

Practical experience with application of alternative tender procedures in connection with maintenance of regional and local road networks

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Transportation

Contents of this presentation

- Introduction to Output- and Performance based Road Maintenance Contracts
- Standing of completed projects
- Brief introduction to how projects can be performed
- Conclusions and recommendations

Introduction

- Tendencies
 - Increasing traffic load and less human and financial means
 - Traditional way of maintaining turns out to be insufficient in more and more cases

Introduction

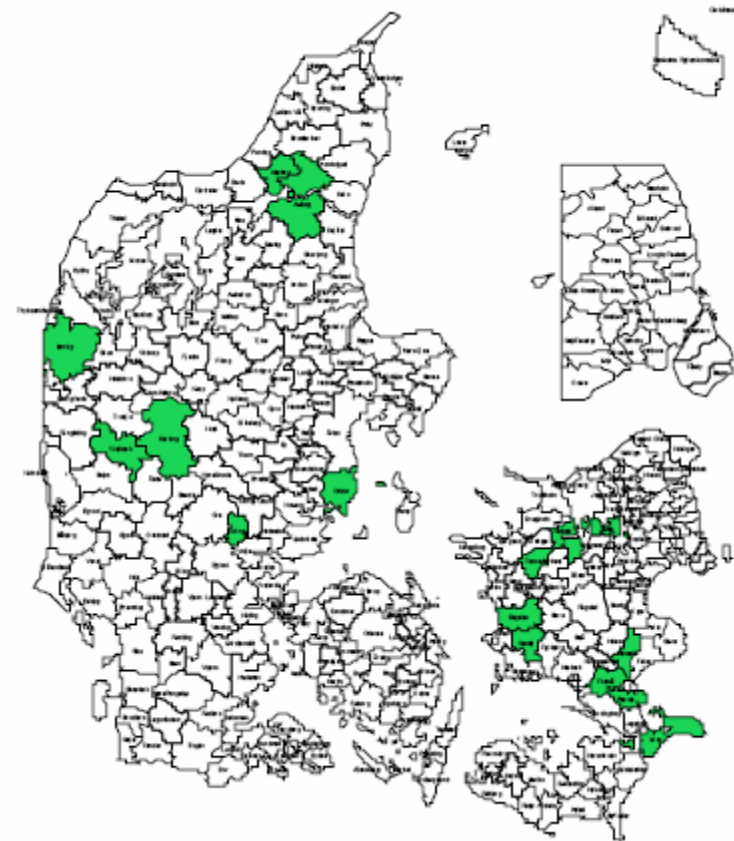
- Examples of how it has been possible
 - To improve and future-orient the service level of existing road network
 - Using less funds and resources
 - Through the application of alternative tendering and outsourcing procedures

Introduction

- Also a brief description of
 - The historical background through 10+ years in Denmark
 - Difference between tenders for a road network and for one specific road section
 - Example of actual successes (savings)
 - Introduction of the methods to other European countries

Standing of projects

- **Denmark**
- Selected sections on regional roads (1998-)
 - Stated requirement for a new asphalt surface (15 years) but at the contractor's free choice
- Road networks (2001-)
 - New asphalt not necessary but free use of method and technology
 - It's up to the contractor to choose technology as long as he keeps the functional condition better than asked for



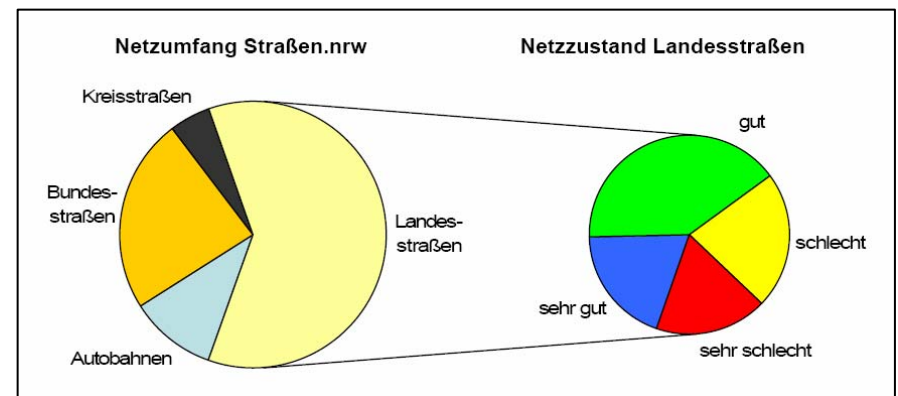
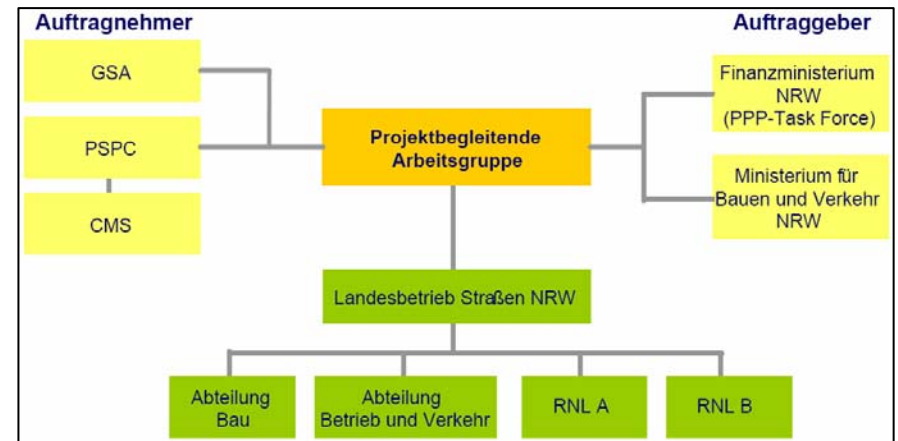
Overview "Road Network" as per 2004

Standing of projects

- Denmark (continued)
 - Example of objects included
 - Road surface, drainage, kerbs, footpaths, verges, ditches, excavations in the road
 - Safety conditions (e.g. potholes) – min. hours
 - Model now improved (2007) to optimized use of
 - a Functional contract for rural roads (15 years) and
 - a Partnering contract model (4-5 years) for urban areas
 - and use of the road authorities own resources

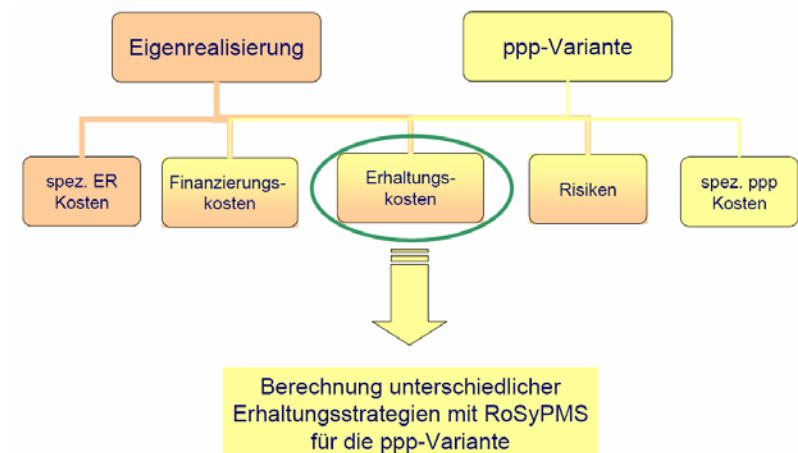
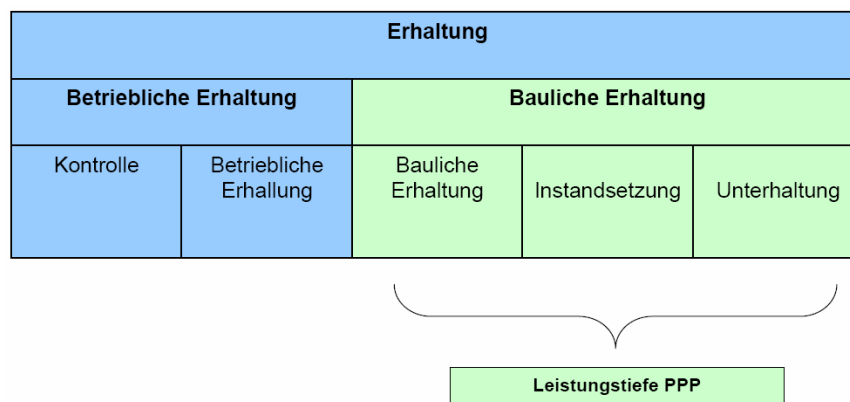
Standing of projects

- Germany
- Bundesland Nordrhein-Westfalen (NRW), a pilot project for 11,000 km Landesstrassen (2006-)
 - Method used similar to the one used in Denmark
 - Plus, how to secure that only big company can bid for such projects out of financial reasons
 - Tender procedure expected later this year (2008)



Standing of projects

- Germany (continued)
 - Kreis Lippe
 - Tendering procedure pending for approx. 430 km Kreisstrassen



Standing of projects

- Romania
- Brasov County (60 km)
Project ongoing
- Based on performance indicators developed as a part of our planning work
- Tender based on the World Bank Sample Bidding Documents



Introduction to performance of projects

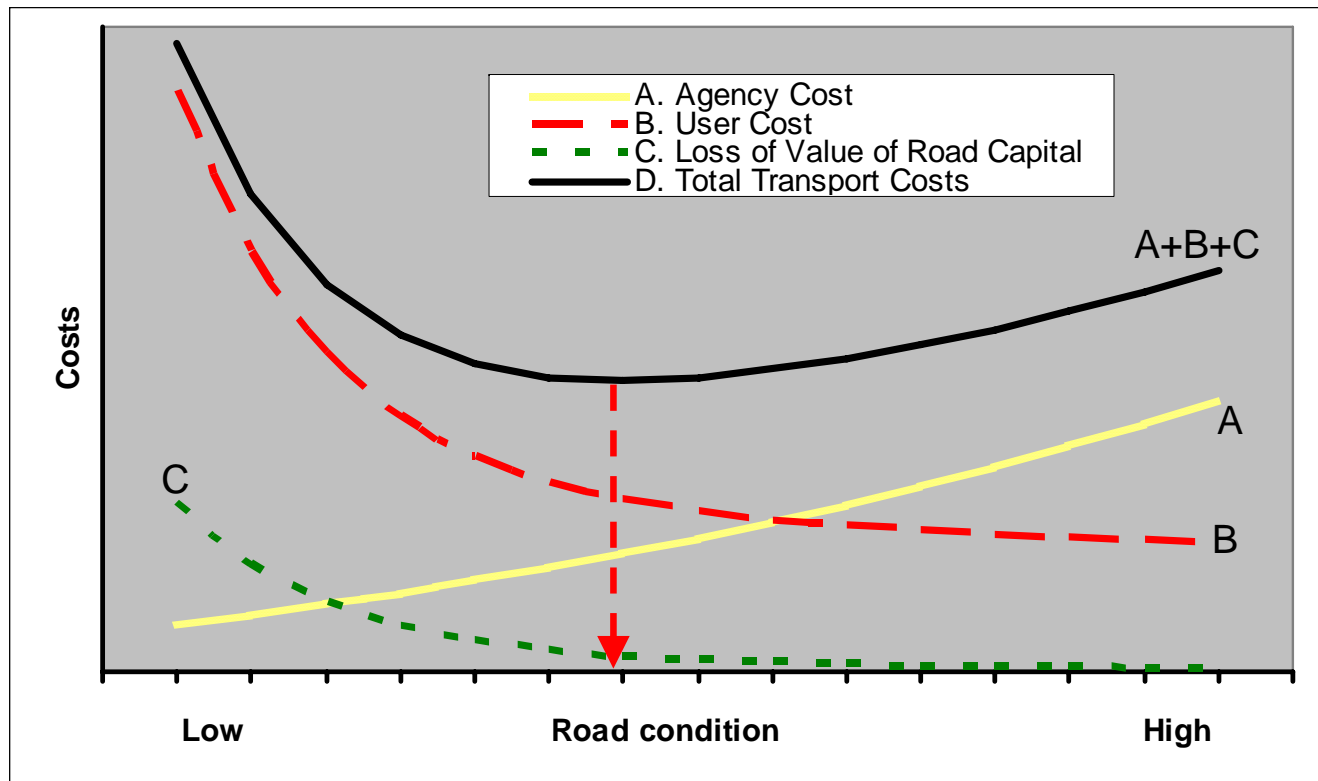
- Phase 1- Data and information
 - Collecting geometry, traffic and condition data (important to minimize risks for the bidding contractors)

Introduction to performance of projects

- Phase 2 – Aim for the service level
 - Decide the minimum service level (functional conditions) for the entire road network. Often divided into different road classes with different service levels
 - The RoSy® Asset Management system www.RoSy.eu has been used as a tool for this and subsequent processes

Introduction to performance of projects

- Phase 2 – Aim for the service level



Introduction to performance of projects

- Phase 3 – Analysis and decision
 - Calculation of the cost that the road authority will have if he is to maintain the service level in the traditional way
 - Is the chosen service level too high so that funds will not be available?
 - Forecasting of price estimates from the contractors (for keeping same level)
 - Any change of service level/s?
 - Tender

Introduction to performance of projects

- Phase 4 – evaluation, results, contracting

OPRC Tender

Known results

Comparison of financial expectations (from RoSy) and considered tenders

	Municipality år	Møn 2002	Holbæk 2002	Præstø 2003	Fladså 2004	Odsherred 2007	All
RoSy calculations	Period	16 years	15 years	14 years	15 years	15 years	
Annual Investment needs	DKKkm per year		6,714	3,041	3,632	5,234	
Value of return	DKKkm per year		0,133	0,370	0,079	0,184	
Total	DKKkm per year	4,200	6,847	3,411	3,711	5,418	23,587
Number of km	km	265	250	145	155	216	1031
Total per 100 km (for comparison)	DKKkm/year/100 km	1,585	2,739	2,352	2,394	2,508	2,288
Considered tenders	Lowest bid:	(NCC)	(Colas)	(Munck)	(Munck)	(Colas)	
Total (incl. few extra services)	DKKkm per year	4,226	7,600	3,183	2,191	3,529	20,729
Number of km	km	265	250	145	155	216	1031
Total per 100 km (for comparison)	DKKkm/year/100 km	1,595	3,040	2,195	1,414	1,634	2,011
Deviation (RoSy - Tender)	DKKkm per year	-0,010	-0,301	0,157	0,981	0,875	0,277
Do. In percentage		-6,0%	11,0%	6,7%	41,0%	34,9%	12,1%

Conclusions and recommendations

- It has been proven that it is possible to get more for less
- Through alternative tendering. But also through an optimized use of different tendering methods for a given road network.
- The largest challenges when using "alternatives" often seem to be in one's own organisation
- The legislation using "alternatives" has not been a limiting factor
- The method means many years without direct influence on the service level.
- A must is therefore to describe the service level using performance indicators which are unique and cannot be misunderstood or manipulated with
- Forecasting of results before tender procedure to avoid wasting money on a project which cannot be performed
- Reduction of the risks lowers the prices of the bidding contractors



Transport Research Arena Europe 2008

Ljubljana, Slovenia

21 - 24 April 2008

Thank you for your attention



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