

Norway's toll rings: Full scale implementations of urban pricing

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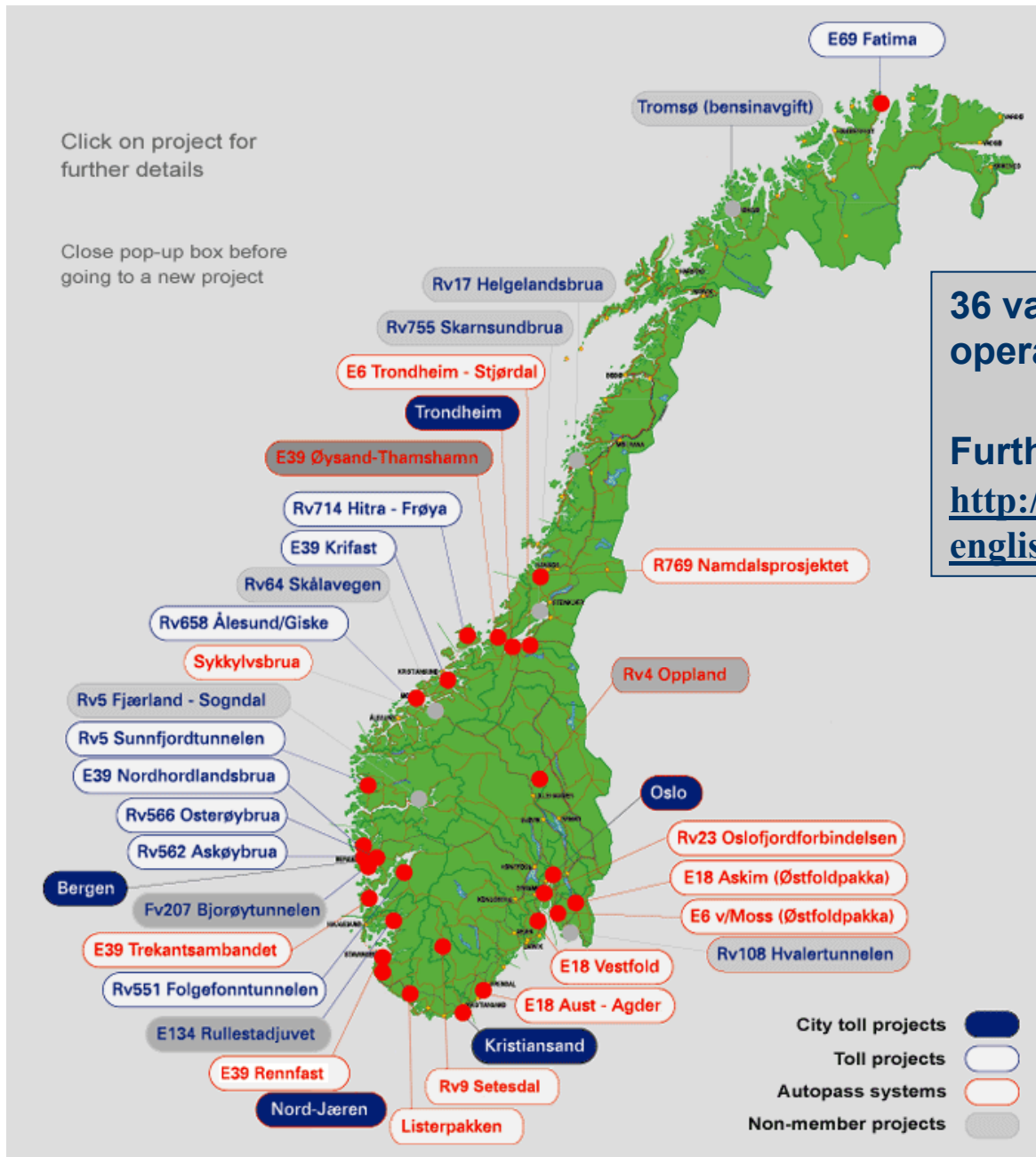


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With special regard to NAS countries**

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36 various toll projects in operation in Norway 2003.

Further information:
<http://www.norvegfinans.com/english/oversiktskart.html>



Urban Tolling in Norway

- In 1986 (Bergen), tolling was first introduced to an urban area. Later Oslo (1990) and Trondheim (1991) followed
- Since then, several Norwegian cities have discussed road pricing, and some have decided on specific local systems
- The design of the schemes, and the composition of investment packages, have changed in line with developments in technology and changing political preferences
- The urban toll rings are based on local initiatives. They need approval by political bodies and sanctioning by the National Parliament.
- An agreed operating period is decided, usually 15 years
- They are managed and operated by private companies, jointly owned by public and private interests

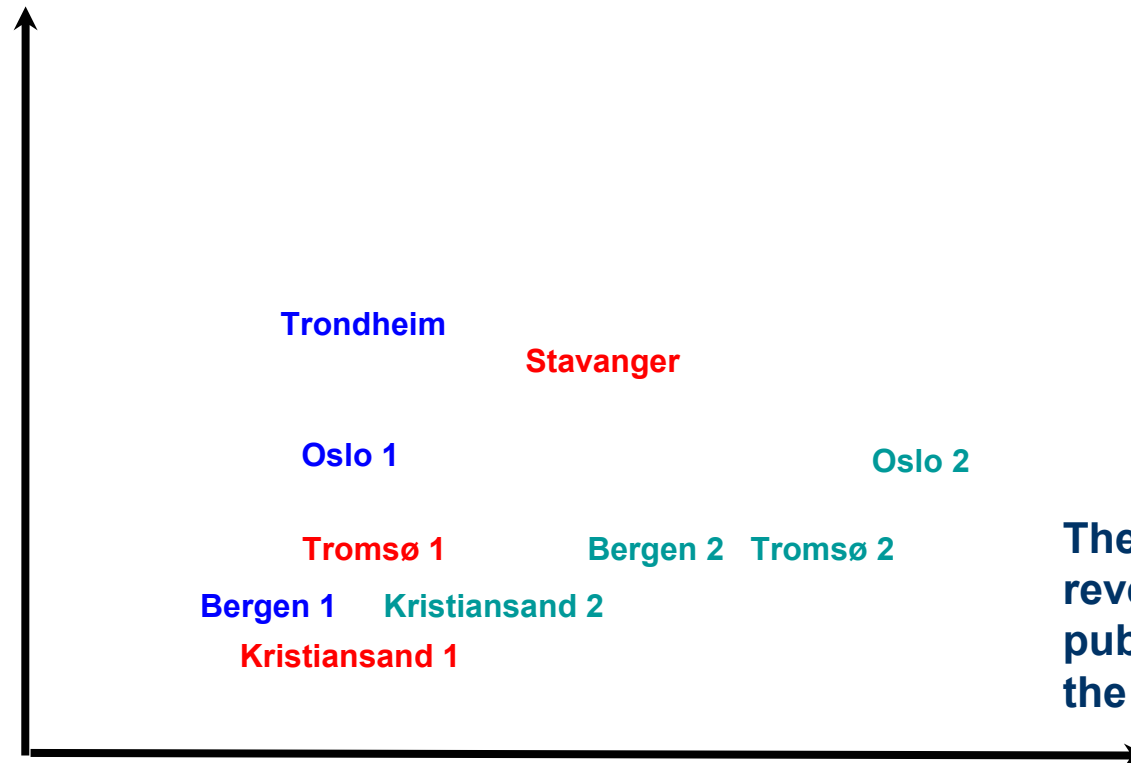
The Package Approach to Urban Road Pricing

- The purpose of the charging is to fund urban transport investment packages
- Toll revenues are supplemented by additional Government funds
- The toll companies are able to take up loans, and start financing new infrastructure before charging of motorists is initiated



Two Key Dimensions of Norwegian Road Pricing Schemes

The emphasis on demand management



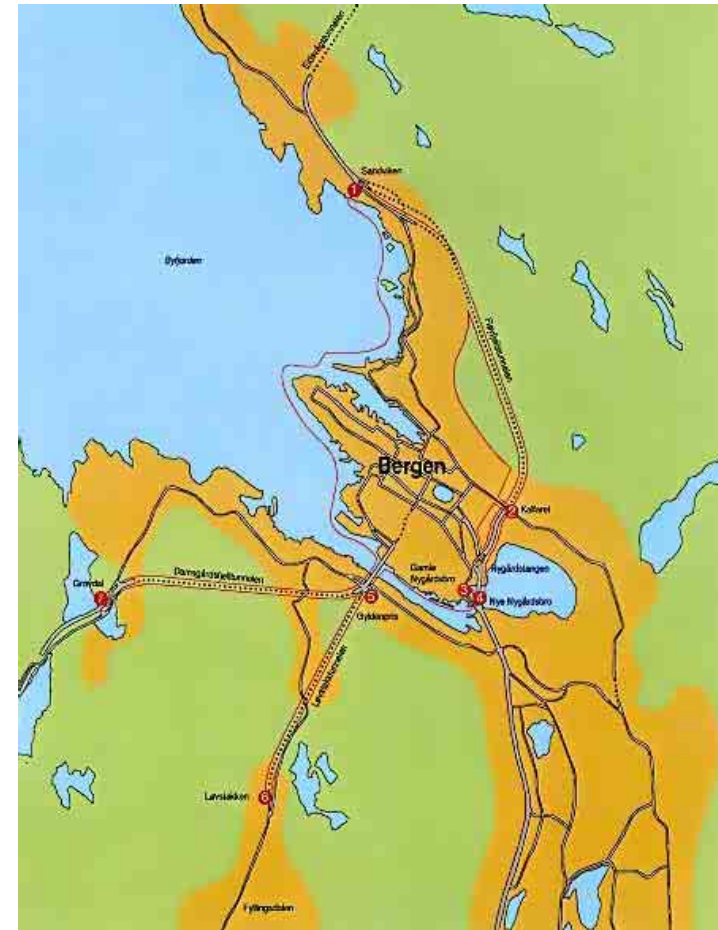
The proportion of revenue spent on public transport and the environment

Characteristics of the Early Toll Rings. 1992 Data

	Bergen	Oslo	Trondheim
City population	213 000	456 000	138 000
Percentage living inside toll ring	10%	50%	40%
Starting date	Jan, 1986	Feb, 1990	Oct, 1991
Number of toll stations	7	19	11
Entry charge for a small vehicle (NOK). (Manual payment. Heavy vehicles are charged double price. 1 NOK=0,125 Euro)	5	11	10
Charging period	Mon-Fri 6am-10pm	all days all hours	Mon-Fri 6am-5pm
Average daily crossings during toll hours	66 000	204 400	40 455
Annual gross revenue, NOK millions	63	628	71
Annual operating costs, NOK millions	10	72	7
Positive/negative split in public opinion <u>just before</u> implementation	19 / 81	30 / 70	9 / 91
Positive/negative split in public opinion <u>after 1-2 years of operation</u>	58 / 42	41 / 59	47 / 53

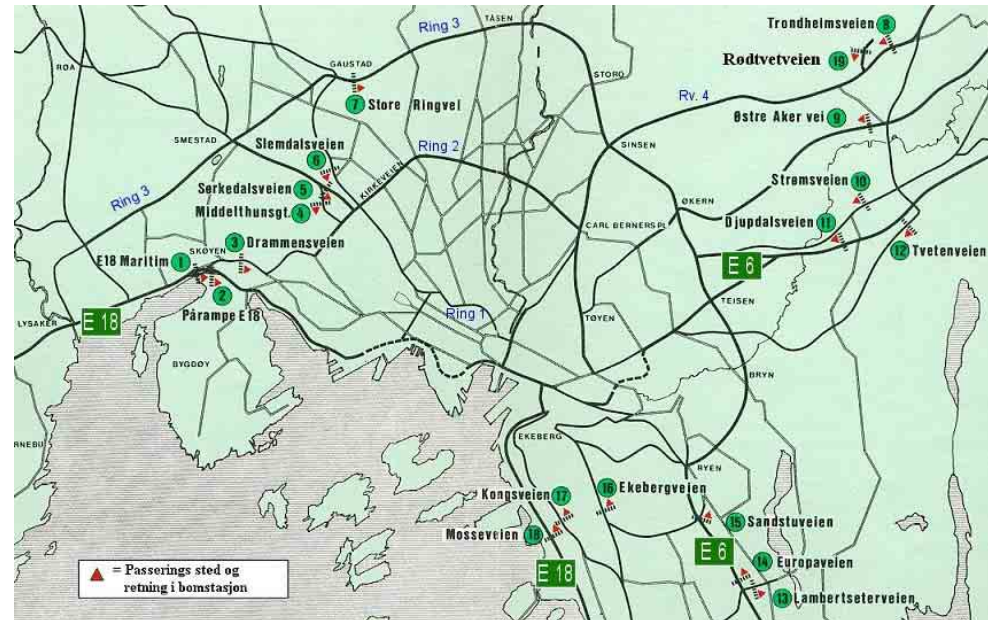
The Bergen Toll Ring

- The first Norwegian City to introduce an urban investment package, partly financed by user fees
- The 6 (later 7) tolling stations forms a tight cordon around the city centre
- Manual operation, including season tickets as a payment option
- One year after opening, the tolling was estimated to have reduced traffic crossings by 6-7 % during its hours of operation
- Original package agreement ended 2002 and was dedicated almost entirely to road investments
- New agreement 2002-2011. Basic charge increased to NOK 15. Only 45% allocated to road investments



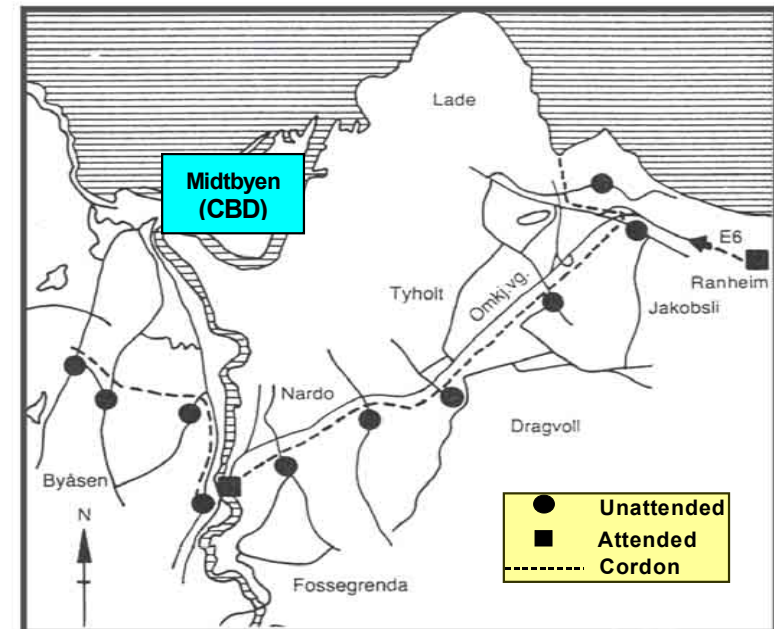
The Oslo Toll Ring

- Only three main transport corridors lead to the central part of Oslo. Still, 19 toll stations are needed
- The main focus of the original investment package was on increase in road capacity
- A new package for 2001-2011 is dedicated entirely to public transport investments. Contributors are National Government (71%), Oslo (5%), **property developers** (3%) and **users of public transport** and cars (21%)
- A total decrease of 5% in car travel during the first year of operation is reported. 3-4% is attributed to the toll ring. The rest is explained by a recession at that time
- No significant effect on use of public transport or car occupancy



The 1991 Trondheim Toll Ring

- All stations had no-stop lanes for electronic payment
- 80 % of transactions in morning peak by electronic tags already at opening in October 1991
- Only inbound crossings were charged
 - Full charges Mon-Fri, 6am-10am
 - Reduced charges Mon-Fri, 10am-5pm
 - No charges Evenings, Weekends
- Every crossing was charged for, but up to a limit of one crossing per hour and 75 crossings per month
- Very few exemptions



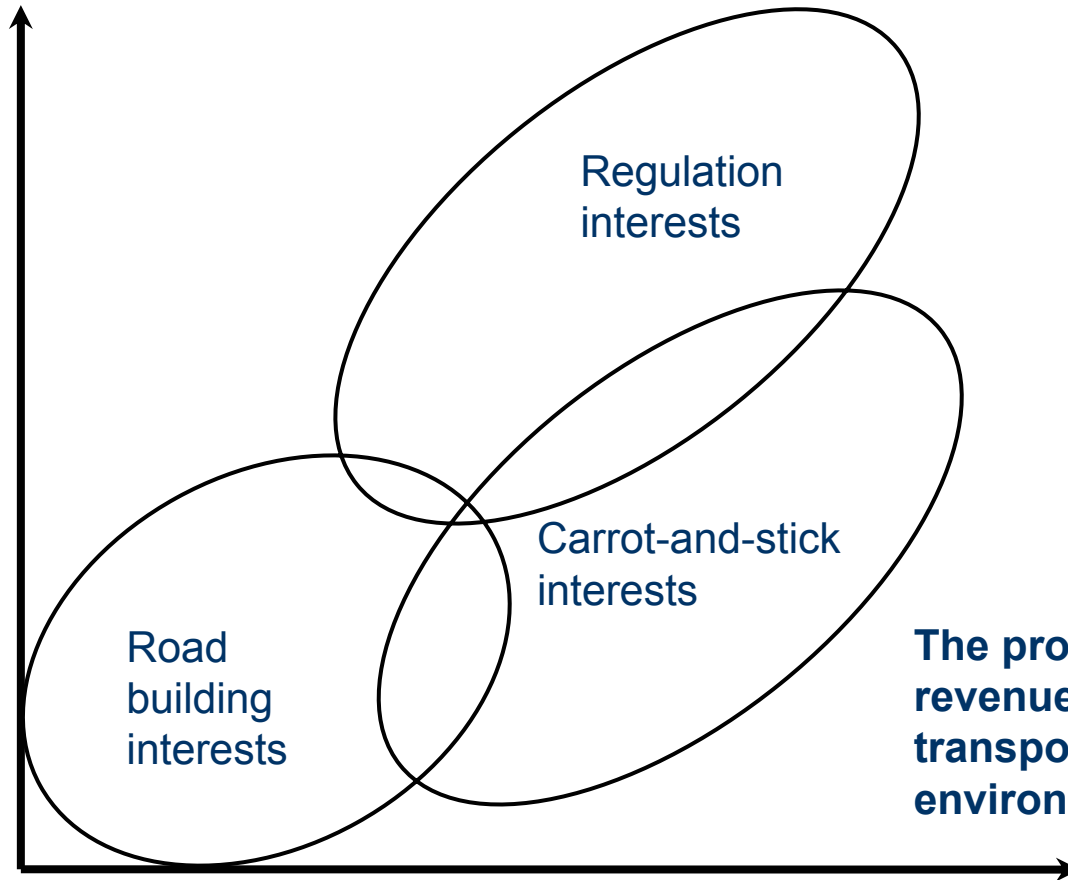
Trondheim 1998: Introducing a Second-generation Road Pricing System



- Number of toll stations increased from 13 to 22
- The new system divides the city into six zones
- Twin rationales of increased “fairness” and increased income
- November 2003:
 - New CBD ring (5 more toll stations)
- Ultimo 2005:
 - Charging to be terminated ?

Political Acceptance: The Three “Areas of Preference” Concerning Road Pricing

The emphasis on
demand management



The proportion of the
revenue spent on public
transport and the
environment

Conclusions (page 1 of 2)

- Public acceptance is not likely, but political acceptance is possible !
 - Interests overlap, so that several compromises are possible
 - Schemes must be flexible enough to be adjustable to shifting political preferences

- Road pricing implementation is probably most likely to succeed when starting with crude systems
 - The initial crude system may be developed and refined
 - An implementation process typically lasts 5-10 years

Conclusions (page 2 of 2)

- City-specific factors easing acceptance
 - Long distance to “rival” cities
 - The benefits of improving the road system should be obvious both to the politicians and to the public
 - Both mobility and environmental improvements should be provided by the schemes

- Traffic impacts have been small. The primary objectives of the designs have been fund raising, rather than congestion pricing
 - The time-differentiated charging in Trondheim did show substantial shifts in timing for car trips
 - Some demand management effects may be achieved even if the official main rationale is fund raising