

# 2008

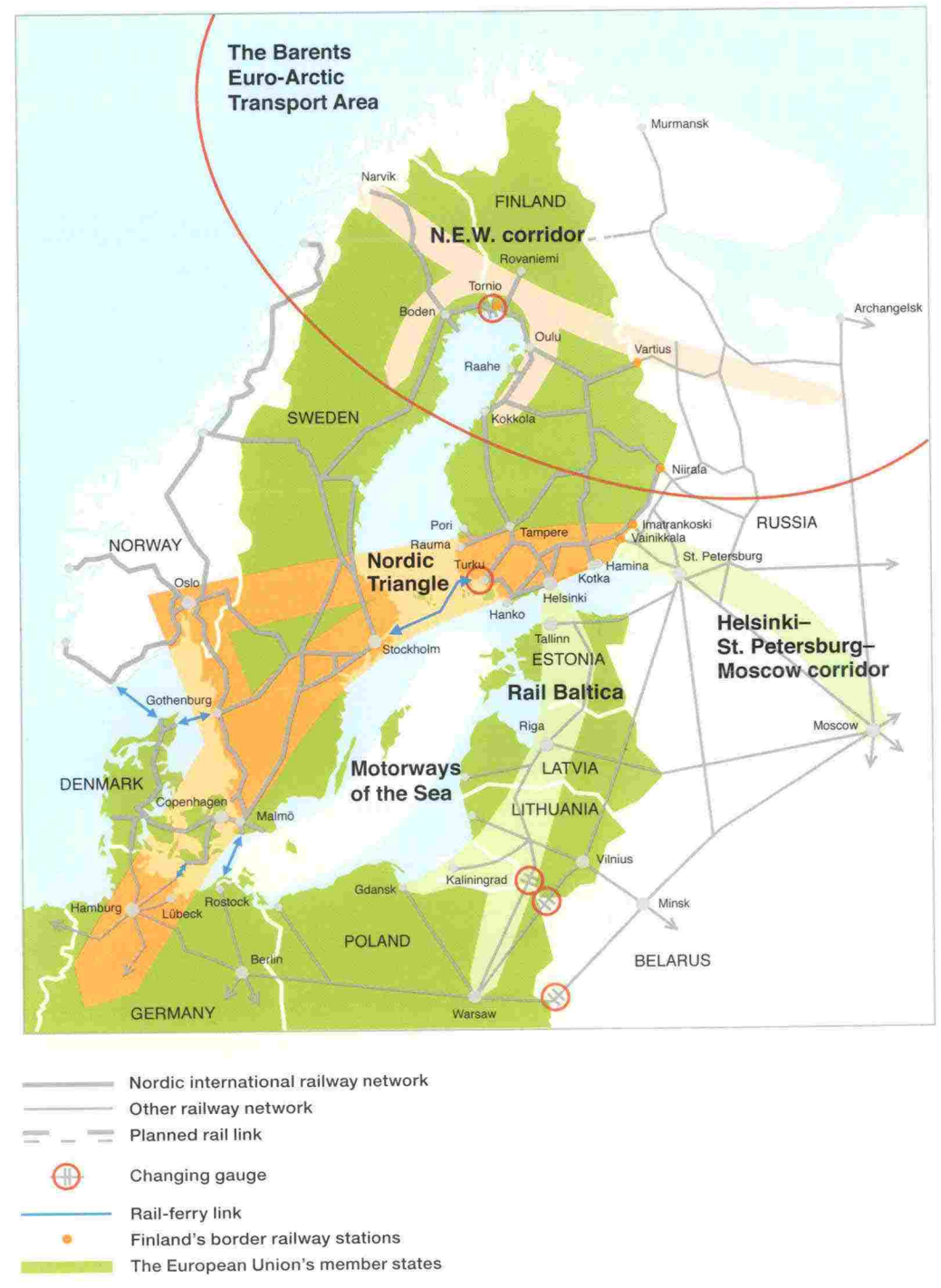
## ANNUAL REPORT

### Facts about Finland's Rail Network

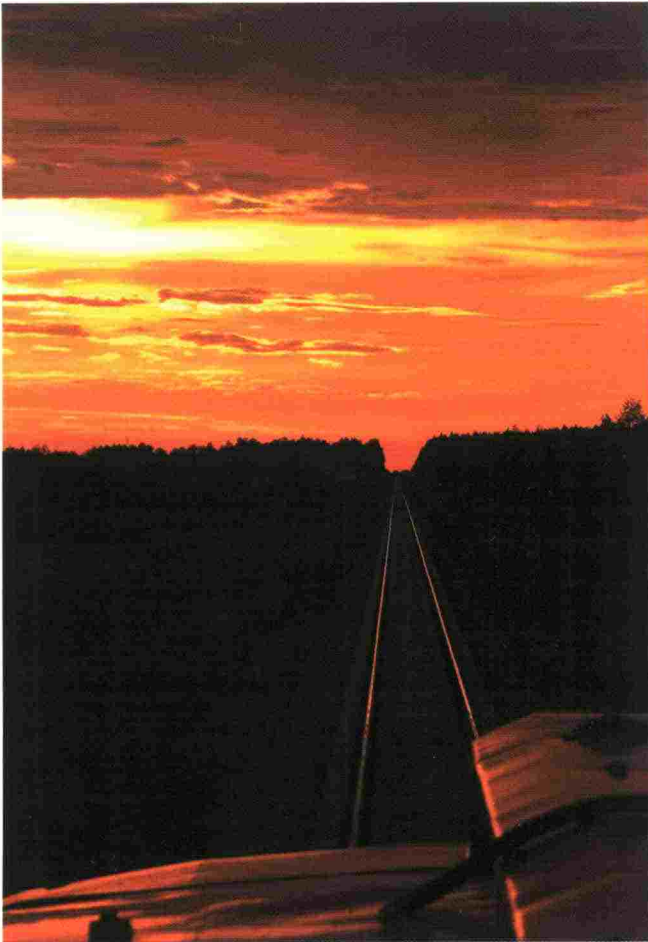
First line .....	Helsinki–Hämeenlinna 1862
Gauge .....	1,524 mm
Total length of railway lines .....	5,919 km
Lines with two or more tracks .....	570 km
Sleepers/km .....	1,640
Electrified line .....	3,067 km
Centrally controlled line .....	2,821 km
Tunnels .....	42
Railway bridges .....	2,284
Bridges over railway line .....	892
Number of level crossings ..	3,515 including 2,988 on main lines



FINNISH RAIL  
ADMINISTRATION



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**Mission**

The Finnish Rail Administration (RHK) is an expert contracting organization that manages and develops Finland's rail network according to customers' needs as a competitive part of the domestic and international transport system and maintains expertise in the railway field.

Through planning, construction, maintenance and traffic control we ensure infrastructure on which traffic can operate reliably and safely every day.

**Strategic goals**

**Economy**

- Financing that allows growth in rail transport's market share.
- Socially sound use of funds.

**Markets**

- Efficient markets in infrastructure management and rail transport.

**People**

- Motivated and active professionals in the Finnish Rail Administration and our service producers.

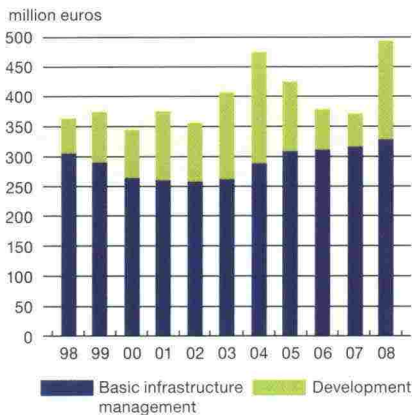
**Operation**

- Sharing of best practices.
- Proactive approach.

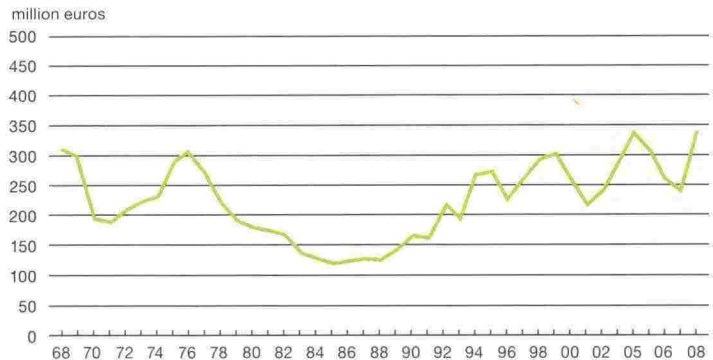
**Effectiveness**

- Safe, smooth and environmentally friendly connections attract customers to select rail transport – go rail.

**Expenditure on the rail network 1998–2008**



**Investments in the rail network 1968–2008 (at the 2008 price level)**





- The number of rail passengers rose by 5% in commuter traffic and 6% in long-distance traffic.
- International freight traffic on the railways increased, but domestic freight traffic declined. The total volume of rail freight was 4% higher than the year before.
- The upgrading of the Seinäjoki–Oulu and Lahti–Luumäki line sections began.
- The renewal of the Ilmala yard in Helsinki continued. Part of the new yard went into operation.
- Financing for the Ring Rail Line, which will run via Helsinki–Vantaa Airport, was approved by Parliament.
- The renewal of the Savonlinna–Huutokoski line was completed and traffic resumed.
- The Vuosaari Harbour and the new line that was built for it went into operation.
- The geometric condition of lines exceeded the target.
- The Finnish Rail Administration's safety management system was updated. A revised safety policy was appended to it.
- The monitoring of safety deviations and safety reporting were improved.
- A new environmental strategy was prepared from the perspective of climate change.
- The Finnish Rail Administration's noise abatement action plan was completed.
- The Finnish Rail Administration was involved in about 50 research and development projects.
- The Finnish Rail Administration participated actively in a study that was undertaken by the Ministry of Transport and Communications concerning the merging of the agencies administering Finland's railways, roads and waterways.
- The rail administration strategy project was completed.
- A personnel expertise development plan was completed.

## Transport policy report and agency reform study in the spotlight

Last year was marked by two projects whose effects will be significant long into the future. The Government submitted its transport policy report to Parliament and the Ministry of Transport and Communications started a study concerning the reform of agencies in the transport sector.

The transport policy report outlines the development of the national transport system and traffic over the long term as a whole. Finland needs all modes of transport in order to develop and remain competitive internationally.

Rail freight traffic and the rail network are an essential part of Finland's competitiveness, but only together with road transport and shipping. The forest industries' logistic processes are a good example of how these modes of transport complement one another.

Russia's decisions regarding duties on wood exports have highlighted the importance of procurement and transport capacity and led to the reevaluation of the significance of lines with low traffic volumes. The mining industry's current and planned investments present a challenge for the capacity of transport routes, which will also be resolved through Nordic cooperation.

Arranging the funds necessary for in-

frastructure investments requires innovative cooperation among different parties. The recent development of the financial situation will make it more difficult to find solutions, although it may also provide a useful breathing space.

Rail passenger traffic developed very well last year, which is also positive from the perspective of climate policy. Late in the year a decision was made to provide a rail link to Helsinki-Vantaa Airport, which will help increase the popularity of rail transport. The decision to build the Ring Rail Line is also a good example of how transport and land use should be planned as a whole. The transport system is not just cooperation between different modes of transport, but other aspects of the development of society are essentially linked to it.

A study concerning the reform of agencies in the transport sector got under way in late spring and the Government took a favourable position on the preparation of the reform

in the autumn. The reform calls for the merging of the agencies responsible for administering shipping, the railways and roads.

The study significantly added to the work load of the Finnish Rail Administration's personnel last year, and setting up the new agency will also require considerable resources. The Finnish Rail Administration has understandably been concerned about employees' occupational health and the future of experts in its field.

This concern was clearly visible in a questionnaire that was sent to personnel, in which the Finnish Rail Administration's response rate was very high. The idea of relocating the agency to some other part of Finland was opposed almost unanimously. This opposition is understandable especially from a human viewpoint, since employees' concern about their own and their families' future is certainly genuine and justified.

The professional viewpoint is also important, however. Infrastructure management and managing the rail network are based entirely on the purchasing of services from outside providers. Consequently productivity depends largely on buyers' expertise.

According to external studies and audits, the size of the Finnish Rail Administration's

personnel is too small, which further emphasizes the significance of expertise. The loss of even one employee is immediately felt in activities. If a larger number of employees were to leave, this would seriously cripple activities.

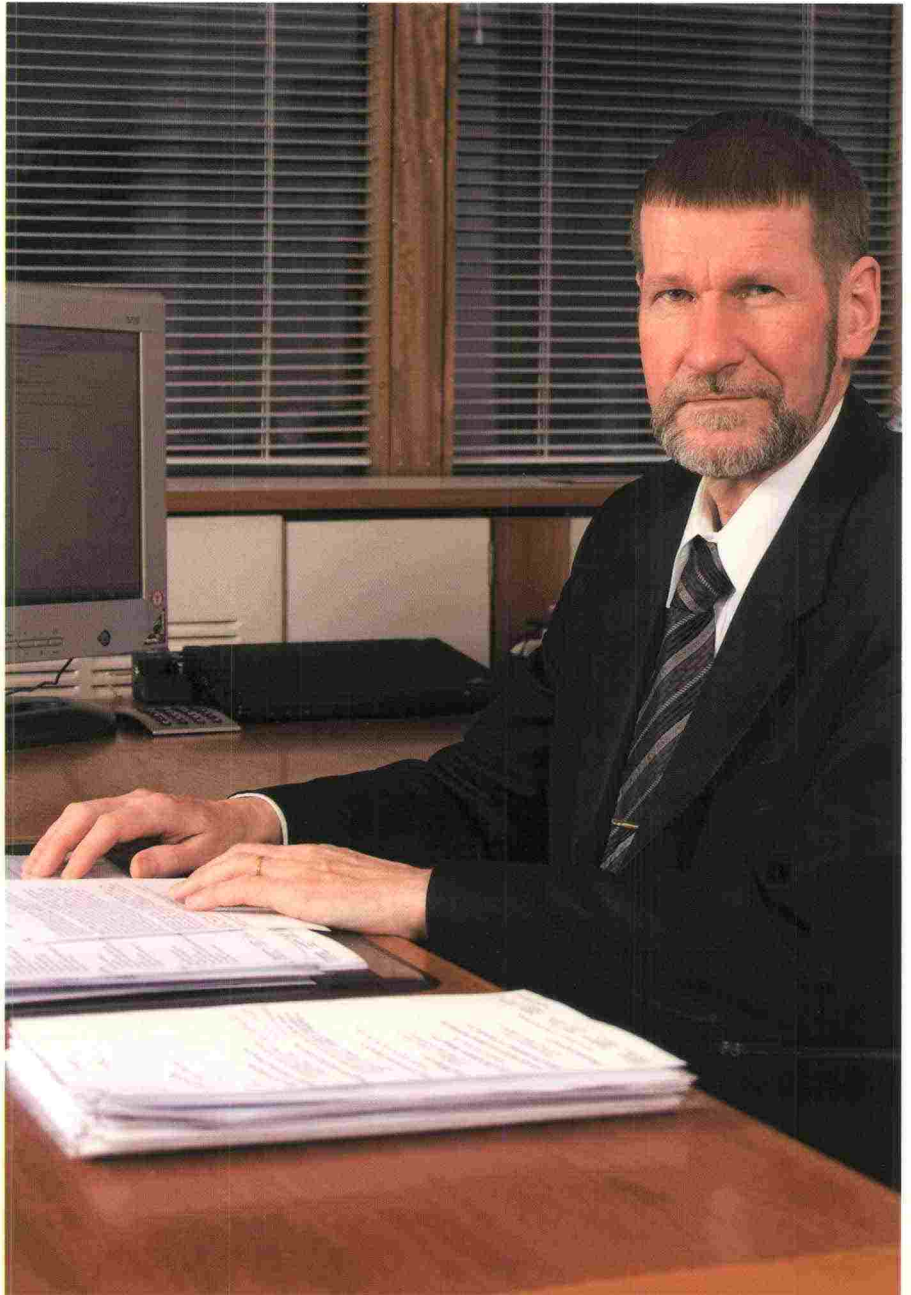
The question is not just whether infrastructure management services can be purchased competently and costs kept down. Ultimately the question is also whether the state can ensure the basic precondition for rail transport, the safety of the rail network and traffic management.

The reform is aimed at strengthening the transport system perspective, raising administration's productivity, taking advantage of synergies and cutting costs, paying attention to travel and transport chains as a whole, and managing safety and environmental matters in a more comprehensive way.

These objectives can be achieved, but only if agencies' personnel are genuinely involved in the reform and if expertise can be ensured.



Ossi Niemimuukko



## Special expertise in infrastructure management must be ensured in future



The Rail Administration Board and the Management Group toured the Ilmala yard in Helsinki in summer 2008.

The Board closely followed infrastructure management and rail projects last year and took a position on financing questions in connection with the preparation of the state budget proposal, among other things.

The Board drew attention to the long-term lines in the Government's transport policy report. The report examines the transport system as a whole, in which different modes of transport have their own strengths.

Rail transport is most competitive in passenger traffic between large cities and on commuter lines as well as heavy freight traffic over long distances. Objectives to curb climate change require the promotion of rail transport. If the railways' share of transport is to be increased, a long-term approach must be taken to railway investments and maintenance. The Board emphasized this when it considered the Finnish Rail Administration's operational and financial plan for 2010-2013, for instance.

The budget proposal for infrastructure management in 2009 was prepared within the spending limits set by the Government. While additional funding was provided for lines with low traffic volumes in order to ensure the supply of wood, in accordance with the transport

policy report, the amount of funds available for the rest of the rail network was reduced.

Funding within the budget framework is not sufficient to meet the challenges presented in the transport policy report and the national climate and energy strategy, especially since the budget framework did not take into account the weakening of purchasing power in the way required by the building cost index.

On several occasions the Board discussed funding for the Seinäjoki-Oulu project and wanted to make sure that authorizations and the level of financing are adequate for the economical and prudent implementation of this important project.

The Board discussed the punctuality of rail services at all its meetings. The quality requirements set by passengers and industry have grown, but at the same time punctuality problems have arisen in rail services. The reasons behind this must be identified.

Rail traffic has increased considerably in recent years. Since 90% of the rail network is single-track, there is no room to eliminate

the effects of exceptional situations. If one train is late, this affects the following trains and delays spread throughout the network. Another reason is information technology disturbances, such as the problems that occurred in southern Finland in October 2008. The technology in use on the railways is constantly updated, but even the latest information technology cannot eliminate the possibility of disturbances. A third reason for delays is track work. Maintaining the quality of rail transport constantly requires different types of track work. This causes local disturbances whose effects can spread broadly.

The most significant way to resolve the punctuality problem is to increase rail capacity. Only in this way can rail traffic be expanded in future while keeping it on schedule. Another important area is the upgrading of the traffic control system.

The Board also considered personnel issues and considered it important that employees' job satisfaction has developed favourably. The results of the job satisfaction survey that was conducted in 2007, which were published at the beginning of 2008, were the best in the Finnish Rail Administration's history. The Board values the measures that are constantly being taken to promote job satisfaction.

Personnel matters were discussed at every meeting in the form of reviews by the Director General. Last year the Board did not establish or abolish any posts. The year was marked by larger than normal personnel turnover and the reorganizing of tasks. On several occasions the Board discussed the effects of the National Productivity Programme and administrative reform on personnel.

The reform of agencies in the transport sector got under way in late spring and the Board followed development throughout the latter part of the year. The Board was glad to see the Finnish Rail Administration take an active





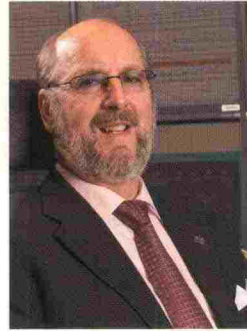
**Tellervo  
Kylä-Harakka-Ruonala**



**Jorma  
Mäntynen**



**Silja  
Siitola**



**Markku  
Pyy**



**Minna  
Kivimäki**

role in planning the new agency and begin preparing for the project at an early stage.

Another important thing in the Board's opinion was that in studying the reform, attention has been paid to giving personnel a chance to participate. The Board has stressed that the reform must preserve special expertise in infrastructure management.

Last year the Board learned more about infrastructure management requiring special expertise by meeting with experts, visiting work sites and taking trips. The Board visited the Finnish Rail Agency at the beginning of the year to look at its activities and facilities. Discussions focused on the importance of cooperation when it comes to participating in tasks related to the development of the European railway system, so that the special features of rail traffic in Finland are taken sufficiently into account.

The Board received good information regarding practical construction in June when it visited the Ilmala yard in Helsinki, where the scope and demanding nature of the projects being carried out simultaneously by the Finnish Rail Administration, VR and

the Finnish Road Administration were given concrete form.

The work that is done in railway yards and depots is vital to ensure smooth and safe rail traffic. It is essential that these operating environments are modernized and brought up to modern standards.

On 23–26 September the Board attended the InnoTrans 2008 event in Berlin. This is an international convention in the railway field that is held every other year. Nearly 2,000 exhibitors were on hand to display rolling stock, track machines and equipment.

The event was an excellent opportunity to become acquainted with the network of actors in the railway field and the latest technology. With regard to development in the field, emphasis was placed on environmental responsibility and particularly curbing climate change. The latest high-speed trains, which can compete with airplanes over many routes in terms of journey time and travel comfort, were on display at the trade fair. Also on display were new commuter trains such as the Flirt, which will also enter service in Finland.

During the trip the Board gained first-hand knowledge of Berlin's efficient public transport system and was given a tour of Berlin's new and modern Central Station,

which has an automatic passenger information system.

The Board held 11 meetings during the year. It continued holding "evening sessions", which started the year before, together with the Finnish Rail Administration's Management Group to study significant issues and matters of principle that came up at meetings. Such issues included the Government's transport policy report and the reform of agencies in the transport sector.

The Board closely monitored the preparation of the rail administration strategy and presented its views on this work. The preparation of the strategy was considered good as a whole. Placing emphasis on the selection and development of indicators was considered important for the focusing and evaluation of activities.

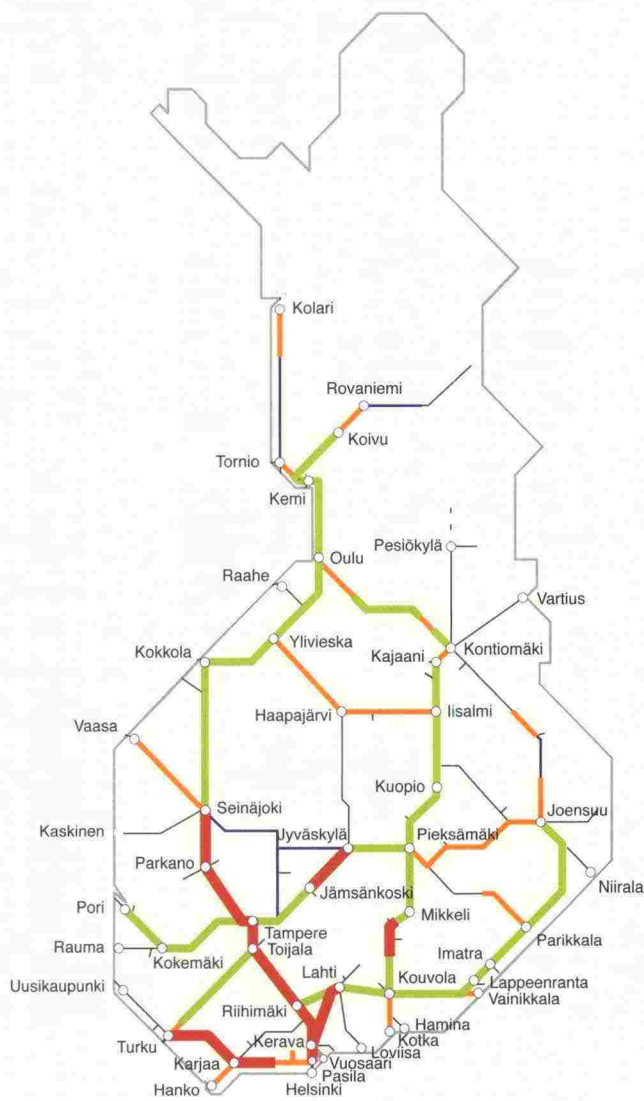
The Board's composition changed during the year when the Government appointed Minna Kivimäki to replace Mikael Nyberg as Board member and vice chair beginning on 18 September 2008. At the same time the Government extended the Board's term up to 31 December 2009.



## Performance objectives agreed between the Ministry of Transport and Communications and the Finnish Rail Administration

Outputs and quality management	Objective	Actual	Comment
Length of the high-speed (at least 160 km/h) network (passenger traffic, km)	675	675	The objective was achieved.
Length of the 25-tonne network (freight traffic, km)	397	392	Helsinki-Pasila reduction 5 km. The need for 25-tonne traffic was eliminated when the Vuosaari Harbour was completed.
Rail network condition index (100 = good condition)	88	90	The objective was achieved.
Obsolete rails in the rail network in operation (maximum, km)	1,440	1,374	The objective was achieved.
Delays due to track maintenance (over 5 minutes, share of long-distance passenger trains at destination, maximum, %)	5	3.5	The objective was achieved.
Speed restrictions set because of poor track condition in the rail network in operation (maximum, km)	540	481	The objective was achieved. Supplementary budget funding made it possible to exceed the objective.
Total number of level crossings in the state rail network in operation (maximum, number)	3,559	3,515	The objective was achieved. Supplementary budget funding made it possible to exceed the objective.
Number of rail accidents due to permanent way (maximum, number)	5	3	The objective was achieved.
Passenger fatalities in rail accidents	0	0	The objective was achieved.
Number of persons protected from noise through RHK and joint projects (annual objective, persons)	100	0	Noise abatement projects are conducted in cooperation with cities, which has slowed the implementation of projects.
Operational efficiency	Objective	Actual	Comment
Cost covering in business performances (%)	100	84	It is not possible to charge rents on properties that are sufficient to cover costs.
Maintenance and operating costs for electric and telematic systems (maximum, euros/track-km)	5,330	5,570	Increased safety technology, the opening of the Vuosaari Harbour line and the new line communications system, and tighter quality requirements raised costs.
Other maintenance and operating costs (maximum, euros/track-km)	7,670	7,600	The objective was achieved.
Growth in productivity during the year (%)	0	-0.5	The objective was nearly achieved.
Average growth in overall productivity during the operational and financial plan period (%)	0	3.9	The objective was achieved.
Human resource management	Objective	Actual	Comment
Personnel's job satisfaction (on a scale of 1-5)	3.4	3.6	The objective was achieved.

## Rail network service classes in 2008



### Passenger traffic

Service class	Maximum speed
<b>H1</b> (Red line)	675 km over 140 km/h
<b>H2</b> (Green line)	1,823 km 130–140 km/h
<b>H3</b> (Orange line)	1,002 km 110–120 km/h
<b>H4</b> (Blue line)	543 km 100 km/h or under
<b>H5</b> (Grey line)	1,737 km No regular passenger traffic
(Thin grey line)	21 km Only freight traffic
(Dashed grey line)	118 km No traffic
<b>Total</b>	<b>5,919 km</b>



### Freight traffic

Service class	Maximum axle load
<b>T1</b> (Red line)	392 km 25 tonnes and 60–100 km/h
<b>T2</b> (Green line)	3,437 km 22.5 tonnes and 100 km/h
<b>T3</b> (Orange line)	1,282 km 22.5 tonnes and 50–80 km/h
<b>T4</b> (Blue line)	682 km 20 tonnes and 40 km/h
(Thin grey line)	8 km Only passenger traffic
(Dashed grey line)	118 km No traffic
<b>Total</b>	<b>5,919 km</b>

## The significance of rail transport is increasing because of climate change



Rail traffic serves Finnish society by moving passengers and freight. In passenger traffic responding to the challenges of climate change favours the development of public and rail transport. The growth of large urban areas increases demand for long-distance services, and demand for commuter services is increasing with the growth of the Helsinki region.

Rail transport is environmentally friendly, since rail traffic accounts for only 2% of energy consumption in the transport sector

in Finland. Travelling by rail is also considerably safer than going by car.

Rail carryings will have even greater significance for Finland's basic industries in future. The expansion of mining activities will create considerable new transport demand. Rail carryings of roundwood will rise as plants are consolidated. Railways' share of domestic freight traffic is already 25%, which is high by international standards.

Possibilities to increase rail traffic are

limited by Finland's rail network, most of which is single-track and already operating at full capacity. There is a lot of growth potential in the rail sector, and decision-makers should take this into consideration when they appropriate funds.

### **Strong growth in passenger traffic**

Rail passenger traffic has grown strongly in recent years, thanks to the increased supply of services, among other things. In 2008 passenger traffic in Finland's rail

network totalled 69.9 million journeys (66.7 million in 2007). This included 56.2 million (53.7 million) in commuter traffic and 13.8 million (12.9 million) in long-distance traffic. Passenger traffic rose by about 5% in commuter traffic and about 6% in long-distance traffic compared with the year before.

Rail traffic between Finland and Russia also continued to grow as in previous years. The number of journeys totalled 432,000 or 8% more than in 2007.

#### Increase in international freight traffic

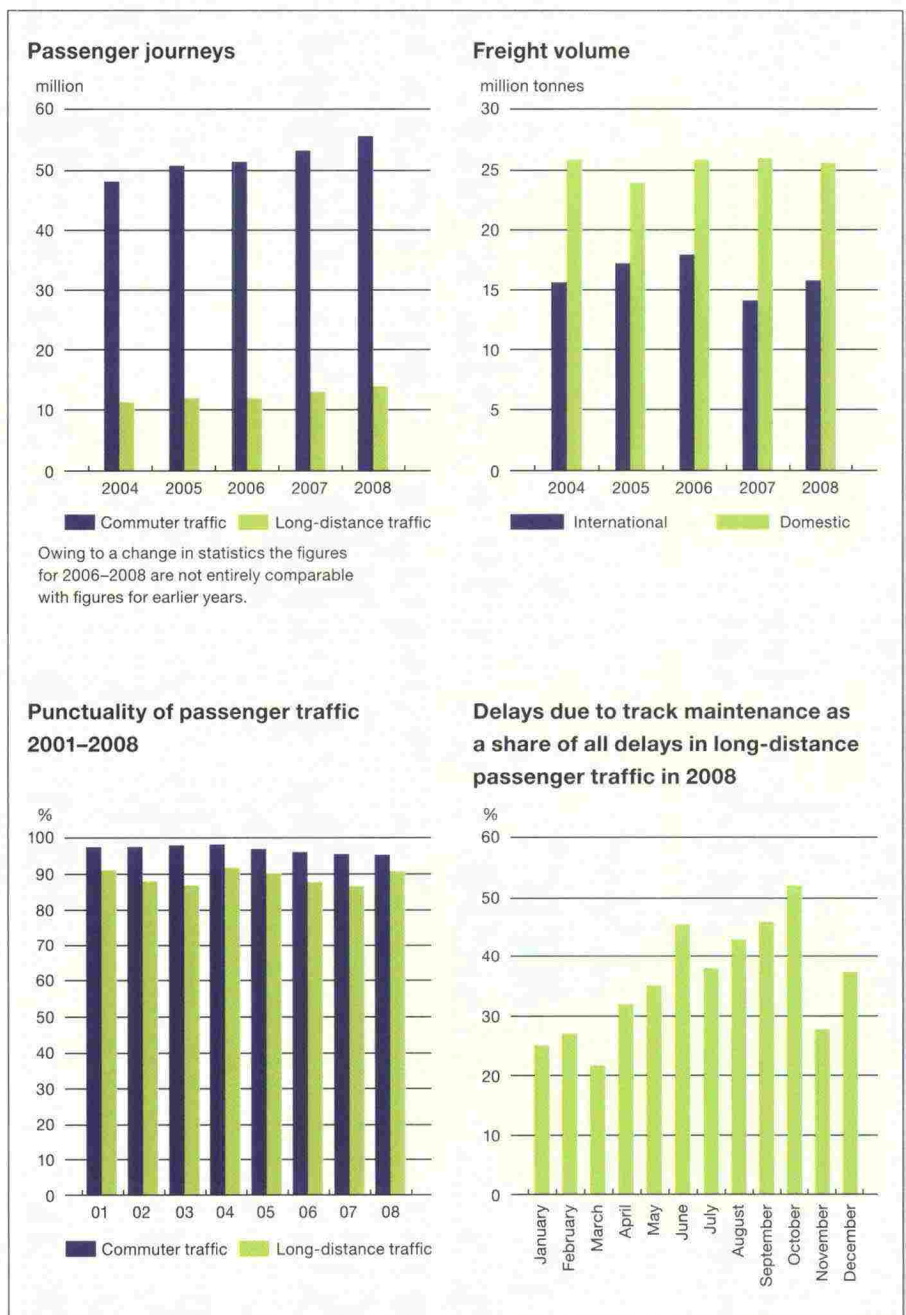
Last year the volume of rail freight totalled 41.9 million tonnes or 4% more than the year before. International traffic rose while domestic traffic declined. The effect of the economic downturn was visible in freight traffic only towards the end of the year.

Domestic freight traffic totalled 25.5 million tonnes, down 3% compared with the year before. Freight traffic between Finland and Russia totalled 11.2 million tonnes and was up 13%. Transit traffic totalled 4.8 million tonnes and rose by 35%. Western traffic totalled 0.4 million tonnes.

#### Measures to improve punctuality

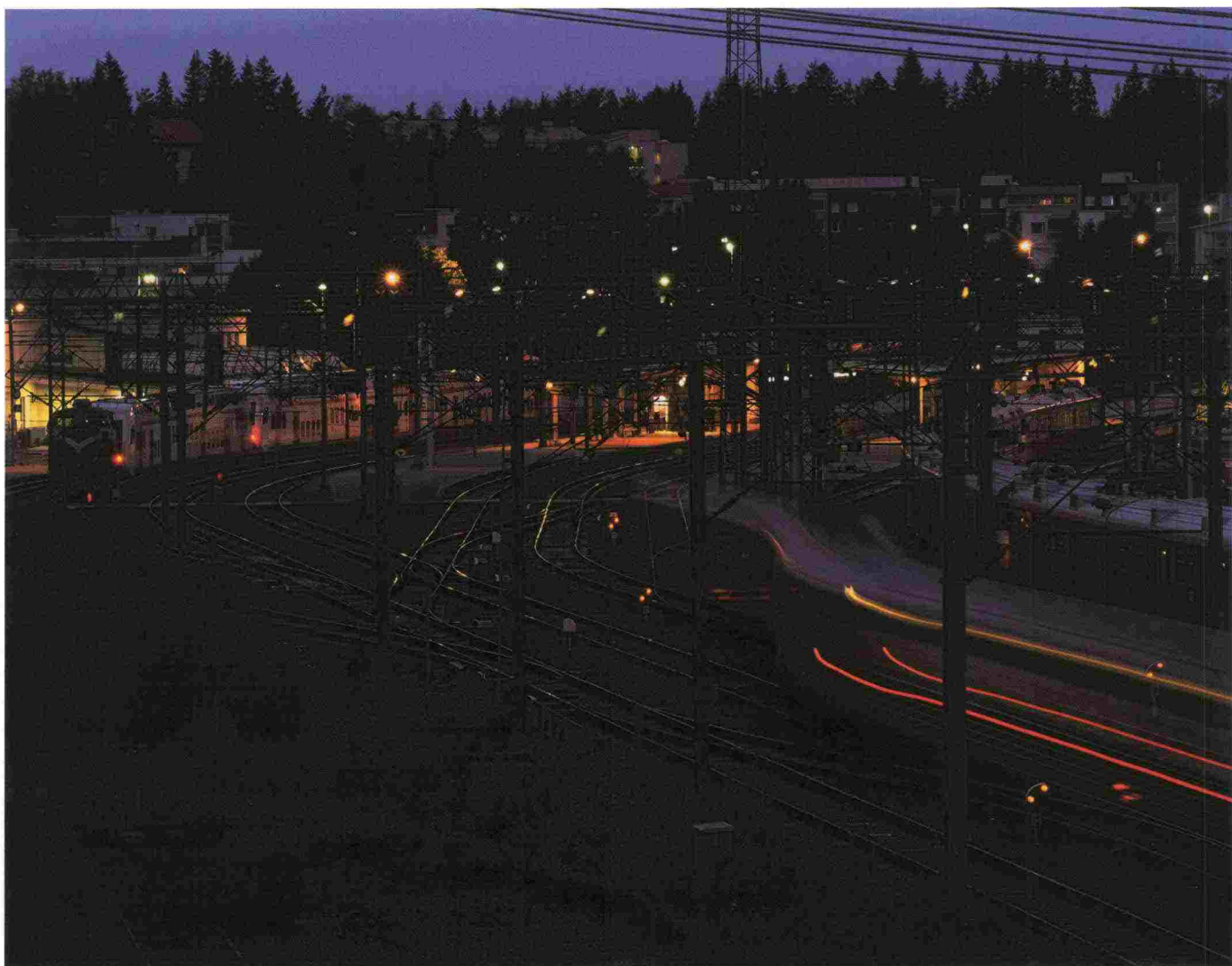
Growth in passenger traffic places demands not only on rolling stock and carrying capacity but also on punctuality. In 2008 the punctuality level was 90.6% (88.2%) in long-distance traffic. The objective was 90%. Commuter traffic achieved a punctuality rate of 95.9% (96.6%), while the objective was 97.5%. In freight traffic the punctuality objective is 90%. Last year the actual figure was 87.4% (88.2%). The Finnish Rail Administration and VR Group have together set punctuality objectives.

The Finnish Rail Administration manages the state rail network along with safety equipment and passenger information systems. Although VR Limited operates rail services, the Finnish Rail Administration is responsible for traffic control and correcting disturbances and in most cases providing information on disturbances.



The Finnish Rail Administration's Traffic Management Centre, which went into operation on 1 January 2008, is responsible for national traffic control around the clock. VR Limited will probably receive competitors in domestic freight traffic in the coming years.

The Traffic Management Centre will ensure the fair treatment of different operators in case of disturbances. The Finnish Rail Administration is also responsible for overseeing regional traffic control centres.



### **Systems being developed to meet modern requirements**

In October 2008 a serious disturbance occurred in rail traffic when the remote control system for the Helsinki region as well as the back-up system crashed. The fault was found to be a computer component necessary for internal connections in the main computers, and after this was replaced the system began operating normally.

The disturbance brought traffic to a halt on several line sections in southern Finland, and problems were quickly reflected in other parts of the rail network. Nor were

passengers provided sufficient information on delays, owing to the outmoded information system.

To avoid similar situations in future the Finnish Rail Administration is improving and developing its systems. A remote control system for all of southern Finland is being built. This will replace the existing system, gradually consolidating operations and increasing operability and capacity. The new system will include more automatic functions and will be less susceptible to errors. The new system went into operation at the end of the year in the Riihimäki remote

control centre and on the Vuosaari Harbour line. The system will cover all of southern Finland in 2011.

### **Improvement in passenger information**

Construction of a new and improved passenger information and announcement system (called MIKU) began in 2007, and the system will go into full operation in spring 2009.

In southern Finland the system will be operated by personnel at a new information centre, who started work in June 2008. At the end of the year the number of personnel was increased from five to seven.

As a result the centre can now work around the clock.

The MIKU system will allow personnel to take care of station announcements and train information on displays centrally and will replace several separate information systems.

#### **Rail capacity management system in the testing stage**

The development of an information system to manage rail capacity (called LIIKE) proceeded in 2008 according to plan. The first parts of the system, tools for managing infrastructure information and map interfaces, were completed. In the latter part of the year tools for creating, viewing and maintaining timetables were tested.

The first stage of the LIIKE system will go into operation in late summer 2009, after which the system can be used to apply for, plan and allocate rail capacity. Once the second stage of the project has been completed in spring 2010, the system can also be used to manage daily traffic changes. The system will then play a main role as a source of timetable information.

#### **Future of passenger traffic under review**

Last year a study concerning the future of passenger traffic got under way. The study will survey alternate scenarios for how Finns could travel in 2050 and the role of rail traffic. The study will pay attention to climate and energy policy perspectives and the effects of different regional policy approaches on rail passenger traffic. It will also evaluate how people's travel needs and behaviour could develop.

On the basis of recognized development needs, service class descriptions for passenger traffic in 2025 and 2050 will be prepared. These will specify the desired scope of the rail network, train supply, journey times and stations. The study will be completed in May 2009.

#### **Competition in freight traffic expected**

Freight traffic in Finland was opened to competition in 2007. Last year interest in entering the market increased. Access to the rail network requires a safety certificate and an operating licence. In addition an operator must apply for and be allocated rail capac-

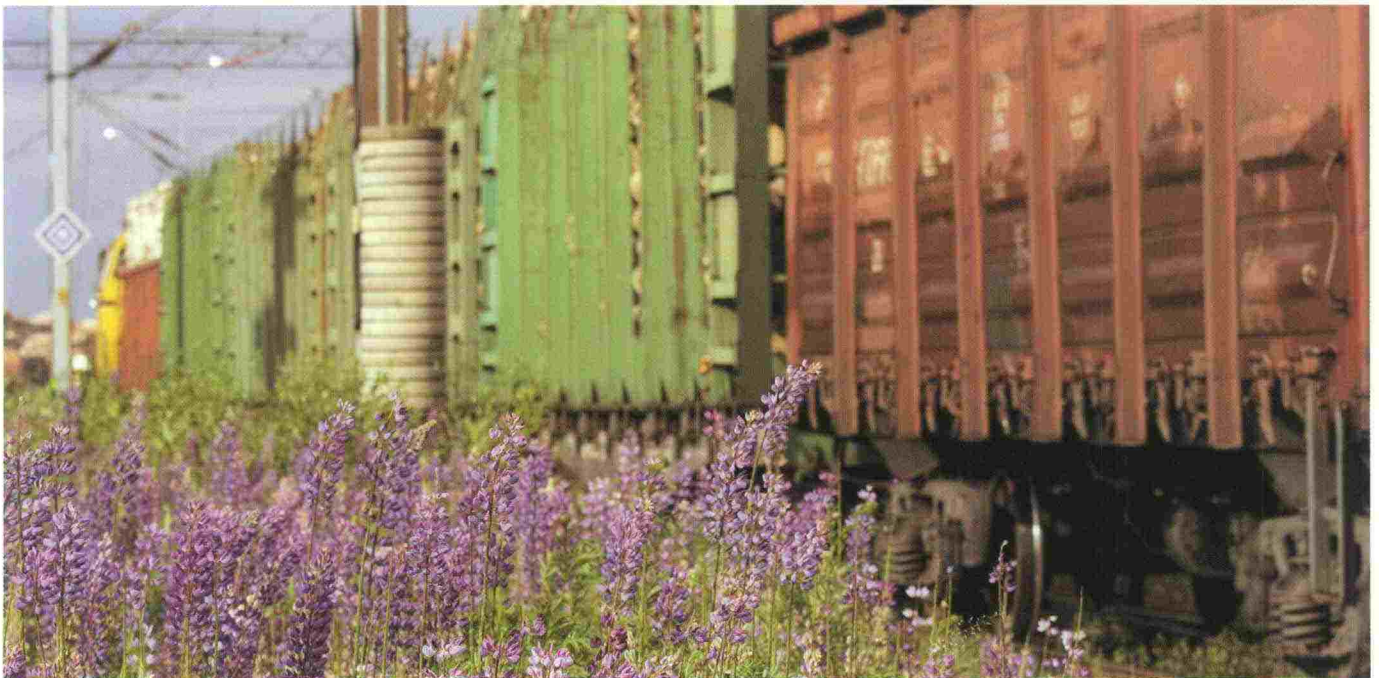
ity and must conclude a contract with the Finnish Rail Administration concerning the use of the rail network. Market entry takes at least a year.

Competition is expected to start in the near future. It should lower prices and consequently increase demand for rail carryings. According to projections competition in the freight sector could become a reality in 2009 or 2010.

#### **Study of freight traffic in southern Finland**

An extensive study of freight traffic in the southern Finland rail network began last year. The goal of the study is to ensure the functioning and competitiveness of freight traffic by evaluating rail infrastructure, safety systems and development needs regarding the timetable structure in freight traffic. The study will be completed in autumn 2009.

In 2008 freight traffic studies were completed regarding mining projects in the Kolari area, future roundwood transport needs and the development of the network of roundwood terminals and loading places.



## Development projects improve rail services



Developing the rail network improves its functioning but also increases maintenance costs as a result of increased equipment. The current Seinäjoki–Oulu, Lahti–Luumäki, Ilmala and Central Pasila projects and the construction of the Ring Rail Line beginning in 2009 will create the preconditions for raising the level of rail services.

Investing in the rail network is visible in strong growth in the total cost of infrastructure management. A long-term approach is needed regarding the level of financing for basic infrastructure management and the progress of development, however. In order to allow the efficient maintenance and development of the rail network, it is important for funds earmarked for basic infrastructure management in the state budget to be adequate, also taking into account changes in market prices.

A long-term approach to financing is important because the special features of infrastructure management include materials and equipment that require long delivery periods, the fact that track work mainly has to be done on single tracks without disturbing traffic and the need for special machinery.

Measured in terms of purchasing power, funds available for basic infrastructure man-

agement fell by about 150 million euros from 1996 to 2008, and the same trend could continue in future. On the other hand the economic downturn may lower infrastructure management costs in the coming years, in which case it makes good sense to increase society's investments in the rail network.

### Planned projects in motion – future needs being reviewed

In 2008 a number of projects that had been planned the year before got under way, including the upgrading of the Seinäjoki–Oulu and Lahti–Luumäki line sections. A study was also conducted together with the Finnish Road Administration and the forest industries regarding wood transport routes, in which major changes will be made because of plant closures and Russian export duties on wood.

In 2009 the Finnish Rail Administration will have 5 million euros of its basic financing earmarked for the development of wood loading and wood terminals.

Growth in the volume of freight traffic has underlined the need to renew and develop existing railway yards. Practically every large freight yard in Finland will have to be repaired by 2020. This requires the

technical and operational development of yards so that they can serve changing transport markets more efficiently and economically. Last year attention was focused on the yards that most urgently need to be developed, such as the Ykspihlaja yard in Kokkola and the Kotolahti yard in Kotka.

### Shortage of funds threatens Seinäjoki–Oulu project

The upgrading of the Seinäjoki–Oulu line section began in spring 2008. This is the biggest single development investment project in the rail network in the coming years. The competitiveness of rail transport will be improved by increasing the line section's capacity, raising axle loads to meet the requirements of heavy freight traffic and speeding up passenger traffic.

The implementation of the Seinäjoki–Oulu project is threatened by the spreading of budget funds over too long a period, however. In the worse case track renewal will be interrupted in 2010 and then start slowly in the following years. In order to prevent such a sizable project from taking decades and hampering business, annual appropriations for track renewal should be around 90 million euros.



### Upgrading of the Lahti–Luumäki line section under way

The other major track renewal project that started last year is the upgrading of the Lahti–Luumäki line section. This is part of the development of rail traffic in eastern Finland. Lahti–Luumäki is a busy line section that is used by most passenger and freight trains in eastern Finland. The project will increase train speeds in passenger traffic and axle loads in freight traffic.

Once the Lahti–Luumäki line section has been upgraded, journey times will be shortened and the competitiveness of freight traffic will improve. The upgraded section will be ready for traffic in 2010. In connection with the project the single-track line between Luumäki and Vainikkala will also be renewed, allowing the maximum speed and axle load to be increased.

### New mining lines in the north

The expansion of mining activities in northern Finland will also place requirements on the rail network. A mining company has built a new 30-kilometre track to the Talvivaara nickel mine, and this will go into operation in summer 2009. The Talvivaara mine will also increase the need to build a second track between Kokkola and Ylivieska. In the Kolari area analyses are being conducted at iron ore pits whose output could climb to 13 million tonnes a year.

The renewal of the Tornio–Kolari line began last year. If production is according to projections, development investments will also be needed on this line section to allow heavy freight traffic and ensure adequate capacity. In Sokli, which is located in northeast Lapland, the opening of a phosphate mine is being studied and a mining company is planning a new track that would be over 100 km long. If these mining projects proceed, large rail investments will be necessary in the coming years to allow mining operations.

### Progress in Ilmala, Central Pasila and Ring Rail Line projects

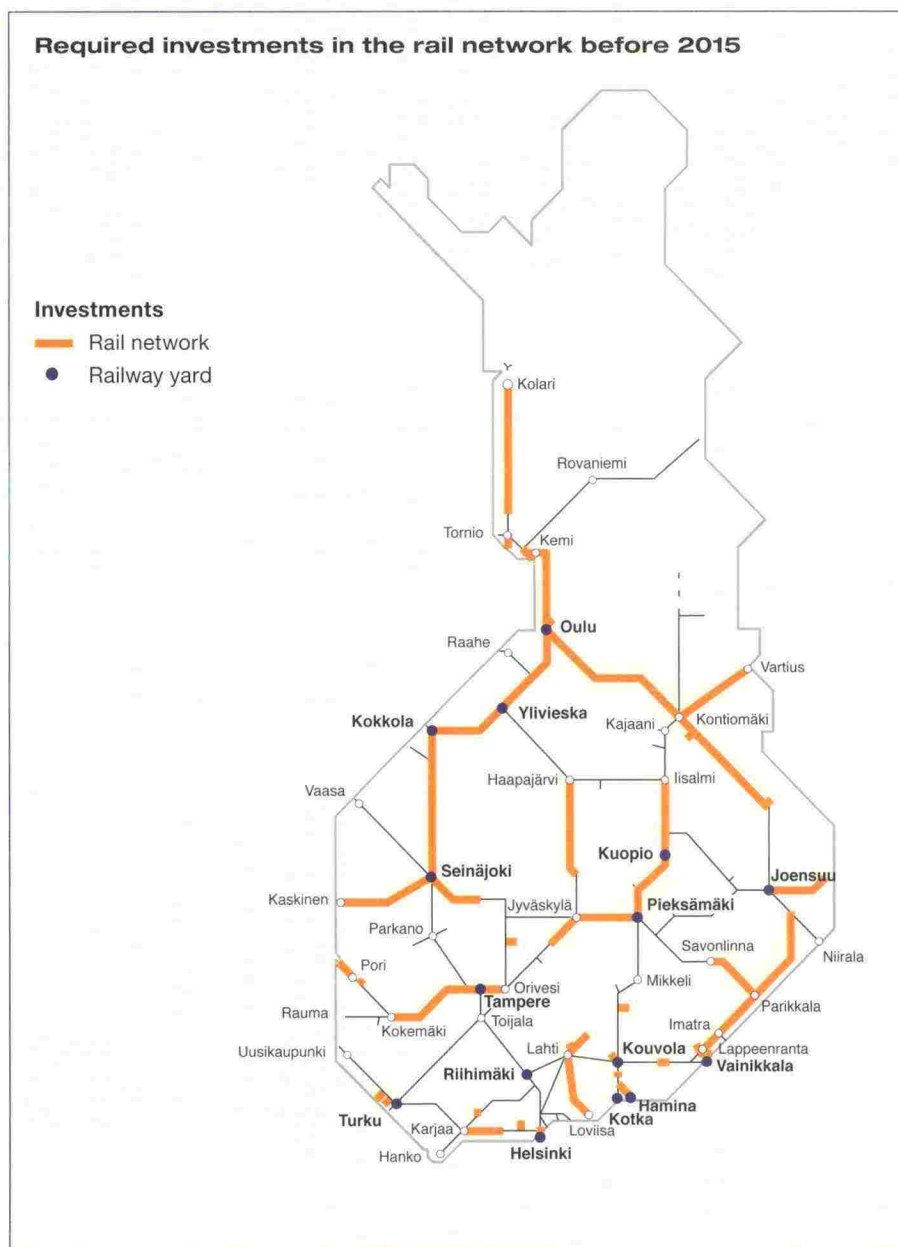
The renewal of the Ilmala yard in Helsinki continued at a good pace, and part of the

new yard went into operation. Work was carefully planned so as not to disturb traffic. Preparations and planning for the Central Pasila yard also continued last year. Financing for the Ring Rail Line, which will run via Helsinki–Vantaa Airport, was approved at the end of 2008 and construction will begin in 2009.

In spring 2008 the renewal of the line between Jämsänkoski and Jyväskylä began.

The project includes the renewal of tunnels and rock cuttings as well as superstructures or rails, sleepers and ballast. Work will continue on the line section in 2009. Between Orivesi and Jämsänkoski the track was also rerouted to firmer ground.

On the Karelian line the track south of Joensuu was rerouted to avoid the Tikkala bog area, which made it possible to remove a speed restriction.





**Main rail network covered by automatic train protection**

By the end of last year all the lines that are used for passenger traffic as well as the lines that are most important for freight traffic were covered by automatic train protection.

Automatic train protection ensures that trains obey speed limits in different situations and observe signs and signals that govern rail traffic. If a train goes too fast, the brakes are automatically applied.

**New line communications system in operation starting with Vuosaari**

The Finnish Rail Administration's new line communications system (called RAILI) was connected to the telecom network in autumn 2008.

The system will mainly serve train dispatchers, remote controllers and train drivers as well as personnel responsible for switching and track work. The system is based on GSM technology and includes special features developed to meet the needs of rail traffic. Its purpose is to ensure the smooth flow of traffic as well as safety. The system went into operation on the new Vuosaari Harbour line in December and will gradually be expanded to most parts of the rail network in 2009.

**New travel centre tunnel completed in Tampere**

The travel centre tunnel at the Tampere railway station was opened at the beginning of July. The new tunnel improves accessibility to the station and its environs and makes it easier to move about in the station area. The travel centre tunnel was financed jointly by the Finnish Rail Administration and the City of Tampere.

passenger and freight traffic. The project includes the replacement of wooden sleepers and short-welded rails with concrete sleepers and long-welded rails. Safety will be improved by eliminating about 200 level crossings. The project is scheduled for completion in 2011.

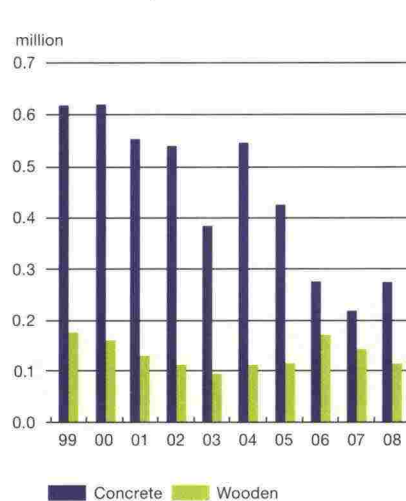
**Savonlinna–Huutokoski line renewed**

Last year the renewal of the Savonlinna–Huutokoski line was completed and traffic resumed. This was the biggest total contract for the renewal of superstructures that has been put out to tender by the Finnish Rail Administration. All the rails, sleepers and ballast on the 74-kilometre line, which is mainly used by the forest industry, was replaced. In 2009 safety at level crossings and yards will be improved.

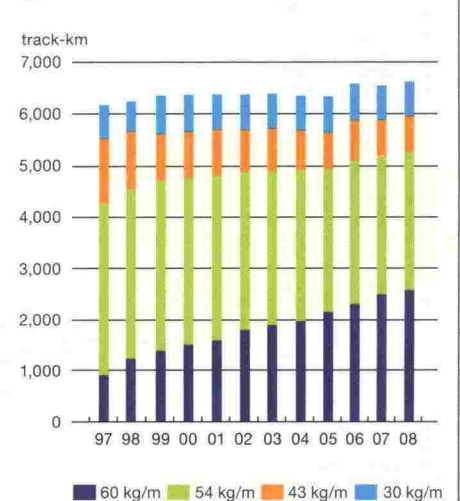
**Tornio–Kolari project under way**

The renewal of superstructures on the Tornio–Kolari line is necessary to ensure proper operating conditions for current

**Installed sleepers 1999–2008**



**Types of rails on main lines 1997–2008**



### High-speed connections between Helsinki and St. Petersburg studied

At the request of the Ministry of Transport and Communications, the Finnish Rail Administration studied high-speed connections between Helsinki and St. Petersburg last year. A preliminary study investigated the needs and preconditions for high-speed (under 250 km/h) or very high-speed (over 300 km/h) rail links between the two cities.

Options that were investigated included possible routes via Kouvola, Luumäki and Vaalimaa, which were compared with the existing Lahti-Luumäki-Vainikkala line upgraded according to current objectives. The possibility of having long-distance trains run in a tunnel via Helsinki-Vantaa Airport was also studied. On the basis of the study the ministry noted that the rail link between Helsinki and St. Petersburg will be developed primarily in the existing corridor from Helsinki via Lahti to Luumäki and the border. Regional planning should prepare for new rail corridors from Helsinki via Porvoo and Kotka to Luumäki and from Lahti via Heinola to Mikkeli to meet future needs.

### Commuter services considered in Southwest Finland

In 2008 the Finnish Rail Administration, the Ministry of Transport and Communications and the Regional Council of Southwest Finland conducted a study of rail network investments that would be necessary to allow the start of commuter services on the Turku-Salo, Turku-Loimaa and Turku-Uusikaupunki line sections. The study indicated that investments would be required in passenger facilities, rail capacity and track maintenance. Measures and costs have been tentatively evaluated.

### Technical condition of the coastal line evaluated

A report on of the technical condition of the Helsinki-Turku line and traffic on the line was completed in summer 2008. According to the report, possibilities to raise speeds in long-distance traffic are limited with the existing track geometry. The most impor-

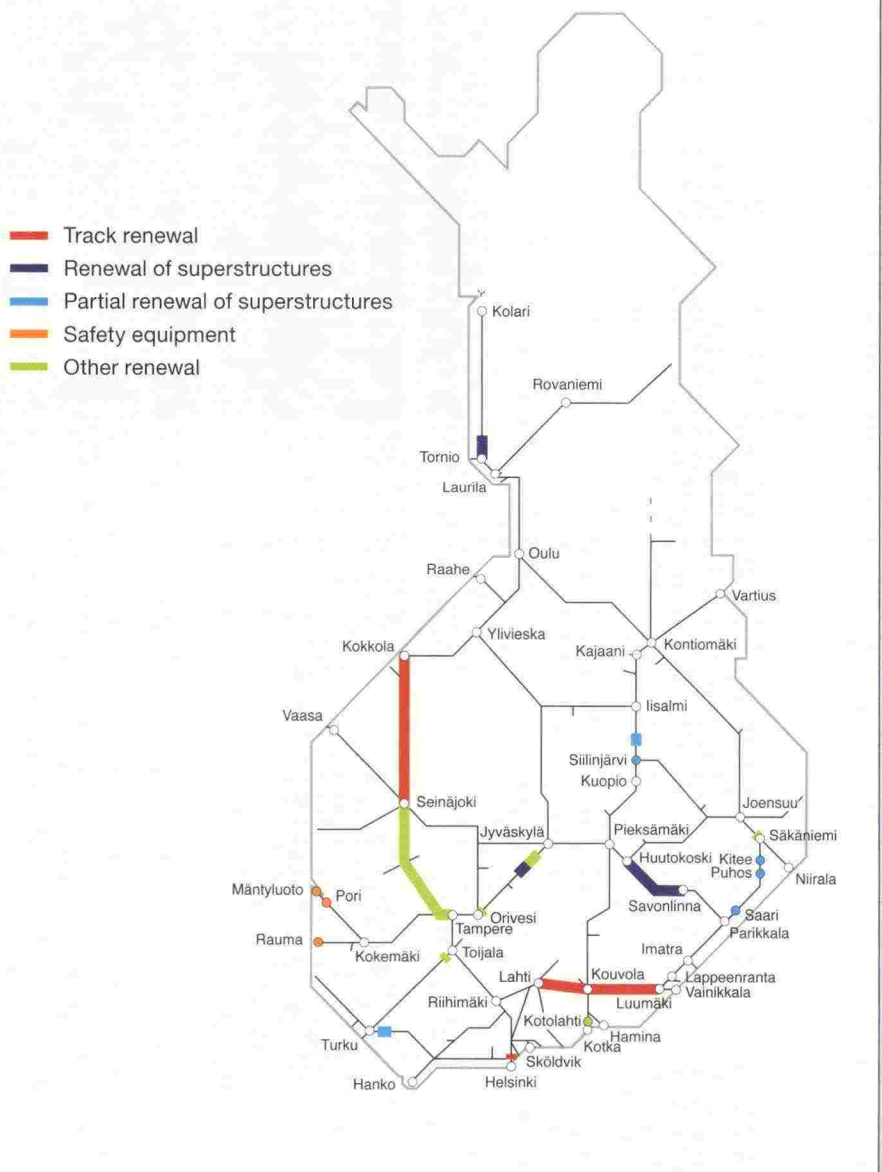
tant measure to raise train speeds would be the construction of a second track between Salo and Hajala. In addition old substructures and tunnels must be renewed in the coming years.

### Vuosaari Harbour line opened late in the year

The Vuosaari Harbour and the new line that was built for it went into operation at the end

of 2008. The VUOSA and VUOLI projects were responsible for the harbour and its traffic channels. The harbour line is 20.5 kilometres long. It is a single-track, electrified line that includes two tunnels. The 13.5-kilometre Savio tunnel is the longest railway tunnel in Finland and the second longest in the Nordic countries. The harbour line was turned over to the Finnish Rail Administration on 14 December 2008.

Investments in the rail network in 2008



## Technology means higher maintenance costs and requirements

The rail network must be constantly maintained to keep it in safe operating condition. To support its own work the Finnish Rail Administration has a regional management model in which the country has been divided into four parts. Track managers supervise the Finnish Rail Administration's interests and the maintenance work it orders.

Maintaining the rail network includes taking care of tracks, real estate and land areas as well as operation. Practical measures include inspections, preventive maintenance, repairs and snow clearing. Managing land areas and real estate is also part of maintenance. The operation of the rail network includes the renting of communications links, the remote control of electrified lines and the consumption of electricity for track equipment (switch heating, yard lighting and other technology).

Repairs must also be carried out to keep the rail network in good condition. The need for repairs is based on mechanical and manual inspections and the monitoring of track condition. Repair measures include the replacing of sleepers, worn rails and switch components, among other things. Preventive maintenance consists of adjustments and other measures that are taken on the basis of inspections. Improvement measures include the replacing of obsolete components with modern and more durable components.

### **New technology raises maintenance costs**

Maintenance costs are gradually increasing as a result of the rail network's rising qual-



ity and equipment level, the introduction of the GSM-R network and new safety equipment and lines. All in all expanding technology means higher maintenance requirements and costs.

Last year was good with regard to maintaining the rail network, since weather conditions were favourable. The mild winter and the absence of hot spells in the summer facilitated track maintenance. Damage to the rail network from storms was also minimal in 2008.

### **Competition expanded in maintenance of electrified lines**

The tendering model for track maintenance that was jointly agreed by the Finnish Rail Administration and the Ministry of Transport and Communications is being gradually expanded to the entire rail net-

work. Each year tenders will be invited for two or three maintenance districts. The rail network has been divided into 12 maintenance districts for this purpose.

Last year a contract for the maintenance of electrified lines and power current technology was concluded with VR-Track and Eltel Networks. VR-Track was selected to take care of maintenance in southern and eastern Finland. Eltel Networks took over the western Finland district. It had previously operated in northern Finland. The new maintenance contracts will remain in force for 3–5 years, and they emphasize measures aimed at improving punctuality in rail traffic.

Tenders were also invited last year for maintenance district 5, the "Haapamäki star". The contract was awarded to VR-Track and came into force in February 2009. VR-Track

was also selected to manage the operational centre. Late in the year tenders were invited for maintenance district 7 in eastern Finland. This contract will be awarded in 2009.

**Maintenance of safety equipment intensified**

In autumn 2008 numerous defects in safety equipment occurred in the rail network and these weakened the punctuality of rail services. The Finnish Rail Administration decided to assign an additional expert to supervising basic track maintenance.

In October 2008 remote control in Helsinki broke down. The fault was located and all the defective units in the system were replaced. The reliability of the remote control system was improved by reducing maintenance intervals, increasing spare parts, new online disturbance monitoring and additional training for personnel. Cooperation between different suppliers has also been improved and response periods have been shortened by renewing contracts.

**Rail data system proceeded to testing**

The development of a new rail data system (called Ratapurkki) continued in 2008. The system will allow the Finnish Rail Administration to manage knowledge concerning rail infrastructure and distribute it to actors in the rail sector.

Cooperation has taken place within the Finnish Rail Administration to coordinate the rail data system with the LIIKE and Sampo systems. All of these are closely linked. Testing of the rail data system began at the end of 2008 and it will go into operation in early autumn 2009.

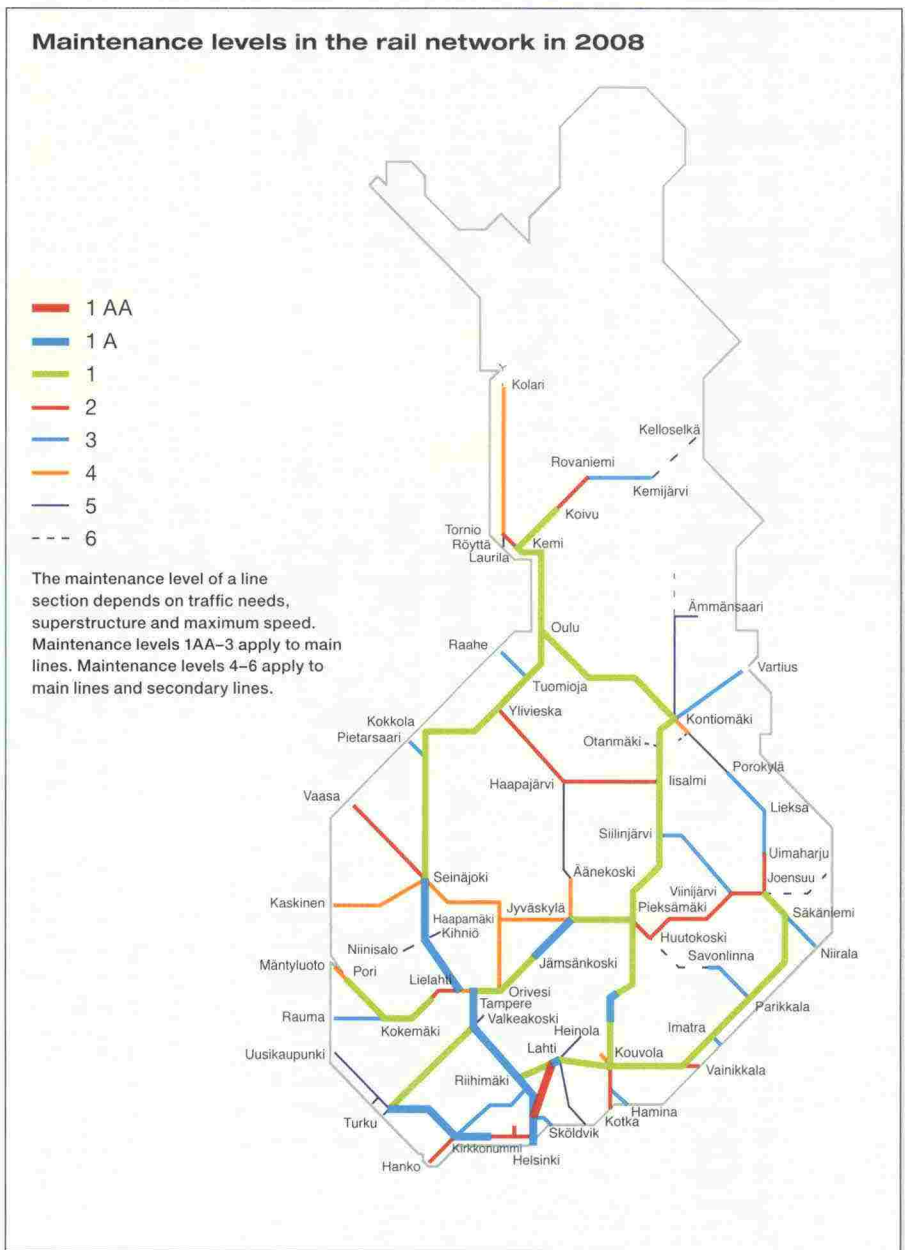
The rail data system is based on the Finnish Rail Administration's IT strategy, the objective of which is to manage the Finnish Rail Administration's key knowledge and create an overall architecture that minimizes IT overlap, among other things. The objective of the new rail data system is to improve the quality of information, harmonize processes and provide a coherent, real-time system for the production and use of information.

**Study of real estate assets**

At the end of the year a study of real estate assets owned by the Finnish Rail Administration and VR was started under the direction of the Ownership Steering Department in the Prime Minister's Office. In collecting background information, real estate assets have been divided into three categories: those that are important for infrastructure management and are being developed, those that are important for infrastructure management

at the moment, and those that are managed by the Finnish Rail Administration because of the development of rail traffic.

The study is designed to investigate how ownership relations will influence the fair treatment of operators when competition begins in the freight sector. The significance of properties for VR's core functions and the Finnish Rail Administration's basic tasks will also be evaluated.



## Monitoring of safety improved



The Finnish Rail Administration achieved its key safety objectives last year. Owing to the closer monitoring of safety deviations, however, serious incidents and close calls came to light.

Especially alarming was the increase in the number of incidents involving inadequate safety at crossings and dangerous situations during track work. More derailings also came to the attention of the Finnish Rail Administration, though there was no increase in the number of serious derailings.

As a result of incidents, the monitoring of safety activities and safety has been improved at all organizational levels. The Finnish Rail Administration requires the comprehensive reporting and handling of

safety deviations in all its activities. Objectives regarding the handling of safety deviations have also been appended to service providers' contracts.

### **Safety management system developed**

In spring 2008 the Finnish Rail Administration's safety management system was updated. The safety policy was also revised. According to the key principles in the safety policy, every accident can be prevented and incidents can be anticipated.

The safety policy requires that risks in the Finnish Rail Administration's activities must be identified before accidents occur. The safety perspective is also taken into consideration in tendering, and

outside suppliers must comply with the Finnish Rail Administration's safety principles.

In connection with the updating of the safety management system, the Finnish Rail Administration's safety guidelines were incorporated into the safety management system.

### **Safety guidelines for infrastructure management**

Last year the Finnish Rail Administration prepared safety guidelines for track maintenance. These were introduced in November. The guidelines cover qualifications, track work, working and vehicle traffic in platform areas, and safety supervisors.

In connection with the safety guidelines the Finnish Rail Administration's safety qualification procedures were also updated. According to the new procedures, safety training must be provided by an institution that has been approved by the Finnish Rail Administration. In 2008 two institutions were approved for this purpose. In addition the Finnish Rail Administration produces safety training materials, arranges training for instructors and supervises training.

#### Safety report prepared monthly

A safety report describing key events related to safety is prepared monthly for the Finnish Rail Administration's management. Last year the safety report was standardized. The report describes accidents and incidents, track damage, derailings, accidents at level crossings, and accidents and incidents at work sites, among other things.

#### In-house control plan introduced

On the basis of an order issued by the Finnish Rail Agency, an in-house control plan for 2008 was prepared for the Finnish Rail Administration. According to this plan key

control areas are safety systems, rail system functions, rolling stock, track maintenance and preparedness. The implementation of the in-house control plan is reviewed in safety reports.

#### Risk management prevents threats

The Finnish Rail Administration's risk management is preventive, conscious, systematic and constant work. Risk management is part of good management, planning and safety. It is also incorporated in the Finnish Rail Administration's safety management and operational systems.

The purpose of risk management is to ensure proper operating conditions in changing circumstances and different situations and to promote the achievement of safety objectives. It also ensures the resumption of activities after an accident or error and a speedy return to normal.

As part of risk management, risk analysis has been developed, for example in key building projects and other major change situations. A risk analysis method for investment projects was developed in cooperation with the Finnish Road Administration. This

covers all stages of a building project, from planning to operation. The method can also be applied to maintenance.

#### Preparedness plan updated

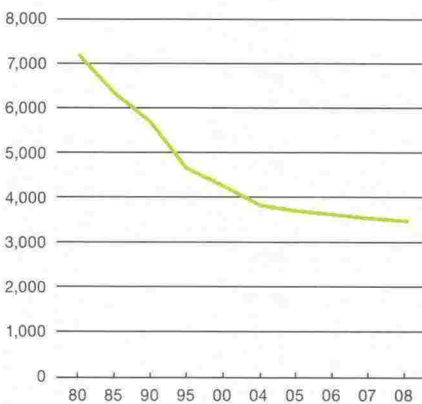
The Finnish Rail Administration's preparedness plan was updated in spring 2008. The plan covers all disturbances during normal periods as well as exceptional circumstances. Guidelines were also prepared for the preparation of regional preparedness plans.

#### Level crossings eliminated with supplementary budget funds

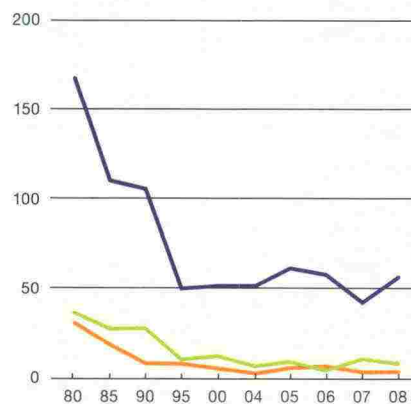
The Finnish Rail Administration received 9 million euros in supplementary budget funds to eliminate level crossings in 2008. In the background was the general improvement of rail safety. An additional goal was to raise train speeds on some line sections.

Last year a total of 119 level crossings were eliminated on the state rail network, including 36 with the help of supplementary budget funds. The largest number of level crossings was eliminated in eastern and northern Finland.

Number of level crossings on state-owned lines 1980–2008

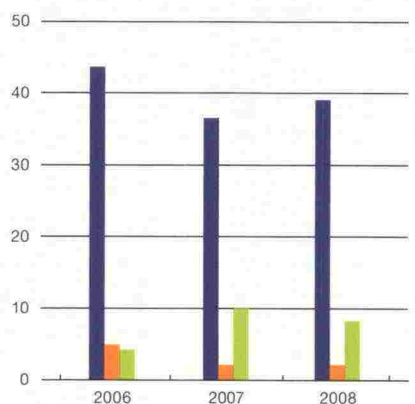


Development of accidents at level crossings 1980–2008 on all lines



■ Total accidents  
 ■ Persons seriously injured in accidents  
 ■ Persons killed in accidents

Development of accidents at level crossings 2006–2008 on state-owned lines



■ Total accidents  
 ■ Persons seriously injured in accidents  
 ■ Persons killed in accidents

# Climate change is a challenge and an opportunity for the railways



Rail transport is the most environmentally friendly mode of transport, and the railways have a significant role in environmental protection and curbing climate change. Rail transport's low emissions also provide good opportunities to increase its market share.

The biggest environmental impacts of rail traffic are noise, vibration and contaminated soil. Prevention is the most socio-economically feasible way to deal with noise and vibration problems. Cooperation with local planning authorities is increasingly important in this regard.

## Responding to climate change

The Finnish Rail Administration's environmental work is guided by its environmental strategy. Last year a new and more comprehensive environmental strategy was prepared for 2009–2013. This included a noise and vibration strategy and a climate and energy strategy. A soil and groundwater strategy was prepared in 2007.

The key content of the environmental strategy is responding to climate change. Infrastructure management can respond to climate change with warning systems, emergency and conservation plans and material

preparedness, for example. Emission targets can be met by cooperating with operators and local authorities and by reducing energy consumption, among other things.

## More vibration studies

The Finnish Rail Administration conducted 19 vibration studies in different parts of the country, which is more than in past years. Eight studies were conducted in the Turku region and six in Lahti. The other studies were in Joensuu, Järvenpää and Mellilä and on the Kerava–Lahti line. In most of these places studies had been conducted before. Anti-vibration measures were tested in six places and in the best case vibration was reduced by over 50%.

## Operational plan for noise abatement completed

In autumn 2008 the Finnish Rail Administration completed an operational plan for noise abatement. This was prepared for the busiest line sections, which run from Helsinki to Espoo, Vantaankoski and Riihimäki. These line sections have a combined length of 96 kilometres. The plan followed an environmental noise study that was conducted in

2007 and is based on the EU Directive on Environmental Noise.

The plan specified the most important areas in which noise abatement is needed and what measures should be taken, evaluated the effect of measures on the number of people who are subjected to noise and prepared a long-term plan to reduce negative impacts. On the basis of the study the decision was made to propose noise abatement measures in the Viertola section of Hyvinkää and the Saunakallio, Kinnari, Loutti, Kyrölä and downtown sections of Järvenpää. The proposed measures are noise barriers and rail dampers.

## Large clean-up of former sleeper treatment facility in Mikkeli

In spring 2008 the Finnish Rail Administration started the biggest soil and groundwater clean-up project in its history. Approximately 80,000 tonnes of contaminated soil was removed from a former sleeper treatment facility in Mikkeli. This corresponds to roughly 5,000 truck loads.

A key objective of the project was to ensure the quality of untreated water at the Pursiala pumping station. The quality of removed soil, residual levels at the bottom of the pit and contaminants in groundwater were monitored with chemical analyses. The first stage of the clean-up cost about 1.5 million euros. The project may take several years.

## Risks to groundwater areas being surveyed

Last year the Finnish Rail Administration continued a project to develop risk management with regard to groundwater areas. The rail network includes about 550 kilometres of tracks that pass near or through important class I or II groundwater areas. A two-stage risk evaluation model was developed. This allows attention to be focused on the most significant groundwater areas in terms of risk and further measures.

The main risk to groundwater areas involves transports of hazardous substances. Nationally the largest volumes of hazardous



substances are transported in southeastern Finland, and the area administered by the Southeast Finland Regional Environment Centre was consequently selected as the project's testing area.

The risk evaluation method and evaluations for this area were completed in summer 2008. Proposed risk management measures included the regular monitoring of groundwater. The method and a site card model will be applied to groundwater areas throughout the rail network.

**Environmental impact assessment for second track between Luumäki and Imatra**

An environmental impact assessment concerning the construction of a second track between Luumäki and Imatra was completed at the end of 2008.

The assessment considered three op-

tions: maintaining the present line without development measures, upgrading the present line by increasing maximum speeds and axle loads, and improving carrying capacity by building a second track.

The environmental impact assessment noted that building a second track is the best option in terms of climate and traffic impacts. A second track would result in a significant improvement in rail traffic's speed, carrying capacity and competitiveness.

**Master planning for the Pasila-Riihimäki line section**

In autumn 2008 the Finnish Rail Administration started the tentative preparation of a master plan intended to increase the carrying capacity of the Pasila-Riihimäki line section.

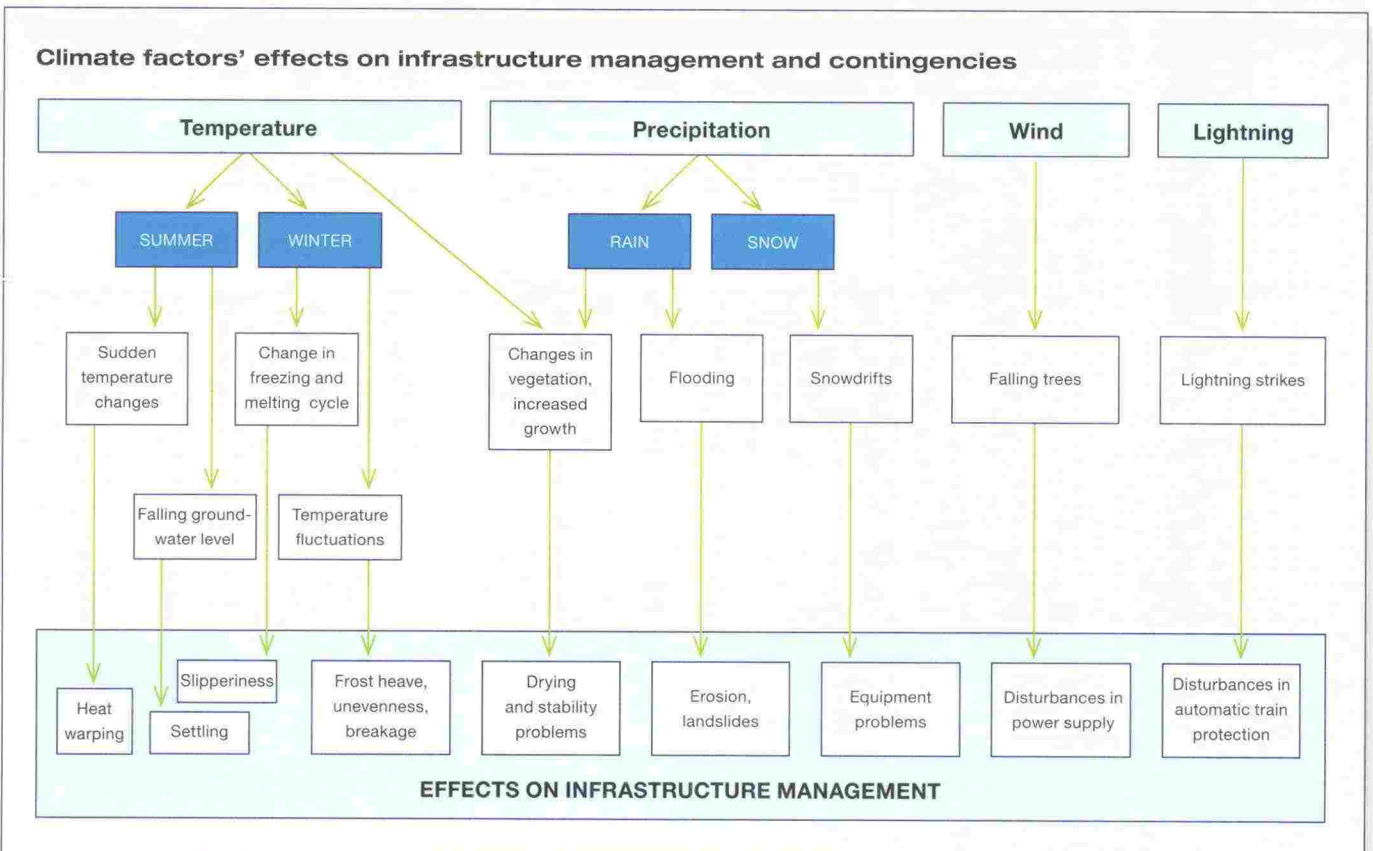
The plan includes the evaluation of environmental impacts between Kerava and Rii-

himäki. The line from Helsinki to Riihimäki is the busiest in Finland, and no significant expansion of services is possible unless the line's carrying capacity is increased.

**External costs of transport studied**

In February 2008 the Finnish Rail Administration began a study of the external costs of transport and how these can be internalized in charges. The project is based on an EU study.

The external costs of transport include climate change, exhaust emissions, noise, vibration, congestion and accidents. External costs influence consumers' choices if costs have been internalized in transport charges. In this way the negative impacts of transport on the environment and health can be reduced.



## Results of research and development quickly put to use



The Finnish Rail Administration conducts sizable research and development work, on which it spends about 6 million euros a year. The main principle is that research should directly serve practical investment and maintenance work in the rail network as well as rail services.

There are only a few multi-year research programmes. Projects are planned so that results can quickly be put to use in infrastructure management. This is referred to as "nimble" research. The Finnish Rail Administration specifies its research and development programme each year. It updates its broader R&D strategy every three or four years.

Last year 30% of research and development work focused on technical systems and 20% on track structures and their construction. Half of financing was thus spent on actual railway technology. The

remainder was spent on safety, timetable management, the development of the transport system and the environment.

International cooperation projects, which promote the European rail market and the competitiveness of rail transport, also play a significant role in research concerning railway technology. In Finland the main cooperation partners are technical universities.

### **Broad study of ballast-free track**

Last year the Finnish Rail Administration was involved in around 50 research and development projects. One of the most significant was a broad study of a ballast-free track. This solution would substantially reduce the need for track maintenance.

The study indicated that the benefits of a ballast-free track would be too small in relation to higher investment costs. On

the basis of the study, ballast-free tracks will not be built in Finland. Instead tracks resting on ballast, which have lower life-cycle costs, will continue to be used in future. As a concrete example the study focused on the Ring Rail Line, which will provide a rail link to Helsinki-Vantaa Airport. The construction of the new line will begin in 2009.

### **Several significant projects in progress**

The longest research project involved development work on the Specific Transmission Module (STM), which will allow the use of new ETCS equipment installed in locomotives on lines with automatic train protection.

With regard to safety equipment a broad research project is being conducted regarding a new signal system, with the work-



ing name of Signal 2010. This would be based on LED signals spaced farther apart and with a narrower structure. Prototypes will be installed in the early part of 2009.

In 2008 a broad study concerning heavy ore traffic got under way. The purpose is to investigate possibilities to use larger axle loads and loads per metre. In addition to Finnish research institutes, experts from the United States and Sweden are also participating in this project.

Currently the maximum axle load in Finland is 22.5 tonnes as a rule and 25 tonnes on some lines. The study is looking at possibilities to use considerably higher axle loads. Work is complicated by the fact that very heavy freight trains and express trains would use the same lines. The study was prompted primarily by mining projects in northern Finland.

#### **Alternatives sought for noise barriers**

Research also focuses on reducing vibration and noise induced by rail traffic. The Finnish Rail Administration has commissioned several trials aimed at reducing the diffusion of vibration. The results are promising, although structures are expensive.

Trials are presently being conducted to find alternatives to traditional noise barriers, which are susceptible to damage from vandalism and are considered unattractive by some residents.

Alternative ways to reduce noise include rail dampers, lubricating rails, reducing friction on curves and noise-damping guard-rails.

Safety studies last year investigated ways to improve safety at level crossings, among other things. One study focused special attention on unguarded level crossings with little traffic. The study is part of the na-

tional Safe Traffic 2025 research programme, which covers rail and road traffic.

#### **RHK Academy's position established**

The RHK Academy, which was launched in 2007, established its position last year and is already recognized in the field.

In 2008 supplementary training regarding new technical guidelines was arranged at the RHK Academy. The development of rail transport and infrastructure management will be ensured by maintaining adequate expertise and by training new experts. The goal of the RHK Academy is to increase knowledge in the rail sector among the Finnish Rail Administration's personnel as well as service providers. The academy will also make it possible to apply research and development findings effectively. In 2008 a total of 243 persons participated in training.

## Merger of agencies in the transport sector being prepared



In 2008 the Finnish Rail Administration participated in a major organizational reform together with the Finnish Road Administration and the Finnish Maritime Administration. In the background is a study that is being conducted by the Ministry of Transport and Communications concerning the merger of agencies in the transport sector. The Finnish Rail Administration's functions would be part of the new agency.

In addition a new agency responsible for transport safety would be established, and among other things this would take over the tasks of the Finnish Rail Agency, which is in charge of rail safety. The intention is for the new agencies to start operating at the beginning of 2010.

The merger of agencies would respond to the productivity and efficiency objectives that have been set for transport administration. The aim of the reform is to implement transport policy in a more coherent way and to strengthen the national and regional trans-

port system perspective. From the viewpoint of users, the objective is to take the needs of the entire travel and transport chain into consideration better.

### Personnel actively involved in study

The Finnish Rail Administration began planning for the reform in May 2008. The planning process has been based on interaction with personnel throughout the project. Planning was conducted in the autumn in regular workshops that were attended by representatives of the Finnish Rail Administration's management and personnel. Personnel had an opportunity to express their views on the progress of planning.

The Finnish Rail Administration has adopted an active approach as its strategy in planning the new agency. It wishes to influence planning throughout the project. The management group of the transport agency project appointed Anne Herneoja, the director of the Finnish Rail Administration's Traffic

System Department, to serve as project director. She assumed this task on a full-time basis at the beginning of 2009.

A personnel survey was conducted in the autumn concerning the study. Although they are actively involved in planning, both the Finnish Rail Administration's management and other personnel take a critical view of the new agency. In the survey the greatest criticism concerned the relocation of activities and maintaining expertise in the new organization.

The Ministry of Transport and Communications started a study concerning the location of the new agency at the end of the year. Possible locations that were compared included Lappeenranta and Rovaniemi as well as the Helsinki metropolitan area.

### Rail administration strategy completed

A strategy project that was started in the latter part of 2007 was completed in the first half of 2008. The goal was to investigate

what strategic goals the Finnish Rail Administration should adopt to respond to changes in the operating environment. The project looked at the Finnish Rail Administration's values, mission, vision and previous strategic lines.

Most of the preparatory work for the strategy was conducted at the project group's meetings. Drafts of the strategy were discussed at meetings of management and the Rail Administration Board as well as personnel's department and unit meetings. In addition a strategy seminar was arranged for the entire personnel.

**Job satisfaction still good**

The results of the job satisfaction survey that was conducted at the beginning of 2009 concerned activities in 2008. Job satisfaction remained at the same good level as the year before. The Finnish Rail Administration's job satisfaction index was 3.6 on a scale of 1-5. Job satisfaction improved with the exception of working conditions, since evaluations of job security and occupational health declined as a result of the transport agency reform and the threat of relocation. Job sat-

isfaction varies considerable within the Finnish Rail Administration. There are significant differences between department and between men and women.

The results of the survey will be considered in detail by each department and the consultation committee. Development projects will be started to resolve problems.

**Expertise development plan completed**

Last year an expertise development plan was prepared for the Finnish Rail Administration. This includes surveying expertise, preparing personal development plans, training options and other measures to develop expertise as well as feedback.

**Planning of the Sampo system continued**

The planning of the Finnish Rail Administration's and the Finnish Road Administration's joint operational control system, which is called Sampo, continued in 2008. The technical implementation of the system also began.

The purpose of the operational control system is to improve the planning and mon-

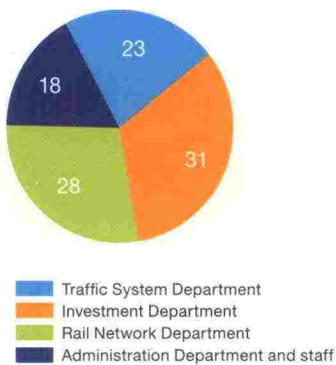
itoring of projects as well as financial and personnel resources. Furthermore information concerning traffic in the rail network can be integrated into the operational control system through the new LIIKE system and technical information through the new rail data system. The new model for operational control will cause changes in actors' roles and tools. For example, the new information system will be a tool in performance management and project management.

The Finnish Rail Administration's and the Finnish Road Administration's joint Sampo project will directly support the transport agency reform. The Sampo system will be the first new shared information system, and the objective is to include maritime functions in it in the new transport agency.

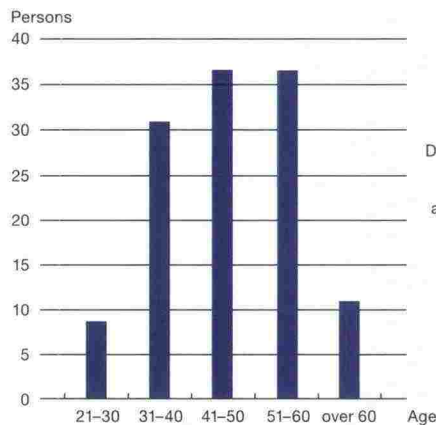
**New office software in use**

Last year the Finnish Rail Administration's computers were replaced and the operating system was changed. All personnel were trained to use the new operating system and new office software. Personnel were also trained to use the new intranet and electronic document management.

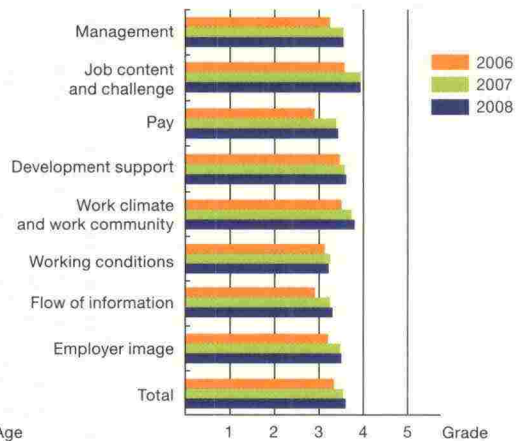
**Employees by department in 2008, %**



**Age breakdown of employees**



**Development of job satisfaction 2006-2008**



In 2008 the Finnish Rail Administration had 27 employees in the Traffic System Department, 37 in the Investment Department, 37 in the Rail Network Department and 23 in the Administration Department and staff.

## Statement of Income and Expenses

1,000 euros	1.1.-31.12.2008		1.1.-31.12.2007	
<b>OPERATIONAL INCOME</b>				
Fees	45,421		42,561	
Rents and user charges	5,876		5,836	
Other operational income	27,135	78,432	8,336	56,733
<b>OPERATIONAL EXPENSES</b>				
Material, supplies and goods	355		367	
Personnel expenses	8,778		6,934	
Rents	1,818		1,625	
Purchased services	208,748		185,316	
Other expenses	1,719		1,525	
Depreciation	163,946	385,363	155,390	351,156
<b>DEFICIT I</b>		<b>-306,931</b>		<b>-294,423</b>
<b>FINANCIAL INCOME AND EXPENSES</b>				
Financial income	20		26	
Financial expenses	-12	8	-18	9
<b>EXTRAORDINARY INCOME AND EXPENSES</b>				
Extraordinary income	804		837	
Extraordinary expenses	4,627	-3,823	4,620	-3,783
<b>DEFICIT II</b>		<b>-310,746</b>		<b>-298,197</b>
<b>INCOME FROM TAXES AND COMPULSORY CHARGES</b>				
Taxes and compulsory charges	20,533		17,857	
VAT received	7,101		5,451	
VAT paid	-121,146	-93,512	-91,280	-67,972
<b>DEFICIT FOR THE YEAR</b>		<b>-404,258</b>		<b>-366,169</b>

# Balance Sheet

1,000 euros	31.12.2008		31.12.2007	
<b>ASSETS</b>				
FIXED ASSETS AND OTHER LONG-TERM INVESTMENTS				
INTANGIBLE ASSETS				
Intangible rights		487		266
TANGIBLE ASSETS				
Land and water areas	3,029		3,051	
Building land and water areas	61,272		60,319	
Buildings	20,169		21,917	
Structures	2,696,977		2,682,651	
Machinery and equipment	1,888		2,748	
Furnishings	145		14	
Advances and projects in progress	577,817	3,361,297	391,561	3,162,262
TOTAL FIXED ASSETS AND OTHER LONG-TERM INVESTMENTS		3,361,784		3,162,527
INVENTORIES AND FINANCIAL ASSETS				
CURRENT RECEIVABLES				
Accounts receivable	8,145		11,524	
Prepaid expenses and accrued income	4,305		0	
Other current receivables	273		275	
Advance payments	0	12,723	0	11,798
CASH, BANK AND OTHER				
Cash account		0		0
TOTAL INVENTORIES AND FINANCIAL ASSETS		12,723		11,798
<b>TOTAL ASSETS</b>		<b>3,374,507</b>		<b>3,174,325</b>
<b>EQUITY AND LIABILITIES</b>				
EQUITY				
STATE'S EQUITY				
State's equity at 1 January 1998	2,371,022		2,371,022	
Change in equity in previous years	735,653		633,979	
Equity transfers	573,543		467,843	
Deficit for the year	-404,258	3,275,960	-366,169	3,106,675
LIABILITIES				
CURRENTS LIABILITIES				
Liabilities assigned to the state	54		0	
Advance payments	78		68	
Accounts payable	96,235		66,200	
Inter-agency transfers	217		183	
Payable items	166		125	
Accrued expenses	1,795		1,076	
Other current liabilities	1	98,547	0	67,651
TOTAL LIABILITIES		98,547		67,651
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>3,374,507</b>		<b>3,174,325</b>

## Financing and use of funds

Last year 551.7 million euros in net budget funds was available, including 502.6 million euros (91%) in the regular budget, 16.5 million euros (3%) in supplementary budgets, 32.2 million euros (6%) in funds carried over from previous years and 0.4 million euros in funds allocated to the Finnish Rail Administration by a decision of the Ministry of Transport and Communications. The corresponding amount in 2007 was 422.4 million euros, which means that net budget funds increased by 129.3 million euros last year.

The Finnish Rail Administration's operational expenses item (31.40.01) and basic infrastructure management item (31.40.21) are net budgeted item which were expected to bring in 52.0 million euros in income. Actual income was 64.4 million euros or 12.4 million euros more than the budgeted amount.

- fees: 51.3 million euros (budgeted 49.2 million euros)
- income from the sale of assets: 3.5 million euros (budgeted 2.0 million euros)
- TEN support for infrastructure management: 7.9 million euros (budgeted 0 euros)
- income from ERDF projects: 0.8 million euros (budgeted 0 euros)
- compensation for damages: 0.8 million euros (included in Extraordinary income and expenses) (budgeted 0.8 million euros)
- other income: 0.01 million euros (budgeted 0 euros)

Taking income into account a total of 616.1 million euros was available for gross expenses, and 93% of this was used last year.

The estimated appropriation for the Ilmala yard project was exceeded by 3.9 million euros and the land purchasing and compensation item by 0.4 million euros (with permission to exceed appropriations by 4.5 million euros).

Unused funds included 0.1 million euros appropriated for the Seinäjoki–Oulu project, 0.2 million euros for the Lahti–Luumäki project and 0.8 million euros for the Central Paasila project. Some 0.2 million euros in ERDF

funds for the old programming period went unused.

In 2008 TEN support for rail projects totalled 22.4 million euros, of which 14.5 million euros was booked under item 12.31.40 state income and 7.9 million euros as TEN support for basic infrastructure management.

The Finnish Rail Administration's gross expenses (571.0 million euros) were 138.3 million euros more than the year before (change 32%).

## Statement of Income and Expenses

The Statement of Income and Expenses shows operational income totalling 78.4 million euros, with 1.4 million euros going to cover the Finnish Rail Administration's operational expenses and 62.2 million euros to basic infrastructure management. Other income (totalling 27.1 million euros) includes 14.5 million euros in TEN support to cover investment costs and 0.5 million euros in profits on the sale of buildings, which were booked under item 12.39.40 state income. The biggest difference compared with the year before was an increase in TEN support (2.9 million euros in 2007) and an increase of 0.9 million euros in ERDF funds.

Among operational expenses the largest items were purchased services (208.7 million euros) and depreciation (163.9 million euros). Purchased services include track maintenance (152.5 million euros) and traffic control services (32.5 million euros), real estate maintenance services (4.3 million euros), telecommunication services (2.0 million euros) and expert and research services (3.5 million euros). Personnel expenses rose by 1.8 million euros. Other expenses (1.7 million euros) mainly include travel expenses, membership fees and property tax.

Extraordinary income (0.8 million euros) and expenses (4.6 million euros) include the costs of delays resulting from track damage and track work and related compensation. Taxes include track taxes and investment taxes totalling 20.5 million euros.

According to the Statement of Income and Expenses, operational income covered 20% of operational expenses.

## Balance Sheet

The capital value of fixed assets amounted to 3.4 billion euros at the end of the year.

The net increase in assets was:

	Track structure	
	Work in progress	Completed
	(1,298)	(1,241)
Budget expenditure (booked in balance sheet)	343.1	
Transfers to completed	-176.1	176.1
Administrative transfers	19.2	
Depreciation		-161.7
Net change	147.9	14.3

Current receivables totalled 12.7 million euros, of which the biggest items were track tax and track fees. Current liabilities totalled 98.5 million euros (67.7 million euros in 2007). These consisted mostly of bills that were paid in early January 2008.

The balance of the state's equity was calculated in connection with the starting balance sheet on 1 January 1998.

## Paid activities and cost covering

In paid activities the largest item was track fees, which the Finnish Rail Administration collects from operators on the basis of a special Act. Statutory and commercial performances under this Act are specified in a Decree issued by the Ministry of Transport and Communications (754/2006). Statutory performances include the issuing of different kinds of licences, decisions and technical specifications and inspections. Commercial performances include real estate services, the issuing of crossing permits and switching work that is part of traffic control service.

The income from statutory performances was less than 100,000 and so a separate cost covering statement according to State Treasury regulation 19.12.2005/DNo 364/03/2005 has not been prepared for this income.



<b>Financing and use of funds in 2008</b> million euros	Gross expenses	571.0
	Carried over to 2009	48.1
	- basic infrastructure management (31.40.21)	(38.0)
	- operational expenses (31.40.01)	(2.5)
	- development of radio network (31.40.79)	(7.6)
	Exceeding of estimated appropriations	4.3
	Unused budget funds	1.2
	<b>Available funds, total</b>	<b>616.1</b>

<b>Use of funds in 2006–2008</b> million euros		<b>2006</b>	<b>2007</b>	<b>2008</b>
	Administration	12.5	11.7	14.9
	Traffic control	39.0	38.8	44.1
	Real estate activities	6.2	3.7	4.9
	Track maintenance and operation	108.1	111.2	121.9
	Track repairs	28.2	26.0	29.3
	Maintenance investments	11.4	20.9	17.0
	Planning and research	8.5	8.9	12.0
	Replacement investments	164.2	157.5	168.9
	Development (31.40.77)	9.5	0.7	-
	Oulu–Iisalmi, electrification	20.1	0.2	-
	Kerava–Lahti	30.7	1.1	-
	Ilmala yard	4.4	20.8	28.9
	Seinäjäki–Oulu	-	7.0	53.9
	Lahti–Luumäki	-	5.3	64.8
	Central Pasila	-	-	1.2
	Radio network	2.8	7.3	6.2
	Land areas (31.40.76)	1.2	3.8	2.1
	EU structural funds (old programming period)	1.2	7.7	0.2
	EU structural funds (Min. of Empl. and Econ.)	-	-	0.7
<b>Total</b>	<b>448.0</b>	<b>432.7</b>	<b>571.0</b>	

<b>Paid activities in 2008</b> million euros		<b>Income</b>	<b>Expenses</b>	<b>Result</b>
	Track fees	43.1	486.8	-443.7
	Commercial performances	8.2	9.8	-1.6
	<b>Total</b>	<b>51.3</b>	<b>496.6</b>	<b>-445.3</b>

<b>Cost covering calculation for track fees 2006–2008</b> million euros		<b>2006</b>	<b>2007</b>	<b>2008</b>
	Track fees	44.0	42.4	43.1
	Track maintenance and operation, separate costs	135.1	136.8	147.3
	Operational deficit	-91.1	-94.4	-104.2
	Capital costs			
	- depreciation	142.8	153.0	161.7
	- interest costs	58.2	90.7	170.6
	Total capital costs	201.1	243.8	332.4
	Share of social costs	5.8	5.9	7.1
	Total costs	341.9	386.4	486.8
Deficit	-297.9	-344.0	-443.7	
Deficit as % of costs	-87.1	-89.0	-91.1	

#### Cost by task in 2006–2008, million euros

	Costs excluding capital costs				Total costs			
	2006	2007	2008	Change %	2006	2007	2008	Change %
<b>Network management</b>	<b>191.3</b>	<b>194.8</b>	<b>218.1</b>	<b>12.0</b>	<b>393.3</b>	<b>439.8</b>	<b>551.6</b>	<b>25.4</b>
Traffic control	37.9	38.9	45.6	17.2	38.8	40.1	46.7	16.5
Track maintenance and operation	140.9	142.7	156.3	9.5	342.0	386.4	488.7	26.4
Planning and research	12.5	13.2	16.2	22.7	12.5	13.2	16.2	22.7
<b>Paid activities</b>	<b>9.4</b>	<b>4.7</b>	<b>7.5</b>	<b>59.6</b>	<b>12.6</b>	<b>7.1</b>	<b>9.8</b>	<b>38.0</b>
Commercial	8.0	4.7	7.5	59.6	11.2	7.1	9.8	38.0
Statutory	1.4	-	-	-	1.4	-	-	-
<b>Total costs</b>	<b>200.7</b>	<b>199.5</b>	<b>225.6</b>	<b>13.1</b>	<b>405.9</b>	<b>446.9</b>	<b>561.4</b>	<b>25.6</b>

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