



**Economic and Social  
Council**

Distr.  
GENERAL

ECE/TRANS/WP.5/2007/7/Add.3  
5 July 2007

Original: ENGLISH

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**ECONOMIC COMMISSION FOR EUROPE**

**INLAND TRANSPORT COMMITTEE**

Working Party on Transport Trends and Economics

Twentieth session  
Geneva, 13-14 September 2007  
Item 6 of the provisional agenda

**REPLIES TO THE QUESTIONNAIRE ON TRANSPORT DEVELOPMENTS**

Addendum

Transmitted by the Government of Finland

I. GENERAL TRANSPORT POLICY ASPECTS

A. Developments with regard to your Government's policy objectives for inland transport as a whole and for special sectors (road, rail, inland waterway, urban transport, etc.) as well as external objectives (land use planning, regional development, etc.) to the extent they are related to transport

1. Trends in Finland's transport policy will be guided by the challenge of climate change. The amount of greenhouse gas emissions from the transport sector must be reduced. But at the same time, care must be taken to ensure the competitiveness of the logistics sector and ease of daily travel. A balanced transport policy must find ways of reconciling these objectives. The key is to change our ways of thinking and acting and become customer-oriented and innovative.

2. Transport policy is based on customers' needs and wishes. Customer-orientation means transport policy choices that aim to ensure smooth travel in both professional and everyday life. The level of service needed by customers, citizens and the business community will be provided using a variety of diversified and innovative mechanisms. Customer-orientation also means ensuring that future generations will be able to travel and transport goods as required.

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3. The transport system must be planned and developed holistically. Daily and business travel often involves chains of different modes of travel and transport and their overall functioning has to be ensured. Reviews of individual sectors and operations will be replaced by overall development and optimization of the transport system. As the transport system is developed the activities of the various agencies will be used to their best advantage.

4. Resources will be used efficiently. The sensible and efficient use of limited resources means using a broad selection of mechanisms. The objective of the new development strategy will be to make effective use of the capital invested in transport infrastructure, faster resolution of travel and transport problems and innovations to improve service levels. Efficient use of resources also means prioritizing; resources have to be used in the most productive way overall. Increasingly close cooperation and networking will be used to exploit skill-based resources.

5. A flexible approach will be taken to solutions and operations. Although the development of the transport system aims at long term sustainability, there must be flexibility in identifying the right development approach, skill in predicting and responding to changes in the operating environment, and the courage and initiative to influence developments. The future will change people's approach to working and doing business, and will bring new and efficient mechanisms to improve the quality and operation of the transport system. We must be able to take advantage of the opportunities of new technology when improving the transport system. There is a risk that the long-term solutions adopted in the light of today's mechanisms and ways of thinking will not be the best way of responding to the needs of the future.

B. Organizational developments with regard to measures for achieving transport policy objectives, e.g. the structure, functioning and competence of the public administration responsible for transport policies and the relationships of this administration with other administrations (national, regional, local) and with transport enterprises

6. Roads: Finnish Road Administration is responsible for Finland's highway network. Competition in road markets (maintenance, building) has been totally in open markets since 2004. In 2001 the State-owned enterprise (Finnish Road Enterprise, now called Destia) was set up. Destia is planned to be incorporated from the beginning of 2008.

7. Rail: The Finnish Rail Administration is responsible for maintaining and developing Finland's rail network. The Finnish Rail Administration (RHK) orders planning, construction and maintenance services from engineering firms, consultants and contractors. About 70% of track maintenance work is put out to tender. In new projects and expansion investments the figure is nearly 100%.

8. Operating the goods transport is open for the markets from the beginning of 2007. Passenger traffic is operated for the present by the State-owned rail-company VR.

9. Seaways: Maintenance, piloting and ice-breaking are open to markets. The State-owned enterprises Finstaship and Finnipilot (set up in 2004) are still in a dominant position.

10. Airways: State-owned enterprise Finavia maintains Finland's network of airports and the air navigation system. At the end of 2005 the airport network consisted of 25 airports and the organization employed about 2,385 people.

C. Policies adopted or action taken by public authorities to enhance safety (users, personnel and third persons) and reduce adverse environmental impact of various modes of inland transport

11. The long-term objective for all modes of transport is to avoid fatal accidents. We are already close to this objective with air traffic and merchant shipping. The greatest challenge is to improve road safety.

12. The main challenges are to improve road safety, particularly to reduce the number of collisions on main roads and light traffic accidents in agglomerations, as well as to change people's attitudes and behaviour and increase safety awareness.

13. According to a Government resolution, the objective is to improve road safety so that the number of fatal road traffic deaths by 2025 is no more than 100. Transport safety has only improved a little over the past 10 years. At the present rate of progress, we will lag far behind the targets set by the Government and remain below the levels of other Nordic countries. Another problem is the large number of people who are seriously injured. A particular challenge is to reduce the number of collisions on main roads and light traffic accidents in agglomerations.

14. Trains are involved in traffic accidents at level crossings. Since the high number of level crossings makes it impossible to remove them all, the challenge is to change people's behaviour.

15. Growing transport to Russia is increasing safety risks for both road and maritime transport. The high growth in maritime transport to Gulf of Finland ports means more safety risks in the Baltic. The growth in pleasure boating will result in more dangerous situations with merchant vessels.

16. Security issues have become more important and will continue to become even more important particularly for international travel and transport. A particular challenge in maintaining the security level at ports and airports is to keep these bottlenecks functioning smoothly.

17. Pedestrians and users of public transport sometimes feel insecure. The threat is that increased feelings of insecurity will limit people's movements and reduce the attractiveness of light and public transport.

18. The renewal of the vehicle fleet and improvement in the road network will have a positive effect on traffic safety, as will increased surveillance. Reducing speeds reduces accidents and makes them less serious. New technology can be an efficient way of providing information about driving conditions and other dangers and can also help drivers control their vehicles. The threat is that the benefits of new technology will be outweighed by greater risk-taking in traffic. The problem can be seen on a wider scale too: people's attitudes, motivation and behaviour are often in contradiction to the objective of improving safety.

D. Action taken and provisions made by public authorities to promote a rational use of available transport capacity (e.g. to give a better distribution of traffic between collective and individual transport) including measures carried out to encourage the use of urban public transport and to reduce the use of individual motor vehicles in urban areas

19. The objective in urban areas is to develop public transport options that can compete with the use of private cars. The objective with public transport is to create journey chains that are functional, of good quality and accessible. The coverage, service level and attractiveness of public transport in growing, large and medium sized urban areas will be clearly improved by reviewing transport planning, organization and funding. New technology will be used to improve information services for passengers, and to make journeys easier and public transport more attractive.

20. Government investment in infrastructure to support public transport will be increased, including tracks, bus-lanes and other aids to public transport, interchange stops and information systems. A condition for increasing Government support for planning and public transport services is that the municipalities also increase their investments.

21. In rural areas and small towns, a reasonable level of public transport will be provided for inhabitants. This means that reductions in the number of scheduled routes will be compensated by organizing on-demand public transport. The municipalities and the Social Insurance Institution of Finland will be encouraged to use scheduled services as well as on-demand services and the associated booking systems when ordering transport and reimbursing transport costs.

22. Improving public transport and making the services more effective means better coordination between decision making on service levels and transport planning. Planning of services will be integrated over a wider area than the municipality, so travel and transport needs across different communities and local government areas can be considered as well as possible.

23. Government subsidy for public transport to the regions will be used to maintain a basic level of service. Subsidies will ensure that citizens throughout the country have basic public transport services. Funding will be considered both as a whole, separate from the municipalities, as well as in conjunction with the funding provided by the municipalities and the Social Insurance Institution of Finland for transport services and reimbursement of travel expenses.

24. Most travel in sparsely populated rural areas will depend on private cars. Help from neighbours and car sharing could be of particular help to older people in rural areas when there are insufficient public transport services to meet their day-to-day needs. Improvement in information services could support the wider use of car sharing. Developing public and commercial operating models could improve accessibility to services and ease daily life for people without cars in rural areas.

E. Measures to promote a rational use of energy in transport

25. The main factors in reducing greenhouse gas emissions from transport are stopping the fragmentation of urban structures and the growth in use of private cars, improving the energy efficiency of transport and new, low-emissions fuels. Emissions could also be reduced by

improving the competitiveness of rail and water-borne transport and by increasing their share of the transport market.

26. Reducing greenhouse gas emissions will be slow. There are many effective mechanisms available although their effect may only be seen in a few years. That is why it is necessary to set off in a new direction purposefully and immediately. If reductions in greenhouse gas emissions from transport are targeted in a controlled manner and in different ways, there is every possibility that it will succeed without endangering the competitiveness of Finland's logistics sector or the functioning of day-to-day travel.

27. However, an approach that considers using transport policy in isolation to reduce greenhouse gas emissions from transport will not work. The support of land use planning in particular, and tax policy and other economic stimuli is needed. Environmentally friendly forms of travel; walking, cycling and public transport should be promoted. This also needs the support of land use planning.

28. The objective is a compact urban structure with little traffic and where journeys can be made using public transport, cycling or walking. However, the different interest groups involved in land use and transport planning often pull in different directions. Decisions taken by Government, municipalities, business and individuals emphasize their own, mainly economic, interests. Travel and transport are just one factor in location decisions taken by companies and individuals.

29. Planning of regional transport systems has to develop so that transport and land use planning are better integrated. Land-use planning has to give more consideration to the effects on traffic and the split between different modes of travel. Activities should be located so as to minimize journeys and promote the use of public transport, cycling and walking.

30. There should be closer cooperation between the Ministry of Transport and Communications and the Ministry of the Environment in land use and transport planning. The role of the Ministry of Transport and Communications and the infrastructure agencies is to promote transport considerations in planning by other government bodies and agencies. It is important that the municipalities and Government develop a common understanding of the importance of developing the transport system in response to changes in urban structures, a common will to stop the process of fragmentation of urban structures, and a way to work together to achieve these targets. The main tools are the provincial and overall plans, as well as urban and transport system plans for renewal of municipal and service structures. In the large urban areas it is important to develop a network where local centres offering day-to-day services are connected by strong public transport links.

31. Taxation of company cars and offsetting the cost of travel to work against tax should be reviewed so that their negative effect on community structures and travel behaviour is reduced.

32. The objective is to increase the share of public transport in urban areas. In order to make travel easier and day-to-day journeys possible without a car, transport services in places where people work will be reviewed and planned holistically in the light of local objectives. Land-use planning will be linked to the development objectives for public transport.

33. There will be more government aid for public transport planning in the most important urban areas, and subsidies will be carefully targeted to public transport services as long as the municipalities also increase their contribution. The development of public transport will be supported over the long term through development programmes specific to particular urban areas. The public transport development programme will be linked to the regional transport system plan. The objectives set for the regions' public transport and land use will help achieve national objectives. The regions will select the best mechanisms to achieve their objectives with consideration to their individual strengths and particular needs.

34. In urban areas, most journeys are so short that they could easily be made on foot or by bicycle. Footpaths are needed that are attractive, safe and suitable for everyone, as well as cycle paths and services for cyclists. A comprehensive network of good quality paths for pedestrians and cyclists will be established in urban areas, and they will be signposted and have information points as well as access to stops for public transport. Pedestrians and cyclists will be considered as important as other forms of transport in urban areas' transport planning.

35. The aim will be to price all forms of transport on the basis of use. The biggest development need is in road traffic. There is a clear link between price and demand in air, water and railway traffic: pricing influences customer choice.

36. Road pricing will be implemented using intelligent technology and satellite tracking. The new pricing system will be introduced in 2015 at the earliest. The basis for charging will be the amount a vehicle is used, the place, time and the characteristics of the vehicle. It will replace part of today's taxation on vehicle use without increasing the average cost of using a vehicle. However, the price during rush hour in urban areas could be higher than now. On the other hand, pricing in rural areas would take the long distances and lack of alternative modes of transport into account.

37. This new approach to pricing could influence the choice of transport and the amount of private car use, increase utilization of the current network and cut rush hour peaks by influencing the timing of journeys. Pricing could also encourage a switch to vehicles with low emissions. The objective is to use pricing to manage transport demand and thus reduce the damage done by traffic. In major urban areas in particular, road pricing will be effective in managing demand, thus reducing congestion and greenhouse gas emissions.

38. Road traffic pricing in urban areas will be part of a review of traffic pricing throughout the country. When improving transport systems in urban areas, demand management will always be one of the mechanisms available.

39. The competitive position of energy-efficient passenger rail travel will improve for local travel in urban areas and long distance travel between centres. The train is at its best for medium distance travel of about 100-400 km. Improving the competitive position of rail traffic requires improvements in connections, information and train services as well as developments in the network of travel terminals and door-to-door services.

40. The competitiveness of rail and water traffic will be improved to increase their share of transport. This requires efficient, joint terminals for many forms of transport and new approaches to loading and load areas as well as investment in transport management and administration

systems. For air traffic, emissions trading within the framework of the EU is needed. Business will be encouraged to save energy and use energy more efficiently in transport as part of their quality and environmental management systems.

41. Increases in the price of fuel for road traffic will play its part in the switch to alternative fuels. The use of bio fuels in transport will be replaced as soon as possible by cost-effective, second generation bio fuels made from forestry and waste raw materials.

## II. ECONOMIC, TECHNOLOGICAL AND OPERATIONAL ASPECTS

A. Major, technological developments, with regard to existing infrastructures, transport equipment, traffic control, etc., including in particular traffic control measures in urban areas

and

B. Progress achieved with regard to integrated services of different transport modes for passengers and goods (car-carrying passenger trains, containerisation, palletization, piggy-back), and improved efficiency for transfer operations (commuting, links with airports, collection, handling and distribution of freight at ports and other major centres)

42. Services developed/piloted during the AINO Programme (R&D Programme on Real-Time Transport Information 2004-2007) in relation to European minimum and common ITS services (CEC 2003). Around one third of the projects resulted in the implementation of service concepts, such as:

(a) Public transport passenger information services:

- (i) public transport real-time schedule service Omat lähdöt ("virtual monitor");
- (ii) public transport incident information services in the Helsinki metropolitan area;
- (iii) public transport passenger information provided on stops, online and/or via mobile phone in Tampere, Jyväskylä, Turku, Espoo;
- (iv) passenger information available in vehicles on the public transport line connecting universities in the Helsinki metropolitan area.

(b) Goods transport services:

- (i) goods transport service network information system ;
- (ii) phase 2 of the maritime transport information system PortNet.

(c) Traffic and mobility management especially in urban areas:

- (i) transport network status information from the traffic signal control system;
- (ii) traffic management for road works;
- (iii) collection of transport network status information using sensor vehicles (FCD);
- (iv) short-term weather and road surface condition forecasts;
- (v) centralized provision of urban traffic information services;
- (vi) intelligent road user charging.

- (d) Driver support services:
    - (i) heavy transport driver warning and route planning service;
    - (ii) in-vehicle emergency call system eCall and its supplementary services;
    - (iii) in-vehicle warnings about approaching trains at level crossings;
    - (iv) risky behaviour feedback to car drivers.
  
  - (e) At least the following services appear to be becoming permanent:
    - (i) Public transport passenger information services in several cities;
    - (ii) Route planner for pedestrians and bicyclists in the Helsinki metropolitan area;
    - (iii) Urban transport information service based on the pilot in the Oulu region;
    - (iv) Urban transport information and traffic management services based on the Tampere model;
    - (v) Traffic management for large road works;
    - (vi) Heavy vehicle driver warning and route planning service;
    - (vi) Collection of travel time and transport information using mobile sensor vehicles (FCD)
  
  - (f) Transport information platform
- C. Identification and localization of permanent traffic impediments (bottlenecks, saturation of certain roads, operational difficulties)

43. The major ones are on the Russian Border at Vaalimaa and Nuijamaa – frontier stations.

### III. INFRASTRUCTURE ASPECTS

A. Developments with regard to the planning or realization of major transport infrastructure projects (road, rail, inland waterway, pipeline, domestic or international) as well as improvements to existing infrastructure

44. A transport facility investment programme for the 2004–2007 was published during the first year of the administration of the Prime Minister Matti Vanhanen's first cabinet. The programme consisted of 20 road, rail and waterways investment projects (total building costs about 1,500 million euros), of which 18 is under construction in 2007). The programme of Prime Minister Matti Vanhanen's second cabinet was published in April. At the beginning of the electoral period, the Government will present a report to Parliament to outline its long-term transport policies. The report will include a transport facility investment programme for the 2007–2011 electoral period and a long-term transport and infrastructure development and investment programme based on a comprehensive approach to the transport system.



B. Developments with regard to arrangements for financing infrastructure projects (e.g. road, rail, inland waterway, pipeline, urban transport infrastructure), particular modalities possibly envisaged (e.g. by introducing global or specific financing resources, allocation of infrastructure costs)

45. The construction of the section of the E18 motorway between Muurla and Lohja is a so-called life cycle model project, in which the constructor will also be responsible for the maintenance of the road for a period of 25 years. The construction was started in 2005 and the section will be opened to traffic in 2008. The section is 50 km in length.

46. Developments with regard to some key elements in the inland transport sector:

(a) total employment in the transport sector:

132,000 persons are employed in the transport sector which is about 5% of the total employment in Finland.

(b) total investment in the transport infrastructure:

Total investment in 2005 was approximately €1,000 million, about 0,6% of GDP.

(c) total passenger kilometres:

Total passenger kilometres in 2006: 75,900 million (in 2005-75,200 million); In 2005-62,200 by passenger cars; 3,338 by railways; 118 by trams; 404 by underground transportation; 4,642 by buses and coaches, 926 by taxi; and 1 206 million passenger kilometres by air.

(d) total freight transport:

In 2006 the total was 40,500 million tonne km; 26,400 by road; 11,100 by rail; and 3,000 million tonne km by waterways.

(e) The total length of transport infrastructure:

Total length of public (i.e. State-maintained) roads in Finland is approximately 78,000, of which the main road network (class I and II main roads) accounts for about 13,300 km. The total length of motorways is about 700 km. Approximately two-thirds of all public roads in Finland are paved. The length of the Finnish operational rail network is approximately 5,700 km, about 45% of which has been electrified. About 90% of the network consists of single-track lines. The network of maritime and inland waterways maintained by the Finnish Maritime Administration is approximately 16,200 km in length. About 4,000 km consists of merchant shipping routes, of which the total length of maritime and inland waterways with a depth of at least 8 metres is 2,100 km; this includes all the seaways leading to winter ports.

(f) Domestic passenger transport in Finland – Capacity of public transport at the end of 2005<sup>1, 2, 3</sup>

| 2005                                       | Railway <sup>6</sup> | Tram   | Under-ground <sup>7</sup> | Bus, coach <sup>9</sup> | Taxi               | Air <sup>5</sup> | SI Ferry | Total   |
|--------------------------------------------|----------------------|--------|---------------------------|-------------------------|--------------------|------------------|----------|---------|
| <b>Long-distance transport</b>             |                      |        |                           |                         |                    |                  |          |         |
| Vehicles                                   | 722                  | 0      | 0                         | 630                     | 0                  | 32               | 0        | 1 384   |
| Seats                                      | 40 383               | 0      | 0                         | 32 058                  | 0                  | 2 895            | 0        | 75 336  |
| All places                                 | 42 603               | 0      | 0                         | 32 058                  | 0                  | 2 895            | 0        | 77 556  |
| <b>Urban transport of major cities</b>     |                      |        |                           |                         |                    |                  |          |         |
|                                            |                      |        |                           | 44                      | seats/bus or coach |                  |          |         |
| Vehicles                                   | 70                   | 131    | 54                        | 1 499                   | 0                  | 0                | 3        | 1 757   |
| Seats                                      | 13 300               | 5 889  | 6 948                     | 66 250                  | 0                  | 0                | 810      | 93 197  |
| All places                                 | 16 625               | 16 293 | 21 300                    | 104 289                 | 0                  | 0                | 900      | 159 407 |
| <b>Other local transport within cities</b> |                      |        |                           |                         |                    |                  |          |         |
|                                            |                      |        |                           | 43                      | seats/bus or coach |                  |          |         |
| Vehicles                                   | 0                    | 0      | 0                         | 958                     | 0                  | 0                | 0        | 958     |
| Seats                                      | 0                    | 0      | 0                         | 41 190                  | 0                  | 0                | 0        | 41 190  |
| All places                                 | 0                    | 0      | 0                         | 62 263                  | 0                  | 0                | 0        | 62 263  |
| <b>Other collective transport</b>          |                      |        |                           |                         |                    |                  |          |         |
|                                            |                      |        |                           | 47                      | seats/bus or coach |                  |          |         |
| Vehicles                                   | 112                  | 0      | 0                         | 1 892                   | 0                  | 0                | 0        | 2 004   |
| Seats                                      | 16 758               | 0      | 0                         | 88 733                  | 0                  | 0                | 0        | 105 491 |
| All places                                 | 20 948               | 0      | 0                         | 90 621                  | 0                  | 0                | 0        | 111 569 |
| <b>Charter transport<sup>8, 4</sup></b>    |                      |        |                           |                         |                    |                  |          |         |
|                                            |                      |        |                           | 47                      | seats/bus or coach |                  |          |         |
| Vehicles                                   | 0                    | 0      | 0                         | 1 778                   | 9 152              | 0                | 0        | 10 930  |
| Seats                                      | 0                    | 0      | 0                         | 83 628                  | 46 332             | 0                | 0        | 129 959 |
| All places                                 | 0                    | 0      | 0                         | 83 628                  | 46 332             | 0                | 0        | 129 959 |
| <b>Total</b>                               |                      |        |                           |                         |                    |                  |          |         |
|                                            |                      |        |                           | 46                      | seats/bus or coach |                  |          |         |
| Vehicles                                   | 904                  | 131    | 54                        | 6 757                   | 9 152              | 32               | 3        | 17 033  |
| Seats                                      | 70 441               | 5 889  | 6 948                     | 311 858                 | 46 332             | 2 895            | 810      | 445 173 |
| All places                                 | 80 176               | 16 293 | 21 300                    | 372 859                 | 46 332             | 2 895            | 900      | 540 755 |

1. Also in Tampere and Turku.
2. Capacity as on the last day of the year.
3. If the place capacity of vehicles (e.g. aircraft) varies, the nominal capacity is used in capacity statistics, although statistics on the number of seats are compiled according to the actual number of places provided.
4. Charter transport of buses and coaches also includes charter transport abroad with Finnish vehicles.
5. Air transport includes all notable operators of domestic flights.
6. Railway vehicle capacity is the number of carriages.
7. Underground vehicle capacity is the number of pairs of cars.
8. Charter transport capacity can only be distinguished from other capacity in the case of buses and coaches.
9. Figures on buses and coaches are inclusive on non-member companies of Finnish Bus and Coach Association.

47. Total number of passenger cars at the end of 2006 was 2,505,543 and lorries 91,465. Railways owned 11,162 wagons with the total carrying capacity 499,128 tonnes, and private owners owned 54 wagons with a total capacity of 2.314 tonnes.