Economic Commission for Europe
Inland Transport Committee

Working Party on Transport Trends and Economics

Thirty-first session
Geneva, 3–5 September 2018
Item 3 of the provisional agenda
Workshop and study on “Integrated Transport and Urban Development including environmental, health and quality of life perspective”

Questionnaire

Transmitted by the Government of the Russian Federation

I. Introduction

1. This document has been prepared in line with the plan of work of the United Nations Economic Commission for Europe (UNECE) Inland Transport Committee aimed to promote best practices in the sustainable urban transport sphere. The information presented by states (or regions/cities) will be used for the creation of a Manual of Best Practices on Sustainable Urban Transport which will be presented at the high-level ministerial meeting of the Transport, Health and Environment Pan-European Programme (THE PEP). Please note that the information presented for the purpose of the achieved results promotion should be accompanied by visual documents (photos, tables, graphs, etc.).

2. The questions are addressed to the State bodies responsible for urban transport policy and to the local authorities of the cities or regions in which best practices for sustainable urban transport systems have been implemented, including related to environment, spatial planning, health and quality of life.

3. We request that replies include the name of the State, city or region, and authority responding to the questionnaire. Information can be submitted from several cities in each country, in which case it would be desirable if the largest cities were included.

4. We would be pleased to receive a response for as many questions as you may wish to answer. We also would be glad to get any additional information which you would like to send for the above-mentioned purposes.
II. Questionnaire

A. Common information

Please indicate:

(a) Name, position;
(b) Email;
(c) Country;
(d) Name of city;
(e) Population of city including the metropolitan area (thousands of people);
(f) Population mobility (number of journeys per inhabitant per year);
(g) Road network length (km);
(h) Bus lanes network length (km);
(i) Trolley lanes network length (km);
(j) Tram/LRT\(^1\) network length (km);
(k) Metro lines network length (km);
(l) Urban rail network length (km);
(m) Cycling lanes network length (km);
(n) Average share of household expenditure on transport;
(o) Motor vehicle use (motor vehicles per 1,000 inhabitants);
(p) Number of taxis per 1,000 inhabitants)? etc.

B. General principles and priorities

Question 1

Are the principles of sustainability fixed in strategical documents of urban transport system development?

If yes, please provide any information regarding:

(a) The initial concept, vision and principles behind the creation of such a “sustainable urban transport system”.
(b) The goals and objectives of the development of urban transport systems.
(c) The criteria used to ensure the sustainability of urban transport systems.
(d) The indicators employed to monitor the achievement of goals for the sustainable development of transport systems.
(e) Examples of “sustainability” being incorporated into laws and regulations and being implemented in practice in transport and city planning.
(f) Online references.

Question 2

Do you have any regulative or methodological documents which establish goals, objectives and indicators for urban transport systems, effectiveness and safety, principles of “sustainable transport planning”? Indicate them and give references. Please give examples of the results of these documents use in specific cities. Please provide references.

\(^1\) Light Rail Transit
Question 3
What methods and mechanisms are used to harmonize transport planning and urban planning? What instruments exist to prevent building developments from generating excess transport demand? Please provide examples and references.

C. Public transport planning and organization

Question 4
Please describe the procedures and the requirements in order to ensure high quality of public transport services provided. Describe any classification and/or indicators used, approval of documents (quality standards), their use in planning and organizing transport systems, liability for non-compliance (examples and references).

Question 5
Please provide any information regarding the management of transport systems in urban and sub-urban areas. The principles and examples of planning, management and financing of such transport systems.

Question 6
Please describe the principles for selecting modes of transport in the development of transport networks in metropolitan areas with due regard to the requirements of sustainability. How are the different modes of public transport integrated in one single system/network at the stage of transport planning in metropolitan areas?

Question 7
The system for financing public transport: share of major sources for each area of activity (infrastructure development, vehicle modernization, operations). The principles on which decisions are made regarding the distribution of funding. Legislative regulation. Examples and references.

Question 8
Public transport fare policy as a means of managing demand: principles for determining the range of tickets, setting fares and applying discounts. The principles for organizing a zoned fare system in metropolitan areas. The organization of the collection and distribution of fare income in metropolitan areas. The system for compensating carriers of reduced-fare passengers for shortfalls in revenue. Examples and references.

Question 9
What is done to implement priorities for the development and use of road infrastructure for public transport, pedestrians and non-motorized transport (including in terms of traffic management, funding and land use). Examples and references.

Question 10
How is demand for urban public transport forecast? References to methodologies and software packages.

Question 11
What measures are taken to regulate transport demand in the context of a changing urban environment? Examples and references.

Question 12
What principles and methods are used to plan public transport (the route network, timetable coordination, etc.)? Examples and references.
Question 13

What is done to ensure that the public transport route network complies with the requirements of sustainable urban mobility? How is the route network being modernized? Legislation and guidance documents in this area. Examples and references.

Question 14

What methods are used to ensure that public transport is highly reliable and quick (separate lanes, priority at intersections, organization of pick-up/drop-off points, etc.)? What are the principles and conditions for introducing priority traffic lanes for public transport? Examples, references and photographs.

Question 15

How are information and communications technologies used to improve the quality of public transport services? Examples, references and photographs.

Question 16

What factors are prioritized in the process of choice of public transport vehicles?

Question 17

What measures and technical solutions are being implemented to make public transport accessible to persons with reduced mobility? Examples, references and photos.

Question 18

Requirements for vehicles, infrastructure, technologies, staff and information management. Examples and references.

Question 19

How is fare policy harmonized with the public transport route network in metropolitan areas? Examples.

Question 20

Organization of major multimodal passenger transport hubs. Examples, references and photographs.

Question 21

How does urban public transport function and how is it developed in historical city centres? Examples, references and photographs.

Question 22

How is public transport traffic managed at an operational level, including in extraordinary circumstances (disruptions, road traffic accidents, etc.)?

D. Promoting clean transport

Question 23

What measures are being taken to promote the development of environmentally clean transport? Environmental impact requirements for vehicles and fuel used in cities. The use of alternative fuel types in urban transport. Examples and references.
Question 24

What measures are being taken to develop the infrastructure for electric urban transportation (including in terms of energy saving, track facilities and overhead lines)? Examples, references and photographs.

Question 25

What methods are employed in the design and construction of trams/LRT lines for built-up urban areas and for new urban districts under construction? Examples, references and photographs.

Question 26

Mechanisms and measures to encourage the use of electric cars and other electric vehicles in cities (plug-in hybrids, electric cars, electric buses, electric bicycles, etc.).

E. Use of information technologies on public transport

Question 27

What principles are used to create information systems for the operational management of public transport?

Question 28

How are public transport service updates communicated to passengers? Examples, references and photographs.

F. Methods of traffic management

Question 29

What measures are being taken to prevent car traffic congestion across the road network? Examples, outcomes, references and photographs.

Question 30

How is parking policy implemented in cities? The principles for creating parking spaces (on road and off-road parking facilities, parking payment systems). How are parking facilities, public transport systems and bicycle infrastructure harmonized with one another? Examples, references and photographs.

Question 31

What methods are employed to encourage the use of public transport? Examples and references.

Question 32

What is done to discourage private car use? What systems and schemes are employed to reduce traffic and private car use (congestion charging, low emission zones, etc.)? Tax policy mechanisms aimed at encouraging the use of cleaner and more efficient vehicles and modes of transport. Examples, references and photographs.

Question 33

How are the principles of “green freight logistics” implemented in cities? What restrictions apply to truck traffic and use? Examples, references and photographs.
G. Organization of pedestrian and bicycle traffic

Question 34
What methods are employed to ensure the safety of cyclists and pedestrians? How is the development of the necessary infrastructure planned? Examples, references and photographs.

Question 35
How is the development of bicycle infrastructure financed? What mechanisms and funding sources are used to that end? Are there any national programmes to support the development of cycling? Examples and references.

Question 36
How are bicycle hire schemes (including those for electric bicycles), their docking stations and other modern solutions for encouraging bicycle use organized? Examples, references and photographs.

III. Examples of best practice from cities in the ECE region in terms of the sustainable development of urban transport systems

Please provide examples of cities with a detailed description, photographs and references to primary sources.
IV. **Statistics on urban transport systems**

Information should be accurate as at 1 January 2018. Where information is requested “per year”, use 2017.

<table>
<thead>
<tr>
<th>No.</th>
<th>General city information</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Country</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Name of city</td>
<td></td>
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<tr>
<td>3</td>
<td>Population of city</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Measures to limit car use</th>
<th>At rush hour on weekdays</th>
<th>On weekends</th>
<th>At night</th>
</tr>
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<tbody>
<tr>
<td>4</td>
<td>Number of parking spaces, of which</td>
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</tr>
<tr>
<td>5</td>
<td>• Paid</td>
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<tr>
<td>6</td>
<td>• Underground</td>
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<tr>
<td>7</td>
<td>• Free</td>
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<tr>
<td>8</td>
<td>Paid parking charges</td>
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<tr>
<td>9</td>
<td>• In the city centre</td>
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<tr>
<td>10</td>
<td>• In the inner suburbs</td>
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<tr>
<td>11</td>
<td>• In residential areas in the outer suburbs</td>
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<tr>
<td>12</td>
<td>Charge for entering the city centre (in cities with a congestion charge system)</td>
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<tr>
<td>13</td>
<td>Length of the road network covered by low emissions zones (a ban on the entry of cars below a particular vehicle emission standard)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Number of registered vehicles</th>
<th>Cars</th>
<th>Trucks</th>
<th>Buses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
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<td>14</td>
<td>Euro 3 and below</td>
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<td>15</td>
<td>Euro 4</td>
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<td>16</td>
<td>Euro 5</td>
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<tr>
<td>17</td>
<td>Euro 6</td>
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<tr>
<td>18</td>
<td>Hybrids</td>
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<tr>
<td>19</td>
<td>Electric vehicles</td>
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<tr>
<td>20</td>
<td>CNG(^2) vehicles</td>
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<tr>
<td>21</td>
<td>All vehicles</td>
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\(^2\) Compressed Natural Gas
<table>
<thead>
<tr>
<th>No.</th>
<th>Public transport parameters</th>
<th>Bicycle hire schemes</th>
<th>Car sharing</th>
<th>Taxi</th>
<th>Bus</th>
<th>Classic trolleybus</th>
<th>Electric bus</th>
<th>In-motion charging (partial automation)</th>
<th>Recharging at terminal stations</th>
<th>Overnight charging (please specify)</th>
<th>Other types of charging (please specify)</th>
<th>Tram/light rail transport</th>
<th>Metro</th>
<th>Urban electric train</th>
<th>Other forms (please specify)</th>
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<tbody>
<tr>
<td>22</td>
<td>Number of passenger journeys per year (millions)</td>
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<td>23</td>
<td>Number of vehicles (thousands)</td>
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<td>24</td>
<td>• Number of low-floor vehicles</td>
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<td>25</td>
<td>Average age of vehicles (years)</td>
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<td>26</td>
<td>Total route length (km)</td>
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<td>27</td>
<td>Length of priority traffic lanes delineated by markings</td>
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<tr>
<td>28</td>
<td>Length of physically separate priority traffic lanes</td>
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<td>29</td>
<td>• Length of physically separate lanes without intersections with road traffic on the same level</td>
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<td>30</td>
<td>Integration of fare payment system (single payment card), yes/no</td>
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<tr>
<td>31</td>
<td>All-in-one ticket (no charge for transfers), yes/no</td>
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</table>
### Fares (within the city limits) — please indicate the selection of tickets valid within the city limits

<table>
<thead>
<tr>
<th>No.</th>
<th>Price of a ticket (euros)</th>
<th>Budgetary subsidy per ticket, if applicable (in euros)</th>
<th>Number of tickets sold per year (units)</th>
</tr>
</thead>
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<td>1</td>
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</tbody>
</table>

- Travel cards valid for an unlimited number of journeys:
  - For 365 days (from any date)
  - For 90 days (from any date)
  - For 30 days (from any date)
  - For 1 calendar month (from 1 to 30/31 of the month)
  - For 7 calendar days (24 hours beginning at midnight)
  - For 5 days (5 periods of 24 hours beginning with the first journey)
  - For any other number of days (please provide information)
  - For 1 calendar day (24 hours beginning at midnight or 3 a.m.)
  - For 1 day (24 hours beginning with the first journey)
  - For 90 minutes
  - For 60 minutes
  - Tickets for travel on one line only (transfers to other lines not included)
  - Tickets for travel on one mode of transport only (transfers to other modes not included; please list all modes of transport for which a different fare applies, if any)
  - Zoned tickets (yes/no)
  - Tickets for students (by type)
  - Tickets for older persons (by type)

### Allocation

<table>
<thead>
<tr>
<th>No.</th>
<th>Financing of public transport (millions of euros per year)</th>
<th>Vehicle modernization</th>
<th>Major infrastructure renovation</th>
<th>Operating costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>Ticket income / passenger fares</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>49</td>
<td>Budgetary subsidies</td>
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<tr>
<td>50</td>
<td>Local budget</td>
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<tr>
<td>51</td>
<td>Regional budget</td>
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<tr>
<td>52</td>
<td>State budget (federal or other)</td>
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<tr>
<td>53</td>
<td>Special taxes</td>
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<td>54</td>
<td>Local</td>
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<tr>
<td>55</td>
<td>Regional</td>
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<tr>
<td>56</td>
<td>State/federal</td>
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<tr>
<td>57</td>
<td>Other sources (please specify)</td>
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</table>