TRANSPORT CONDITIONS IN 2035

Liikennevirasto

Finnish Transport Agency

‘Transport Conditions in 2035’ is the Finnish Transport Agency’s expert opinion on the transport system of the future and associated implementation.

FOREWORD

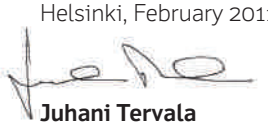
The Finnish Transport Agency was established at the start of 2010. The first year saw rapid progress in the integration of the three modes of transport and in the unfolding of the transport system perspective in general. Preparation of the long-term plan for the transport system is part of this ongoing work.

The transport system of the future will face various challenges. How will we bring about customer-centric mitigation of climate change whilst implementing a transport system that will promote competitiveness and well-being in Finland in circumstances wherein the prospects for public finances are bleak and economic performance must be enhanced over the long term? **There is a clear need for major policy changes.** The requisite changes cannot be implemented all at the same time; instead, we must set our focus far in the future and align our actions accordingly. Interoperation of the various elements of the transport system must be resolved in a new way. Sitra's Traffic Revolution project is doing its part to drive the changes forward.

'Transport Conditions in 2035' is **the Finnish Transport Agency's expert opinion** on the transport system and infrastructure management of the future within the framework of funding limitations. The plan includes recommendations addressed to the other relevant operators and policy guidelines for the Finnish Transport Agency's own operations. The plan, spanning the six coming terms of Parliament, was issued through extensive collaboration with national and local stakeholders. The feedback and comments received at the stakeholder meetings and as a result of the consultation round were a valuable contribution to the preparation of the final opinion.

Transport expenditure represents only approximately 3% of the state budget, but the significance of traffic and transport as a prerequisite and facilitator for trade and industry as well as for Finnish welfare is considerably greater. A modern society cannot operate without adequate transport connections and infrastructure. The plan is based on a moderate annual budget of 1.5 billion euros, lower than the current level, which means funding of approximately six billion euros during one term of Parliament. The low level of financing reflects the state of public finances and the need for improved economic performance over the long term, thus necessitating clarity of the priorities. Funding is aligned with the priorities for operations, with the central priority in the plan being to assure the existing infrastructure's capacity for handling day-to-day traffic, as the resources allocated for development work will diminish considerably from their current level. Basic infrastructure management accounts for 4.8 billion euros of the funding, public transport for 520 million euros, and development of transport networks for 840 million euros. The plan demonstrates, by way of service level descriptions, the effective impact expected from the funding allocated, from the versatile array of methods available, and through collaboration with the other operators.

Helsinki, February 2011



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INTRODUCTION

1.

The point of view on the development of the transport system was composed so as to take into consideration customer needs, societal objectives, and the available resources.

The report 'Transport Conditions in 2035' is the Finnish Transport Agency's long-term plan (LTP) presenting the agency's point of view on the development of the transport system. 'Transport Conditions in 2035' covers all sectors of infrastructure management and infrastructure services and public transport, cycling, and walking. The drafting started with a notion of such seamless interoperation of the travel and transport chains and of the various modes of transport and services as would allow meeting the service level requirements posed by customer needs, mitigation of climate change, and the environmental and safety targets. For the Finnish Transport Agency's operations to promote the functionality of the entire transport system, traffic safety, fair and balanced regional development, and sustainable development in general requires a more comprehensive perspective and an increasingly holistic approach in the study of the transport system. In this work, the main players are the Centres of Economic Development, Transport and the Environment (ELY Centres), whose Transport and Infrastructure branch operates as an integral part of the state transport administration.

To provide an overall view of the transport system, the report presents, in addition to actions in the Finnish Transport Agency's purview, also guidelines that fall outside the scope of the Finnish Transport Agency's authority. These guidelines are recommendations that seek to support the operation of the totality in line with customer needs and societal objectives.

The report presents a point of view on how the transport system should be developed in consideration of the above-mentioned needs, goals, and objectives and, at the same time, how the annual resource allocation of approximately 1.5 billion euros and the available means and methods would facilitate accomplishing optimal service and effective impact. Long-term planning is a continuous process and therefore allows subsequent studies to take into account any fluctuation in public finances. This report seeks to provide decision-makers with background material in support of policy decisions on the overall transport system. The plan includes a programme of future transport projects, which presents the entities on which the near-future development of the transport system should focus. The programme in itself is not tied to the financial framework proper of the plan.

Transparency and interaction were emphasised in the preparation work, as was more in-depth consideration of the various regional needs than was applied in the past. In spring 2010, preliminary guidelines for the development of the transport system were issued on the basis of the regional transport system plans and the evaluation of needs and the target state. These guidelines were reviewed at five stakeholder events (one national and four regional).

The stakeholder collaboration yielded three transport system options, each with different emphasis on the development of regional and spatial structure, the needs of trade and industry, development of public transport, management and maintenance resources, and the size and targeting of development investments. Proceeding from the feedback received at the stakeholder events in the autumn, the Finnish Transport Agency composed its expert opinion on the long-term development of the transport systems and the agency's role therein. An extensive consultation round preceded the final outlook.

Stakeholder views influenced drafting during the various phases.

EFFICIENT TRANSPORT CONNECTIONS – A THRIVING FINLAND

2.

Pursuant to its strategy, the Finnish Transport Agency develops the transport system for the benefit of the customers, based on a vision of efficient transport connections and a thriving Finland.

The long-term plan follows the views of the Finnish Transport Agency's strategy. According to the vision, the transport system is developed for the benefit of the customers and in collaboration with the various operators. The objective is to create efficient transport connections and a thriving Finland. For realising the vision, the plan emphasises the day-to-day traffic capabilities of the infrastructure, minor development schemes, and increased funding for public transport in growing urban areas in particular.

In the run-up to 2035, society will change in many ways. The transport of the future will nevertheless be supported mainly by the existing networks. During the plan period, infrastructure is developed only to an extent equivalent to a few per cent of the overall length of the infrastructure. Infrastructure development is a slow process in comparison to societal changes and especially to those taking place in trade and industry. In order to anticipate change, we must first identify the drivers of change that affect transport supply. The diversification and differentiation of the relevant needs and circumstances must also be considered in the design of supply and guidance. We must not lose our reaction speed and agility in the development of the transport system. We will also need a versatile array of tools and methods, collaboration among the various operators, and increasingly customised solutions. Only close collaboration with the customers and stakeholders will ensure adequate service levels and allow meaningful allocation of the limited resources and the development of service solutions that meet user needs.

THE FOLLOWING CHANGES IN THE OPERATING ENVIRONMENT WILL INFLUENCE TRAFFIC AND TRANSPORT:

- Globalisation will advance and change commercial structures and global trade
- Climate change will continue and the ensuing changes gain in strength, forcing us to adapt accordingly
- Energy prices will increase, and the availability of energy may be restricted
- The development of the Russian economy will have an impact on passenger and goods traffic
- The significance of the Barents area will increase over the long term
- Industrial reorganisation will bring about new lines of industry; also, the extraction industry will gain ground, and the transport operations of heavy industry will change
- Use of bioenergy will increase
- The relative importance of services will increase in the production structure
- E-commerce and online transactions will increase in volume
- Lifestyles and values will diversify, and the importance of leisure time will increase
- Working life will change and mobility increase
- The population is ageing and becoming concentrated in the major growth centres
- Areas will differentiate
- Technical solutions are becoming more advanced, and new innovations will offer new opportunities
- Vehicle and fuel technologies will develop further

STRATEGIC GOALS

Guidelines applicable in the long-term development of the transport system

FOR THE CUSTOMER

OPERATIONS PREREQUISITES FOR TRADE AND INDUSTRY

- Handling of day-to-day traffic and securing of the operational conditions necessary for trade and industry operations throughout the country are the first priorities in the development of national and international connections.
- Regional needs are emphasised particularly in the management and maintenance of the low-volume road network, minor transport system developments, and the mode of organisation of public transport.

EVERYDAY MOBILITY

- Functional travel chains and day-to-day traffic capabilities are first priorities in the development of passenger transport and associated services. Public transport will be transformed into an appealing option in the metropolitan and urban areas, where feasible.
- To enhance operations at transport system hubs and nodes, the responsibilities and funding related to the park-and-ride function will be distributed among the state bodies, municipalities, and private-sector operators involved.
- Walking and cycling are to be the basic modes of travel and will have priority in the transport environment design of metropolitan and urban areas.
- The possibility of combining statutory transport with traded public transport offering a basic level of service will be studied and implemented through municipal collaboration.

OUR ACTIONS TODAY IMPACT TOMORROW

ADAPTATION TO AND MITIGATION OF CLIMATE CHANGE

- Traffic-related greenhouse gas emissions will be reduced in collaboration with the other operators through reduction of mobility needs and improvement of energy-efficiency in the transport system.
- The taxation and fee structure of all modes of transport will be reviewed holistically from the various perspectives (e.g., those of the environment, fairness, and guidance impact).
- Targeting of the transport pricing (taxes, fees and charges) will support transport policy targets.
- The ecological footprint of traffic and transport will be reduced.

SAFETY AND THE ENVIRONMENT

- Safety thinking is an integral part of the Finnish Transport Agency's operations. Ensuring safety is the defining aim of the agency's work.
- New design criteria will be introduced, with emphasis on safety rather than speed.
- Road traffic safety will be improved through support for compliance with speed limits and utilisation of new technology.

MORE FOR LESS, TOGETHER

A VERSATILE ARRAY OF TOOLS AND METHODS

- A versatile array of tools and methods will be employed, and the agency will collaborate with the customers and stakeholders, emphasising service solutions that meet customer needs rather than mere infrastructure management.

MAIN CONNECTIONS

- Assuring solid travel and transport conditions for the main connections will promote competitiveness of trade and industry, provide for inter-regional accessibility, and allow integration of land use and traffic.

FUNDING

- Allocation of financial resources will emphasise day-to-day traffic capabilities of the infrastructure, minor development schemes, and increased funding for public transport – particularly in the growing metropolitan and urban areas.
- Potential rises in cost levels must be considered in the funding for procurement of infrastructure management and traffic services.
- The long funding span and the 10-year implementation plan will enable efficient implementation of the improvement schemes.
- The agency will prepare a draft transport system appropriation, common to all operators, that would be used for transport system improvement in the metropolitan and other urban areas, in compliance with the common guidelines and irrespective of administrative and municipal demarcations.
- Minor investment schemes will be preferred increasingly in basic infrastructure management, which will require, at first, increased funding for basic infrastructure management.
- The funding of major investments should be secured through amendment of the budget procedure so as to allow more cost-efficient and prompt implementation of the investments. In the event that the budget procedure cannot be amended, investment financing from a source outside the state budget should be considered (e.g., Infra Ltd).
- In collaboration with the other operators, the agency will seek new funding models that would ensure development of the traffic services and routes.

2.1 Operations prerequisites for trade and industry

Handling of day-to-day traffic and securing of the operations prerequisites for trade and industry throughout the country are first priorities in the development of national and international connections.

In collaboration with the other operators and using the resources available, the agency will, on a long-term basis, develop the national and international connections to the transport chains of trade and industry, regional accessibility, and tourism. The dynamics of trade and industry, special needs of the various regions of Finland, and changes in the operating environment will be considered in the development work.

- **In Southern Finland**, the emphasis will be on ensuring adequate capacity for the national and international transport operations of trade and industry and on providing good connections for commuting and mobility of the work force in general.
- **In Western Finland**, the emphasis will be on the operation of transport chains at the main connection nodes and ports, also on the East–West axis.
- **In Eastern Finland**, the emphasis will be on adequate connections to Russia; the needs of the extraction, forest, and tourism industries; and the operation of the Saimaa Canal.
- **In Northern Finland**, the emphasis will be on the needs of extraction and other heavy industries and of tourism. Over the long term, the agency prepares for the increasing importance of the Barents region.

Meeting of the operations-related prerequisites for trade and industry will be supported through secure, functional transport chains and accessibility. In consideration of meaningful allocation of tasks among the various modes of transport, the state will guarantee a flight connection in the case where travel by other means of public transport would exceed three hours and no other flight connection is available within one hour.

The competitiveness of trade and industry will be ensured through functional transport chains and accessibility.

Regional needs are emphasised particularly in the management and maintenance of the low-volume road network, minor transport system developments, and the mode of organisation of public transport.

2.2 Everyday mobility

Functional travel chains and handling of day-to-day traffic are the first priorities in the development of passenger transport and associated services. The appeal of public transport will be increased in the metropolitan and other urban areas, where this is feasible.

In long-distance passenger transport, the first priorities include connections from regional and tourism centres to Helsinki and the connections between the regional centres that are required for linking commuting areas and supporting economic activity. In the national public transport networks, commercial services will be reinforced also by infrastructural means, such as improvement to connection nodes and making of railway infrastructure investments. The service level target for the key sections of the main road infrastructure (motorways and trunk roads) is set at a safe 100 km per hour, whereas elsewhere in the main road network the applicable speeds are determined in line with safety considerations.

Transport system development within the metropolitan and urban areas focuses on supporting the generation of functional travel chains and coherence of land use in the metropolitan and urban areas. The agency will develop the transport system in collaboration with the metropolitan and urban municipalities, seeking to improve the conditions for public transport, cycling, and walking. Public transport funding will be allocated increasingly to urban areas, especially to emerging public transport zones and to the improvement of travel chains. Furthermore, public transport will be supported through infrastructural measures and the functionality of connection nodes will be improved.

In the four largest metropolitan areas, the target is to render public transport competitive with private motoring in work travel and commuting. In other large and medium-sized developing metropolitan and urban areas, the supply of public transport will be made more appealing. The state will direct the measures to regions that are committed to the integration targets. In urban areas, funding will be awarded for entities that will advance attainment of the mutually agreed service levels and targets. Walking and cycling conditions will be developed as part of functional travel chains. In other areas, use of passenger cars will remain the primary means of transport. In small urban areas and in sparsely populated areas in the proximity of urban areas, the target is public transport at the basic service level set. The agency seeks to secure basic services also in the sparsely populated areas.

The conditions for public transport, cycling, and walking must be reinforced in urban areas.

To enhance the operation of transport system connection nodes, the responsibilities and funding related to the park-and-ride function will be streamlined by the state bodies, municipalities, and private-sector operators involved.

Walking and cycling are the basic modes of travel and will have priority in transport environment design and implementation in metropolitan and urban areas.

The possibility of combining statutory transport with openly traded public transport at a basic service level will be studied and implemented through municipal collaboration.

2.3 Adaptation to and mitigation of climate change

Traffic-related greenhouse gas emissions will be reduced in collaboration with the other operators through reduction of mobility needs and improvement of energy-efficiency in the transport system.

Transport generates approximately 20% of Finland's greenhouse gas emissions. Pursuant to the long-term climate and energy strategy, the goals under the 2009–2020 climate policy programme of the Ministry for Transport and Communications administrative sector include, inter alia, that:

- greenhouse gas emissions from traffic and transport will be reduced by 15% in the run-up to 2020, as compared to year 2005
- the energy-efficiency of travel and transport will improve by nine per cent
- the volume of travel done by walking and cycling will increase by 20%
- the service level of traffic and transport will remain unchanged despite the increased number of extreme weather phenomena

The 2009 government report on the future of climate and energy outlines the more distant goals for emissions reduction. According to the report, the goal is to reduce greenhouse emissions in Finland by 80% from 1990 levels before 2050.

A new kind of action is called for. The central methods in the mitigation of climate change are vehicle and fuel technology, and economic guidance. In the future, private motoring must be guided through legislative instruments and taxes, fees, and other charges based on the effective travel output.

The Finnish Transport Agency will seek to reduce traffic-related greenhouse gas emissions in collaboration with the other operators, through:

- more integrated land-use and traffic planning, and favouring of the letter-of-intent procedure
- promotion of more coherent land use in the metropolitan and urban areas, the conditions necessary for cycling and walking, energy-efficient travel chains, and guidance of mobility
- promotion of energy-efficient solutions and intelligent logistics in goods transport
- enhancement in traffic management (through utilisation of guidance services etc.)
- enhancement to the competitiveness of railway transport by means of infrastructure management and associated travel chains

Climate change requires preparedness also on the part of infrastructure management and traffic services, for reaching of the requisite transport service level despite the increased prevalence of floods, gales, rainstorms, and around zero weather conditions.

The taxation and fee structure for all modes of transport will be reviewed holistically from the various perspectives (e.g., those of the environment, fairness, and guidance impact).

Traffic pricing (taxes, fees and charges) will be targeted in support of the transport policy objectives.

2.4 Safety and the environment

Safety thinking is an integral part of the work of the Finnish Transport Agency. Ensuring safety is the defining aim in the agency's operations. The ecological footprint of traffic and transport will be reduced.

The overall objective is to prevent all fatal injuries and all accidents harmful to the environment in maritime and railway traffic. In road transport, the agency seeks to ensure by 2025, in collaboration with the other operators, that the number of fatal accidents does not exceed 100 annually. Over the long term, safety work in road transport is based on the notion of zero-tolerance: the transport system design must ensure that no-one will perish or sustain serious injury in traffic.

All operations seek to prevent accidents and adverse effects, aiming at a safe infrastructure and operating environment that takes environmental impact into consideration. People and the environment are safeguarded against any health or environmental hazards caused by traffic and infrastructure management (noise, vibration, and soil and groundwater contamination).

In collaboration with the other operators, the Finnish Transport Agency will seek to reduce accidents in traffic through:

- actions under the national traffic safety programme
- application of efficient methods to prevent the most serious accidents (for example, segregating opposite driving lanes in road traffic and introducing safety-centric design criteria)
- promotion of attitudes oriented toward safety and responsibility among both individual users and corporate and other organisations engaged in commercial transport operations
- participation in the development of intelligent transport solutions that will prevent accidents and mitigate the consequences (including automated traffic management and monitoring)
- development of railway traffic safety systems and elimination of level crossings
- development of maritime vessel traffic services and infrastructure management measures that use the latest technology
- promotion of such regional and spatial development as will reduce the vehicle output and support a shift to safer modes of travel and transport

Preventive work is of the essence for reaching the safety and environmental goals.

New design criteria will be introduced, with their emphasis on safety rather than speed.

Road traffic safety will be improved by supporting compliance with speed limits and utilisation of new technology.

2.5 A versatile array of methods and collaboration

A versatile array of tools and methods will be employed, and the agency will collaborate with the customers and stakeholders, emphasising service solutions that meet customer needs over mere infrastructure management.

The agency seeks to influence, in collaboration with the other operators, transport demand and choice of transport mode through a comprehensive array of methods and by taking part in the development of pricing, supporting land use that will minimise transport needs, and supporting the development of service networks. Use of the infrastructure and traffic services will be boosted by means of intelligent transport. Traffic management and control, information services for public transport, electronic payment systems, smooth functioning of the travel chains, and park-and-ride solutions will be enhanced.

Small-scale development schemes will be favoured in the enhancement of the transport system. This approach will allow wider spatial dispersal of the measures and implementation of also those measures that, despite their cost-efficiency, have not received prior funding. Major development measures will be considered carefully, since the available resources will not allow for large investments. Among investment projects, only such reasonable, safe, and functional entities will be implemented as yield adequate transport benefits for the connection-users.

The economic performance of the industry will be improved and innovations utilised. Innovations will be encouraged by means of efficient procurement procedures and implementation models. Access to public information will be promoted, making traffic and infrastructure information widely available to the public. This will enable new services and the development of innovations.

Collaboration is required for creation of new funding models and budget practices, to develop urban transport systems, and to organise public transport across municipal boundaries.

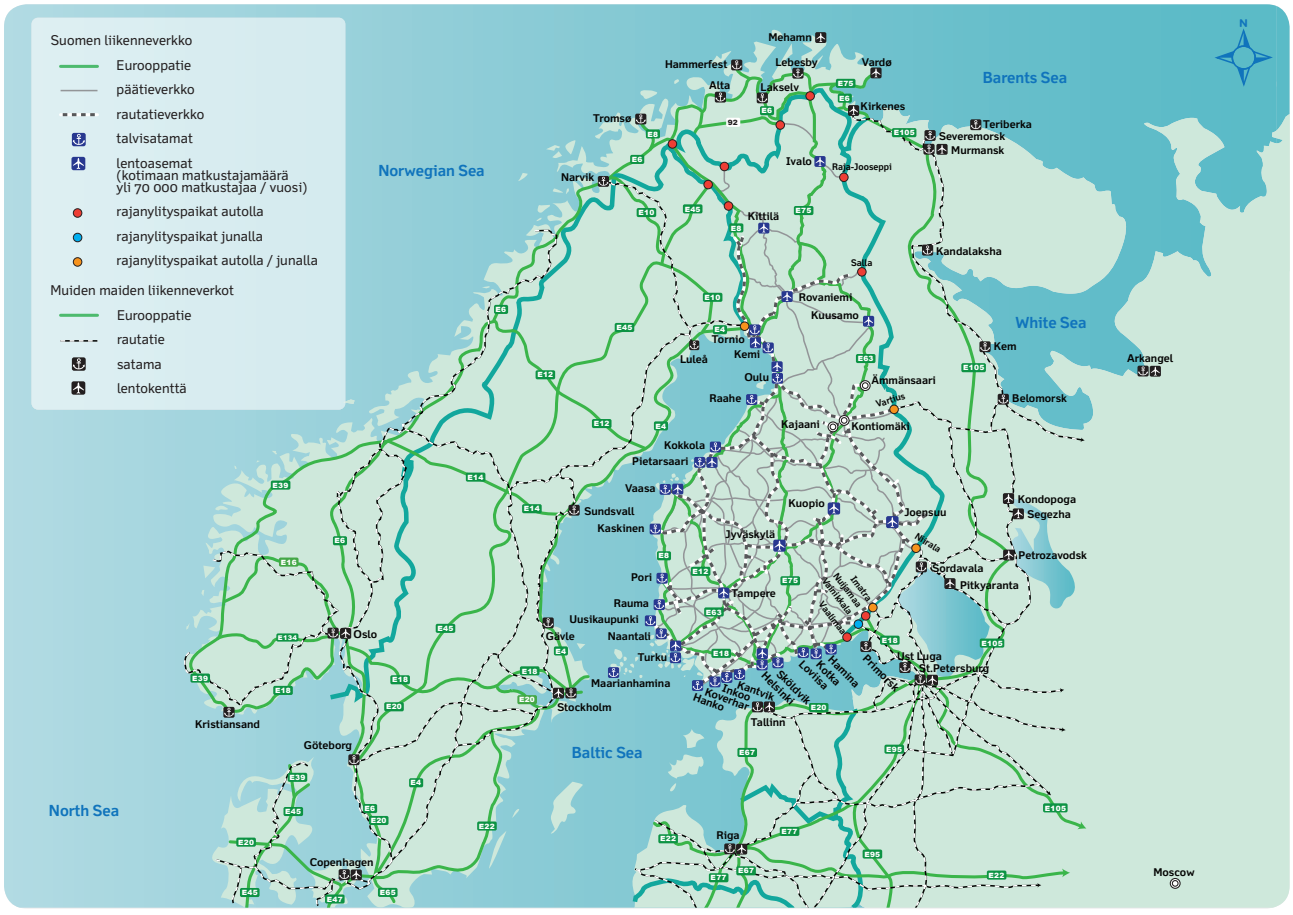
Collaboration is necessary to guide transport demand and to ensure adequate traffic services.

2.6 Key transport networks

Assurance of travel and transport conditions for the main connections will promote the competitiveness of trade and industry, provide for greater inter-regional accessibility, and allow integration of land use and traffic.

The purpose of the main transport networks is to provide reliable, safe, and undisturbed travel and transport between the various parts of the country and across state borders. The Railway and Highways Acts use the term 'trunk network', and, according to said acts, the Ministry of Transport and Communications shall specify the trunk networks separately. The trunk network was presented in a committee report by the Ministry of Transport and Communications (LVM publications 43/2006), but the matter was not pursued further. The main road and railway connections, seaports, and airports should nevertheless be specified in one way or another. In this context, establishing priorities among the existing connections is important.

Figure 1:
National main transport networks and international connections.



2.7 Financing as the basis for service levels

The allocation of financial resources will emphasise the day-to-day traffic capabilities of the infrastructure, minor development schemes, and increased funding for public transport (in the growing metropolitan and urban areas in particular)

In 2011–2015, the Finnish Transport Agency's operations will be guided by the Finnish Transport Agency's strategy, action, and financial plans for 2011–2015, and the underlying budgetary framework. This long-term plan guides these operations over the long term. The changes that the plan will bring about can be fully visible only after two or three terms of Parliament.

The plan proceeds from the assumption of an annual funding level of 1,550 million euros. The funding framework includes income funding from infrastructure charges and other ex-budgetary revenue sources, estimated at 50 million euros. The plan excludes overhead costs. It also assumes that separate funding will be awarded for certain significant projects, such as transport connections for mines or underground solutions in metropolitan areas.

The plan describes how, in the opinion of the Finnish Transport Agency, the available funding should be allocated and what will be accomplished thereby. In recent years, the funding level has been higher than the plan's funding framework assumes: 1,680 million euros, on average, in 2008 and 2009. Because of recovery funding, for example, funding for large-scale development investments has been high in relation to the long-term median. The plan's low funding level reflects the state of public finances and necessitates clear prioritisation. The funding need for traffic and infrastructure management exceeds the amount of available funds by a wide margin.

The allocation of funding in the plan is not based on the existing budgetary section grants; the improvement of traffic conditions comprises both major development investments and smaller enhancement schemes funded under infrastructure management. The future expenditure for post-funding or Public-Private Partnership (PPP) projects, either completed or in progress, is included under expenditure for improvement of traffic conditions. All expenditure is presented at today's value. The expenditure excludes long-term increases in cost levels and the ensuing deterioration of purchasing power.

The funding allocation is designed primarily to assure day-to-day traffic capacity. Funding for infrastructure

> The potential for increases in cost levels must be considered in the funding.

The potential for cost increases must be considered in the financing of the procurement for the infrastructure management and traffic services.

The long span of the funding period and the 10-year implementation plan will enable efficient implementation of the enhancement schemes (see Appendix 1).

Minor investment schemes will be favoured increasingly in basic infrastructure management, which will require, at first, increased funding for basic infrastructure management (see Appendix 2).

The agency will prepare a draft transport system appropriation, common to all operators, to be used for transport system improvement in the metropolitan and other urban areas, in compliance with the common guidelines and irrespective of administrative demarcations.

Funding of the major investments should be ensured through amendment of the budget procedure in a manner that would allow more cost-efficient and prompt implementation of the investments. In the event that the budget procedure cannot be amended, investment financing from a source outside the state budget should be considered (e.g., Infra Ltd).

In collaboration with the other operators, the agency will seek new funding models that would ensure development of the traffic services and connections.

Table 1:
Average allocation of annual funding in 2016–2035
(change from the 2008–2009 funding level in brackets)

Plan sections	Plan annual funding (in euros)	Change from current situation (in euros)
Maintenance of traffic capacity	**1,050 million**	**(+ 110 million)**
Infrastructure maintenance	500 million	(+80 million)
Infrastructure management and operation	400 million	(+10 million)
Traffic management, icebreakers	100 million	(+10 million)
Archipelago traffic, ferries, and cable ferries	50 million	(+10 million)
Improvement of traffic conditions	**370 million**	**(-280 million)**
Minor improvement schemes	160 million	(+35 million)
Major investments	210 million	(-315 million)
Public transport subsidies	**130 million**	**(+40 million)**
Metropolitan and urban areas	50 million	(+30 million)
Basic-level service traffic	60 million	(+20 million)
Long-distance transport	20 million	(-10 million)
Total	**1,550 million**	**(-130 million)**

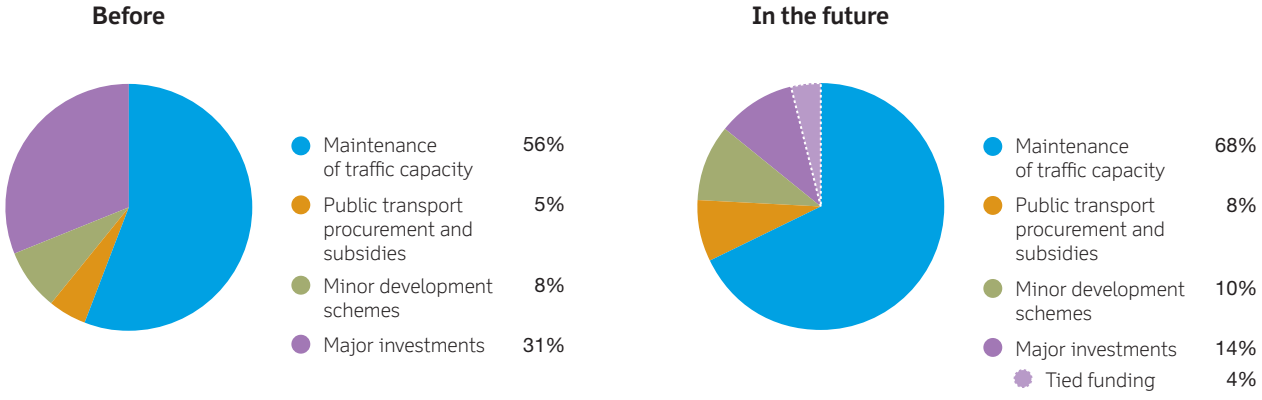


Figure 2:
Allocation of annual average funding in years 2008–2009, and allocation of funding underlying the future service level.

management and maintenance and for traffic management is set at a level that, in the first part of the plan period, will maintain the current level of management and maintenance for the the various modes of transport. In the latter part of the plan period, the management and maintenance operations will be prioritised according to the traffic needs of the networks in such a manner that the condition of the main connections will not deteriorate.

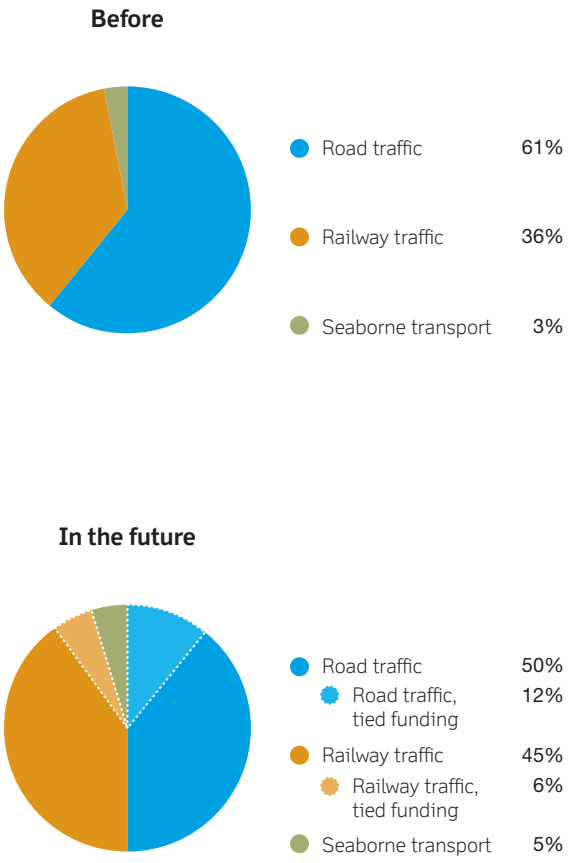
More funding will be allocated for public transport procurement and subsidies than at present. The additional funding will be allocated to public transport subsidies for metropolitan areas and to assurance of a basic level of service in smaller urban and rural areas.

The road network will be improved primarily through minor schemes, for which more funding will be made available. Funding for minor improvement schemes will be allocated primarily to projects that advance public transport, walking, cycling, and the environment and to individual safety measures related to the busiest main routes. The funding allows the implementation of only a few major road network development projects during the plan period. The schemes apply to only a few per cent of the overall length of the full main road network. No investment in improvement will be made for approximately 90% of the road network.

In the improvement of the railway network, emphasis will be on the major projects on the main lines that enhance transfer capacity and on the commuter transport projects for the Helsinki region's local traffic. In seaborne traffic, improvement funding will be allocated for the development of traffic management systems and to waterway deepening in line with the traffic needs of the ports.

The total investment in the improvement of traffic conditions is 370 million euros per annum (over 55% of the current level). Annually, almost 70 million euros of the funding, on average, is tied to the funding of completed or in-progress post-funding or PPP (Public-Private Partnership) projects, leaving approximately 300 million euros available per year, on average, for new improvement schemes. This is less than half of the existing amount. The focus of the improvement funding will be transferred to some extent from road to railway infrastructure management.

Figure 3:
Allocation of improvement funding for traffic conditions (major investments and minor development schemes) in 2008–2009 and in the future.



TRANSPORT SERVICE LEVELS AND PROJECTED IMPACT IN 2035

3.

3.1 National and international connections

The resources under the plan allow reaching in 2035 in national and international connections the service level described in the following.

Finnish exports rely mainly on shipping and air transport. Trends in foreign trade are affected by globalisation, increasing attraction to Asia, developments in Russia and structural reorganisation of industrial capacity. Development of the St Petersburg region will increase Finnish exports and reinforce the role of road transport. Structural reorganisation of trade and industry will reduce transport intensity and increase the volume of road transport. Reorganisation of the forest industry and associated production cuts will reduce transport volume in all modes of transport, but railway transport will see the greatest relative reduction. On balance, the emerging extraction industry will increase the volume of railway transport.

Since the plan emphasises handling of day-to-day traffic across the entire infrastructure, the low-volume road network's role in day-to-day traffic will remain at a reasonable level. It follows, however, that the main connections will be developed to a lesser extent.

The funding allocation applied in the plan is quite fair in regional terms and will not increase pressure for further concentration of the population or for spatial polarisation due to urban growth. In the event that spatial concentration in the metropolitan areas exceeds the estimated rate, the connections with busy traffic will be unable to provide an adequate level of service. Furthermore, speeds must be reduced in order to ensure safety, since the budget framework will not allow any major investments.

With the available resources, the projected improvement for the speed level target (100 km per hour) set for the key sections of the main road network is minimal as compared to the present situation. The traffic service level of the road network will improve only at individual locations, which represent a small proportion of the entire length of the motorways. The service level will deteriorate in those parts of the infrastructure where traffic increases significantly. Since the speed level is determined in accordance with safety considerations, increasing traffic will mean reduction in speed limits (to 80 km per hour) for many sections, on certain sections to below the maximum speed allowed for heavy vehicles. Travel times will increase, and long-distance traffic especially will slow down. Cost-efficiency in transport operations will deteriorate.

The smoothness of road traffic will be enhanced and incidents thwarted through traffic management methods. The schemes designed to enhance punctuality will reduce the average range of speeds and thus improve road safety. The infrastructural methods do not, however, allow any greater improvement in road safety. The condition of

the main routes (motorways and trunk roads, slightly over 13,000 km) will remain at the present level, because of the increased funding allocated to day-to-day traffic capacity. Similarly, the high level of wintertime maintenance and the maintenance of the road environment (green areas, traffic signs, lighting, fixtures, and cleaning) will remain at the current level on the motorways and trunk roads.

With the resources under the plan, the condition of the key sections of the railway infrastructure will remain at its present level. The functioning of the key railway yards will be improved after 2020. The projects and schemes under the plan will allow improvement of the carrying and throughput capacity on certain railway lines, but the targets will not be reached. The 25-ton railway network will expand somewhat (currently, it accounts for approximately 30% of the infrastructure central to goods transport). Increasing the carrying capacity of the most important goods transport lines will improve cost-efficiency in transport and increase the railway network's throughput capacity by weight.

The punctuality of railway traffic will be increased through greater transfer capacity in the key sections of the infrastructure and modernisation of the traffic management system. Increased transfer capacity in the Helsinki region fulfils the prerequisites for increased railway transport supply. This will have a positive impact on long-distance passenger transport and the development of public transport in the Helsinki region and contribute to the increase in spatial coherence. The speed level target for passenger transport will be raised on the Pohjanmaa line and, to a lesser extent, for other parts of the main-line network. Over the connections within the catchment of the Pohjanmaa line, the competitiveness of railway transport will increase in long-distance passenger transport in proportion to air and bus traffic and, to some extent, to private motoring. On the other sections between urban areas, public transport will rely largely on present-level railway and bus connections, but reduced speed levels on the main road connections will also slow down bus transport. The functionality and accessibility of the stations will be slightly improved. The service level of the travel chains will be improved across the board through the development of real-time mobile passenger information services based on mobile technology. The effective impact on passenger volumes cannot be projected with any certainty, since the price level of travel has an important influence on the development of the relative competitiveness of the various modes of public transport and private motoring.

The safety of the railway infrastructure will remain high. Funding for large-scale elimination of level crossings is lacking, preventing increased speed levels over a larger part of the network. The increased funding for ensuring good handling of day-to-day traffic at the start of the plan period means that the volume of repairs to the connections and structures will not increase and the portions of the infrastructure that are in relative disrepair will remain at today's level, on average. Ageing infrastructure and equipment and the expansion of the infrastructure through new investments will increase the need for management and maintenance funding during the plan period. Given the funding level proposed, the condition of the infrastructure will deteriorate in the latter part of the period.

The service level and condition of commercial shipping routes will improve slightly. Commercial shipping routes will be deepened and improved pursuant to a profitability assessment based on customer needs. The condition of commercial shipping routes will also improve. Trustworthy and up-to-date chart data facilitate safe navigation. Wintertime commercial shipping to Finnish ports will be ensured. Average waiting times for icebreaker assistance will remain unchanged. Modernisation and use of traffic management systems have reduced safety-related and environmental risks, as well as hazards and other incidents. The reliability of operations in the Saimaa Canal will improve.

The infrastructure investments required for the mine projects in Northern and Eastern Finland will be funded under separate projects. The plan does not recommend investments associated with the emerging Barents region, since these will most likely be actualised only after the 2030s.

The operation of air connections is market-based and, in the event of market failure, will be ensured only where travel by other means of public transport would exceed three hours and no other flight connection is available within one hour.

3.2 Service level in urban areas

The resources under the plan allow reaching the service level described below in national and international connections by 2035.

Changes in the operating environment influence the demand for transport. Spatial coherence and effective guidance of this demand have a considerable impact on where housing, workplaces, and services will be located. If the current trend holds, dispersal will continue and the opportunities to develop a competitive public transport sector will deteriorate. The potential for reaching the climate, safety, and environmental goals will also decline.

Influencing traffic growth requires goal-oriented collaboration among the various operators and commitment to a state of will. Both travel distances and the pre-conditions for public transport, cycling, and walking can be influenced through the design of housing, services, and work places as well as traffic planning. Design can also be employed to influence the availability of the leisure-time services used locally. Municipal actions and schemes have a key role in this development. The plan supports municipal integration through the letter-of-intent procedure and increased funding for public transport, for example. Funding will be increased in metropolitan areas, in particular. Public transport is subsidised also through investments. Walking, cycling, and park-and-ride traffic will be developed as part of the travel chains.

Economic guidance of transport seeks to exert influence both on the choice of motor vehicles, fuels, and modes of transport and on the demand for transport in general. In addition to the economic guidance, price developments for fuels influence travel costs. The price of fuels used in transport is projected to rise because of the increasing expense of fossil fuels, climate policy, and the high price of the new fuels.

Municipal funding is an important factor in the maintenance and development of urban transport systems, and state funding alone will not suffice to promote development aligned with the goals and targets. The proposed transport system appropriation would enhance regional flexibility and the implementation of collaborative projects.

The service level description is based on the assumption that, in urban areas, funding will be awarded to the project entities that will advance attainment of the mutually agreed targets.

In the four largest metropolitan areas, the state will increase its investment in public transport from the current level, aiming at a service level competitive with private motoring. In the Helsinki region, investment in railway infrastructure will create conditions for a greater and more punctual commuter traffic supply. Railway transport coverage will still remain marginal in the growing boundary municipalities, and there will be no funding for entirely new lines. The state will, jointly with the municipalities, make the minimal investments required for launching commuter railway transport in the Tampere and Turku regions. Public transport subsidies will increase in the metropolitan areas. In combination with investment from the metropolitan municipalities, this will create the prerequisites for improved trunk line supply and allow keeping ticket prices competitive. Regional public transport bodies operate the public transport systems in the metropolitan areas and provide the passengers with integrated ticket systems.

In the other large and medium-sized urban areas, the state will increase public transport subsidies, providing that the municipalities too invest in transport. The increased subsidies will facilitate more appealing service in public transport. An integrated ticket system will also facilitate the use of public transport.

Increased funding for minor investments will bring about improved cycling and walking conditions. Increased funding will also be allocated to functional enhancement of bus traffic (benefits, bus stops, and park-and-ride systems).

Increased traffic will cause deterioration in the service level of the metropolitan main connections. No funding is available for projects that would provide additional capacity. Contingent upon regional and local decisions, the minor schemes implemented across Finland will facilitate local improvement in road traffic safety, such as functioning of the junctions, the smoothness of public transport, and prevention of adverse effects on the environment. In the growth centres, the increased number of minor investments will not entirely suffice to meet the needs generated through increased traffic and property development.

Overall, the operations-related conditions for walking, cycling, and public transport will improve slightly in the growth centres while those for private motoring will slightly deteriorate. Particularly in the Helsinki Metropolitan Area, increased traffic will also result in increased congestion, if the share of public transport, cycling, and walking in travel cannot be increased.

3.3 Service levels in other areas

The resources under the plan allow reaching the service level described below by 2035.

The day-to-day maintenance of the entire road network (in winter traffic conditions, in particular) will meet traffic needs throughout the plan period, but only within the limits of reasonableness where low-volume roads are concerned. In the first part of the plan period, the condition of the roads and road structures will remain at the present level, and no further repair needs will arise. During the latter part of the period, the overall need for repairs will be accentuated through the ageing infrastructure, the impact of ageing structures, increased traffic, and climate change. Climate change will result in more floods, gales, and extreme temperatures, causing problems for maintenance operations. These factors have an impact on the functioning of traffic and transport, maintenance needs, and the structures involved.

Assurance of day-to-day maintenance means that the relative lack of funding will affect mainly the repair of low-volume roads and bridges. The structural condition of regional roads, especially connecting roads, will deteriorate fundamentally in the latter part of the plan period. The number of roads in disrepair will increase twofold in comparison to that of today. The condition of bridges will also deteriorate.

State funding for public transport will increase in small urban areas and in sparsely populated areas. The increased funding and the transport-related collaboration across administrative and municipal borders will ensure at least a basic service level in public transport.

The condition of low-volume railway tracks will deteriorate, and the number of traffic restrictions will increase. Correspondingly, the condition of railway yards in minimal use will deteriorate. Those railway lines in most infrequent use will be decommissioned, whenever the line's condition would necessitate a major replacement investment. In the most important timber procurement areas, timber terminals will be implemented through joint efforts to organise roundwood transport.

In seaborne transport, the condition of shallow channels will deteriorate slightly.

3.4 Safety and the environment

The design of traffic connections and the associated environment has a key role in both safety and environmental impact, but further action is called for to achieve the goals set.

Safety constitutes the central point of focus in the plan. The design of transport connections and associated environments facilitates prevention of accidents that is implemented in compliance with the national traffic safety policy. The new design criteria that prioritise safety over speed will reduce the risk of accidents. Nevertheless, reaching the goal requires collaboration with the other operators.

Minor development schemes are used to implement safety measures all over Finland. The plan pays attention to the safety of transport routes and associated environments and utilises the means of intelligent transport systems to improve safety. Accomplishing the safety targets is a demanding task.

Prevention of accidents, minor development schemes, and the development and modernisation of traffic management systems will reduce the risk of accident in shipping and railway traffic. The plan emphasises reduction of risks through, inter alia, hydrographic surveys and modernisation of the control system for vessel traffic.

With respect to groundwater contamination, the focus is on preventive measures and the development of anti-slip agents and methods. Warm winters and temperatures around zero degrees will increase the use of road salt, thus increasing the necessity of safeguarding groundwater. The most urgent protection measures can be implemented through minor development schemes.

Increased traffic entails a higher level of noise and vibration hazards. In Finland, almost one million people are exposed to traffic noise. The problems pertain to metropolitan environments in the main, but railway and road traffic noise produces adverse effects also in other environments. Design solutions have a significant role in the elimination of these effects (integration of routes and land use, and traffic planning). Current noise and vibration problems are to be eliminated through minor improvement schemes, in areas such as solutions related to surfacing and maintenance, but there is increasing need for specific noise prevention measures.

The transport sector accounts for approximately 15–20% of the energy consumption in Finland. Energy consumption for traffic and transport can be influenced through vehicle and fuel technology, spatial coherence, greater functionality in the travel and transport chains, and economic guidance. Taxes imposed on motor vehicles and fuels are developed to guide consumer choice. The significance of technology will also be central in future efforts to reduce emissions. Since modernisation of the vehicle base is taking place at a slower pace than expected, reaching the emission targets for 2020 will require reinforcement of the economic guidance or other, similar action to speed up the modernisation process. For reaching the long-term target for emission reduction by 2050, it is important that the energy-efficiency of the transport system improve and that the transport system support the other operators' potential to implement efficient reduction measures. Integrated planning of land use and traffic is essential. There is currently a clear disparity between the climate targets and the trends in traffic volumes.

Vehicle and fuel technology are central to the reduction of nitrogen oxide and micro-particulate emissions. Levels of maintenance and efficient sand removal in the springtime are other important factors in the reduction of emissions of larger particles.

KEY MESSAGES OF THE CONSULTATION ROUND

4.

The Finnish Transport Agency's expert opinion on the long-term development of the transport system was submitted for comments in late 2010. The elements and effects to which the parties consulted paid particular attention in their comments are addressed below.

FOR THE CUSTOMER

EVERYDAY MOBILITY

- The maintenance of day-to-day traffic capacity, implementation of minor investments, and increased subsidies for public transport were considered beneficial for ensuring the conditions needed by trade and industry; for everyday mobility; and for the various smaller schemes pertaining to public transport, cycling, safety, and the environment. Many minor cost-efficient projects have not been implemented, because they were too extensive to be implemented as part of basic infrastructure management and too small for investment projects. For these reasons, the parties consulted found it good that the plan distances itself from the traditional model of budget-section-based separate appropriations. In the statements, certain parties stated that they considered it necessary to amend budgetary practices in order to secure funding for minor investments.

- Certain parties wanted to allow the regions more leverage in relation to the maintenance of day-to-day traffic capabilities, implementation of minor investments, and increased subsidies for public transport. For these reasons, the parties consulted found benefit in the proposed transport system appropriation that would allow, irrespective of organisational competence limits, the implementation of jointly agreed schemes based on a common transport system plan, for example, or through utilisation of the letter-of-intent procedure.

- The parties consulted considered increased funding for public transport to be beneficial but indicated that increasing the appeal of public transport would require even more funding. Particular concern was expressed about public transport services outside metropolitan areas. A clarifying of the duties and responsibilities related to park-and-ride systems found favour. The topics of walking and cycling received fairly little discussion. Some people introduced new notions related to these topics, while others considered the issues to receive too much publicity even as it is.

OPERATIONS PREREQUISITES FOR TRADE AND INDUSTRY

- Many among the parties consulted were of the opinion that the analysis of the changes in the operating environment corresponds to their view of the changes in that environment. Certain parties wished to emphasise that the structural reorganisation has not received sufficient attention and that the plan ignores the possibility that the changes may unfold rapidly. In particular, the statements brought up the needs of the extraction industry, the forest industry, tourism, and bio energy, as well as, where international connections are concerned, Russia, the Northern Arc, and the increasing significance of the Barents region.

- The statements brought up, from the perspective of trade and industry, the concern about the increased disrepair of low-volume roads, decommissioning of the low-volume railway lines, and inadequate attention to the needs of South-Eastern and Northern Finland.

- Good road connections to the seaports, airports, and border-crossings and the connections between regional centres were considered important, and the plan was criticised for not adequately taking these issues into consideration.

OUR ACTIONS TODAY IMPACT TOMORROW

- Doubts were expressed about reaching the safety-related, environmental, and climate targets. Additional resources were wished for, especially in relation to protection of the groundwater and elimination of adverse effects of noise and vibration.

- Particular attention was paid to the contradiction between the climate targets and the development of traffic volumes.

- More climate-related measures were wished for. Particular emphasis was put on the significance of integrated design of land-use and traffic planning. Comments on economic guidance were rather few. The comments made emphasised, on the one hand, the necessary nature of the guidance and, on the other, the importance of differences between regions.

MORE FOR LESS, TOGETHER

- As a rule, definition of the trunk network was deemed necessary. Preparation of a clear definition was considered to support regional zoning, in particular. Some municipalities were critical with respect to the need for a definition.

- Various opinions on the development of the trunk network were advanced. The trunk network was considered to be too Helsinki-centered, with the growing importance of the Oulu region not examined adequately. The notion of the trunk network applied was considered to be based on outdated views of transport needs, thus requiring updating to reflect the changed circumstances. In particular, the connections to the trans-European and other international infrastructure should be taken into consideration – in particular, the TEN-T network, key seaports, and international air connections. More seaports, the Saimaa Canal areas, border-crossings, and railway and road connections were proposed for inclusion in the trunk network definition. In the statements, the parties emphasised that a modern service level must be maintained for the main connections and that a safe speed limit of 100 km per hour must be assured in road traffic. All things considered, the trunk network should not be the only thing to be developed.

- Although the new areas of focus for the funding were considered to be good, the low level of major investments was criticised strongly and was deemed inadequate in almost all statements. The available resources were considered rather limited in relation to the needs. The funding will not allow reaching the targets set; the level will be too low as regards needs for transport system development and maintenance. The level of funding affords poor conditions for assuring the transport conditions needed in the future, even more so in view of the multi-billion-euro maintenance deficit accumulated with the present level. The level of funding was considered bound to accelerate the rate of increasing polarisation.

- In the statements, the 10-year implementation plan, linking of the funding for infrastructure management and traffic services to an index, and the establishment of Infra Ltd were considered important.

- Also, the need to develop new funding models was emphasised. The new models would ensure solid development of transport connections and services.

APPENDICES

APPENDIX 1:
Future transport projects for the 10-year period

Pursuant to the policy guidelines concerning transport conditions in 2035, 210 million euros will be allocated each year to the major development projects for the transport network. The in-progress and completed traffic projects and the life-cycle and post-funding projects will in 2011–2015 require funding for approximately 1.9 billion euros and in 2016–2020 for approximately 0.5 billion euros. In addition to the completed projects, a preliminary proposal for transport project entities of 2.5–4 billion euros is outlined below. These projects should be implemented over the coming 10 years but are not included in the funding framework discussed here. Plans of varying degrees of completion have been drafted for the individual projects included in the project entities. The content of the project entities is described on these two pages.

In the further planning of the projects optional solutions and utilisation of a versatile array of methods will also be evaluated. The cost projections are preliminary only and will be specified in more detail as the planning progresses. A balanced and even investment level is important with respect to the operation of the market and long-term development of the transport network.

Improvement of the main routes (road, railway, and sea)	EUR 1,000–1,700 million
E18 Turku–Vaalimaa motorway	EUR 250 million
Helsinki region transport system	EUR 700–900 million
Improvement of other main roads and the railway network	EUR 100–200 million
Metropolitan area projects	EUR 250–550 million
Investments in traffic management	EUR 200–400 million
Total	**EUR 2.5–4 billion**

Concurrently with the above-mentioned project entities, purchases totalling approximately 1.3 billion euros (four icebreakers, coming to approx. 900 million euros, and commuter ferries for approx. 400 million euros) should be procured through service contracts.

Future transport projects for the 10-year period

Ensuring Finnish competitiveness and sustainable growth requires functional and flexible travel and transport chains. Focusing development measures on the metropolitan areas, key international connections, and main routes will assure a good service level in the long term.

In the planning of the route projects, the emphasis will shift increasingly toward service solutions that meet customer needs. For guaranteed service levels, versatile methods and optional solutions will be studied. The implementation of route projects will consider the needs of all transport modes, and the optimal solution in view of the entire transport system will be implemented.

Improvement of the main routes (road, railway, and sea) (1,000–1,700 million euros)
For the main routes, the goal is to improve the functionality and safety of travel and transport. The core targets include inter-regional accessibility and competitiveness.

In the railway connections, the goal is to increase the carrying and throughput capacity of the network and traffic punctuality. Modernisation of railway yards will improve the level of service and the functioning of travel and transport.

The road network measures aim at traffic safety and a more consistent service level in long-distance transport. The shipping lane measures seek to assure functioning of transport operations and improve transport-economic performance.

E18 Turku–Vaalimaa motorway (250 million euros)
The goal is to establish a consistent level of service on the most international Finnish road, part of the 'Nordic Triangle' prioritised on EU level. The project will ensure traffic functionality far into the future.

Transport system in the Helsinki region (700–900 million euros)
For the Helsinki region, the goal is to improve the conditions for public transport, railway traffic, and park-and-ride services. On the Ring Roads, the safety and functioning of commuter, public, and distribution traffic will be improved by means of traffic management and infrastructure management.

Improvement of other main roads and railway networks (100–200 million euros)
For the road network, the goal is to maintain the current service level of the transport network and to improve traffic safety by remedying shortcomings in individual problem locations. For the railway network, the goal is to improve traffic punctuality and to increase the carrying and throughput capacity.

Projects for urban areas (250–550 million euros)
In large and medium-sized urban areas, the goal is to assure the functioning of the travel chains, to improve the conditions for public transport, to assure efficient use of the existing network, to promote walking and cycling, and to reduce harm to the environment. New residential areas and business and industrial parks will be supported through public transport solutions. The development schemes will be determined in collaboration with the various local operators in connection with the drafting of the transport system plan.

Investments in traffic management (200–400 million euros)
The goal is to assure good handling of day-to-day traffic and to create conditions for efficient use of the transport networks and traffic punctuality. Travel and transport that operate from adequate information increase the functionality of the travel and transport chains. Reduction of the risk of environmental accidents is a central goal for sea and inland waterway traffic.

APPENDIX 2:
Minor investment schemes during the next term of Parliament (for 380 million euros in total)

Minor schemes of various types will allow improved functionality of the transport system in many different locations across Finland and development of the management and information services over an extensive part of the infra structure. During the next term of Parliament, these minor investment schemes should be included in the basic infrastructure management.

Over the long term, an annual funding level of approximately 160 million euros is projected for the minor improvement schemes. Progress toward this end must be gradual, and the first step will be to allocate funding of 380 million euros (80–95 million euros per annum) during the next term of Parliament to enable the launching of some of these schemes. Implementation of the minor investment schemes requires an increase in the funding for basic infrastructure management.

Responding to changes in trade and industry	EUR 50 million
Ensuring of raw material transports (e.g., forest-industry and timber terminals)	EUR 30 million
Goods transport hubs and nodes	EUR 40 million
Improvement of the functionality and punctuality of public transport	EUR 40 million
Streamlining of travel chains	EUR 30 million
Promotion of walking and cycling in urban areas	EUR 30 million
Prevention of head-on collisions on the main roads	EUR 60 million
Traffic safety in conurbations and prevention of level crossing accidents	EUR 30 million
Ensuring and boosting traffic management operations	EUR 40 million
Improvement of the living environment (addressing of groundwater issues, noise, and vibration)	EUR 30 million
Total	**EUR 380 million**

The day-to-day operation of the transport system will be ensured through maintenance and traffic management schemes. Changes in the operating environment can be addressed by employing minor improvement schemes of various types.

Minor investment schemes during the coming term of Parliament, for 380 million euros in total

Responding to changes in trade and industry (50 million euros)
Schemes will be employed to respond to changes in the operating environment or to better meet the prerequisites for trade and commerce. They include traffic and park-and-ride arrangements in the main road network, increased axle load and improvement of the carrying capacity in the railway network, and ensuring of the level of service on commercial shipping routes.

Ensuring of raw material transports (30 million euros)
The schemes will guarantee solid raw material transport operations for the forest industry, for example. Development of timber terminals and loading sites in the railway infrastructure, ensuring of transports in the railway network, and providing of road connections required for forest maintenance will be part of the work.

Goods transport hubs and nodes (40 million euros)
The schemes will enhance the transport chains and develop the operation of the nodes and hubs. Development of combined transport operations will be an area of focus, as will modernisation and replacement investments for railway yards and transport connections to the ports.

Improvement of the functionality and punctuality of public transport (40 million euros)
The schemes will promote the competitiveness of public transport in the metropolitan and urban areas and in long-distance travel. Dedicated bus lanes will be developed for the metropolitan connections, and the punctuality of the railway services will be improved.

Streamlining of travel chains (30 million euros)
The schemes will improve the competitiveness of public transport by providing better service to passengers. Improved operations and accessibility of stations, park-and-ride arrangements, and developments in passenger information will be focused on.

Promotion of walking and cycling in urban areas (30 million euros)
The schemes will promote walking and cycling as the primary means of travel in urban regions. The development programme for walking and cycling, to be implemented in collaboration with municipalities, includes a versatile selection of measures.

Prevention of head-on collisions on the main roads (60 million euros)
The schemes will improve traffic safety on the main roads. Included are median barrier solutions and speed-monitoring systems.

Traffic safety in conurbations and prevention of level crossing accidents (30 million euros)
The schemes will improve traffic safety. They are to include arrangements in the urban areas, integration of speed levels in the urban areas with the route environment, improvement of level crossing conditions, and elimination of level crossings.

Ensuring and boosting traffic management operations (40 million euros)
The schemes will improve the day-to-day functioning of traffic and develop disturbance management. The schemes include traffic information and traffic management in road transport, ensuring vessel traffic management, and ensuring the functionality of safety systems.

Improvement of the living environment (related to groundwater and protection from noise and vibration) (30 million euros)
The schemes will reduce harm and inconvenience due to traffic and infrastructure management. They include groundwater protection measures and the prevention of noise and vibration.

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