

WINTER MAINTENANCE MANAGEMENT IN ESTONIA

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Location

Estonia is a small northern member-state of the European Union. It is located on the coasts of the Baltic Sea. Latvia and Russia are our mainland neighbours and Finland and Sweden in overseas. Its area is about 45 000 km² with the population of 1,4 million people. Administratively Estonia is divided into 15 counties.

Climate

Snow and slippery usually begin in November and winter conditions last for 5 months until April. But we have had snow even in the end of May. The climate varies from the wet maritime on the coasts to the dry continental in the eastern and southern areas. We must be ready to meet quite low temperature like –30 degrees Celsius. Road surface temperature often alters from minus to plus degrees and therefore skid control is utmost important.

Management in development.

During the last 3-4 years the Estonian road organisation has changed a lot and simultaneously the privatisation of maintenance works including winter maintenance, is going on.

Until the year 2000 state-owned road offices carried out the winter maintenance in-house. We used to have a road office in each of 15 counties. In 2000 privatisation of maintenance started and firstly maintenance of the public network of Põlva county was tendered out to a private company. By now in 10 counties all maintenance works including winter maintenance, are performed by a contractor on the basis of 5-year lump sum contracts. The smallest contract is 359 km, the largest 1244 km. In 1 county the first contracting period is already over and the next turn started. In 5 counties, where centres of regional offices are located, state agencies continue to maintain national roads. The continuation of privatisation of maintenance operations will be decided after interim analysis.

Supervision of maintenance works has been introduced and in 1 county it even contracted out to a private company.

Simultaneously the road management was reorganized. Instead of former 15 county offices now we have 6 regional offices.

The role of a road administration as a wise regulator is very important in contracting out of winter maintenance. So, big changes were supported by numerous legal and normative acts. For winter maintenance the most important act is “Requirements for the State of Road”.

In one region close to the capital of Estonia now 100% of road works have been privatised and the regional road office has been reformed into the regional road administration as an institution of civil service.

Winter maintenance cost

Last year the percentage of winter maintenance cost was 35% of total maintenance works.

The average winter maintenance cost per 1 km was 472 euros.

Winter maintenance information system

Winter maintenance information system bases to the cooperation of Road Information Centre (which is a private entity) and road information units of winter maintenance performers. Data from more than 50 road weather stations are supported by road patrols and the information about road and traffic conditions is disseminated to road users by mass media and Internet.

Supported by slide program (enclosed)

Winter Maintenance Management in Estonia

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Climate

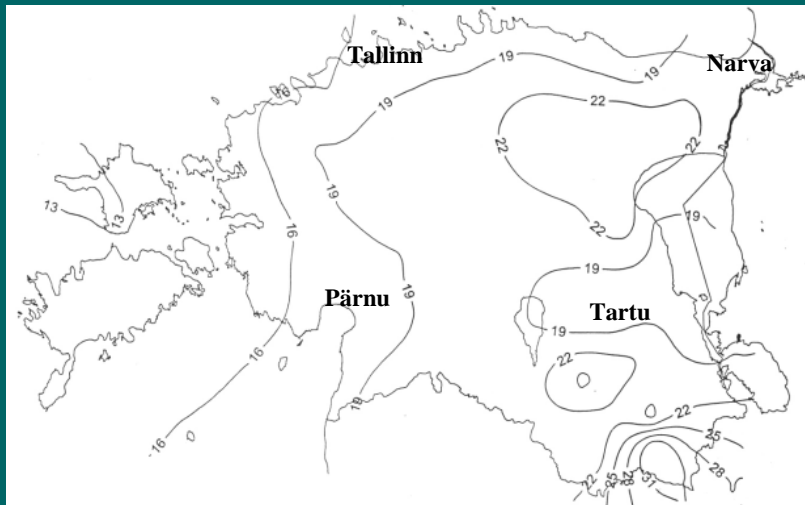
Town	Monthly average Temperature (30-years average)				
	Nov	Dec	Jan	Feb	Mar
Tallinn	1,0	-2,2	-4,1	-4,9	-1,4
Tartu	0,0	-3,6	-5,3	-5,8	-1,4
Narva	-0,2	-3,9	-6,1	-6,5	-2,0

The average number of days from September to May in 1992-2000 with daily minimum temperature below 0°C and maximum temperature 0°C or above is 127.

Climate

	Snowfall (8-years average) (cm)		
	Daily maximum snowfall	Maximum snow depth	Cumulative depth of snowfall
Tallinn	22	58	280
Tartu	20	49	280
Narva	15	51	290

Average Snow Cover Depth (cm) on Fields, in February:



Road Network By Winter Service Levels

	Total	By levels of the state of a road			
		Motorway			
		Level 4	Level 3	Level 2	Level 1
Winter service km	16 460	0	1 866	3 046	11 548
%	100	0	11	19	70
Notes:					
The level 4 is defined as the highest and 1 as the lowest level of the state of roads.					





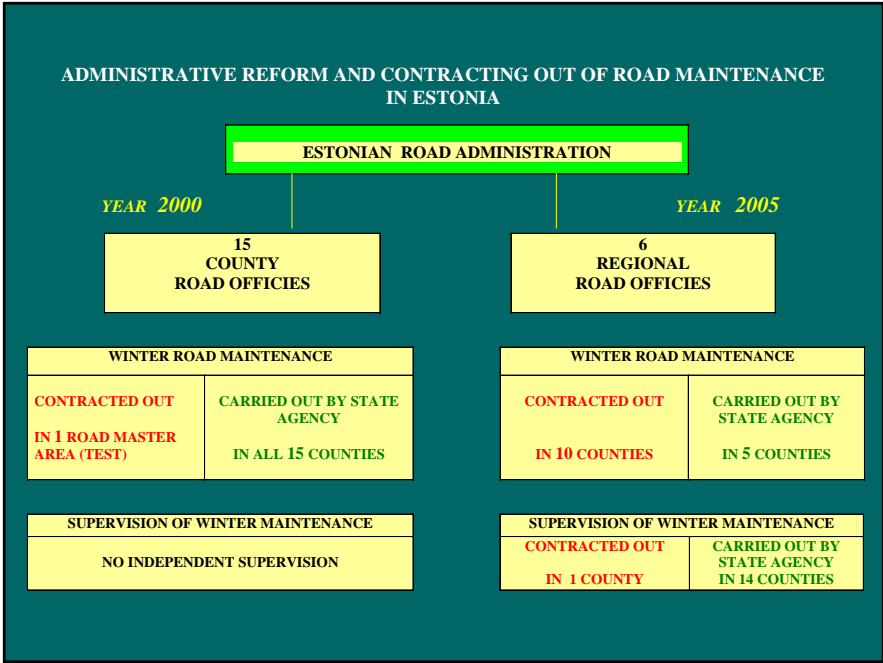
Maximum Service Cycle Time (h)					
Required level of service	Snow and slush removal	De-icing, anti-skid treatment	Salt-snow mix removal	Side-walks cleaning and skid control	Treatment of other road facilities
4 Motorway	2	2	4	6	8
3	5	4	8	8	12
2	12	8	-	12	24
1	36	24 (spots)	-	12	36

Required service level	Hours when requirements are applied
Motorway 4	Round the clock
3	6.00-22.00 On other time service level 2 is allowed
2	7.00-21.00 On other time service level 1 is allowed
1	Determined by the owner of the road

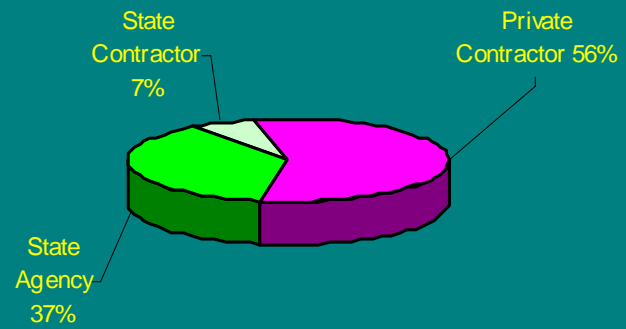
Development Phases of the Estonian Road Organisation

Source: Proposals for the Reorganisation of the Estonian Road Administration, Tallinn 2001

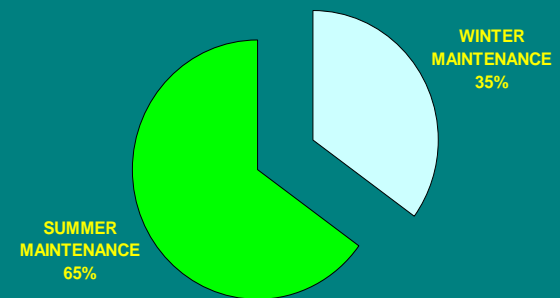
	Phases of development of the road organisation	Extent of contracting out of road maintenance			Territorial administrative reform of Estonia
		Maintenace done in-house by 14 district road offices and contracted out in 1 county	Maintenace done in-house by regional road offices in 6 counties and contracted out in 9 counties	Maintenance contracted out in all 15 counties	
1	15 district road offices as state road agencies, administrated by the government body – the Estonian Road Administration (ERA)	○			
2	6 regional road offices + 9 county branch offices as state road agencies, administrated by the ERA		○		
3	Possible establishment of 6 local civil service agencies instead of administrated agencies of the ERA as a government body, delegation of certain functions of the ERA to local agencies			○	
4	Restructuring of the ERA depending on the territorial administrative reform of Estonia				○



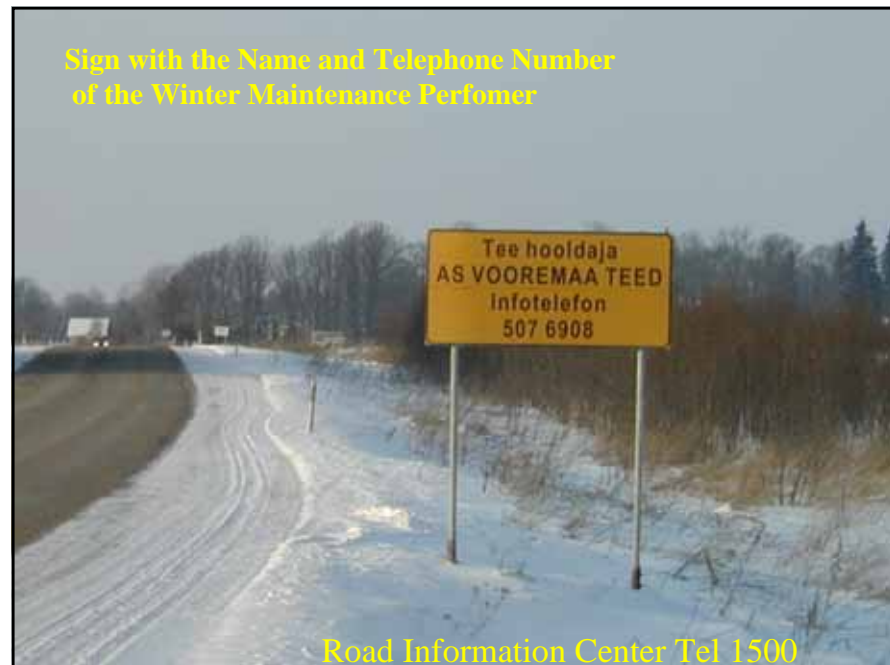
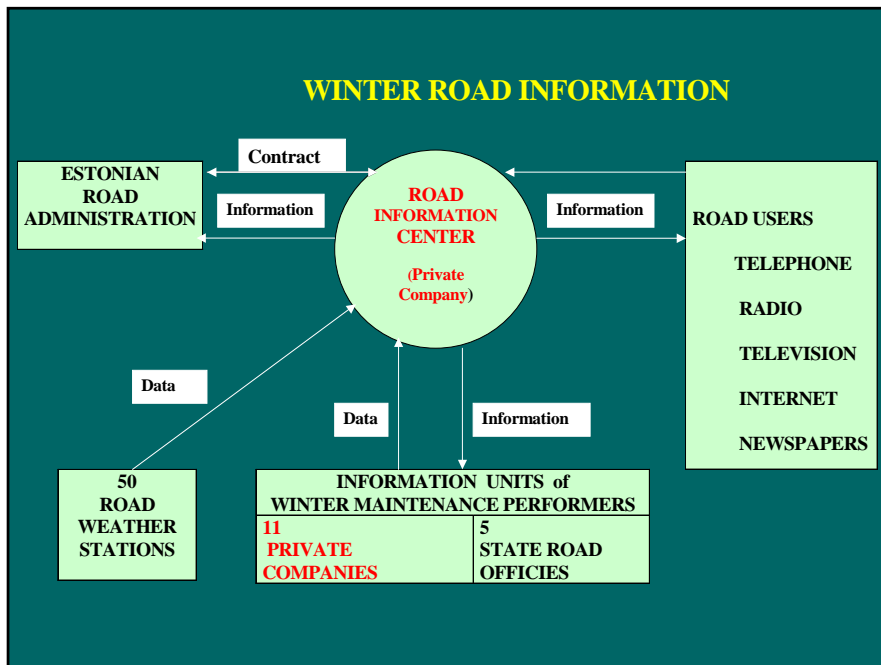
Level of Winter Maintenance Privatisation 2005



WINTER MAINTENANCE COST 2004



AVERAGE WINTER MAINTENANCE COST PER 1 KM 7387 EEK = 472 EUR



THANK YOU!

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