



RAKLI

Asset Management and Valuation - Case Finland

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Road Financing and Investment
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Ngurdoto Mountain Lodge, Arusha, Tanzania

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Construction Clients

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Structure of the presentation

1. Asset management and valuation

- What is asset management ?
- Valuation and accounting
- Framework for asset management

2. Case Finland

3. Conclusions

1. Asset Management and Valuation



What is it about?

- Based on pavement management systems developed in 1980's
- Integrated use of varied management systems in 1990's
- Integration of geographical information systems (IMS) in 2000's
- Valuation of assets
- Integration with accounting
- Managing a road administration's resources more like a business

Definition for road asset management

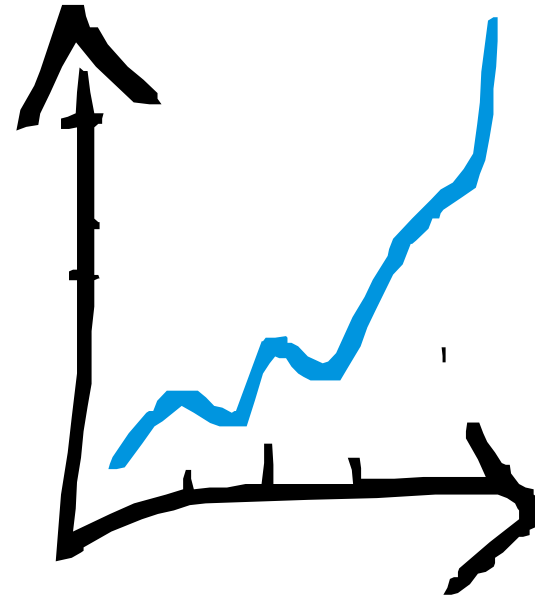
“A systematic process of maintaining, upgrading and operating assets, combining engineering principles with sound business practice and economic rationale, and providing tools to facilitate a more organized, and flexible approach to making the decisions necessary to achieve the public's expectations.”

Definition for road asset management ⁽²⁾

Asset management is a strategic and systematic approach to managing your business, e.g. road infrastructure, road transport and road administration

Business-like approach

"Managing road assets requires valuation of assets in monetary terms"



Valuation as a key issue

- Each asset has an economic value to the transport network
- Each asset has a capital value
- Valuation in monetary terms is a key element in developing the common language and knowledge between engineers and financial managers and between road administration and its stakeholders

Stages for valuation



1. Definition and inventory of the assets
2. Valuation of the assets and reporting them in monetary terms
3. Implementing accounting and financial reporting
4. Integration of road management and accounting

Definition and inventory of the assets

- Definition of assets
 - roads and land areas
 - other fixed assets
- Inventory and registering roads
 - substructures, pavements etc.
 - bridges, tunnels and other structures
 - land areas (road areas, rest areas etc.)
 - unfinished road projects
- Classifying assets
 - similar type of assets with similar life of service

Valuation of the assets

- Inventory and valuation for book-keeping
- Can be defined in many ways
 - book value
 - written down value
 - market value
 - replacement value
 - present value
 - nominal value
 - real value, taxable value, utility value etc.
- Definition of yearly expenses and capital investment costs

Implementing accounting – capitalisation



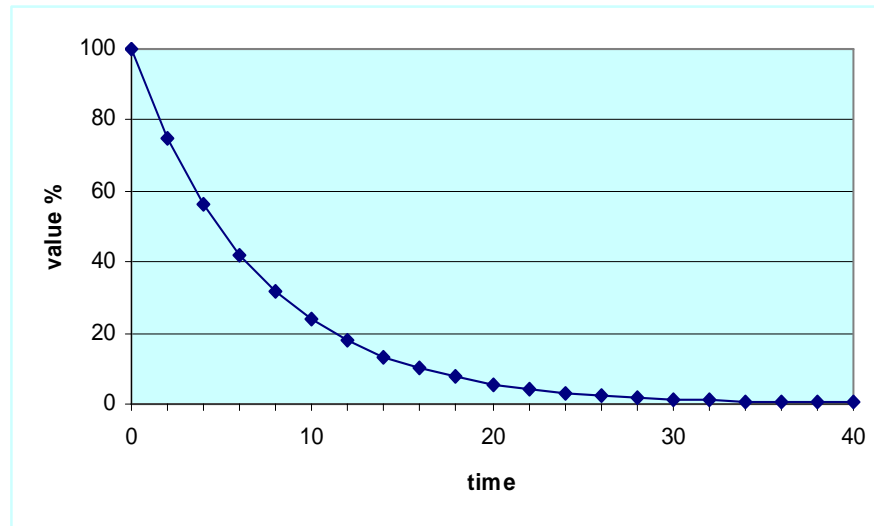
- The annual increase of the value
- The annual upkeep, improvement or other investments with long term effects

Implementing accounting ⁽²⁾

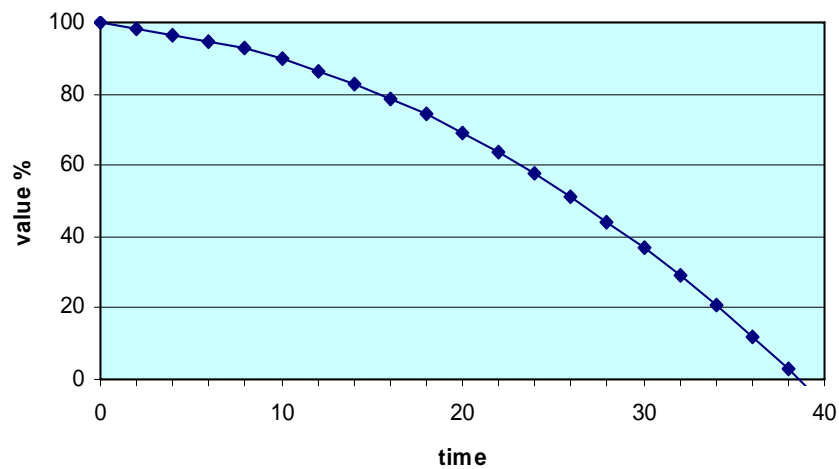
– depreciation

- The annual loss of the value or the annual wearing of the assets
- Planned depreciation or measured condition
- Depreciation parameters should be planned beforehand and confirm according to local accounting standards and legislation

Depreciation methods

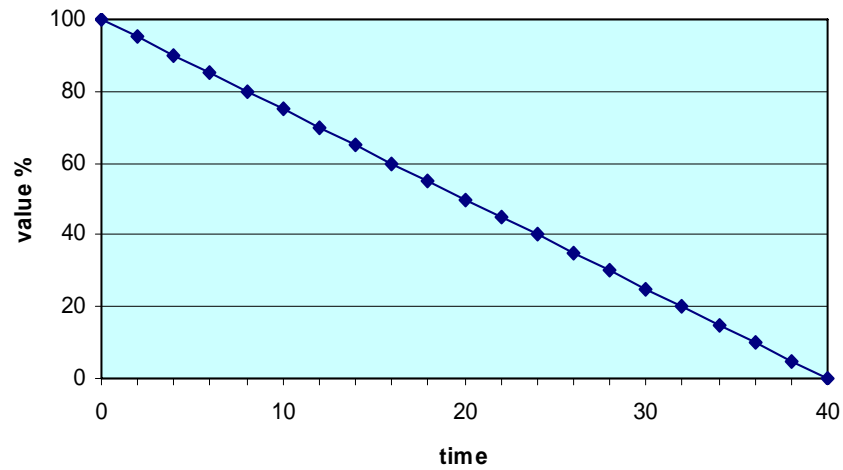


Degressive

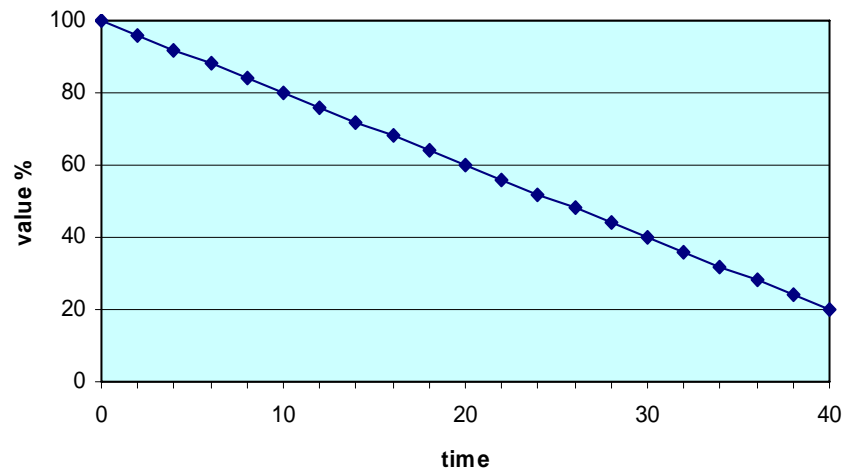


Progressive

Depreciation methods (2)



Linear



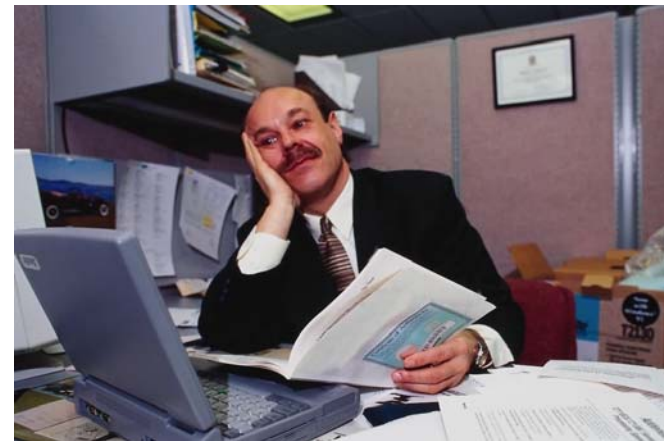
Linear with
residual value

Different types of road assets

Asset type	Economical lifetime	Annual depreciation	Residual value
Roads			
▪ substructures	20-50 years	5-2 %	0 %
▪ pavements	10-20 years	10-5 %	0 %
▪ bridges	25-100 years	4-1 %	0 %
▪ other structures	5-20 years	20-5 %	0 %
Unfinished road structures		0 %	100 %
Land areas		0 %	100 %

Implementing accounting ⁽³⁾ – financial reporting

- Implementing financial statements
 - profit and loss account
 - balance sheet
- Reporting
 - monitoring the performance
 - allocation of resources for road management



Integration of road management and accounting

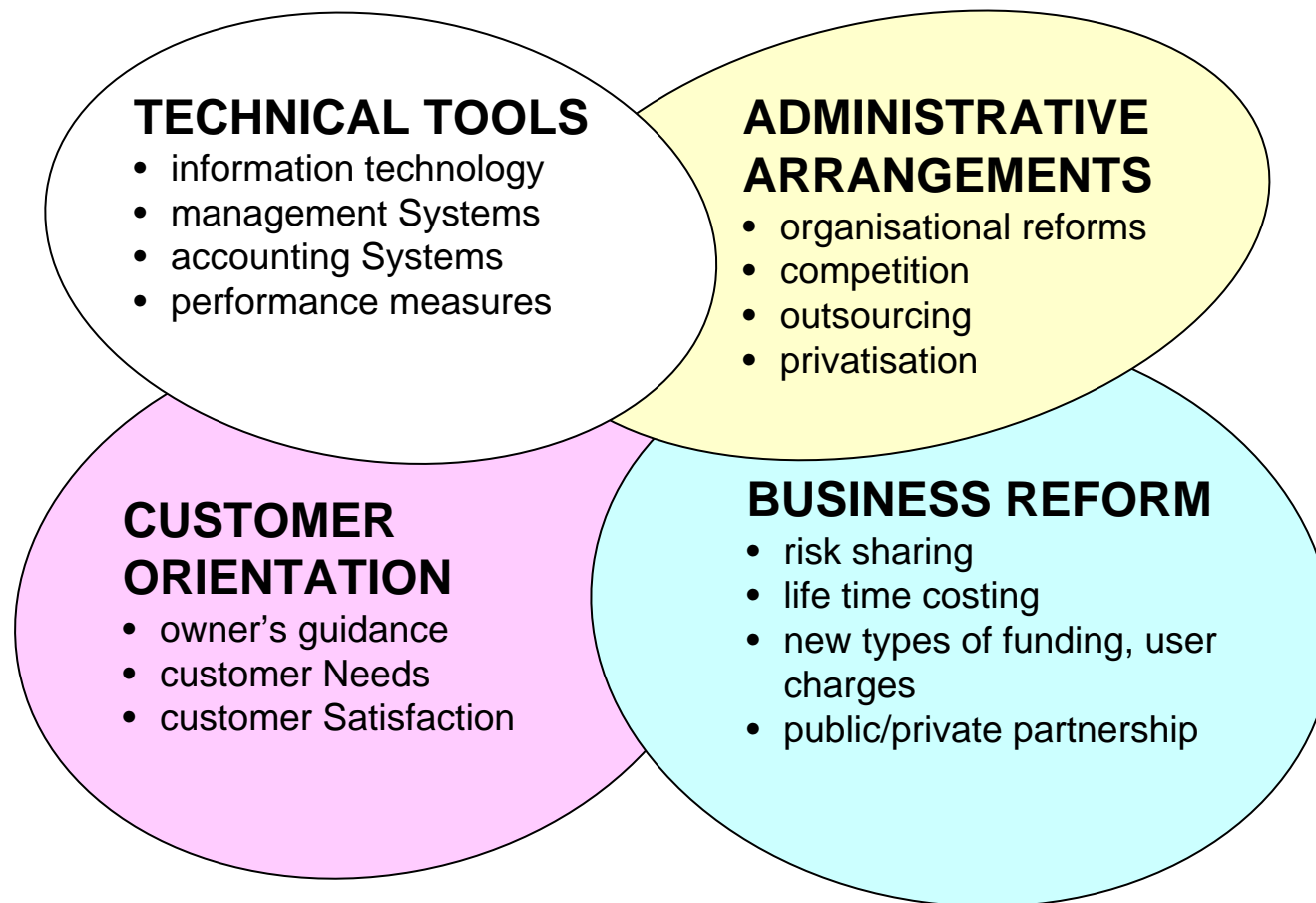
- Integration of the information
- Using information for financial planning and for estimating needed maintenance and investments
- Depreciation should reflect the annual need for maintenance and upkeep

Framework for Asset Management

“Managing assets is something else than just using integrated systems”

“Asset management should be developed as a systematic procedure or as a set of guidelines.”

Framework for Asset Management



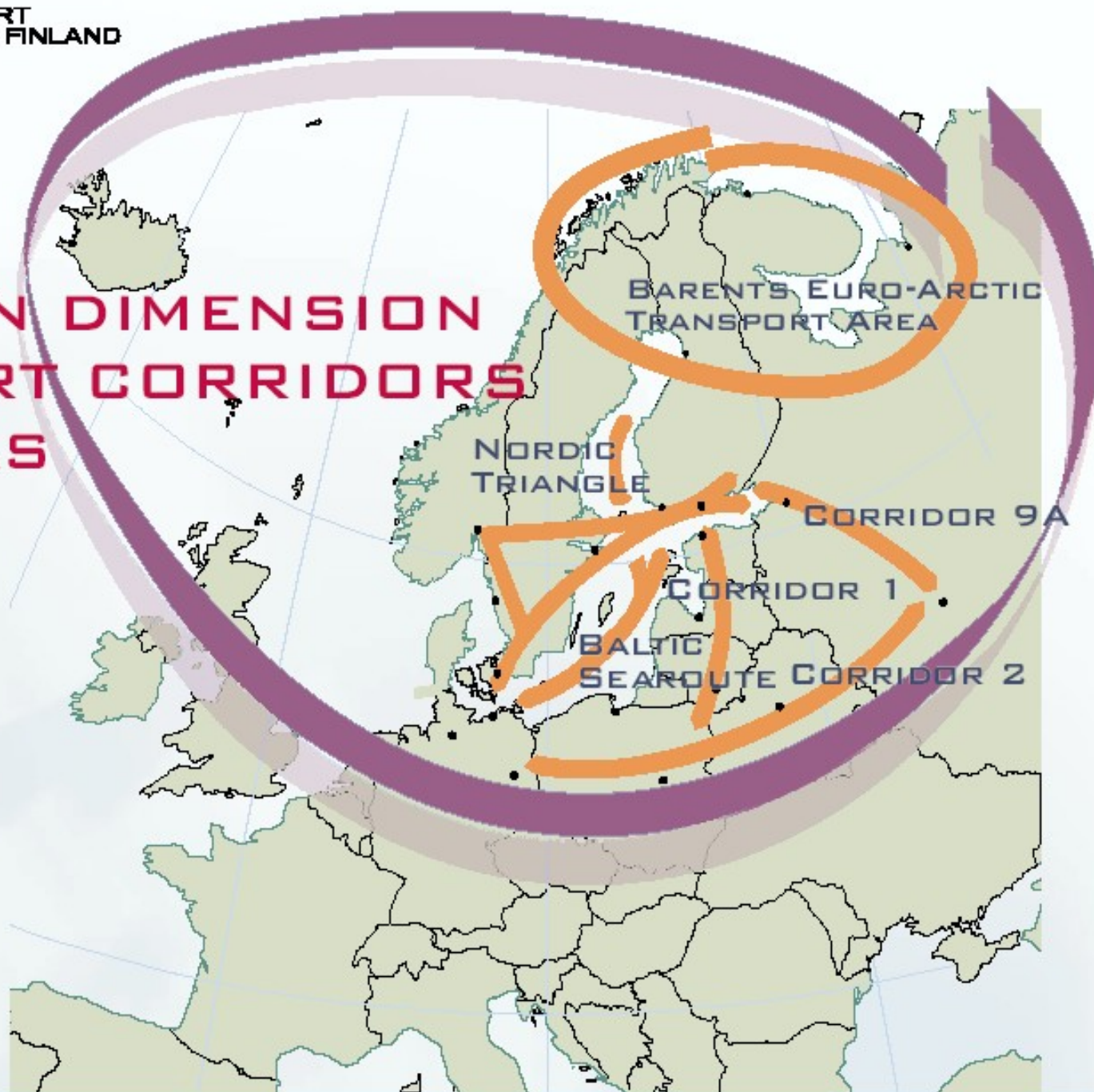
2. Case Finland





MINISTRY OF TRANSPORT
AND COMMUNICATIONS FINLAND

NORTHERN DIMENSION TRANSPORT CORRIDORS AND AREAS



























Road Asset Management in Finland

- Based on management systems developed in the 1980's
- Implementation of the State accounting system 1998
- Road reform 2001-2004
- Stakeholder and customer orientation 2001-2004
- Business reform going on



Implementing State Accounting System

- Accounting for budget revenues
- Business accounting for book-keeping



Structure of the State Accounting

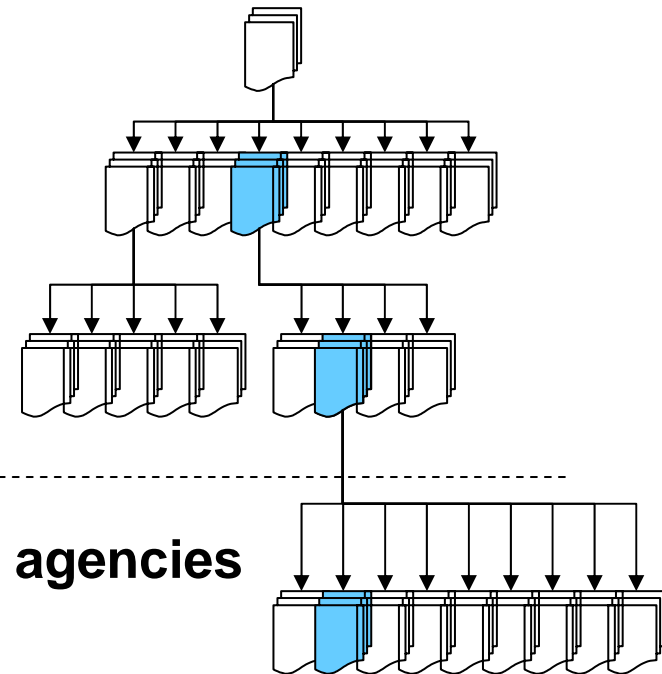
State

Parliament

Ministries ~ 13

- Ministry of Finance
- State Treasury

State Agencies ~ 110



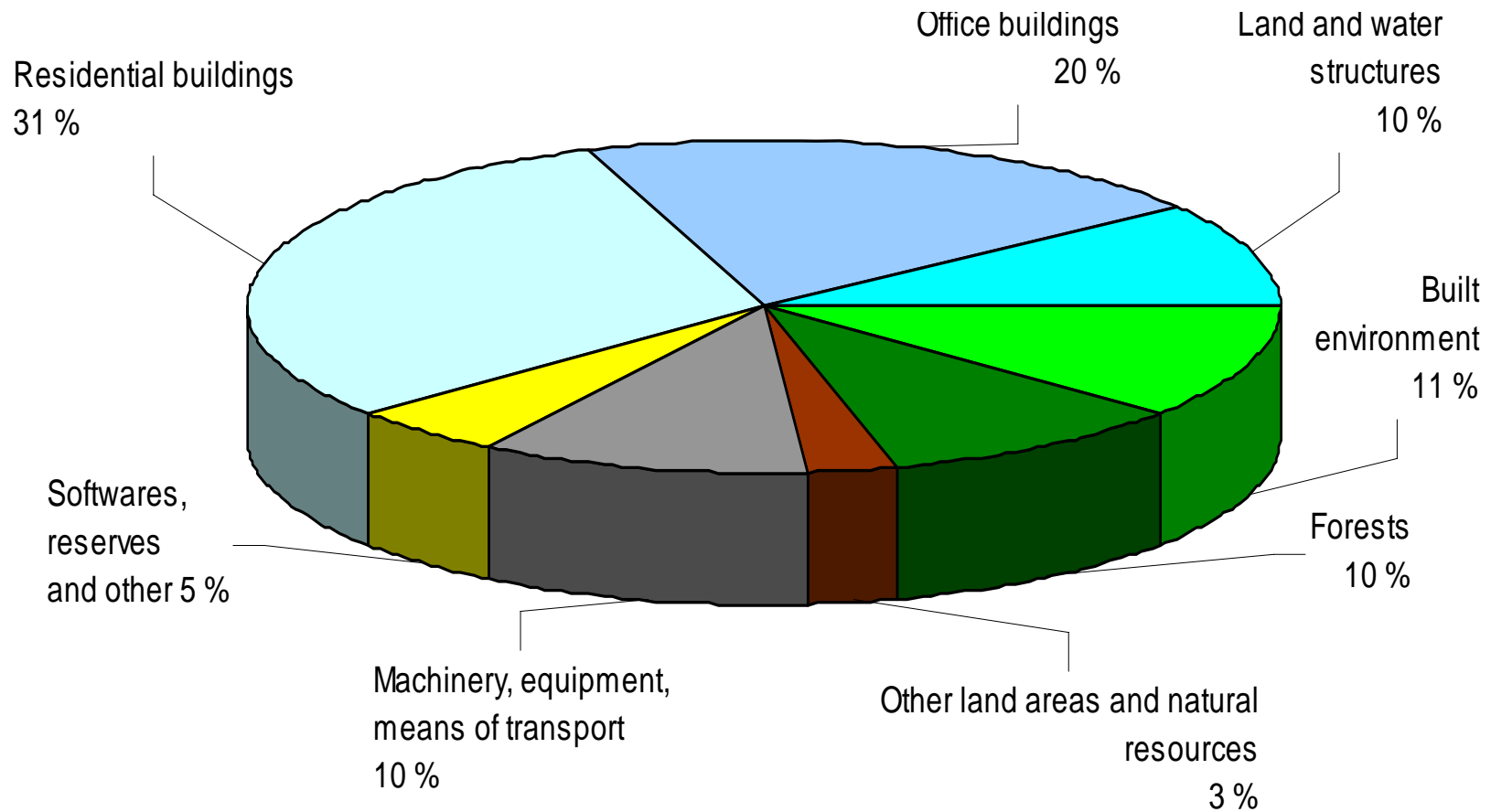
Regions ~ 20

**Regional units of state agencies
~ 100-200**

Municipalities ~ 450

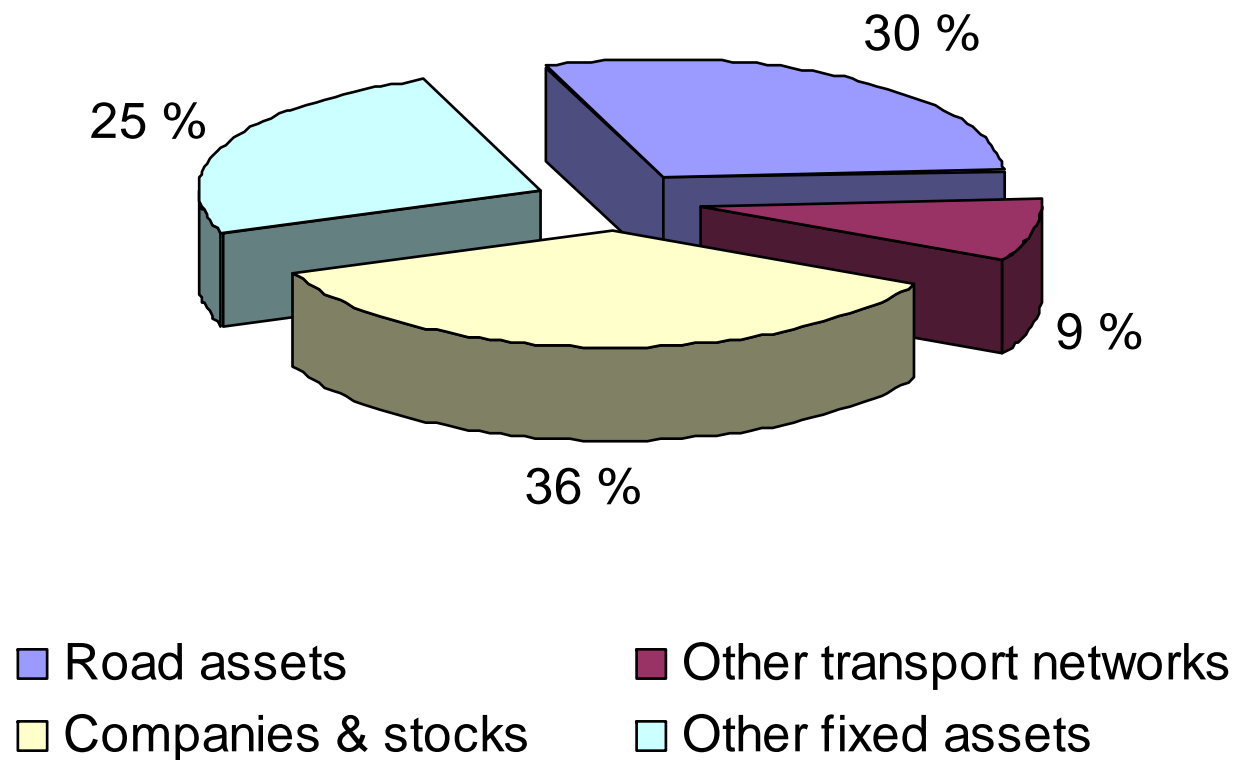
Fixed Assets of the Nation 2005

Total EUR 560 000 million



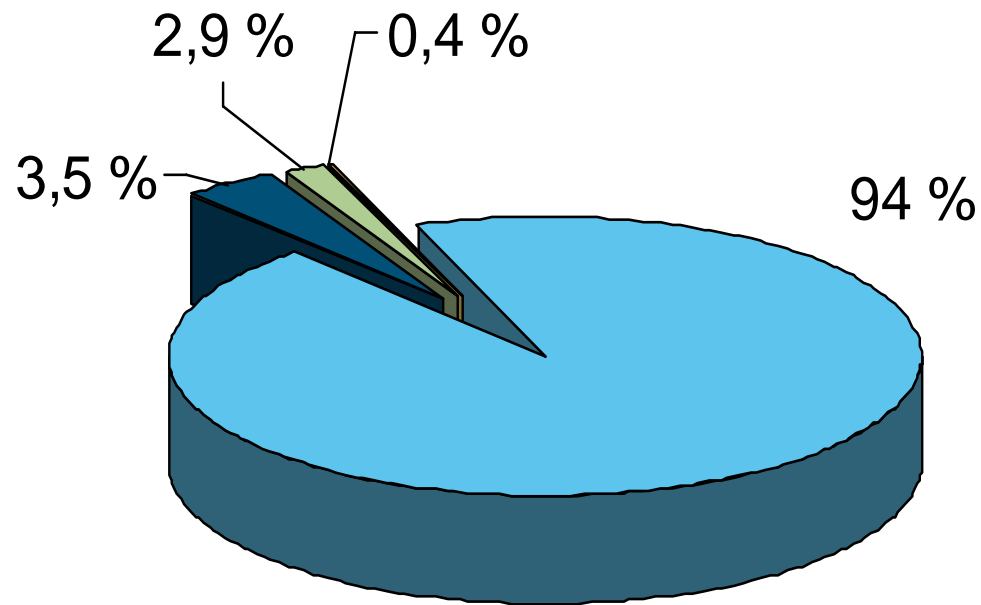
Fixed Assets of the State of Finland

Total EUR 49 500 million



Fixed assets of the Finnish Road Administration

Total EUR 14 695 million, 30 % of the state assets



■ Roads ■ Land areas ■ Under construction ■ Other assets

Source: Finnra, 31.12.2006

Valuation of road assets

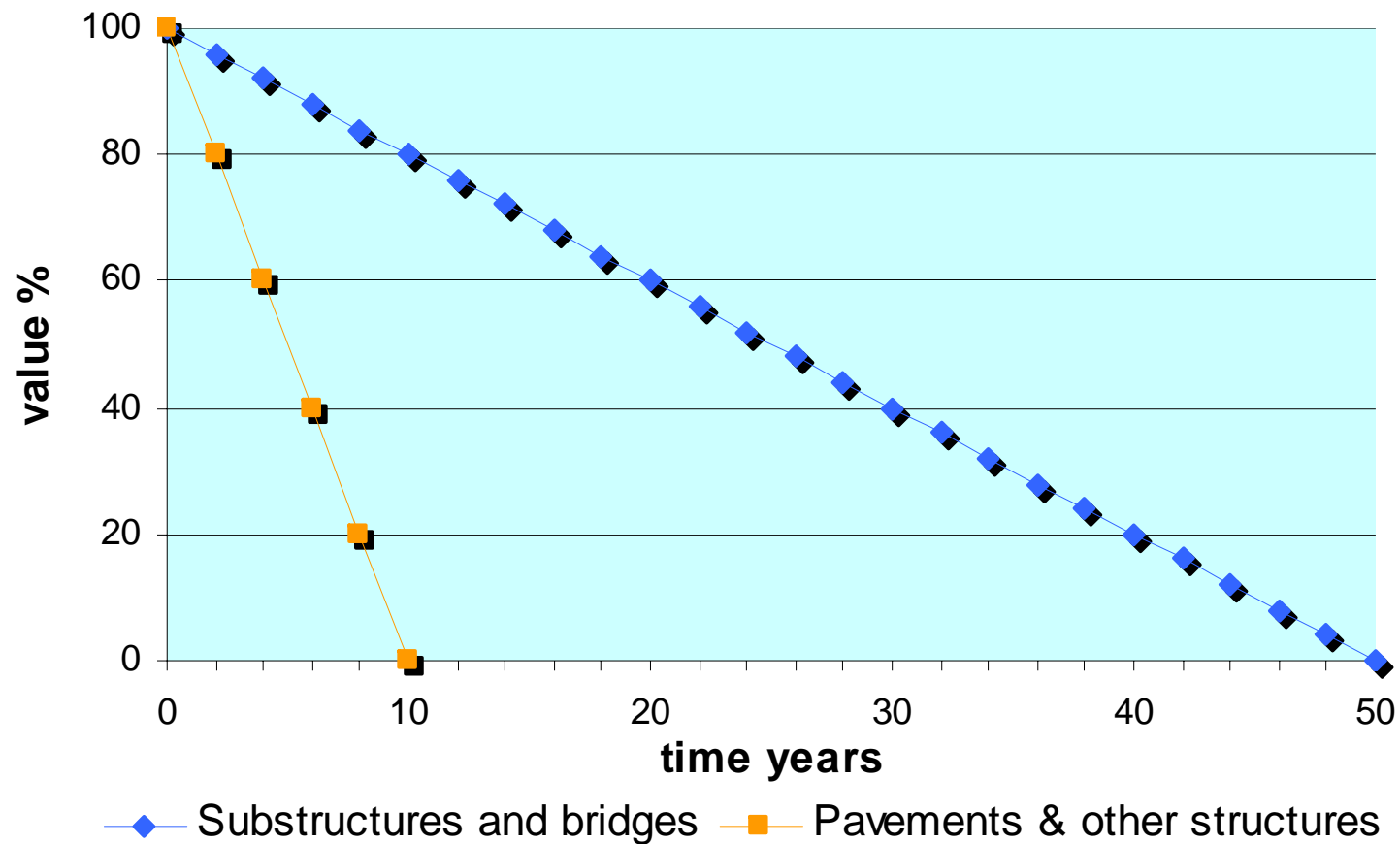
- Based on original investment cost
- Depreciated and then written off from the original investment cost by the annual need of maintenance and upkeep estimated by management systems (such as PMS)
- Valuated first time for the first balance sheet 1.1.1998 - EUR 14 500 million (30 % of the state assets)

Types of road assets

Asset type	Economical lifetime	Annual depreciation	Residual value
Roads			
▪ substructures	50 years	2 %	0 %
▪ pavements	10 years	10 %	0 %
▪ bridges	50 years	2 %	0 %
▪ other structures	10 years	10 %	0 %
Unfinished road structures		0 %	100 %
Land areas		0 %	100 %

State road network 78 000 km owned by the Finnish Road Administration, Finnra

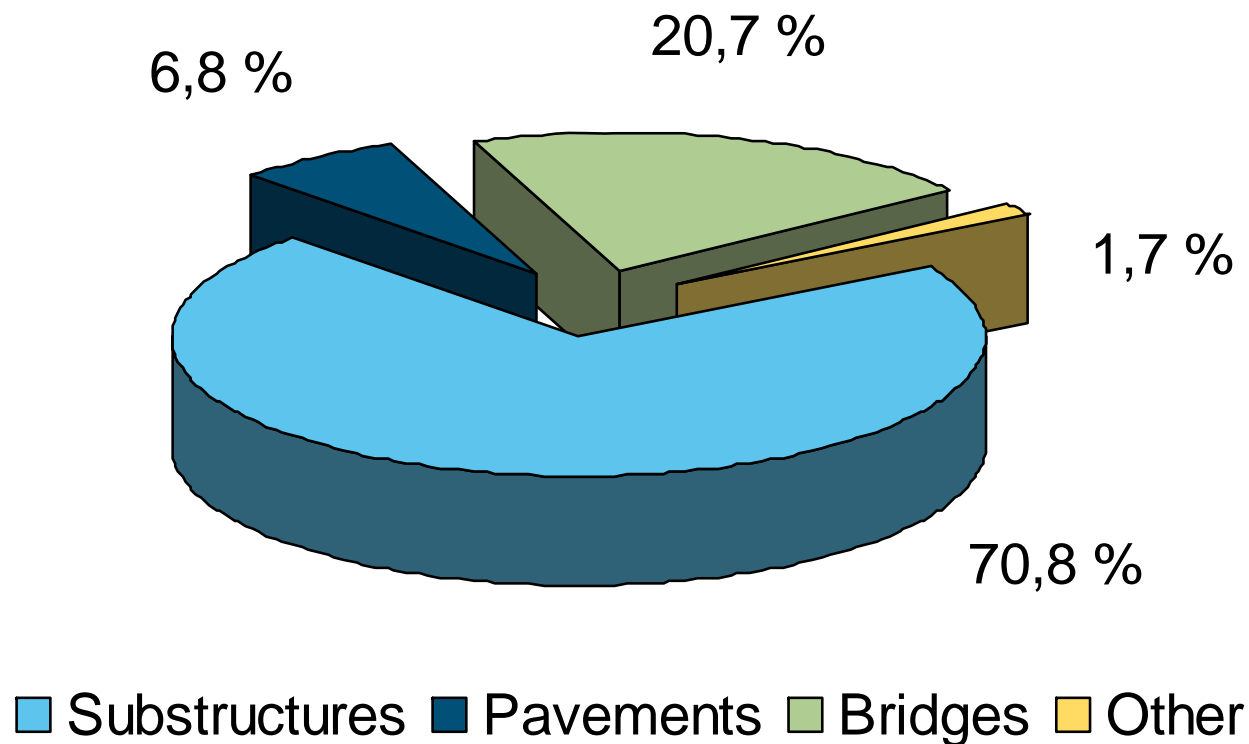
Depreciation of road assets



State road network 78 000 km owned by the Finnish Road Administration, Finnra

Road assets of Finnish Road Administration

Total EUR 13 778 million



Source: Finnra, 31.12.2006

Capitalisation of road assets

- Increased by the original investment cost
 - upkeeping and repaving
 - replacement and reconstruction investments
 - expansion and new investments
 - road design
 - acquisition of land areas
- Calculated monthly



Depreciation of road assets

- Decreased by depreciation matching the annual need of periodic maintenance and reconstruction
- Roads removed from service or surrendered to local authorities is decreased
- Calculated monthly by straight-line depreciation without residual value

Basis of the valuation

- Based on original construction cost (acquisition cost) decreased by annual depreciation
- Calculated as a single value for the whole network (slump sum)
- Updated annually through the state accounting system
- Reported in profit and loss account and in balance sheet

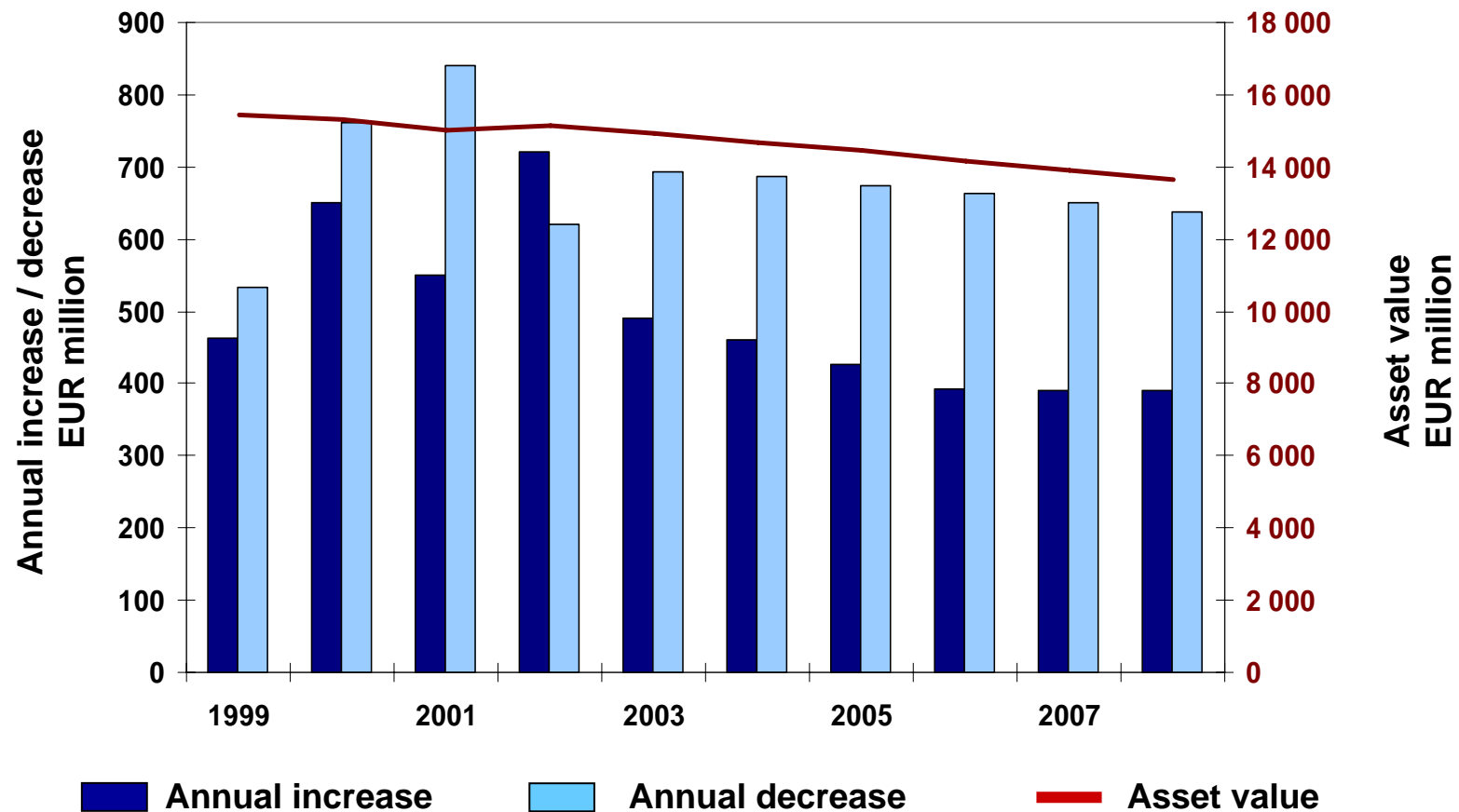
Change in road assets in 2006

EUR million

Road assets (EUR million)	1.1.2006	Increase	Depreciation/ decrease	31.12.2006	Change
Road substructures	9846	145	235	9755	-90
Pavements	1037	156	263	931	-107
Bridges	2832	88	67	2854	21
Other structures	249	45	56	238	-11
Roads total	13965	435	622	13778	-187
Land areas	591	32	0	622	31
Assets under construction	293	467	495	265	-28
Total	14848	934	1117	14665	-1834

Source: Finnra, 31.12.2006

Change in road assets, 1999-2008



State road network 78 000 km owned by the Finnish Road Administration, Finnra

Lessons learned in Finland

- Value in monetary terms key element in developing the common language and knowledge
- Depreciations should match the need of upkeep and reconstruction and the value should reflect the physical conditions
- Preservation of the asset value less important than the service value

3. Conclusions

 FINNISH ROAD ADMINISTRATION	Highway 12
Day of purchase	Best before
18.11.02	18.11.12
 2 000515 901390	EUR 120 [€] mill 12,7 km EUR 9,5 mill/km

Conclusion

- Valuation has to be done
- Asset management systems and accounting should be integrated at some level
- Asset management should be developed as a systematic procedure, or a set of guidelines and methodology

Conclusions (2)

- Asset management is a strategic approach to managing your business
- Value for money means you need to focus on
 - technical tools
 - administrative reform
 - customer orientation
 - business and funding reform

Thank you for
your attention!

