180-G30-SN	B 180		Relocation near Thalheim		N 2	2.6	11.9	**11.9**	0.0	0.0		VE	**WB***	**4.0**						
55	SN	B182-G10-SN	B 182		OU Strehla		N 2	5.9	14.9	**14.9**	0.0	0.0		OP	**WB***	**1.6**						
56	SN	B183-G10-SN	B 183		OU Bad Düben		N 2	2.9	13.6	**13.6**	0.0	0.0		OP	**WB***	**3.1**			High			
Total level of funding for second priority projects with planning go-ahead									**534.0**	**483.9**	**38.7**	**11.4**										
New projects - second priority category (WB)																						
57	SN	A72-G30-SN	A 072		Zwickau	Chemnitz	E 6	27.6	199.7	**66.6**	133.1	0.0	0	OP	**WB**	**1.3**						
58	SN	A72-G30-SN-T1-SN	A 072		Zwickau	Stollberg	E 6							OP								
59	SN	A72-G30-SN-T2-SN	A 072		Stollberg	Chemnitz	E 6							OP								
60	SN	B6-G10-SN	B 006		OU Kühren		N 2	3.6	9.1	**9.1**	0.0	0.0		OP	**WB**	**2.4**			High			
61	SN	B94-G10-SN	B 094		Reichenbach	A 72	E 4	2.2	15.7	**9.9**	5.8	0.0		VE	**WB**	**1.0**						
62	SN	B94-G20-SN	B 094		Relocation in Reichenbach		N 2	4.7	20.9	**20.9**	0.0	0.0		OP	**WB**	**3.0**						
63	SN	B98-G10-SN-T5-SN	B 098		OU Thiendorf		N 2	1.5	5.6	**5.6**	0.0	0.0		VP	**WB**	**5.1**			High			

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
64	SN	B101-G10-SN	B 101		Relocation in Aue (S 255)		N 2	1.8	52.7	**52.7**	0.0	0.0		VP	**WB**	**1.8**						
65	SN	B101-G20-SN	B 101		Scheibenberg	Annaberg-Buchholz	N 2	9.1	59.5	**59.5**	0.0	0.0			**WB**	**1.4**	High					
66	SN	B101-G20-SN-T1-SN	B 101		OU Scheibenberg		N 2							OP					High			
67	SN	B101-G20-SN-T2-SN	B 101		OU Schlettau	And OU Annaberg-Buchholz	N 2							OP								
68	SN	B101-G60-SN-T2-SN	B 101		Brand-Erbisdorf - Freiberg	Freiberg	E 4	0.8	4.5	**3.6**	0.9	0.0		OP	**WB**	**2.5**						
69	SN	B107-G10-SN	B 107		TOU Colditz	With construction of new Mulde Bridge	N 2	2.8	16.2	**16.2**	0.0	0.0		OP	**WB**	**1.9**						
70	SN	B107-G20-SN	B 107		OU Trebsen		N 2	3.4	10.9	**10.9**	0.0	0.0		OP	**WB**	**1.7**						
71	SN	B156-G20-SN	B 156		OU Bluno		N 2	3.2	7.1	**7.1**	0.0	0.0		OP	**WB**	**2.4**						
72	SN	B169-G10-SN	B 169		OU Bad Schlema		E 4	2.9	112.2	**73.8**	1.5	36.9		OP	**WB**	**1.6**				Yes		
73	SN	B169-G30-SN-BB-T3-SN	B 169		OU Lichtensee		N 2	2.0	4.8	**4.8**	0.0	0.0		OP	**WB**	**1.8**		High	High			
74	SN	B175-G20-SN	B 175		OU Rochlitz		N 2	4.3	36.1	**36.1**	0.0	0.0		OP	**WB**	**2.0**						
75	SN	B282-G10-SN-T3-SN	B 282		OU Syrau		N 2	2.8	18.7	**18.7**	0.0	0.0		OP	**WB**	**1.1**			High			
Total level of funding for second priority projects									**573.7**	**395.5**	**141.3**	**36.9**										

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Saxony-Anhalt																						
Ongoing and definitely planned projects																						
1	ST		A 014		Wolmirstedt	Lüderitz	N 4	29.0	154.0	**154.0**	0.0	0.0	0		FD							Under construction
2	ST		A 143		AS Halle/Neustadt	AD Halle-N	N 4	12.6	226.0	**226.0**	0.0	0.0	0		FD							Completion of overall project
3	ST		B 002		O-OU Wittenberg		N 2	3.6	7.3	**7.3**	0.0	0.0			FD							Completion of overall project
4	ST		B 002	B 100	OU Eutzsch		N 2	3.3	11.3	**11.3**	0.0	0.0			FD							Completion of overall project
5	ST		B 006n		OU Bernburg	A 9	N 2/4	28.8	45.2	**45.2**	0.0	0.0			FD							Under construction
6	ST		B 079		OU Halberstadt - Harsleben		N 2	7.3	37.4	**37.0**	0.0	0.4			FD							Start of construction pledged
7	ST		B 091		OU Theißen		N 2	3.9	26.2	**26.2**	0.0	0.0			FD							Start of construction pledged
Total level of funding for ongoing and definitely planned projects									**507.4**	**507.0**	**0.0**	**0.4**										
New projects - first priority category (VB)																						
8	ST	A14-G20-ST-BB-T1-ST	A 014		AS Dahlenwarsleben	Wittenberge (Lgr. ST/BB)	N 4	67.1	673.0	**669.7**	0.0	3.3	0	PE	VB	**3.0**	High	High				
9	ST	B1-G20-ST	B 001		OU Burg		N 3	9.7	31.4	**31.4**	0.0	0.0		OP	VB	**4.2**						
10	ST	B6-G10-ST	B 006		AS Großkugel (A 9)	Halle/Bruckdorf	N 2	7.2	26.3	**26.3**	0.0	0.0			VB	**3.5**						
11	ST	B6-G10-St-T1	B 006		OU Großkugel		N 2							OP								
12	ST	B6-G10-ST-T2	B 006		OU Gröbers		N 2							OP								
13	ST	B6-G10-ST-T3	B 006		OU Bruckdorf		N 2							OP					High			
14	ST	B6n-G12-ST-T1	B 006n		AS B 6n (A 9)	B 184	N 4	2.5	24.9	**24.9**	0.0	0.0		OP	VB	**2.5**						Completion of B 6n
15	ST	B71-G20-ST-T1	B 071		OU Estedt		N 2	2.2	5.7	**5.7**	0.0	0.0		OP	VB	**7.8**						
16	ST	B71n-G10-ST	B 071n		A 14	Haldensleben	E3+N3	9.5	63.7	**57.8**	0.0	5.9		VEG	VB	**2.3**						
17	ST	B80-G10-ST	B 080		OU Aseleben		N 2+N 4	3.3	8.8	**8.8**	0.0	0.0		OP	VB	**4.0**			High			
18	ST	B81-G30-ST	B 081		OU Halberstadt		N 3	10.7	42.0	**42.0**	0.0	0.0		OP	VB	**6.0**						
19	ST	B87-G10-ST	B 087		OU Weißenfels (southern ring road)		N 2	6.2	24.5	**24.5**	0.0	0.0		OP	VB	**5.5**						
20	ST	B87-G20-ST	B 087		Naumburg	Lgr. ST/TH	N 2	24.1	102.8	**102.8**	0.0	0.0			VB	**2.1**	High	High				
21	ST	B87-G20-ST-T1	B 087		OU Naumburg		N 2							PE				High				
22	ST	B87-G20-ST-T2	B 087		OU Bad Kösen		N 2							PU				High				

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			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
23	ST	B87-G20-ST-T3	B 087		OU Taugwitz/ OU Poppel	OU Gernstedt	N 2							OP				High				
24	ST	B87-G20-ST-T4	B 087		OU Eckartsberga		N 2							OP				High				
25	ST	B107-G10-ST	B 107		OU Oranienbaum		N 2	4.2	12.6	**12.6**	0.0	0.0		OP	**VB**	**3.4**						
26	ST	B107-G20-ST-T1	B 107		OU Jerichow		N 2	4.7	11.1	**11.1**	0.0	0.0		OP	**VB**	**4.3**						
27	ST	B180-G60-ST	B 180		OU Aschersleben/Süd	Quenstedt	N 2	8.4	26.2	**26.2**	0.0	0.0		PE	**VB**	**2.4**						
28	ST	B181-G10-ST	B 181		OU Zöschen-Wallendorf	Merseburg	N 3	11.8	89.3	**89.3**	0.0	0.0		OP	**VB**	**5.3**	High					
29	ST	B183-G20-ST-T2	B 183		OU Prosigk		N 2	2.5	5.0	**5.0**	0.0	0.0		OP	**VB**	**3.2**						
30	ST	B184-G10-ST-T1	B 184		OU Roßlau/Tornau		N 2	3.7	34.5	**31.5**	0.0	3.0	1	ROV	**VB**	**4.1**			High			
31	ST	B184-G10-ST-T3	B 184		OU Wahlitz/ OU Menz/OU Königsborn	And OU Heyrothsberge	N 2/3	10.7	34.1	**34.1**	0.0	0.0	1	OP	**VB**	**1.7**						
32	ST	B187-G11-ST	B 187		OU Jessen	Mühlanger	N 3	21.2	48.1	**48.1**	0.0	0.0		OP	**VB**	**3.5**	High	High				
33	ST	B187-G21-ST	B 187		AS Coswig	Wittenberg	N 2/3	24.1	104.5	**104.0**	0.0	0.5			**VB**	**2.5**	High	High				
34	ST	B187-G21-ST-T1	B 187		OU Coswig - Griebo		N 2/3							PA			High	High	High			
35	ST	B187-G21-ST-T2	B 187		NOU Wittenberg		N 2/3							VE			High	High				
36	ST	B188-G10-ST-T3	B 188		OU Miesterhorst		N 2	5.8	13.4	**13.4**	0.0	0.0		PA	**VB**	**1.7**						Network completion
37	ST	B188-G20-ST	B 188		OU Oebisfelde (2. BA)		N 2	5.3	21.8	**21.8**	0.0	0.0		PA	**VB**	**3.1**						
38	ST	B244-G10-ST	B 244		OU Wernigerode		N 2	3.9	90.4	**90.4**	0.0	0.0		OP	**VB**	**3.9**						
39	ST	B246_246a-G10-ST	B 246	B 246a	OU Wanzleben		N 2/3	5.0	20.0	**20.0**	0.0	0.0		OP	**VB**	**2.2**			High			
Total level of funding for first priority projects									**1,514.1**	**1,501.4**	**0.0**	**12.7**										
New projects - second priority category with planning go-ahead (WB*)																						
40	ST	B71-G20-ST-T4	B 071		OU Mahlsdorf		N 2	2.2	10.3	**10.3**	0.0	0.0		OP	**WB***	**1.9**			High			
41	ST	B86-G11-ST	B 086		OU Mansfeld		N 2+E 2	5.8	15.3	**15.3**	0.0	0.0		OP	**WB***	**2.6**						
42	ST	B87/B180-G10-ST	B 087	B 180	OU Wethau		N 2	4.6	37.9	**37.9**	0.0	0.0		OP	**WB***	**1.8**						

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
43	ST	B91-G10-ST-T2	B 091		OU Naundorf		N 2	1.3	8.9	**8.9**	0.0	0.0		VEA	**WB***	**2.2**						
44	ST	B180-G40-ST	B 180		OU Farnstädt		N 2/3	3.2	8.4	**8.4**	0.0	0.0		OP	**WB***	**3.3**						
45	ST	B183-G10-ST	B 183		OU Bitterfeld		N 2	6.9	81.4	**81.4**	0.0	0.0		OP	**WB***	**2.5**						
46	ST	B185-G21-ST-T1	B 185		OU Ballenstedt		N 2	4.1	12.6	**11.9**	0.0	0.7		VEA	**WB***	**1.0**						
Total level of funding for second priority projects with planning go-ahead									**174.8**	**174.1**	**0.0**	**0.7**										
New projects - second priority category (WB)																						
47	ST	B1-G30-ST	B 001		OU Genthin		N 2	4.3	11.0	**11.0**	0.0	0.0		OP	**WB**	**2.7**						
48	ST	B2-G10-ST-T1	B 002		OU Giebelroth		N 2	2.5	4.7	**4.7**	0.0	0.0		OP	**WB**	**2.4**						
49	ST	B2-G10-ST-T2	B 002		OU Droßdorf		N 2	2.9	9.3	**9.3**	0.0	0.0		OP	**WB**	**1.2**						
50	ST	B7/B180-G10-TH-ST-SN-T7-ST	B 007		OU Kretzschau	Döschwitz (B 180)	N 2	4.3	24.7	**24.7**	0.0	0.0		OP	**WB**	**1.7**			High			
51	ST	B27-G10-ST	B 027		TOU Hüttenrode		N 2	2.5	7.6	**7.6**	0.0	0.0		VE	**WB**	**1.2**	High					
52	ST	B71-G20-ST-T2	B 071		OU Kakerbeck		N 3	3.7	11.3	**11.3**	0.0	0.0		OP	**WB**	**1.6**						
53	ST	B71-G10-ST	B 071n		OU Letzlingen		N 2/3	4.0	17.2	**17.2**	0.0	0.0		OP	**WB**	**1.9**			High			
54	ST	B79-G20-ST	B 079		OU Athenstedt		N 2	2.8	4.5	**4.5**	0.0	0.0		OP	**WB**	**1.9**						
55	ST	B81-G10-ST	B 081		OU Blankenburg		N 2	5.4	61.2	**61.2**	0.0	0.0		VEA	**WB**	**1.0**						
56	ST	B81-G20-ST	B 081		Halberstadt	AS Heimburg (B 6n)	E 4	10.5	40.8	**40.8**	0.0	0.0		OP	**WB**	**2.3**	High					
57	ST	B85-G10-ST	B 085		OU Kelbra-Berga		N 2	5.7	38.5	**38.5**	0.0	0.0		OP	**WB**	**1.8**						
58	ST	B91-G10-ST-T3	B 091		OU Deuben		N 2	1.3	14.3	**14.3**	0.0	0.0		VP	**WB**	**2.2**			High			
59	ST	B107-G20-ST-T3	B 107		OU Sandau		N 2	3.6	9.1	**9.1**	0.0	0.0		OP	**WB**	**1.9**						
60	ST	B180-G30-ST	B 180		OU Naumburg		N 2	8.3	59.2	**59.2**	0.0	0.0		OP	**WB**	**3.3**	High					
61	ST	B183-G20-ST-T1	B 183		OU Gnetsch		N 2	2.0	3.1	**3.1**	0.0	0.0		OP	**WB**	**2.5**						
62	ST	B184-G10-ST-T2	B 184		OU Zerbst		N 2/3	8.4	28.4	**28.4**	0.0	0.0	1	OP	**WB**	**2.3**						

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
63	ST	B185-G10-ST-T1	B 185		OU Mosigkau		N 2	5.2	9.9	**9.9**	0.0	0.0		OP	**WB**	**1.7**						
64	ST	B185-G10-ST-T2	B 185		OU Köthen		N 2	4.3	13.1	**13.1**	0.0	0.0		OP	**WB**	**1.7**						
65	ST	B187-G10-ST-T1	B 187		OU Holzdorf		N 2	3.8	11.9	**11.9**	0.0	0.0		OP	**WB**	**1.4**		High				
66	ST	B187a-G10-ST	B 187a		OU Aken (mit Elbquerung)		N 2	9.6	103.0	**103.0**	0.0	0.0		OP	**WB**	**1.0**	High					
67	ST	B188-G10-ST-T1	B 188		OU Kloster Neuendorf/ OU Jävenitz	And OU Hottendorf	N 2	7.3	20.4	**20.4**	0.0	0.0		VEA	**WB**	**2.1**			High			
68	ST	B190n-G10-ST-NI-T1-ST	B 190n		LGr. ST/NI	A 14	N 3	69.7	244.3	**244.3**	0.0	0.0	1	LB	**WB**	**1.6**	High	High				
69	ST	B246_246a-G20-ST	B 246a		OU Möckern		N 2	7.0	25.8	**25.8**	0.0	0.0		OP	**WB**	**2.5**						
70	ST	B246a-G20-ST	B 246a		OU Altenweddingen		N 2	3.8	10.8	**10.8**	0.0	0.0		OP	**WB**	**1.9**						
Total level of funding for second priority projects									**784.1**	**784.1**	**0.0**	**0.0**										

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Schleswig-Holstein																						
Ongoing and definitely planned projects																						
1	SH		A 007		LGr. SH/HH	AD Bordesholm	E 6	59.0	792.8	**317.1**	475.7	0.0	0		FD							Under construction
2	SH		A 020		Weede	A 7	N 4	29.6	343.9	**343.9**	0.0	0.0	1		FD							Completion of overall project
3	SH		A 021		Kiel (with B 76 junction)	Stolpe	E 4	20.0	163.8	**135.9**	27.9	0.0	1		FD							Completion of overall project
4	SH		A 023		AS Itzehoe-S	AS Itzehoe-N	E 4	-	6.2	**6.2**	0.0	0.0	1		FD							Completion of overall project Opened to traffic in June2016
5	SH		B 207		Puttgarden	Heiligenhafen-Ost	E 4	21.0	249.4	**179.4**	70.0	0.0	0		FD							Consequence of the State Treaty between Denmark and Germany on the Fehmarnbelt Link
Total level of funding for ongoing and definitely planned projects									**1,556.1**	**982.5**	**573.6**	**0.0**										
New projects - first priority category (VB) and first priority category for removal of bottlenecks (VB-E)																						
6	SH	A20-G10-NI-SH-T10-SH	A 020		Glückstadt (B431)	Hohenfelde (A23)	N 4	15.2	207.4	**205.4**	0.0	2.0	1	PE	**VB**	**1.9**		High				
7	SH	A20-G10-NI-SH-T9-NI-SH	A 020		Drochtersen (Trog Süd)	Glückstadt (B 431)	N 4	4.0	389.8	**389.8**	0.0	0.0	1	PE	**VB**	**1.9**		High				
8	SH	A20-G10-SH	A 020		Hamburg NW bypass		N 4	23.4	215.1	**213.4**	0.0	1.7	1		**VB**	**1.9**						
9	SH	A20-G10-SH-T1-SH	A 020		Hohenfelde (A 23)	L 114	N 4							PE								Hinterland connection to and from seaports/spatial planning
10	SH	A20-G10-SH-T2-SH	A 020		L 114	AK A 20/ A 7	N 4							PA								
11	SH	A21-G20-SH-NI-T1-SH	A 021		AK Bargteheide	AK Schwarzenbek (A 21/A 24)	E 4	20.0	134.6	**83.9**	50.7	0.0	1	OP	**VB**	**3.8**						
12	SH	A23-G10-SH-HH	A 023		AS Tornesch	AS Eidelstedt	E 6	13.0	189.8	**144.9**	44.9	0.0	1	VP	**VB-E**	**2.6**				Yes		Temporary HSR planned
13	SH	A25_B5-G20-SH	A 025n	B 005	OU Geesthacht		N 2/4	10.5	93.0	**92.6**	0.0	0.4	1	VEA	**VB**	**>10**						
14	SH	B005-G30-SH	B 005		OU Lauenburg Nord		N 2	7.5	25.3	**25.3**	0.0	0.0		OP	**VB**	**4.8**			High			
15	SH	B5-G10-SH	B 005		OU Hattstedt	Bredstedt	N 2	16.5	64.5	**62.9**	0.0	1.6	1	PF	**VB**	**5.4**			High			
16	SH	B199-G10-SH	B 199		OU Handewitt		N 2/4	7.3	13.7	**13.7**	0.0	0.0		VEA	**VB**	**8.2**			High			
17	SH	B202-G20-SH	B 202		Südspange Kiel		N 4	2.2	34.6	**34.6**	0.0	0.0		VP	**VB**	**4.1**						
18	SH	B202-G40-SH-T1-SH	B 202		OU Tating		N 2	3.8	7.7	**7.7**	0.0	0.0		PE	**VB**	**1.3**						
19	SH	B206-G10-SH	B 206		N-OU Itzehoe		N 2	6.1	17.7	**17.7**	0.0	0.0	1	OP	**VB**	**9.7**						
20	SH	B208-G20-SH	B 208		OU Ratzeburg		N 2	10.6	25.3	**21.5**	1.9	1.9		LBV	**VB**	**>10**	High					
21	SH	B209-G10-SH	B 209		OU Schwarzenbek		N 2	5.2	17.5	**17.4**	0.0	0.1			**VB**	**>10**						
22	SH	B209-G10-SH-T1-SH	B 209		OU Schwarzenbek	2. BA (B 404 bis K 17)	N 2							PF								
23	SH	B209-G10-SH-T2-SH	B 209		OU Schwarzenbek	3. BA (K 17 bis B 209)	N 2							OP								
24	SH	B209-G20-SH	B 209		OU Lauenburg-O	(B 209 - B 5)	N 2	2.4	17.0	**17.0**	0.0	0.0		OP	**VB**	**5.8**			High			

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					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
25	SH	B431-G10-SH	B 431		OU Glückstadt		N 2	5.5	19.4	**19.4**	0.0	0.0		UVS	**VB**	**7.7**						
26	SH	B431-G20-SH	B 431		Relocation in Wedel		N 2+E 2	3.5	27.4	**15.9**	0.0	11.5		LB	**VB**	**>10**			High			
Total level of funding for second priority projects with planning go-ahead									**1,499.8**	**1,383.1**	**97.5**	**19.2**										
New projects - second priority category with planning go-ahead (WB*)																						
27	SH	A21-G20-SH-NI-T2-SH	A 021		AK Schwarzenbek (A 24)	AD Geesthacht (A 25)	N 4	15.0	86.8	**73.1**	13.7	0.0	1	OP	**WB***	**3.8**	High					
28	SH	A21-G20-SH-NI-T3-SH-NI	A 021		AD Geesthacht (A 25)	AS Rönne	N 4+E 4	2.0	50.7	**48.3**	2.4	0.0	1	OP	**WB***	**3.8**	High					
Total level of funding for second priority projects with planning go-ahead									**137.5**	**121.4**	**16.1**	**0.0**										
New projects - second priority category (WB)																						
29	SH	B502-G10-SH	B 502		Eastern embankment relief road in Kiel		N 4	2.6	127.9	**127.9**	0.0	0.0		VP	**WB**	**2.1**						
Total level of funding for second priority projects									**127.9**	**127.9**	**0.0**											

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
			1	2																		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Thuringia																						
Ongoing and definitely planned projects																						
1	TH		A 004	A 009	Upgrade Hermsdorfer Kreuz		E 6	2.9	80.0	**80.0**	0.0	0.0	0		**FD**							Completion of overall project
2	TH		A 004		Herleshausen	Gotha	E 6	-	472.5	**189.0**	283.5	0.0	0		**FD**							Refinancing of a PPP project
3	TH		A 009		AS Lederhose	Lgr. TH/BY	E 6	-	273.0	**109.2**	163.8	0.0	0		**FD**							Refinancing of a PPP project
4	TH		B 062		OU Bad Salzungen	(4.+5. BA incl. B 19 OU Witzelroda)	N 2	9.4	69.2	**69.2**	0.0	0.0			**FD**							Completion of overall project/4th construction phase in preparation/under construction,
5	TH		B 088		OU Rothenstein		N 2	2.6	27.3	**27.0**	0.0	0.3			**FD**							Completion of overall project
6	TH		B 088		OU Zeutsch		N 2	1.4	8.9	**6.7**	0.0	2.2			**FD**							Start of construction pledged
7	TH		B 090n		Traßdorf (A 71)	Nahwinden	N 2	18.3	36.8	**36.8**	0.0	0.0	1		**FD**							Under construction
8	TH		B 243		OU Mackenrode		N 3	1.7	8.7	**8.7**	0.0	0.0	1		**FD**							Start of construction pledged
Total level of funding for ongoing and definitely planned projects									**976.4**	**526.6**	**447.3**	**2.5**										
New projects - first priority category (VB)																						
9	TH	B4-G10-TH-T3-TH	B 004		OU Nordhausen		N 2	5.4	24.5	**24.5**	0.0	0.0		LB	**VB**	**4.1**						
10	TH	B4-G40-TH	B 004		Andislebener Kreuz	Abzweig B 249	N 2	14.7	49.7	**49.7**	0.0	0.0			**VB**	**3.5**		High	High			
11	TH	B4-G40-TH-T1-TH	B 004		OU Gebesee		N 2							VE				High				
12	TH	B4-G40-TH-T2-TH	B 004		OU Straußfurt		N 2							LB				High	High			
13	TH	B4-G40-TH-T3-TH	B 004		OU Greußen		N 2							LB				High	High			
14	TH	B7/B180-G10-TH-ST-SN	B 007	B 180	Frohburg (A 72)	Zeitz (A 9)	N 2	14.9	71.7	**71.7**	0.0	0.0	1		**VB**	**1.7**	High					Necessary connection to new A 72 federal motorway
15	SN	B7/B180-G10-TH-ST-SN-T1-SN	B 007		Relocation in Frohburg		N 2							VE								
16	TH	B7/B180-G10-TH-ST-SN-T2-TH	B 007		Altenburg	Lgr. TH/SN	N 2							VE								
17	TH	B7/B180-G10-TH-ST-SN-T3-TH	B 007	B 180	Altenburg	Rositz	N 2							UVS					High			
18	TH	B7/B247-G10-TH-T1-TH	B 007		OU Tüttleben		N 2	3.2	8.9	**8.9**	0.0	0.0		VEG	**VB**	**3.7**						
19	TH	B7/B247-G10-TH-T2-TH	B 007		Gotha	Siebleben	N 3	4.4	14.0	**13.2**	0.0	0.8		OP	**VB**	**>10**			High			
20	TH	B7-G10-TH-T1-TH	B 007		OU Weimar-Ost		N 2	5.0	26.0	**26.0**	0.0	0.0		LB	**VB**	**6.9**						
21	TH	B7-G10-TH-T2-TH	B 007		Nohra	Weimar	N 4/E 4	4.3	34.8	**26.8**	8.0	0.0		VEA	**VB**	**3.2**						
22	TH	B7-G10-TH-T3-TH	B 007		Mönchenholzhausen	Nohra	N 4/E 4	6.3	32.0	**23.0**	9.0	0.0		OP	**VB**	**3.2**						Network completion B 7

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
23	TH	B19-G50-TH-T1-TH	B 019		OU Meiningen, 2. BA		N 3/4	4.4	39.2	**39.2**	0.0	0.0		PA	**VB**	**3.8**	High					
24	TH	B176/B247-G11-TH-T6V-TH	B 084		Behringen	Reichenbach	N 2/3	8.8	25.5	**25.5**	0.0	0.0		ROV	**VB**	**2.2**			High			
25	TH	B84-G10-TH	B 084		OU Bad Langensalza-Ost		N 2	4.9	19.5	**19.5**	0.0	0.0		OP	**VB**	**4.7**						
26	TH	B85-G20-TH	B 085		OU Buttelstedt		N 2	4.3	10.4	**10.4**	0.0	0.0		UVS	**VB**	**2.4**			High			
27	TH	B85-G60-TH	B 085		Schwarza	Saalfeld	E 4	2.9	15.0	**10.8**	4.2	0.0	1	OP	**VB**	**>10**				Yes		
28	TH	B86-G10-TH	B 086		OU Bad Frankenhausen		N 2	6.7	12.8	**12.8**	0.0	0.0		OP	**VB**	**4.3**						
29	TH	B88/B247-G20-TH-T3-TH	B 088		Spange Nauendorf		N 2	3.7	8.7	**8.7**	0.0	0.0		LB	**VB**	**6.4**			High			
30	TH	B88-G50-TH	B 088		OU Schwarza Süd		N 2	2.3	10.5	**10.5**	0.0	0.0		VEA	**VB**	**3.7**						
31	TH	B88-G90-TH-T2-TH	B 088		Ostanbindung Rudolstadt	Kirchhasel	N 2/3	4.5	14.9	**14.9**	0.0	0.0		OP	**VB**	**1.8**						
32	TH	B92/B175-G10-TH-T2-TH	B 175		OU Burkersdorf		N 3	2.0	7.2	**7.2**	0.0	0.0		VE	**VB**	**3.0**						
33	TH	B92/B175-G10-TH-T3-TH	B 175		OU Frießnitz		N 3	1.5	4.2	**4.2**	0.0	0.0		VE	**VB**	**9.6**						
34	TH	B92/B175-G10-TH-T4-TH	B 175		OU Großebersdorf		N 3	2.6	13.7	**13.7**	0.0	0.0		VE	**VB**	**4.4**						
35	TH	B176/B247-G11-TH-T5-TH	B 176		OU Gräfentonna		N 3	5.8	26.6	**26.6**	0.0	0.0	1	LB	**VB**	**2.2**						
36	TH	B7/B180-G10-TH-ST-SN-T4-TH	B 180		Altenburg-West (B 180)		N 2	3.9	13.2	**13.2**	0.0	0.0		VP	**VB**	**1.7**						
37	TH	B243-G30-NI-TH-T4-TH	B 243		OU Holbach		N 3	3.8	16.5	**16.5**	0.0	0.0	1	VE	**VB**	**5.7**						
38	TH	B243-G30-NI-TH-T5-TH	B 243		OU Günzerode		N 3	6.0	30.0	**30.0**	0.0	0.0	1	VE	**VB**	**5.7**						
39	TH	B176/B247-G11-TH-T1-TH	B 247		OU Kallmerode		N 3	4.5	18.2	**18.2**	0.0	0.0	1	PU	**VB**	**2.2**						
40	TH	B176/B247-G11-TH-T2-TH	B 247		OU Mühlhausen		N 3	9.8	49.2	**49.2**	0.0	0.0	1	PU	**VB**	**2.2**						
41	TH	B176/B247-G11-TH-T3-TH	B 247		OU Höngeda		N 4	4.7	40.1	**40.1**	0.0	0.0	1	PU	**VB**	**2.2**						
42	TH	B176/B247-G11-TH-T4-TH	B 247		OU Großengottern		N 4	7.3	49.5	**49.5**	0.0	0.0	1	PF	**VB**	**2.2**			High			
43	TH	B247-G10-NI-TH-T3-TH	B 247		Ferna	Teistungen	N 2	7.6	27.4	**26.3**	0.0	1.1		VEG	**VB**	**2.0**	High					
44	TH	B88/B247-G20-TH-T1-TH	B 247		A 4	OU Schwabhausen	N 4	4.1	19.5	**18.8**	0.0	0.7		VEA	**VB**	**9.2**			High			

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
			1	2	From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
45	TH	B249-G20-TH	B 249		OU Mühlhausen		N 2	5.8	13.5	**13.5**	0.0	0.0		OP	**VB**	**1.5**			High			
46	TH	B281-G20-TH-T2-TH	B 281		Rockendorf	Krölpa	N 3	6.0	30.4	**30.4**	0.0	0.0	1	ROV	**VB**	**2.0**			High			
47	TH	B4n/B281-G10-TH-T1-TH	B 281		OU Saalfeld		N 2	4.1	27.1	**27.1**	0.0	0.0		ROVV	**VB**	**2.8**			High			
Total level of funding for first priority projectswith planning go-ahead									**804.4**	**780.6**	**21.2**	**2.6**										
New projects - second priority category with planning go-ahead (WB*)																						
48	TH	B4-G10-TH-T2-TH	B 004		OU Niedersachswerfen		N 2	3.7	19.0	**19.0**	0.0	0.0		LB	**WB***	**2.4**						
49	TH	B4-G30-TH-T1-TH	B 004		Sundhäuser Berge		E 4	3.7	13.6	**10.2**	3.4	0.0		OP	**WB***	**>10**		High				Initially conversion and upgrading
50	TH	B7/B180-G10-TH-ST-SN-T6-TH-ST	B 007		OU Meuselwitz		N 2	6.6	16.5	**16.5**	0.0	0.0		OP	**WB***	**1.7**						
51	TH	B19-G50-TH-T2-TH	B 019		OU Wasungen		N 2/3	3.8	84.0	**84.0**	0.0	0.0		VE	**WB***	**1.1**			High			
52	TH	B86-G20-TH	B 086		OU Oldisleben		N 2	4.9	22.7	**22.7**	0.0	0.0		OP	**WB***	**2.1**						
53	TH	B88-G10-TH-T1-TH	B 088		OU Großeutersdorf		N 3	2.3	13.4	**13.4**	0.0	0.0		OP	**WB***	**2.2**						
54	TH	B88-G90-TH-T1-TH	B 088		OU Uhlstädt		N 2	2.3	61.9	**61.9**	0.0	0.0		OP	**WB***	**1.8**			High			
55	TH	B 94-G10-TH	B 094		OU Zeulenroda		N 2	8.0	23.6	**23.6**	0.0	0.0		OP	**WB***	**1.7**			High			
56	TH	B94-G20-TH	B 094		OU Schleiz		N 3	6.0	18.2	**18.2**	0.0	0.0		UVS	**WB***	**2.4**						
Total level of funding for second priority projects with planning go-ahead									**272.9**	**269.5**	**3.4**	**0.0**										
New projects - second priority category (WB)																						
57	TH	A4-G10-HE-TH-T6-HE	A 004		ö AS Wildeck - Obersuhl	w AS Wommen	E 6	7.2	154.9	**83.5**	71.4	0.0	0	OP	**WB**	**1.0**						
58	TH	B4-G10-TH-T1-TH	B 004		OU Ilfeld		N 2	4.3	73.2	**73.2**	0.0	0.0		VP	**WB**	**2.4**	High					
59	TH	B4n/B281-G10-TH-T3-TH	B 004n		OU Neuhaus a. R.		N 2	6.3	32.3	**32.3**	0.0	0.0		OP	**WB**	**1.0**						
60	TH	B281-G10-TH	B 007		OU Großstöbnitz		N 2	2.9	11.2	**11.2**	0.0	0.0		OP	**WB**	**2.1**			High			
61	TH	B19-G30-TH-T6-TH	B 019		Fambach	Barchfeld	E 4	10.9	46.3	**22.7**	23.6	0.0		OP	**WB**	**1.1**						
62	TH	B19-G30-TH-T7-TH	B 019	B87n	B87n	OU Meiningen	E 4	2.4	16.6	**14.3**	2.3	0.0		OP	**WB**	**2.8**						
63	TH	B19-G40-TH-T1-TH	B 019		OU Stockhausen		N 3	3.6	14.8	**14.8**	0.0	0.0		OP	**WB**	**1.1**						
64	TH	B19-G40-TH-T2-TH	B 019		Wilhelmsthal	Eisenach	N 2/3	7.6	201.8	**201.8**	0.0	0.0		ROVB	**WB**	**1.1**	High					
65	TH	B19-G40-TH-T3-TH	B 019		OU Etterwinden		N 3	3.0	12.6	**12.6**	0.0	0.0		ROVB	**WB**	**2.0**			High			

Serial no.	Federal state	(Sub-) project no.	Road no.	2nd road no. (if appropriate	Project		Objective	Length km	Investment € millions				LFL	Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning assessment	Urban development assessment	Removal of bottlenecks	Urgent forthcoming need for replacement/ renewal	Notes
					From	To			Total	Of which upgrade/ new	Of which renewal/ replacement	Of which third party costs										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
66	TH	B19-G40-TH-T4-TH	B 019	B 088	Wutha-Farnroda		N 2	5.4	49.5	**49.5**	0.0	0.0		OP	**WB**	**1.7**	High		High			
67	TH	B62-G10-TH	B 062		OU Zella-Mehlis		N 2	5.1	28.3	**28.3**	0.0	0.0		VP	**WB**	**1.4**	High					
68	TH	B84-G30-TH	B 084		OU Marksuhl		N 2	3.1	11.0	**11.0**	0.0	0.0		OP	**WB**	**1.0**			High			
69	TH	B85-G10-TH	B 085		OU Sömmerda-West		N 2	2.0	10.7	**10.7**	0.0	0.0		VP	**WB**	**2.4**						
70	TH	B85-G30-TH	B 085		OU Bad Berka		N 2	3.3	56.2	**56.2**	0.0	0.0		UVS	**WB**	**1.3**	High					
71	TH	B85-G40-TH	B 085		OU Teichel		N 2	1.5	5.6	**5.6**	0.0	0.0		OP	**WB**	**2.5**						
72	TH	B85-G50-TH	B 085		OU Pflanzwirbach		N 2	1.4	6.9	**6.9**	0.0	0.0		OP	**WB**	**2.3**						
73	TH	B87n-G20-TH	B 087n		Meiningen	Lgr. TH/HE (bzw. B 278)	N 2/3	17.9	76.4	**76.4**	0.0	0.0			**WB**	**1.0**	High		High			
74	TH	B87n-G20-TH-T1-TH	B 087n		Melkers	Walldorf	N 3							OP								
75	TH	B87n-G20-TH-T2-TH	B 087n		Herpf	Stepfershausen	N 3							OP								
76	TH	B87n-G20-TH-T3-TH	B 087n		OU Oberkatz		N 3							OP			High					
77	TH	B87n-G20-TH-T4-TH	B 087n		OU Kaltennordheim		N 3							OP			High		High			
78	TH	B87n-G20-TH-T5-TH	B 087n		OU Diedorf		N 3							OP								
79	TH	B88-G20-TH	B 088		OU Camburg		N 2	2.1	12.6	**12.6**	0.0	0.0		OP	**WB**	**1.2**			High			
80	TH	B88-G80-TH	B 088		OU Gehren	Pennewitz	N 2	4.4	18.9	**18.9**	0.0	0.0		VE	**WB**	**1.0**	High					
81	TH	B89-G10-TH	B 089		Eisfeld	Hildburghausen	N 3	8.2	30.3	**30.3**	0.0	0.0			**WB**	**2.1**						
82	TH	B89-G10-TH-T1-TH	B 089		OU Harras		N 3							OP					High			
83	TH	B89-G10-TH-T2-TH	B 089		OU Hildburghausen		N 3							OP								
84	TH	B92/B175-G10-TH-T1-TH	B 092		OU Wolfsgefährt		N 3	2.6	23.2	**23.2**	0.0	0.0		VE	**WB**	**1.7**						
85	TH	B176-G10-TH	B 176		OU Kölleda		N 2	2.3	5.5	**5.5**	0.0	0.0		LB	**WB**	**1.0**			High			
86	TH	B7/B180-G10-TH-ST-SN-T5-TH	B 180		Altenburg	Gößnitz (B 93)	N 2	6.6	27.0	**27.0**	0.0	0.0	1	UVS	**WB**	**1.7**						
87	TH	B7/B247-G10-TH-T3-TH	B 247		Gotha	A 4	E 4	2.1	9.7	**7.3**	1.5	0.9		VE	**WB**	**1.9**						
88	TH	B88/B247-G20-TH-T2-TH	B 247		OU Schwabhausen	Spange Nauendorf	E 4	3.4	11.0	**7.5**	3.5	0.0		OP	**WB**	**1.6**						
89	TH	B249-G30-TH	B 249		Grabe	Körner	N 2	8.0	17.7	**17.7**	0.0	0.0		VE	**WB**	**2.0**						
90	TH	B281-G20-TH-T1-TH	B 281		OU Pößneck		N 3	7.9	52.0	**52.0**	0.0	0.0	1	ROV	**WB**	**2.0**			High			
91	TH	B4n/B281-G10-TH-T2-TH	B 281		Lichte	Reichmannsdorf	N 3	12.2	74.7	**74.7**	0.0	0.0		OP	**WB**	**1.0**						
Total level of funding for second priority projects									**1,090.9**	**987.7**	**102.3**	**0.9**										

These projects do not represent value for money in the notified form. They are to be reappraised within the scope of the next requirment plan review.

Serial no.	Federal state	Road no.	Project		Objective
			From	To	
1	BY	A 003	AS Rosenhof (B 8)	AK Deggendorf (A 92)	Widen to 6 lanes
2	BY	A 003	AS Aicha vorm Wald	AS Passau-Nord	Widen to 6 lanes
3	BY	A 003	AS Passau-Nord	Bundesgrenze D/A	Widen to 6 lanes
4	RP	A 006	AK Frankenthal	AS Sandhofen	Widen to 6 lanes
5	BY	A 006	AK Nürnberg-O	AK Altdorf	Widen to 6 lanes
6	BY	A 073	AS Forchheim-Süd	AK Fürth/Erlangen	Widen to 6 lanes
7	HH/SH	A 001	AK Hamburg-O	Lgr. HH/SH	Widen to 8 lanes
8	HH	A 001	AK Hamburg-O	AD Hamburg-SO	Widen to 8 lanes
9	HE	A 003	AS Hanau	Seligenstädter Dreieck	Widen to 8 lanes
10	NI	A 039	AK Wolfsburg	Wolfsburg-Sandkamp	Widen to 6 lanes
11	NW	A 004	AK Köln-Gremberg (A 559)	AD Köln-Heumar (A 3)	Widen to 8 lanes
12	NW	A 042	AK Oberhausen-W (A 3)	AS Oberhausen-Zentrum	Widen to 8 lanes
13	NW	A 042	AS Oberhausen-Zentrum	AS Bottrop-S	Widen to 8 lanes
14	RP	A 060	AD Mainz		Convert federal motorway junction
15	RP	A 064	Trier Northern Bypass		Construct new 4-lane road

Notes and abbreviations

NB: in the case of main projects whose sub-projects cover at least two federal states, the project number refers to the federal states in question.

Objectives (new construction)

N 2	Construct a new 2-lane road
N 3	Construct a new 3-lane road
N 4	Construct a new 4-lane road
N 6	Construct a new 6-lane road
N 2/3	Construct a new 2-lane (3-lane in places) road
N 2/4	Construct a new 2-lane (4-lane in places) road
N ¾	Construct a new 3-lane (4-lane in places) road
N 4/6	Construct a new 4-lane (6-lane in places) road
N 2+E 4	Construct a new 2-lane road and widen existing road to 4 lanes
N 3+E 4	Construct a new 3-lane road and widen existing road to 4 lanes
N 4+E 4	Construct a new 4-lane road and widen existing road to 4 lanes
N 4+E 6	Construct a new 4-lane road and widen existing road to 6 lanes
N 6+E 6	Construct a new 6-lane road and widen existing road to 6 lanes

Objectives (widening)

E 2	Widen to 2 lanes
E 3	Widen to 3 lanes
E 4	Widen to 4 lanes
E 6	Widen to 6 lanes
E 8	Widen to 8 lanes
E 10	Widen to 10 lanes
E 3/4	Widen to 3 (4 in places) lanes
E 6/8	Widen to 6 (8 in places) lanes
E 6/10	Widen to 6 (10 in places) lanes
E 8/9	Widen to 8 (9 in places) lanes
E 8/10	Widen to 8 (10 in places) lanes
KN	Upgrade a junction

Status of planning

LB	Route determined/alignment determined
LBA	Route determination/alignment determination requested
LBV	Route determination in preparation
OP	No start of construction
PA	Plan approval requested
PE	Public plan approval inquiry conducted
PF	Plan approval granted
PU	Plan approval non-appealable
ROV	Spatial impact assessment procedure conducted
ROVV	Spatial impact assessment procedure in preparation
ROVB	Spatial impact assessment procedure requested
TVF	Partially open to traffic
UVS	Environmental impact assessment/study of options completed
VE	Work in progress on draft design
VEA	Draft design completed
VEG	Draft design approved
VP	Prelminary planning underway
VU	Transport study underway

General abbreviations

AD	Motorway Y-junction
AK	Motorway interchange
AS	Junction
B	Federal highway
BA	Construction phase
BAB	Federal motorway
Bgr.	National border
FB	Carriageway
HSR	Hard shoulder running
KN	Junction
L	Regional road
LGr.	Federal state border
M	Central/middle
N	North
NWK	Northwestern interchange
O	East
OU	Bypass
PPP	Public-private partnership
S	South
sö	Southeast
SW	Southwest
T-OU	Partial bypass
W	West

Annex 2 -
Lists of rail projects

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
Ongoing and definitely planned projects													
1	L01	Works with a residual volume <€ 50 m	"Without" scenario; largely completed requirement plan schemes with residual works				Completed						
2	L02	Upgrade the Lübeck/Hagenow Land – Rostock – Stralsund line	"Without" scenario: 1st construction phase and partly 2nd construction phase: Schönberg – Grieben, Schönberg station, Grevesmühlen station, Bad Kleinen – Ventschow, Schwaan – Rostock, Ribnitz-Damgarten West – Warnow Bridge, electronic signal box, Carlshöhe – Bad Kleinen (a); not in the "without" scenario: double track the Riekdahl (near Rostock) – Ribnitz Damgarten West and Velgast – Stralsund sections plus raise V_{max} to 160 km/h between Riekdahl and Ribnitz-Damgarten West				Largely completed						
3	L03	Upgrade the Hamburg — Büchen — Berlin line	Completely in the "without" scenario				Completed						
4	L04	Upgrade the Stelle — Lüneburg line	Completely in the "without" scenario				Completed						
5	L05 and N18	Upgrade the Berlin – Dresden line (1st and 2nd construction phases)	Completely in the "without" scenario				Under construction						

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
6	L06	Upgrade the Hanover — Lehrte line	Completely in the "without" scenario				Completed						
7	L07 and W07	Upgrade the Löhne — Braunschweig— Wolfsburg line (1st construction phase)	"Without" scenario: 1st construction phase: double track the Hildesheim – Groß Gleidingen section: not in the "without" scenario: 2nd construction phase: double track and electrify the Löhne – Hameln – Elze section; construct 3rd and 4th tracks on the Elze – Nordstemmen section; construct a 4th track on the Groß Gleidingen – Braunschweig section, double track the Weddel Junction – Fallersleben section, raise V_{max}				Completed						
8	L08	Upgrade the Dortmund — Paderborn — Kassel line	Completely in the "without" scenario				Largely completed						
9	L09	Upgrade the Nuremberg — Erfurt line/construct a new high-speed line	"Without" scenario: Construct a new high-speed line between Erfurt and Ebensfeld and upgrade parts of the Nuremberg – Ebensfeld line: Nuremberg – Fürth – Erlangen – Forchheim, Breitengüßbach – Ebensfeld, precautionary measures for Fürth freight tunnel, electronic signal box and redevelopment of Strullendorf and Eggolsheim stations: not in the "without" scenario: construct 3rd and 4th tracks on the Breitengüßbach – Bam-				Under construction[1]						

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
			berg – Forchheim section plus Fürth freight tunnel (see project no 2-010-V02)										
10	L10	Construct a new high-speed line between Erfurt and Leipzig/Halle/upgrade existing line	Completely in the "without" scenario				Completed						
11	L11	Upgrade the Leipzig — Dresden line	Completely in the "without" scenario				Under construction						
12	L12 and W09	Upgrade the Paderborn – Bebra – Erfurt – Weimar – Jena – Glauchau – Chemnitz line (1st and second construction phases)	"Without" scenario: 1st construction phase and partly second construction phase: double track the Weimar – Großschwabhausen and Neue Schneke – Stadtroda sections; not in the "without" scenario: double track the Papiermühle – Hermsdorf-Klosterlausitz and Töppeln – Gera sections, electrify the Weimar – Gera – Gößnitz/Lehndorf section (see project no 2-038-V01)				Largely completed						

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
13	L13	Upgrade the Karlsruhe — Stuttgart — Nuremberg— Leipzig/Dresden line	Completely in the "without" scenario				Largely completed						
14	L14	Upgrade the Berlin – Frankfurt (Oder) – D/PL border line	Completely in the "without" scenario				Largely completed						
15	L15	Upgrade the Cologne — Aachen line	"Without" scenario: Cologne – Düren, Aachen D/B border; not in the "without" scenario: Düren – Aachen, but until an appraisal update (see project no 2-048-V01), the most recent appraisal on the basis of which the project may be continued applies.				Largely completed[1]						
16	L16	Upgrade the Hanau — Nantenbach line/construct a new high-speed line	Completely in the "without" scenario				Largely completed						
17	L17	Upgrade the Ludwigshafen – Saarbrücken and Kehl – Appenweier lines	"Without" scenario: Upgrade the Ludwigshafen – Saarbrücken line and parts of the Kehl – Appenweier line: Rhine Bridge near Kehl; not in the "without" scenario: eastern end of Kehl station plus Kehl (a) – Appenweier, but until an appraisal update (see project no 2-034-V01), the most recent appraisal on the basis of which the project may be continued applies.				Largely completed[1]						

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
18	L18	Upgrade the Mainz — Mannheim line	Completely in the "without" scenario				Completed						
19	L19	Upgrade the Fulda — Frankfurt am Main line	"Without" scenario: Neuhof station, remove Gelnhausen level crossing; not in the "without" scenario: Hailer – Gelnhausen (see project no 2-002-V02 or 2-007-V01)				Completed[1]						
20	L20	Upgrade the Stuttgart —Ulm — Augsburg line/construct a new high-speed line	"Without" scenario: construct a new high-speed line between Wendlingen and Ulm; not in the "without" scenario: raise V_{max} between Neu-Ulm and Neuoffingen (see project no 2-041-V01)				Under construction[1]						
21	L21, N14	Upgrade the Augsburg – Munich line (1st and 2nd construction phases)	Completely in the "without" scenario				Completed						
22	L22, N21, I10	Upgrade the Munich — Mühldorf— Freilassing line (1st, 2nd and 3rd construction phases)	"Without" scenario: double track the Ampfing – Mühldorf – Tüßling section, Burghausen electronic signal box, construct a third track on the Freilassing – Salzburg section; not in the "without" scenario: double track the Markt Schwaben – Ampfing and Tüßling – Freilassing sections, electrify the Markt Schwaben – Burghausen/Freilassing section, Trudering curve (see project no 2-008-V02)				Under construction[1]						

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
23	L23	Construct a new Nuremberg – Ingolstadt – Munich high-speed line/upgrade the existing line	Completely in the "without" scenario				Largely completed						
24	L25 and N15	Upgrade the Karlsruhe – Offenburg– Freiburg – Basle line/construct a new high-speed line (1st and 2nd construction phases)	"Without" scenario: line sections 1 to 6 Karlsruhe – Offenburg (a), line section 9 (excluding 9.0a) Müllheim – Basle; not in the "without" scenario: line sections 7, 8 and 9.0a: Offenburg – Kenzingen – Freiburg (Brsg) – Buggingen – Müllheim (see project nos 2-005-V01 or 2-005-V02)				Under construction[1]						
25	L26	Combined transport/ marshalling yards (1st phase)	Completely in the "without" scenario				Partly complete, partly under construction						
26	L27	Upgrade junctions (Berlin, Dresden, Erfurt, Halle/ Leipzig. Magdeburg)	"Without" scenario: Berlin, line to Dresden, Nordkreuz – Karow 1st and 2nd construction phases; Dresden: 1st construction phase; Erfurt, Halle, Leipzig, Magdeburg; not in the "without" scenario: Dresden: 2nd construction phase, but until an appraisal update (see project no K-999-V99),				Partly complete, partly under construction						

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
			the most recent appraisal on the basis of which the project may be continued applies										
27	N01	Upgrade the Hamburg—Lübeck line	Completely in the "without" scenario				Completed[1]						
28	N03	Upgrade the Oldenburg — Wilhelmshaven/Langwedel — Uelzen lines	"Without" scenario: upgrade the Oldenburg – Wihelmshaven line; not in the "without" scenario: electrify the Langwedel – Uelzen line (see project no 2-003-V02)				Under construction[1]						
29	N06	Upgrade the Uelzen—Stendal line	"Without" scenario: Salzwedel – Hohenwulsch, Uelzen station; not in the "without" scenario: double track the Veerßen – Salzwedel and Hohenwulsch – Stendal sections and raise V_{max} on both segments (see project no 2-018-V01)				Largely completed[1]						
30	N09 and I09	Upgrade the (Amsterdam —) D/NL border—Emmerich — Oberhausen line (1st and 2nd construction phases)	"Without" scenario: 1st construction phase: widen to three tracks; not in the "without" scenario: 2nd construction phase, raise V_{max} to 200 km/h				Under construction						
31	N11	Upgrade the Hoyerswerda —	Completely in the "without" scenario				Under con-						

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
		Horka — D/PL border line					struc-tion						
32	N16	Upgrade the Nuremberg — Marktredwitz— Reichenbach/D/CZ border (— Prague) lines	"Without" scenario: electrify the Hof – Reichenbach section; not in the "without" scenario: electrify the Nuremberg – Marktredwitz – Hof/D/CZ border sections (see project no 2-017-V01)				Com-pleted[1]						
33	N17	Upgrade the Luxembourg — Trier— Koblenz — Mainz line	"Without" scenario: double track the Igel – Igel West section; not in the "without" scenario: double track the Moselle Bridge near Konz, carry out line improvements, upgrade to allow operation of tilting trains				Com-pleted[1]						
34	N24	Upgrade the Berlin — Görlitz line	"Without" scenario: raise V_{max} on the Königs Wusterhausen – Lübbenau section; not in the "without" scenario: electrify the Cottbus – Görlitz section, double track the Lübbenau – Cottbus section, raise V_{max} on the Lübbenau – Görlitz section (see project no 2-028-V01)				Com-pleted[1]						
35	N27	Upgrade the Munich — Lindau — D/A border line	Completely in the "without" scenario				Under con-struc-tion						

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				Total	Of which upgrading/new construction	Of which renewal/ replacement							
36	N28	Upgrade junctions (2nd phase) (Bremen, Frankfurt/Main, Hamburg, Mannheim, Munich)	Bremen: "without" scenario (see also project no K-999-V99) Frankfurt: "without" scenario: Sportfeld 1st construction phase and double track Galluswarte Junction; everything else not in the "without" scenario (see project no K-001-V01) Hamburg: "without scenario": works in the Immediate Action Programme for Inland Traffic to and from Seaports; everything else not in the "without" scenario (see project no K-002-V01) Mannheim: "without" scenario: track plan/platform F; everything else not in the "without" scenario (see project no K-004-V01) Munich: not in the "without" scenario (see project no K-005-V01) Until an appraisal update of Frankfurt, Hamburg and Mannheim junctions, the most recent appraisal on the basis of which these projects may be continued applies. Notwithstanding the need for an appraisal update before the start of delivery, this also applies to the planning for the Munich junction				Partly under construction, partly complete[1]						

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
37	N29	Combined transport/ marshalling yards (2nd phase)	"Without" scenario in accordance with train formation yard project (marshalling yard/CT strategy 1/07); not in the "without" scenario: 2nd module in Basle; Rhine/Ruhr combined transport (CT) hub 3rd and 4th construction phases; Oberhausen-Osterfeld Süd train formation yard second construction phase (east-west) (see project no R-999-V99).				Partly under construction, partly complete[1]						
Total, ongoing and definitely planned projects				**12,000.0**	**8,400.00**	**3,600.00**							
New projects, first priority category (VB-E and VB)													
1	2-001-V02	Upgrade the Ulm — Friedrichshafen — Lindau line (Southern Railway)	Electrify the Ulm – Friedrichshafen – Lindau line; electrify branch line to Laupheim Stadt; raise speed to V_{max} 160 km/h on some sections	225.2	221.0	4.2	SOC sched. for 2016	VB	2.7				
2	2-002-V02	Upgrade the Hanau — Würzburg/Fulda — Erfurt lines/construct new high-speed lines	"Mottgers" option: Construct 3rd and 4th tracks on the Hanau – Gelnhausen section; construct a new double-track high-speed line between Gelnhausen and Mottgers, V_{max} 250 km/h, with grade-separated double track connecting curves on both sides towards Fulda and Würzburg linking the new line to the existing Fulda — Würzburg high-speed line; upgrade the existing line/construct a new double track	4,252.8	3,920.1	332.7	BE	VB (chosen option)	1.8	High	High	Yes	The decision as to which option will be chosen – construction of a new high-speed line from Gelnhausen to Mottgers with links on both sides to the north and

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
			high-speed line in the Wildeck/Blankenheim – Bad Hersfeld – Kirchheim/Langenschwarz corridor, V_{max} 200 km/h, grade-separated link to the Kassel – Fulda high-speed line; upgrade the Eisenach – Erfurt section for V_{max} 200 km/h										south or upgrading of the existing lines/construction of new high-speed lines between Gelnhausen and Fulda and between Aschaffenburg and Nantenbach – will be taken by the developer in the course of further planning. In the total investment and overall plan impact, the option with the higher BCR was assumed.
	2-007-V01		"Construct new/upgrade existing lines based on existing facilities" option Construct 3rd and 4th tracks on the Hanau – Gelnhausen section, V_{max} 200 km/h; construct a new double-track high-speed line between Gelnhausen and Fulda, with connecting curves linking the new line to line 3600, grade-separated link to the Fulda – Würzburg high-speed line, V_{max} 200 km/h; upgrade the existing line/construct a new double-track high-speed line in the Wildeck/Blankenheim – Bad Hersfeld – Kirchheim/Langenschwarz corridor, V_{max} 200 km/h, grade-separated link to the Kassel – Fulda high-speed line; upgrade the Eisenach – Erfurt section for V_{max} 200 km/h; shorten block lengths between Aschaffenburg and Nantenbach	3,699.2	3,387.4	311.7	BE		1.4	High		Yes	
3	2-003-V03	Upgrade the Hamburg – Hanover	Upgrade and electrify the Langwedel – Uelzen section, 9 passing stations,	3,890.9	3,064.1	826.8	-	VB	1.0	High		Yes	

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
		line/construct a new high-speed line; upgrade the Langwedel – Uelzen, Rotenburg – Verden – Minden/Wunstorf and Bremerhaven – Langwedel lines (optimized Alpha-E + Bremen)	V_{max} 80 km/h for freight trains; shorten block lengths on the Verden – Nienburg – Wunstorf and Celle – Lehrte sections; Nienburg station: new passing track, central reversing track for Bremen S-Bahn; 2 additional passing stations on the Nienburg – Minden section; construct a third track between Lüneburg and Uelzen; upgrade the Ashausen – Uelzen – Celle section, V_{max} 250/230 km/h (possibly with additional timetable-based measures to enhance capacity and avoiding lines); upgrade the Celle – Hanover-Vinnhorst section, V_{max} 230 km/h; Verden junction: flyover to segregate movements from Rotenburg and Bremen, central link to S-Bahn; construct a third track between Langwedel and Bremen-Sebaldsbrück and between Bremen Marshalling Yard (Bve junction) and Bremen-Burg, V_{max} 160 km/h; shorten block lengths on the Stubben – Bremerhaven-Wulsdorf – Bremerhaven-Speckenbüttel section; upgrade the Rotenburg – Verden section										
4	2-004-V03	Middle Rhine corridor: Target network I (com-	Construct a new double-track high-speed line between Zeppelinheim and Mannheim-Waldhof, V_{max} 300 km/h,	4,394.7	3,799.5	595.2	PP (partly)	VB	2.2	High	High	Yes	

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
		prises, inter alia, construct a new high-speed line between Mannheim and Karlsruhe/upgrade existing line, construct a new high-speed line between Frankfurt and Mannheim, upgrade the Cologne/Hagen – Siegen – Hanau line)	construct a double-track connecting line in the Klein-Gerau/Weiterstadt/Griesheim corridor; double track the Mannheim-Käfertal – Mannheim marshalling yard section; construct third and fourth tracks on the Molzau – Graben-Neudorf – Karlsruhe line/construct a new double track high-speed line, V_{max} 200 km/h; grade-separated connections at Zeppelinheim, Mannheim-Waldhof, Weiterstadt/Griesheim, Darmstadt and Graben-Neudorf; construct a single-track connecting curve between the Wiesbaden and Frankfurt branches of the Cologne – Rhine/Main high-speed line with at-grade merge into the Wiesbaden branch and grade-separated merge into the Frankfurt branch (Wallau curve); construct third tracks on the Karlsruhe – Durmersheim and Groß Gerau-Dornberg – Riedstadt-Goddelau sections; enhance intermodal gauge to P/C 400 on the Hagen – Siegen Ost terminal, Au – Siegen – Siegen Ost terminal and Siegen – Siegen-Weidenau sections; shorten block lengths on the Kreuztal – Siegen and Wetzlar – Gießen-										

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				Total	Of which upgrading/new construction	Of which renewal/ replacement							
			Bergwald – Friedberg sections; double track the entire Blankenberg – Merten and Schladern – Rosbach sections; at-grade connections at Friedberg and Großkrotzenburg; widen the Frankfurt-Stadion – Zeppelinheim section to four tracks, incl. freight track at Frankfurt-Stadion (line 3658)										
5	2-005-V02	Upgrade the Karlsruhe – Basle line/construct a new high-speed line	"Federal motorway alignment" (meeting key requirements 1 ["Offenburg Tunnel"] and 2 ["parallel to the motorway"] as set out in German Bundestag decision 18-7364]: Construct a new high-speed line between "Offenburg Nord" and Hügelheim running parallel to the A 5 motorway, V_{max} 160 km/h, with two single-track freight tunnels at Offenburg, option 1c (bypassing the town), diverging from the existing line at "Offenburg Nord" at line km 143.0 (key requirements 1+2); upgrade the existing Offenburg – Kenzingen section (4000) to V_{max} 250 km/h; construct third and fourth tracks on the Friesenheim – Lahr and Ringsheim – Kenzingen sections, V_{max} 160 km/h; construct third and fourth tracks on the Hügelheim – Müllheim section, V_{max} 250 km/h; upgrade the	6,394.0	5,654.4	739.7	-	VB	1.6	High		Yes	

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
			existing Kenzingen – Freiburg (Brsg) – Buggingen section to V_{max} 200 km/h; construct a single-track connecting curve between the new high-speed line and the existing line (4000) at Riegel for freight trains to and from Freiburg, V_{max} 120 km/h; implement key requirements 3 (enhanced noise mitigation on the Riegel – Schallstadt section), 4 (citizens' alignment between Bad Krozingen and Buggingen) and the optimized key requirement 6 (enhanced noise mitigation on the Hügelheim – Müllheim (– Auggen) section, Hügelheim junction to be grade-separated)									
6	2-008-V02	Upgrade the Munich — Mühldorf— Freilassing line	Double track the Markt Schwaben – Ampfing section, V_{max} 160 km/h, electrify the Markt Schwaben – Freilassing and Tüßling – Burghausen sections; construct a single-track connecting curve from Munich-Riem to Munich-Trudering (Trudering curve)	1,140.7	820.0	320.7	PP	VB	1.2			Yes	
7	2-009-V03	Upgrade the Munich — Rosenheim — Kiefersfelden— D/A border (– Kufstein)	Shorten block lengths between Munich-Trudering and Grafing; construct a new double-track high speed line between Grafing and Großkarolinenfeld, V_{max} 230 km/h; construct	(1,320.8)	(1,210.9)	(109.9)	BE	VB				Yes	Costs for two additional tracks on the Brannenburg – Kiefersfelden –

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
		line/construct a new high-speed line	a new double track high speed line between Großkarolinenfeld and Brannenburg, V_{max} 230 km/h (Rosenheim western avoiding line); construct two additional tracks on the Brannenburg – Kiefersfelden – D/A border section										D/A border section are still being calculated. The measure is still being appraised.
8	2-010-V02	Upgrade the Nuremberg — Erfurt line/construct a new high-speed line (German Unity Transport Project 8.1)	Construct third and fourth tracks between Forchheim and Strullendorf, V_{max} 230 km/h, construct a new passing point at Eggolsheim Süd; construct two additional tracks on the Strullendorf – Breitengüßbach corridor, V_{max} 230 km/h; shorten block lengths between Fürth and Eltersdorf	1,143.6	940.8	202.9	PA	VB	1.1	High		Yes	
9	2-011-V01	Upgrade the Hamburg – Lübeck – Puttgarden line/construct a new high-speed line (inland connection to and from the Fehmarnbelt Fixed Link)	Double track and electrify the Bad Schwartau-Waldhalle – Ratekau section, V_{max} 160 km/h; construct a new line between Ratekau and Göhl, V_{max} 160 km/h; double track and electrify the Göhl –Puttgarden section and construct a double-track Fehmarn Sound Crossing, construct an avoiding line around Großenbrode and electrify the spur to Fehmarn-Burg, V_{max} 160 km/h; construct a new single-track line to Neustadt (Holstein) (spur); construct new railway stations at Timmendorfer Strand, Scharbeutz, Haffkrug, Lensahn, Oldenburg,	1,517.9	1,232.0	285.9	PP	VB	1.7	High		Yes	

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
			Großenbrode; construct holding sidings at Lübeck; lengthen the passing loops on the Hamburg-Wandsbeck – Puttgarden section to a usable length of 850 m										
10	2-013-V01	Upgrade the Burgsinn – Gemünden – Würzburg – Nuremberg line	Shorten block lengths on the Burgsinn – Gemünden – Würzburg – Siegelsdorf section; construct a third track between Siegelsdorf and Fürth	223.1	165.2	57.8	-	VB-E	5.2			Yes	
11	2-014-V01	Upgrade the Nuremberg – Passau line	Construct a third track between Feucht and Neumarkt (Opf.); shorten block lengths between Neumarkt (Opf.) and Regensburg; construct a third track between Regensburg Hbf and Obertraubling; shorten block lengths between Obertraubling and Plattling	585.0	433.3	151.7	-	VB	1,5			Yes	
12	2-015-V01	Upgrade the Paderborn – Halle line (Mönchehof – Ihringshausen curve)	Construct a new 6 km long single-track line between Esepenau-Mönchehof and Fuldatal-Ihringshausen, at-grade junctions with existing lines	79.3	68.9	10.3	-	VB-E	15.6	F		Yes	
13	2-016-V01	Upgrade the Hanover – Bielefeld line/construct a new line	Construct two additional tracks on the Seelze – Porta Westfalica/Bad Oeynhausen section, V_{max} 230 km/h, connect Minden to long-distance services and remove bottlenecks at Minden and Wunstorf junctions; upgrade two of the four existing tracks on the Porta Westfalica – Bad Oeynhausen –	1,884.8	1,650.8	234.0	-	VB	2.0	High	High	Yes	

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
			Löhne (Westf.) section to V_{max} 180 km/h										
14	2-017-V01	Upgrade the Nuremberg – Marktredwitz – Hof/D/CZ border (– Prague) line (Franconia-Saxony mainline)	Electrify the Nuremberg – Marktredwitz – Hof, Marktredwitz – Schirnding – D/CZ border and Nuremberg Ost – Nuremberg-Dutzendteich sections	1,194.9	841.7	353.2	PP	VB	1.3				
15	2-018-V01	Upgrade the Uelzen – Stendal – Magdeburg – Halle (northern section of Eastern Corridor)	Double track the Veerßen – Salzwedel and Hohenwulsch – Stendal sections, V_{max} 160 km/h; shorten block lengths on the Stendal – Angern-Rogätz and Schönebeck – Halle sections; construct a new passing point at Wulfen	548.4	393.6	154.8	PP (partly)	VB-E	3.3			Yes	
16	2-019-V01	Upgrade the Hof – Marktredwitz – Regensburg – Obertraubling line (southern section of Eastern Corridor)	Electrify the Hof – Marktredwitz – Regensburg section; construct a third track between Regensburg and Obertraubling; double track the Regensburg Hafenbrücke – Regensburg Ost connecting curve; enhance intermodal gauge to P/C 400 on the Regensburg – Maxhütte-Haidhof and Marktredwitz – Oberkotzau sections	806.0	588.3	217.7	PP (partly)	VB-E	1.7			Yes	
17	2-020-V01	Rhine-Ruhr Express (RRX): Cologne – Düsseldorf – Dortmund/Münster	Upgrade the Cologne-Mülheim – Langenfeld-Berghausen, Düsseldorf-Hellerhof – Düsseldorf-Wehrhahn and Düsseldorf-Zoo – Düsseldorf-Kalkum sections, Duisburg Kaiserberg Junc-	1,844.0	1,720.3	123.7	PP (partly)	VB-E	1.8			Yes	For the option with more upgrading, see project nos 2-020-V02 and 2-

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
			tion, the Mülheim-Styrum – Mülheim (Ruhr) Hbf, Essen-West – Bochum-Langendreer and Dortmund-Lütgendortmund – Dortmund Bbf sections, Dortmund Hbf										020-V03
18	2-020-V02	Rhine-Ruhr Express (RRX): Cologne – Düsseldorf – Dort-Dortmund/Münster (2nd construction phase)	Construct fifth and sixth tracks between Düsseldorf- Kalkum and Duisburg	487.0	455.3	31.7	PP (partly)	VB	3.6			No	
19	2-020-V03	Rhine-Ruhr Express (RRX): Cologne– Düsseldorf – Dort-Dortmund/Münster (all RRX trains to call at Düsseldorf-Benrath)	Construct Düsseldorf-Benrath halt; construct fifth and sixth tracks between Düsseldorf-Benrath and Düsseldorf-Reisholz	136.2	136.2	0.0	PP (partly)	VB	1.5			No	
20	2-027-V01	Upgrade the Angermünde –D/PL border (– Szczecin) line	Electrify the Passow – Tantow – D/PL border line; V_{max} 160 km/h on the Angermünde – Tantow – D/PL border section	298.8	184.9	113.9	PP	VB	Over 3.0			No	
21	2-032-V01	Upgrade the Hanover – Berlin line (original Lehrte line)	Construct a third track between Ribbeck Junction and Bamme Junction; raise V_{max} on the high-speed line to 250 km/h on this section; electrify the third track between Wustermark and Oebisfelde, V_{max} 160 km/h	431.1	319.3	111.8	-	VB	1.1			Yes	

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
22	2-041-V02	Upgrade the Ulm — Augsburg line/construct a new high-speed line	Construct a third track between Dinkelscherben and Augsburg, V_{max} 200 km/h; upgrade the line on the Neu-Ulm – Günzburg – Jettingen – Dinkelscherben corridor/construct a new line	1,907.0	1,644.5	262.5	-	VB	2.1	High		No	
23	2-999-V99	Potential first priority projects (line measures)	PB projects appraised after adoption of the FTIP (line measures) upon proof of value for money being furnished	2,000.0	1,600.0	400.0	-	VB					
24	K-001-V99 - K-005-V99	Major junctions (Cologne, Frankfurt, Hamburg, Mannheim, Munich)	Upgrade Cologne, Frankfurt, Hamburg, Mannheim, Munich major junctions – appraised after adoption of the FTIP upon proof of value for money being furnished Until an appraisal update of Frankfurt, Hamburg and Mannheim junctions, the most recent appraisal on the basis of which these projects may be continued applies. Notwithstanding the need for an appraisal update before the start of delivery, this also applies to the planning for the Munich junction	2,500.0	2,000.0	500.0	Var.	VB-E				Yes	
25	K-999-V99 M-001-V01 M-999-V99	Potential first priority projects (other junctions, microscopic measures)	PB projects appraised after adoption of the FTIP (other junctions, microscopic measures, measures for a nationwide integrated regular interval timetable) upon proof of value for money being furnished	750.0	600.0	150.0	-	VB				Yes	

Serial no.	Project no.	Project title	Description of the works[2]	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation assessment	Spatial planning analysis	Removal of bottlenecks	Notes
				Total	Of which upgrading/new construction	Of which renewal/ replacement							
26	R-999-V99	Combined transport/ marshalling yards	Upgrade combined transport terminals – appraised after adoption of the FTIP upon proof of value for money being furnished	500.0	400.0	100.0	-	VB					
Total level of funding for first priority projects and first priority projects to remove bottlenecks				**40,456.5**	**34,065.4**	**6,391.1**							

Potential first priority projects

Serial no.	Project no.	Project title	Provisional description of the measure	Status of planning
1	2-003-V04	Upgrade the Bremerhaven – Bremervörde – Rotenburg – Verden line	Project definition not yet completed, will probably comprise electrifying the Bremerhaven – Bremervörde – Rotenburg section, constructing a connecting curve at Rotenburg, upgrading the section between Rotenburg and Verden	-
2	2-004-V04	Middle Rhine corridor: Second target network (will comprise, inter alia, constructing a new line between Troisdorf and Mainz-Bischofsheim)	Will comprise, in addition to 2-004-V03 (see VB), constructing a new line between Troisdorf and Mainz-Bischofsheim for rail freight services; positively appraised parts of project 2-004-V02 might complement 2-004-V01	-
3	2-008-V03	Upgrade the Munich — Mühldorf— Freilassing line	Will comprise, in addition to 2-008-V02 (see VB), constructing double-track passing loops between Tüßling and Freilassing; may complement 2-008-V02 if appraisal is positive	BE
4	2-010-V04	Upgrade the Nuremberg — Erfurt line/construct a new high-speed line (German Unity Transport Project 8.1)	Will comprise, in addition to 2-010-V02 (see VB) constructing a new line between Nuremberg-Kleinreuth and Eltersdorf (Fürth freight tunnel), V_{max} 120 km/h, length 7.5 km; may complement 2-010-V02 if appraisal is positive	-
5	2-021-V01	Upgrade the D/NL border – Bad Bentheim – Löhne line	Project definition not yet completed, will probably comprise upgrading the line for V_{max} 200 km/h	-

6	2-022-V01	Upgrade the Nuremberg – Schwandorf/Munich – Regensburg – Furth im Wald – D/CZ border lines	Project definition not yet completed, will probably comprise double tracking the Amberg – Irrenlohe section, electrifying the Hartmannshof – Neukirchen – Amberg – Irrenlohe – Schwandorf section, electrifying the Regensburg – Schwandorf – Cham – Furth im Wald – D/CZ border section, electrifying the Nuremberg-Mögeldorf – Nuremberg – Dutzendteich section, widening the Regensburg – Obertraubling section to three tracks, double tracking Regensburg connecting curve	-
7	2-023-V01	Upgrade the Nuremberg – Weiden – Hof/Schirnding – D/CZ border lines	Project definition not yet completed, will probably comprise electrifying the Hartmannshof – Neukirchen – Weiden – Hof/Schirnding – D/CZ border lines	-
8	2-024-V01	Upgrade the Hochstadt-Marktzeuln – Hof/Nuremberg– Bayreuth – Neuenmarkt-Wirsberg lines	Project definition not yet completed, will probably comprise electrifying the Hochstadt-Marktzeuln – Hof/Nuremberg – Bayreuth – Neuenmarkt-Wirsberg sections, double tracking the Stammbach – Marktschorgast section (multiple-track option)	-
9	2-025-V01	Upgrade the D/NL border— Kaldenkirchen—Viersen –Rheydt-Odenkirchen line	Project definition not yet completed, will probably comprise double tracking the Dülken – Kaldenkirchen and Rheydt Pbf – Rheydt-Odenkirchen sections and constructing a single-track connecting curve at Viersen for services from Venlo towards Krefeld	-
10	2-026-V01	Upgrade the Augsburg – Donauwörth line	Project definition not yet completed, will probably comprise constructing a third track on the Augsburg – Meitingen – Donauwörth section	-
11	2-028-V01	Upgrade the Cottbus — Görlitz line	Project definition not yet completed, will probably comprise electrifying the Cottbus – Görlitz section	-
12	2-029-V01	Upgrade the Dresden – Görlitz —D/PL border line	Project definition not yet completed, will probably comprise electrifying the Dresden-Klotzsche – Görlitz – D/PL border (– Zgorzelec) section, raising Vmax to 160 km/h	-
13	2-030-V01	Upgrade the Gotha – Leinefelde line	Project definition not yet completed, will probably comprise electrifying the Gotha – Bad Langensalza – Leinefelde section	-
14	2-031-V01	Upgrade the Gruiten – Wuppertal – Schwelm line	Project definition not yet completed, will probably comprise taking capacity-enhancing measures	-
15	2-033-V01	Upgrade the Stuttgart – Backnang – Nuremberg line	Project definition not yet completed, will probably comprise double tracking the Backnang – Schwäbisch Hall-Hessental (Murr Line) section, equipping the Stuttgart – Backnang – Nuremberg section for tilting trains	-
16	2-034-V01	Upgrade the Kehl – Appenweier line	Project definition not yet completed, will probably comprise upgrading for V_{max} 160 km/h, constructing a new single-track Appenweier curve to provide a double track link to the northbound Rhine Valley Line Until an appraisal update, the most recent appraisal on the basis of which the project may be continued applies	PP
17	2-035-V01	Upgrade the Landshut – Plattling line	Project definition not yet completed, will probably comprise double tracking the Landshut – Plattling section	-
18	2-036-V01	Upgrade the Lübeck – Schwerin/Büchen – Lüneburg lines	Project definition not yet completed, will probably comprise double tracking the Lübeck – Bad Kleinen section, electrifying the line, V_{max} 160 km/h, constructing a connecting curve at Bad Kleinen (for services between Lübeck and Schwerin) plus, as an alternative or possibly a complement, electrifying the Lübeck –Büchen – Lüneburg section; potential relief resulting from the construction of an S4 line from Hamburg to Bad Oldesloe will be taken into account	-
19	2-037-V01	Upgrade the Ludwigshafen – Saarbrücken – D/F border line	Project definition not yet completed, will probably comprise raising V_{max} on various sections and possibly constructing a third track in places	-
20	2-038-V01	Upgrade the Weimar – Gera – Gößnitz line	Project definition not yet completed, will probably comprise double tracking the Papiermühle – Hermsdorf-Klosterlausitz and Töppeln – Gera sections and electrifying the Weimar – Gera – Gößnitz/Lehndorf sections	BE
21	2-039-V01	Upgrade the Regensburg – Mühldorf – Rosenheim line	Project definition not yet completed, will probably comprise enhancing capacity between Obertraubling and Landshut, double tracking sections of the line and electrifying the Landshut – Mühldorf – Rosenheim section, V_{max} 160 km/h	-

22	2-040-V01	Upgrade the Stuttgart — Singen—D / CH border line (Gäu Line)	Project definition not yet completed, will probably comprise double tracking the Horb – Neckarhausen, Rottweil – Neufra and Rietheim – Wurmlingen sections, constructing the Singen curve, raising V_{max}, equipping the line for tilting trains	PP (partly)
23	2-042-V01	Construct a new Rheydt curve	Project definition not yet completed, will probably comprise constructing a new single-track connecting line between Herrath and Hochneukirch	-
24	2-043-V01	Construct a new Studernheim curve	Project definition not yet completed, will probably comprise constructing a direct link between the BASF industrial railway and the Mainz – Ludwigshafen railway line via a single-track connecting curve for services between Ludwigshafen (Rhine) BASF and Frankenthal	-
25	2-044-V01	Upgrade the Hamburg — Ahrensburg line	Project definition not yet completed, will probably comprise double tracking the Hamburg-Horn – Hamburg-Wandsbek connecting curve, constructing a third track between Hamburg-Wandsbek and Ahrensburg; potential relief resulting from the construction of an S4 line from Hamburg to Bad Oldesloe will be taken into account	-
26	2-045-V01	Construct a new high-speed line from Dresden to Prague	Project definition not yet completed, will probably comprise constructing a new high-speed line between Heidenau and D/CZ border (– Usti nad Labem), V_{max} 200 km/h	-
27	2-046-V01	Upgrade the Lehrte – Braunschweig – Magdeburg – Roßlau line	Project definition not yet completed, will probably comprise constructing a third track on the Lehrte – Groß Gleidingen and Braunschweig-Buchhorst – Weddel Junction sections, constructing a fourth track on the Groß Gleidingen – Braunschweig section, taking capacity enhancing measures on the Weddel Junction – Eilsleben – Magdeburg – Roßlau section	
28	2-047-V01	Upgrade the Cuxhaven – Stade line	Project definition not yet completed, will probably comprise completing the double tracking of the line and electrifying it	-
29	2-048-V01	Upgrade the Cologne — Aachen line	Project definition not yet completed, will probably comprise constructing passing loops at Aachen-Rothe Erde station, raising V_{max} betwen Aachen and Düren Until an appraisal update, the most recent appraisal on the basis of which the project may be continued applies	PP (partly)
30	2-049-V01	Upgrade the Münster – Lünen line	Project definition not yet completed, will probably comprise creating passing loops to enhance the quality of operations; raising the speed; project will be appraised after adoption of the FTIP and may be upgraded to the first priority category if the BCR is sufficiently positive	
31	2-999-V99	Other line measures	If bottlenecks can be removed neither with the "Ongoing Projects" nor with the "New Projects, First Priority Category (VB-E and VB)" or the other "Potential First Priority" projects, further line measures in the "Potential First Priority" category will be defined. It is already apparent that these will include a "composite project for unblocking bottlenecks on the target network" and a project entitled "passing loops for 740 m trains".	
32	K-001-V01	Frankfurt junction	Project definition of the current requirement project; may be adjusted in the study Until an appraisal update, the most recent appraisal on the basis of which the project may be continued applies	PP (partly)
33	K-002-V01	Hamburg junction	Project definition of the current requirement project entitled "Hamburg Junction 1 and Hamburg Junction 2 "with" scenarios"; may be adjusted in the study Until an appraisal update, the most recent appraisal on the basis of which the project may be continued applies	PP (partly)
34	K-003-V01	Cologne Junction	Project has not yet been defined	
35	K-004-V01	Mannheim junction	Project definition of the current requirement project; may be adjusted in the study Until an appraisal update, the most recent appraisal on the basis of which the project may be continued applies	PP (partly)
36	K-005-V01	Munich junction	Project definition of the current requirement project; may be adjusted in the study Notwithstanding the need for an appraisal update before the start of delivery, the most recent appraisal on the basis of which the project may be continued applies.	PP (partly)

37	M-001-V01	Nationwide integrated regular interval timetable	The feasibility in principle of a nationwide integrated regular interval timetable has been demonstrated in an initial study. In a follow-on project, a "with" scenario (M-001-V01) will be developed, possibly with additional infrastructure schemes, in order to dovetail the FTIP target network and the nationwide integrated regular interval timetable. To this end, further microscopic studies of the railway infrastructure that take into account the exact departure and arrival times of the trains may be conducted. Subsequently, this "with" scenario for the nationwide integrated regular interval timetable will be macroeconomically appraised, taking account of the journey time benefit. This will include considering the links to and from the towns of Bad Hersfeld, Darmstadt, Günzburg and Minden.	-
38	M-002-V01	Upgrade the Leipzig — Chemnitz line	Project definition not yet completed, will probably comprise conducting a study of the mainline services between Chemnitz and Leipzig that takes into account the exact departure and arrival times of the trains with the appropriate infrastructure upgrading.	-
39	K-999-V99 M-999-V99	Other junctions, microscopic measures	Collective item covering numerous notified small and medium-sized junctions plus measures that can only be studied at a microscopic level (unless studied under M-001-V01) The projects will be selected, defined and appraised as required.	-
40	R-999-V99	Combined transport/marshalling yards	Project definition not yet completed, will probably comprise upgrading over 20 combined transport terminals	-

New projects, second priority projects (WB)

Projects and funding level in the second priority category dependent on appraisal of potential first priority projects

Abbreviations and footnotes

BE	Basic evaluation
PA	Plan approval
PP	Preliminary planning
SOC sched. for	Start of construction scheduled for
Var.	various

[1] The planning status for this project refers only to the sections assumed in the "without" scenario.
[2] Contents of measures for the new projects were usually developed at a very early stage of planning. They may change in the course of planning.

Annex 3 -
Lists of waterway projects

Serial no.	Project no.	Federal waterway	Project title	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation appraisal	Network category	Removal of bottlenecks	Forthcoming need for replacement/ renewal	Notes
				Total[2]	of which upgrading/new construction	of which renewal/ replacement								
Ongoing and definitely planned projects														
1	W 47	Mittelland Canal, Elbe-Havel-Canal, Lower Havel Waterway, Berlin Waterways, Havel Canal	German Unity Transport Project 17 (Hanover – Magdeburg – Berlin)	250.0	62.5	187.5					A and C	Yes		
2	W 48	Dortmund-Ems Canal	Upgrade the southern section of the Dortmund-Ems Canal	150.0	37.5	112.5					A	Yes		
3	W 49	Middle Weser	Adapt the Middle Weser for large self-propelled barges with 2.50 m laden draught	10.0	10.0	0.0					B	Partly		Federal state of Bremen participating in funding in accordance with existing agreement on Middle Weser
4	W 50	Mittelland Canal/Middle Weser	Construct a new lock at Minden	3.0	1.0	2.0					B	Yes		Federal states of Bremen, Lower Saxony and North Rhine-Westphalia participating in funding in accordance with existing agreement on Mittelland Canal
5	W 51	Datteln-Hamm Canal	Upgrade the Datteln-Hamm Canal (western section)	44.0	11.0	33.0					A and B	Yes		Federal state of North Rhine-Westphalia participating in funding in accordance with existing agreement on Datteln-Hamm Canal

Serial no.	Project no.	Federal waterway	Project title	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation appraisal	Network category	Removal of bottlenecks	Forthcoming need for replacement/ renewal	Notes
				Total[2]	of which upgrading/new construction	of which renewal/ replacement								
6	W 52	Rhine-Herne Canal	Upgrade the Rhine-Herne Canal (east of Gelsenkirchen)	173.0	43.3	129.8					A	Yes		Federal state of North Rhine-Westphalia participating in funding in accordance with existing agreement on Rhine-Herne Canal
7	W 53	Moselle	Construct second lock chamber at Trier	60.0	60.0	0.0					A			
8	W 54	Main	Deepen the fairway between Wipfeld and Limbach	48.0	48.0	0.0					A	Partly		
9	W 55	Havel-Oder Waterway	Construct a new replacement boat lift at Niederfinow	56.0	0.0	56.0					C	Partly		
10	W 01	Kiel Canal	Upgrade the eastern section of the Kiel Canal	260.0	260.0	0.0					A	Yes		
Pledged restart														
11	W 44	Lower and Outer Elbe	Adaptation of the Lower and Outer Elbe fairways	398.1	398.1	0.0					A	Yes		Delegated section to be upgraded by City of Hamburg (around €200 million)
Total level of funding for the ongoing and definitely planned projects (incl. pledged restart)				**1,452.1**	**931.4**	**520.8**								

Serial no.	Project no.	Federal waterway	Project title	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation appraisal	Network category	Removal of bottlenecks	Forthcoming need for replacement/ renewal	Notes
				Total[2]	of which upgrading/new construction	of which renewal/ replacement								
New projects – first priority category and first priority category for the removal of bottlenecks (VB-E and VB)														
1	W 25	Rhine	Optimize the laden draughts on the Middle Rhine	60.2	60.2	0.0	PP	VB-E	30.7		A	Yes		
2	W 30	Main	Deepen the fairways on the Lower Main up to Aschaffenburg	28.3	28.3	0.0	PP	VB-E	27.6		A	Yes		
3	W 45	Outer Weser	Adapt the fairways on the Outer Weser	62.3	62.3	0.0	PAP	VB-E	11.4		A	Yes		
4	W 02	Kiel Canal	Deepen the Kiel Canal	263.4	263.4	0.0	PP completed	VB-E	8.8		A	Yes		
5	W 46b	Lower Weser	Adapt the fairways on the Lower Weser (south)	5.3	5.3	0.0	PAP	VB-E	31.6		B	Yes		
6	W 46a	Lower Weser	Adapt the fairways on the Lower Weser (north)	35.4	35.4	0.0	PAP	VB-E	6.9		B	Yes		
7	W 23	Wesel-Datteln Canal	Upgrade the Wesel-Datteln Canal up to Marl and construct new replacement "Large Locks"	645.7	103.1	542.6	PP	VB-E	3.6		A	Yes	Yes	
8	W 06	Outer Ems	Deepen the Outer Ems	36.7	36.7	0.0	PAP	VB	3.7	High	B	Yes		

Serial no.	Project no.	Federal waterway	Project title	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation appraisal	Network category	Removal of bottlenecks	Forthcoming need for replacement/ renewal	Notes
				Total[2]	of which upgrading/new construction	of which renewal/ replacement								
9	W 41	Datteln-Hamm Canal	Upgrade the Datteln-Hamm Canal (eastern section)	190.5	156.1	34.3	PP; partly DP	VB	3.5		C	Yes		Federal state of North Rhine-Westphalia participating in funding in accordance with existing agreement on Datteln-Hamm Canal
10	W 03	Kiel Canal	Realignment of the Saatsee Curve on the Kiel Canal	12.4	12.4	0.0	PP completed	VB	2.7		A	Yes		
11	W 04	Rostock	Adapt the seaward approach to the seaport of Rostock	111.6	111.6	0.0	DP	VB	2.3		B	Yes		
12	W 31	Danube	Upgrade the Danube on the Straubing – Vilshofen section (option A)	266.5	255.1	11.4	PAP; PP	VB	2.6	High	A	Partly		
13	W 27	Rhine	Improve the laden draught and stabilize the bottom on the Rhine between Duisburg and Stürzelberg	201.3	103.8	97.4	PP	VB	2.1		A			
14	W 05	Wismar	Adapt the seaward approach to the seaport of Wismar	79.1	79.1	0.0	PP completed	VB	2.3		B	Yes		
15	W 18	Dortmund-Ems Canal	Adapt the Dortmund-Ems Canal (northern section	543.3	28.3	515.0	PP	VB	2.0		B	Partly	Yes	
16	W 37	Havel-Oder Waterway	Upgrade the Havel-Oder Waterway	503.0	141.2	361.7	PP; partly PAP	VB	2.2	High	C	Yes		

Serial no.	Project no.	Federal waterway	Project title	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation appraisal	Network category	Removal of bottlenecks	Forthcoming need for replacement/ renewal	Notes
				Total[2]	of which upgrading/new construction	of which renewal/ replacement								
17	W 10	Salzgitter Branch Canal	Upgrade the Salzgitter Branch Canal including construction of two new replacement locks	220.6	137.3	83.3	DP; partly PAP	VB	1.8		C	Yes	Yes	Total investment figure includes participation in funding by the federal states of Hamburg and Lower Saxony in accordance with the existing agreement on the Mittelland Canal (eastern section)
18	W 24	Coastal canal	Upgrade the Coastal Canal including construction of two new replacement locks	254.9	98.6	156.3	PP	VB	1.3		C	Partly	Yes	
19	W 12	Elbe Lateral Canal	Bring forward construction of a new replacement lock at Lüneburg-Scharnebeck	270.4	270.4	0.0	PP	VB	0.9		A	Yes		
20	W 29	Neckar	Lengthen the locks on the Neckar between Mannheim and Plochingen	1178.1	650.4	527.7	PP	VB	0.8		A and C	Partly	Yes	
21	W 28	Moselle	Construct seven 2nd lock chambers on the Moselle	579.3	579.3	0.0	PA; partly PP, partly DP	VB	0.3		A			
22	W 33	Elbe-Lübeck Canal	Upgrade the Elbe-Lübeck Canal	838.1	790.4	47.7	PP	VB	0.5	High	C	Yes		
Total level of funding for VB and VB-E projects				**6,386.3**	**4,008.8**	**2,377.5**								

Serial no.	Project no.	Federal waterway	Project title	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation appraisal	Network category	Removal of bottlenecks	Forthcoming need for replacement/ renewal	Notes
				Total[2]	of which upgrading/new construction	of which renewal/ replacement								
New projects – second priority category														
1	W 08	Hildesheim Branch Canal	Upgrade the Hildesheim Branch Canal	125.6	78.0	47.7	DP; partly PA	WB	0.9		C			Federal states of Hamburg and Lower Saxony participating in funding in accordance with the existing agreement on the Mittelland Canal (eastern section)
2	W 09	Osnabrück Branch Canal	Construct two new replacement locks on the Osnabrück Branch Canal	105.0	100.1	4.9	PP	WB	0.4		Outside core network			Federal states of Bremen, Lower Saxony and North Rhine-Westphalia participating in funding in accordance with existing agreement on Mittelland Canal (western section)
3	W 32	Saale	Construct a Saale Canal near Tornitz	133.8	133.8	0.0	PP	WB	0.2		Outside core network			
4	W 38	Spree-Oder Waterway	Bring forward replacement of three locks on the Spree-Oder Waterway	188.4	172.1	16.3	PP	WB	0.9		Outside core network			
5	W 39	Teltow Canal	Bring forward replacement of Kleinmachnow Lock on the Teltow Canal	74.4	68.8	5.5	PP	WB	0.9		C			

Serial no.	Project no.	Federal waterway	Project title	Investment in € millions			Status of planning	Priority	BCR	Environmental and nature conservation appraisal	Network category	Removal of bottlenecks	Forthcoming need for replacement/ renewal	Notes
				Total[2]	of which upgrading/new construction	of which renewal/ replacement								
6	W 42	Southern connecting canal (Minden)	Construct a new replacement upper lock at MInden	62.2	59.2	3.1	PP	WB	0.3		Outside core network			Federal states of Bremen, Lower Saxony and North Rhine-Westphalia participating in funding in accordance with existing agreement on Mittelland Canal (western section)
Total level of funding for VB and WB* projects				**689.4**	**612.0**	**77.5**								

Abbreviations and footnotes

[1] 2014 prices, figures include value added tax ("ongoing and definitely planned projects": prices: according to the relevant estimate in the federal budget, including value added tax).

[2] In the case of "ongoing and definitely planned projects", the total investment figure is equivalent to the outstanding Federal Government share.
In the case of "new projects", the figure is equivalent to the total investment including any funding shares of third parties.

Status of planning:

DP: Detailed planning

PA: Plan approval

PAP Plan approval procedure

PP: Preliminary planning

Annex 4 -
Waterway network categorization

To identify the most important origin-destination pairs with a high level of transport significance, the federal waterways have been categorized on the basis of the volume of freight traffic and classified into a "core network with categories A, B and C" and into "waterways outside the core network".

The categorization of waterway origin-destination pairs reflects, in a rough clustering, the forecast traffic volumes on the waterway origin-destination pairs. This is based on the findings of the traffic forecast for 2030. In addition, other aspects relating to the origin-destination pairs were taken into account – where relevant – when determining the core network. The categorization does not affect the legal status of the federal waterways.

Different criteria were applied to origin-designation pairs in the field of inland waterways and the field of waterways navigable by sea-going ships in order to meet the very different infrastructure upgrading and maintenance objectives and the non-comparable types of vessels and volumes of freight traffic.

In addition, waterway origin-destination pairs that are of significance solely because of relevant special transport operations (heavy load and large-volume operations) are given a special code.

Inland waterways	
Core network ≥ 0.6 million t/a	
With the categories:	A: ≥ 6.0 million t/a
	B: ≥ 4.0 million t/a
	C: ≥ 0.6 million t/a
Waterways outside the core network (inland waterway sector)	
	<.0.6 million t/a

Seaward approaches/waterways navigable by sea-going ships	
Core network ≥ 1.0 million t/a	
With the categories:	A: ≥ 50.0 million t/a
	B: ≥ 5.0 million t/a
	C: ≥ 1.0 million t/a
Waterways outside the core network (inland waterway sector)	
	< 1.0 million t/a

Table 25: Criteria for federal waterway network categorization

Network categorization taking the traffic forecast for 2030 into account

Figure 18: **Network categorization taking the traffic forecast for 2030 into account**

List of sources

Glossary of abbreviations

AIS	Automatic Identification System
BBSR	Federal Institute for Research on Building, Urban Affairs and Spatial Development
BCA	Benefit-cost analysis
BCR	Benefit-cost ratio
bn	billion
CO_2	Carbon dioxide
CT	Combined transport
DB	Deutsche Bahn
DIN	DIN Standard (German Institute for Standardization)
EIA	Environmental Impact Assessment
ERTMS	European Rail Traffic Management System
FD	Definitely Planned Projects
FFH	Habitats Directive
FTIP	Federal Transport Infrastructure Plan
GDP	Gross domestic product
ha	Hectares
HC	Hydrocarbons
IC	Intercity (category of train)
ITS	Intelligent Transport Systems
m	million
NIP	National Programme of Innovation for Hydrogen and Fuel Cell Technology
NOx	Nitrogen oxides
pkm	Passenger kilometre (unit of measurement representing the transport of one passenger over one kilometre)
PPP	Public-private partnership
PRINS	Project Information System
RIN	Guidelines for Integrated Network Design
RIS	River Information Services

SEA	Strategic Environmental Assessment
SLFA	Service Level and Funding Agreement
TEN	Trans-European networks
tkm	Tonne kilometre (unit of measurement representing the transport of one tonne of goods over one kilometre)
VB	First priority projects
VB/VB-E	First priority projects – removal of bottlenecks
WB	Second priority projects
WB*	Second priority projects with planning go-ahead

NB:

In this document, the masculine forms “he” and “his” are used.
However, they naturally refer to both genders.

Publication data

Published by:
Federal Ministry of Transport and Digital Infrastructure
Invalidenstr. 44
D-10115 Berlin

Printed by
Federal Ministry of Transport and Digital Infrastructure, Division Z 32

Layout
MedienMélange: Kommunikation!,
Hamburg

Website
www.bvwp2030.de

As at:
August 2016

www.bmvi.de