SUSTAINABLE URBAN TRANSPORT and MOBILITY

Making cities desirable places to live again.
32 + 4
Chapter 1. What is sustainable urban transport and mobility development?

Chapter 2. Urban transport and mobility trends in ECE region

Chapter 3 UNECE Capitals urban Transport and mobility profiles

Chapter 4 Urban Transport indicators analysis

Chapter 5 Conclusions and Recommendations
### Armenia - Yerevan

- **Size:** 227 km²
- **Population:** 1,121,000
- **Density:** 4,896/km²
- **Tourist Season:** July - October

#### Existing means of Public Transport:

<table>
<thead>
<tr>
<th>Mode</th>
<th>Lines in km</th>
<th>Number of stations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BUS</strong></td>
<td>1,324</td>
<td>750</td>
</tr>
<tr>
<td><strong>TRAM</strong></td>
<td>Lines in km</td>
<td>Number of stations</td>
</tr>
<tr>
<td><strong>METRO</strong></td>
<td>Lines in km</td>
<td>Number of stations</td>
</tr>
<tr>
<td><strong>TROLLEY</strong></td>
<td>Lines in km</td>
<td>Number of stations</td>
</tr>
<tr>
<td><strong>URBAN TRAIN</strong></td>
<td>Lines in km</td>
<td>Number of stations</td>
</tr>
<tr>
<td><strong>LIGHT TRAIN</strong></td>
<td>Lines in km</td>
<td>Number of stations</td>
</tr>
<tr>
<td><strong>MINIBUS</strong></td>
<td>Lines in km</td>
<td>Number of stations</td>
</tr>
</tbody>
</table>

- **Number of Parking Lines:** 60
- **Number of Parking Lanes in km:** 1,324
- **Number of Parking Stations:** 750

#### Cost of tickets:

- **One hour ticket:** $0.246 USD
- **One day ticket:**

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Please describe a strategy or initiative implemented by your organization with positive results for the public transport of the city.

The bus routes are served on contractual basis by 13 private companies, “Autobus” CJSC and “Yerevan autobus” CJSC. To replenish the bus fleet of the capital, in 2012 249 Chinese buses of “HIGER” KLQ6770G model were imported to the capital and 18 intra-urban itineraries are already served by them. Due to the actions undertaken the number of intra-urban buses has significantly increased, the volumes of passenger transportation carried out by buses have grown in comparison with the previous year. As a whole, in 2012 49.3 million passengers were transported by buses which is more than the previous year by 12.5 million or the growth made up 34%.

95 mini-bus routes are actually operated in Yerevan which are completed with about 1900 units of different models. The mentioned routes are served by 43 private companies on contractual bases.

Though the trolleybus fleet wasn’t replenished in 2012 certain work has been carried out towards repairing of over ground electric rolling stocks, reticular and cable networks, repairing of traction substations, for construction of some new segments of reticular nets, reconstruction and re-operation of traction substations, production and technical re-equipment of trolleybus economy, as well as to increase the efficiency of service by operators.
### Belarus Minsk

<table>
<thead>
<tr>
<th>Size: 306 km²</th>
<th>Existing means of Public Transport:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population: 1,900,000</td>
<td>![Images of various public transport modes]</td>
</tr>
<tr>
<td>Density: 6,209/km²</td>
<td></td>
</tr>
<tr>
<td>Tourist Season: December – January</td>
<td></td>
</tr>
<tr>
<td>Number of Tourists: 100,000</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Parking: 98</th>
<th>Lines in km</th>
<th>Number of stations</th>
<th>Cost of one hour ticket</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BUS</strong></td>
<td>2,150</td>
<td>1,750</td>
<td>$0.2</td>
</tr>
<tr>
<td><strong>TRAM</strong></td>
<td>90</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td><strong>METRO</strong></td>
<td>35</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td><strong>TROLLEY</strong></td>
<td>600</td>
<td>1,750</td>
<td></td>
</tr>
<tr>
<td><strong>URBAN TRAIN</strong></td>
<td>40</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td><strong>LIGHT TRAIN</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MINIBUS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BICYCLE</strong></td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Passengers distribution per transport mode**

- Metro 30%
- Tram 30%
- Trolleybus 30%
- Bus 10%

Please describe a strategy or initiative implemented by your organization with positive results for the public transport of the city.

New Metro stations and lines projecting and construction will be continued. As a result, the expansion of the 1st Metro line will run up to 20.8 km, and the 2nd one – to 20.3 km. The 3rd and the 4th Metro lines projecting are in sight. The tram being an ecological mode of transport is to be developed rather intensively. At the same time it is provided for the tram high-speed operation due to the tunnels construction at some sections of the road. The trolleybus traffic development has been reconsidered. According to the European traditions, it is provided for the trolleybuses being brought out of the central part of the city. They are to take passengers to the Metro stations and become a mode of transport used in the micro districts. Bus routes development will be exercised depending on the traffic flow growth. The buses will be used as a haulage mode of transport. A jitney will be also developed. To improve the passenger traffic and service the public transport automated control system with navigation system GPS (a global satellite system) will be used. It will be accompanied with the new forms of fare control (noncontact radio card, electronic punch, etc.).
Please describe a strategy or initiative implemented by your organization with positive results for the public transport of the city.

There are 1.24 million people living within area of Prague region. Approximately 3.5 million travellers use daily public transport operated by PID (Prague Integrated Public Transport), the share is 57% of all passenger transports. The PID system is a modern integrated system for the public transport of passengers and is primarily located within the City of Prague, along with adjacent areas in the Central Bohemian Region that have important transportation relations to the capital. The primary carriers operating within PID are the Prague Public Transport Company, which operates the metro, trams, funicular and most of the bus lines within the city and Czech Railways, which is in charge of rail transport.

The constitution of the Prague Integrated Transport System (PID) has the fundamental positive impact on public transport system in Prague metropolitan area. This transport system includes today not only the area of the Prague city but also five suburban zones outside the capital. With the ticket a customer can use not only the metro, trams and city buses, but also the trains of the suburban train system (and some other minority modes of transport, such as a ferry or cable car). The system movement within Prague includes all rail lines in the City region, which cover not only the radial directions but also some tangential transport relationships. In the transport directions, where no rail or tram connection is available, separate bus and taxi lanes are introduced and that has an positive impact on smooth and accurate transport of the most occupied bus lines in Prague metropolitan area. Also the P+R parking zones and K+R parking places are very important for the successful city public transport system.
Please describe a strategy or initiative implemented by your organization with positive results for the public transport of the city.

In Tallinn, active developing of Public Transport started in the beginning of the year 2000. Creating Public transport priority system and dedicated public transport lanes, implementing real time information systems and purchasing new fleet, applying discounts for different groups of public transport users are only few examples of the improvements of our public transport system. The initiative to provide free public transport for Tallinn residents strongly supports the concept of sustainable mobility. The objective is to encourage people to use public transport and not private transport for the short distances in the city. Today first results have been obtained: a) traffic load has decreased 20% compared to the 4th quarter of 2012; b) the number of public transport users has increased 6%. Evaluation of free public transport impact is on going. Expected negative impact of the invasion of homeless people has been really marginal. Due to the free public transport in Tallinn, the number of Tallinn residents has increased rapidly and that had a positive impact to city’s budget. The implementation of free public transport was not a difficult task as the ticketing system included many categories of passengers that had discounts.
UT. 52 Average age of BUSES

- Ottawa: 1.70
- Bratislava: 1.75
- Zagreb: 3.00
- Ankara: 3.25
- Warsaw: 4.25
- Moscow: 4.38
- Bucharest: 5.00
- Tbilisi: 5.00
- Minsk: 5.00
- Amsterdam: 5.57
- Bern: 5.67
- Dublin: 6.00
- Baku: 6.00
- Brussels: 6.33
- Rome: 6.75
- Ljubljana: 8.90
- Reykjavik: 9.00
- Belgrade: 9.50
- Athens: 9.50
- Tallinn: 9.75
- Limasol: 11.00
- Chisinau: 12.00
- Vilnius: 12.50
- Sofia: 20.00
- Astana: 20.00
- Yerevan: 25.00
UT.36 Annual BUS transport injuries per 1000 inhabitants

- Reykjavik: 0.01
- Tallinn: 0.03
- Oslo: 0.04
- Vilnius: 0.07
- Tbilisi: 0.09
- Belgrade: 0.078
- Riga: 0.103
- Bern: 0.112
- Zagreb: 0.118
- Ljubljana: 0.123
- Pragha: 0.196
- Athens: 0.307
- Budapest: 0.329
- Astana: 0.375
- Moscow: 0.382
- Ankara: 0.411
- Yerevan: 0.425
- Brussels: 0.519
- Warsaw: 0.601
UT.64 Bus stops per total length of Bus lines kilometers

- Berlin: 49.02
- Minsk: 9.72
- Bratislava: 8.59
- Others: