Estonian Road Administration

Estonian AMS

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General Facts

- Area: $45,228 \text{ km}^2$
- Population: $1,3$ million inhabitants (30 per sq.km);
- ~55% of all cargo by rail transport
- ~90% of all passengers travel by road
  631 000 vehicles (471 veh/1000 inh.) and >550 000 drivers.

Roads:
- 58 787 km of roads and streets, incl. national roads
- 16 489 km National roads:
  - 995 km E-roads
  - 1342 km – TEN-T roads
  - 140 km - I class roads
- 983 bridges (23,136 m)
Road Network

- Main roads 2.7% 1607 km
- Basic roads 4.1% 2406 km
- Secondary roads 21.2% 12476 km
- Private and forest roads 31.3% 18398 km
- Footpaths and cycle tracks 0.7% 397 km
- Local roads 31.4% 18455 km
- City streets 8.6% 5048 km

TOTAL 58,787 km
Road Master Plan Principles

- Making the “right investment at the right place at the right time”
- Estonian road network is well established with sufficient density;
- Considering road condition - attention to road maintenance: according to the possibilities reconstruction and building is carried out.

- The goal on main road:
  - keep road condition,
  - improve safety and traffic flow
- The goal on basic and secondary roads:
  - reduce 10% poor and very poor condition of roads by 2020
Road Master Plan 2014-2020
Implementation

- RMP Goal – to reduce backlog;

- Goal Achievement – pavement repair work 2200 km per year

- Allows approx 7 year period pavement renovation
  - 65% surface dressing works
  - 17% gravel roads preservation works
  - 18% pavement renewal
Condition measurements

IRI measurements from 1995, annually 5000 km of measurements;

Visual distress inventory started 1995, annually 6000 km of measurements;

FWD measurements from 1996, annually 6000 points measured (600 km);

Rut depth measurements from 2001, annually 5900 km measured
Analysis

- Basic data from Road databank – for different works different data
- Tools - EPMS, HDM-4, Pontis, ArcGIS, …

Analysis:
- Strategic analysis of national roads
- Surface dressing works
- Resurface works
- Reconstruction works
- Gravel road paving works
- Bridge condition (target - optimum condition 2022)
- Traffic safety
FINANCING OF NATIONAL ROADS IN 2010-2014

Operating costs (State Budget; OwnF) Investments of SB and OF Assistance

2010: 108,2 56,8
2011: 110,4 57,9
2012: 100,2 68,6
2013: 104,7 66
2014: 119,2 74,1

Operating costs (State Budget; OwnF) Investments of SB and OF Assistance

2010: 106,3 56,8 57,9
2011: 83,5 57,9 68,6
2012: 117,0 68,6 66
2013: 93,7 66 66
2014: 60,2 66 66
## Financial budget of Road Master Plan 2014-2020

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<tr>
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</thead>
<tbody>
<tr>
<td>Estimate for road management as to RA §16</td>
<td>280,125</td>
<td>285,725</td>
<td>294,350</td>
<td>301,175</td>
<td>308,175</td>
<td>315,225</td>
<td>322,200</td>
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<tr>
<td>For funding local roads</td>
<td>28,013</td>
<td>28,573</td>
<td>29,435</td>
<td>30,118</td>
<td>30,818</td>
<td>31,523</td>
<td>32,220</td>
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<tr>
<td>10% of amount estimated for road management</td>
<td>28,013</td>
<td>28,573</td>
<td>29,435</td>
<td>30,118</td>
<td>30,818</td>
<td>31,523</td>
<td>32,220</td>
</tr>
<tr>
<td>2007-2013 external funding</td>
<td>14,030</td>
<td>3,700</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2014-2020 external funding (estimated prognosis)</td>
<td>0</td>
<td>0</td>
<td>3,000</td>
<td>5,000</td>
<td>5,000</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>For local roads in TOTAL</td>
<td>42,043</td>
<td>32,273</td>
<td>32,435</td>
<td>35,118</td>
<td>35,818</td>
<td>41,523</td>
<td>42,220</td>
</tr>
<tr>
<td>Overall amount planned for national road maintenance</td>
<td>288,088</td>
<td>253,453</td>
<td>261,915</td>
<td>266,058</td>
<td>272,358</td>
<td>273,703</td>
<td>279,980</td>
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### ROAD MANAGEMENT WORKS

| Road maintenance                                      | 48,555 | 50,376 | 53,623 | 57,091 | 58,511 | 59,966 | 61,458 |
| Gravel road preserv. repair | up to 400 km / year | 6,180 | 6,336 | 6,493 | 6,656 | 6,823 | 6,992 | 7,167 |
| Paved road preserv. repair | 1200-1500 km / year | 22,301 | 22,837 | 23,408 | 23,993 | 24,593 | 25,208 | 25,838 |
| Paved road restor. repair | 150-200 km / year | 27,500 | 28,188 | 28,892 | 29,614 | 30,355 | 31,114 | 31,892 |
| Repair of bridges | up to 35 bridges / year | 8,629 | 8,845 | 9,066 | 9,292 | 9,525 | 9,763 | 10,007 |
| Reconstruction                                       | 43,209 | 44,616 | 44,252 | 37,998 | 38,876 | 38,686 | 42,291 |

### Road network preservation in TOTAL

| Preparation of projects                                | 5,000 | 5,000 | 7,000 | 7,000 | 8,000 | 8,000 | 9,000 |
| Execution of the action plan for mitigation of the negative impact of noise | 500 | 1,500 | 2,000 | 2,050 | 2,101 | 2,154 | 2,208 |
| Reconstruction of hazardous traffic sites              | 7,000 | 8,000 | 8,200 | 8,405 | 8,615 | 8,831 | 9,051 |
| State programme "Estonian roads dust-free by 2030" | 2014 up to 50 km. 2015 up to 100 km. From 2016 up to 150 km | 4,000 | 7,900 | 15,315 | 15,725 | 16,146 | 16,581 | 17,049 |
| Construction                                          | 43,635 | 47,743 | 41,000 | 45,000 | 45,000 | 42,000 | 39,000 |

### Development of road network in TOTAL

| Administration                                       | 21,574 | 22,113 | 22,666 | 23,233 | 23,814 | 24,409 | 25,019 |
| Administration in TOTAL                              | 21,574 | 22,113 | 22,666 | 23,233 | 23,814 | 24,409 | 25,019 |

### ROAD MANAGEMENT WORKS in TOTAL

| Total                                               | 238,083 | 253,453 | 261,915 | 266,058 | 272,358 | 273,703 | 279,980 |
Maintenance contracts

- Contracts are performance based (18 contracts)
- Since 2013 duration of contracts – 5 years
- Contractors are responsible for maintaining and managing road assets to a predefined levels of services
  - Levels of services are determined with Regulation of the Minister of Economic Affairs and Communications
Road network preservation works

- **Preservation repair of gravel roads** – up to 400 km
- **Preservation repair of paved roads** – 1200-1500 km
  The main working method for the preservation repair of paved roads is surface dressing.

- **Restoration repair of paved roads** – 150-200 km
  In the restoration repair of paved roads the upper layer of the existing surface structure is renewed by repaving or milling and new installation. As a rule, restoration repair is performed on roads with asphalt concrete surfacing.

- **Repair of bridges** – up to 35 bridges

- **Reconstruction** – up to 100 km
  Reconstruction covers rebuilding or restoration of the load-bearing structure of the road together with other road facilities and improvement of traffic safety.
Road network development works

- Preparation of projects
- Execution of the action plan for mitigation of the negative impact of noise (noise barriers - up to 2 km)
- Reconstruction of hazardous traffic sites
  Hazardous traffic spots, dangerous intersections; construction of new bus stops; construction of the new cross-overs; foot- and bicycle paths; improvement road lighting; other safety investments.
- Construction of national roads
  Construction of roads contribute to safer traffic, increased road capacity, which in turn promotes transit traffic, improves the environmental condition or promotes regional development. Construction objects are selected on the basis of a socio-economic efficiency. The list of objects is drawn up for 7 years.
- National programme "Estonian roads dust-free by 2030"
  The objects are determined and ranked, taking into account traffic density, heavy traffic, impact of dust, road users, significance to network, existence of bus lines, bicycle routes and cost-effectiveness.
Investment Committees

- For reviewing and approval of selected repair objects and planned works, the Estonian Road Administration has formed so-called investment committees, which consist of central and regional executives.

- The committees are authorised to decide over the implementation or rejection of one or another investment.

- There are:
  - Investments Committee I - Network Committee
  - Investments Committee II - Safety Committee
  - Investments Committee III - Development Committee
Ice roads (the longest to Hiiumaa - 25 km)
Thank you!