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INLAND TRANSPORT COMMITTEE

Working Party on Transport Trends and Economics
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COHERENT EUROPEAN SYSTEM OF INTERNATIONAL TRANSPORT INFRASTRUCTURES

QUALITY OF SERVICE CONCEPT

Transmitted by the Governments of Denmark, Netherlands, Sweden, United Kingdom and the United States of America

Note: Following the request by the Working Party, at its fifteenth session, the secretariat circulated Informal document No. 1 (2002) to member countries and asked for comments in the light of various national experiences with the quality of transport service concept. In particular, member Governments were asked to provide their comments on:

(i) the potential applicability of the quality of service criteria (Table 1, page 3);

(ii) the potential use of quality of service indicators (section II, pages 4-12);

(iii) the modal aspects of the quality of service for road, rail and inland waterway transport (section III, page 13); and, in particular;

(iv) transport network aspects of quality of service and the possible development of indicators and benchmarks for modal networks (general aspects, costs, traffic aspects, environmental impact) (section IV, page 15).

Replies from member Governments on these four questions as well as other comments regarding the wider consideration of the concept of the quality of transport service are presented below. The revised version of Informal document No.1 (2002) is being circulated as TRANS/WP.5/2003/10.

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DENMARK

1. The potential use of the criteria for service quality (Table 1, page 3)

The description of the 8 categories are quite vague which may limit the potential use in practice. Regarding the term "information", a relevant parameter is, of course, information during the planning of the trip. The Ministry of Transport believes that information during the trip – for example when trains are delayed - is at least as important in the passengers' perception of the service-quality. This parameter must not, therefore, be neglected.

Regarding "time", the relevant parameter must be travel-time, and not – as put in the UNECE draft – the time spent on planning the trip. The latter will not be an objective quality-parameter, as it varies from person to person.

2. The potential use of the service-indicators (part II, pages 4-12)

Regarding table 2, the Ministry of Transport considers that not all of the 15 indicators mentioned will give a correct picture of capacity-utilization. Several conditions are dependent on the given infrastructure. The stopping-time at stations (indicator No. 9) will for example – ceteris paribus – be higher in countries where there is a high degree of one-tracked lines, because trains more often must wait for crossing trains in comparison with double-tracked lines. Similarly, the average travel-time (indicator No. 6) also depends on the given infrastructure. If Norway is taken as an example, it would be almost impossible to improve on the two given indicators unless most of the network was supplied with double-track and the lines were straightened out – this seems very unlikely.

Regarding table 3, it is difficult to see the difference between the two first indicators, where the one must be the residual of the other. If the indicator "End point punctuality" only refers to the punctuality of the train on the train's end point, the indicator seems to be inappropriate as it does not include the disutility for those passengers who leave a delayed train at intermediate stations, and the train subsequently regains its punctuality. The same objection goes for "stating punctuality."

Regarding tables 4, 5 and 6, the Ministry of Transport has doubts about whether all the information necessary will be available and not considered as classified firm-specific knowledge.

Regarding table 8, the Ministry of Transport cannot see whether the different elements are weighted equally, or whether there are some elements that should have a specific high or low weight.

NETHERLANDS

1. It would be useful to make a distinction between the perspective of the users of the transport system and the perspective or the Government. In inland navigation, for instance, shippers will judge the quality of the transport system on criteria like costs, punctuality (the load must be on time at a certain place) and safety (no risk of damage or loss during transport). The Government will judge the quality of the transport system on aspects like safety (for the

ship, for the persons on board and the people living in the neighbourhood), environment-friendliness, capacity (no bottlenecks), degree of geographical coverage of the network (important economical centres must be connected), costs (control and maintenance costs must not be higher than needed) and operational safety (properly functioning locks).
Indicators to ascertain quantitatively whether these criteria are complied with/met are hardly used in the Netherlands.

2. It might also be useful to distinguish between modalities and between parameters for public and goods transport (e.g. concepts like "punctuality" and "frequency" have different meanings for public and goods transport).

3. In the Dutch transport policy concept many aspects of the quality of service are to be decided by the transport operators themselves. In the Netherlands, the Act on passenger transport 2000 requires public transport authorities to pursue certain general quality elements when tendering out and leaves it to these authorities to add other more specific quality elements.

4. For road usage "service level agreements" (SLA's) are under development in the Netherlands. In this context, user surveys are carried out in which the perception of the road user on the quality is examined.

5. Some remarks with regard to the tables used in the document (from the perspective of public transport):

Table 1

It is confirmed that these are aspects of quality to be taken into consideration.

Table 2

With the exception of boarding and stopping times, all these criteria are considered to be operational elements which concern the public transport operator only.

Table 3

With the exception of fleet reliability, it is felt that the criteria mentioned could be the concern of the public transport authorities.

Tables 4-5-6 and 7

All criteria mentioned here are within the remit of the transport operator.

Table 8

With the exception of End user's willingness to pay and expenditure on information, all criteria listed can be considered appropriate quality criteria to measure customer satisfaction.

Table 9

Social safety and driver training can safely be considered a quality element from the perspective of the customer. All other criteria certainly influence the quality of the product but they are not considered to be part of the customer's perspective.

Table 10

With the exception of comparison fare and petrol price and fare and payment integration, network coverage, pt-lanes and receipts from the public sector, all criteria listed can be considered appropriate quality aspects, either from the perspective of central Government or from the perspective of the public transport authorities.

SWEDEN

(i) The potential applicability of the quality of service criteria

Table 1

Quality criteria, covers most of the criteria that one could think of. No adjustments are needed.

(ii) The potential use of quality of service indicators

The tables of quality performance indicators are very ambitious. Some of the indicators require a lot of detailed information about the public transport system and it is doubted that the information will be collected by the public transport operators. Maybe, there should be two levels of information, one that is more on an overview basis and one more detailed version. It is important to have some kind of balance between the input of work and the outcome of results.

(iii) Modal aspects of the quality of service for road, rail and inland waterway transport

The level of information requested in this part of the questionnaire is sounder (in comparison to the tables related to above) and these parameters will probably give enough information on the evaluation of the quality of transport service on roads, railways and inland waterway. What about airborne transport? Why is airborne transport excluded?

(iv) Transport network aspects of quality of service and the possible development of indicators and benchmarks for modal networks

The Swedish Institute for Transport and Communications Analysis, SIKA, is a national agency responsible to the Ministry of Industry, Employment and Communications.

SIKA has a yearly commission from the Government to evaluate how the transport policy objectives are attained and transport quality is one of the subsidiary objectives. Sweden's perspective on transport quality is, however, nationwide and comprehensive and the usage of most of the indicators mentioned in the paper is limited.

UNITED KINGDOM

In countries such as Great Britain, any indicator of transport quality will show very substantial differences between different regions and different urban areas. There are many reasons for these differences, including the historic endowment of infrastructure, geographical considerations and the density of population, which is an important factor in determining the cost of providing transport services of a given quality.

There was no discussion in the note by the secretariat of the geographical coverage of the proposed indicators. If it is to be set at a national level, then an average across the entire country might conceal significant regional variations in quality. The paper gave no indication of the form that such indicators might take. For example, table 1 describes an accessibility indicator, without explaining whether this is intended to apply to all households in a country, a sample of urban areas or how it might be measured. In Great Britain data are collected from a sample of households to show the percentage who live within 10 minutes walk of a bus stop with more than a specified number of buses per hour using that stop. Is this the sort of indicator the secretariat had in mind?

The discussion of indicators of highway quality largely ignores the time dimension in the discussion of levels of service. For some roads conditions of unstable flow prevail only for the morning and evening peak hours, with free flow conditions at other times. Other roads, in particular those carrying long distance traffic, are operating close to their capacity throughout 12 hours of the day. Any measure of highway quality needs to identify the duration of the different service levels identified in section III of the paper and associate these with the traffic volumes in each of these periods.

The data requirements for deriving level of service based quality standards for roads are substantial. In the United Kingdom, there are good data for the trunk road network which carries around 35% of all vehicle kilometres and which is provided directly by the central Government. The data on traffic flows and road capacity for the roads provided by local authorities is less complete, although service levels as defined in your document tend to be worse on these roads. This is because roads in urban areas, where congestion is worst, tend to be the responsibility of local authorities. How will the reliability of the data used in determining the various indicators proposed be established?

The Highways Agency in the United Kingdom, which is responsible for providing and maintaining the trunk road network, carries out user annual satisfaction surveys. Speed surveys are carried out on both trunk and local roads to establish typical speeds and trends in speeds over time.

Data on accidents and trends in accidents are also collected and published.

The paper by the secretariat provides much more detail of possible indicators of bus service quality than for rail or other modes. In Great Britain all bus services are operated by the private sector, either in a deregulated environment or, in the case of London alone (which accounts for around 50% of all bus patronage), as a number of competitively tendered franchises for specific routes. For this reason, most of the information the document listed is not available. Information is not available on operating and other costs, on financial performance,

on capacity utilization, on reliability, on the technical performance indicators, on several of the safety indicators and on the majority of the legal and operational indicators.

It seems that the proposed indicators of public transport service quality far exceed the information that might reasonably be expected from any country contributing to this work. Again, it is not clear whether the information should be supplied for each municipality or regional authority in the country, or for a sample, or whether the data should be aggregated to a national average level.

The requests for information about rail services give very little detail of the requirements to provide meaningful comparisons of quality between operators. Again the question is imposed of the level of disaggregation at which the quality is measured – whether separating peak from off-peak services, and identifying differences between routes. There is no reference to indicators of frequency of service, another important consideration, or to some measure of the geographical coverage of the rail network. In Great Britain data are collected on reliability of each of the 20 or so franchised operators. This covers the percentage of trains arriving at the end of each trip within a specified number of minutes of the scheduled arrival time and the percentage of services cancelled. Data are also collected on overcrowding (passengers in excess of the comfortable level of capacity) on London commuter services.

UNITED STATES OF AMERICA

It is agreed that there needs to be a standardized performance measurement platform to better assess and evaluate the progress and improvement of transportation systems across all modes of travel. Finding the appropriate benchmarks and indicators will always be a process of continuous refinement.

While the concept of performance measures has been in existence in one form or another for some time, there has been a recent increase in interest in the United States, especially among public agencies. The genesis for this interest was the passage of the Government Performance and Results Act of 1993, which directed Federal agencies to develop formal mechanisms for measuring and reporting performance. State and local governments followed suit shortly thereafter.

Even after these efforts, the question remains when performance measures will take on a more quantitative, instead of the traditionally qualitative, character. Assessing the quality and value of programs and processes reflective of the customer-focused orientation as seen in Informal Document No. 1 has been the subject of some of the studies published by the Transportation Research Board.

The Transit Cooperative Research Program (TCRP) Report No. 88, A Guidebook for Developing a Transit Performance-Measurement System, is an excellent resource that aims to bring the much sought standardization and consistency across the transit industry in the United States and abroad. The report assesses in detail the usefulness and application of various indicators and presents case studies of successful examples from around the world. The report also provides guidance on implementing a performance-measurement program from scratch and outlines the available tools that can improve quality of service.

Another useful guide in defining quality of service can be found in the National Cooperative Highway Research Program (NCHRP) Synthesis No. 300, Performance Measures for Research, Development, and Technology (RD&T) Programs. While this report's primary emphasis is placed on assessing RD&T programs instead of focusing on modal networks, it is estimated that the application of performance measures to a less-than-tangible domain of RD&T can provide valuable insights in UNECE research efforts.

Transit Cooperative Research Program
Report 88: A Guidebook for Developing a Transit Performance-Measurement System (2003), ISBN 0-309-06802-9

National Cooperative Highway Research Program
Synthesis 300: Performance Measures for Research, Development and Technology Programs (2001); ISBN 0-309-06915-7
The material referenced above is available from:

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