



Concept Symposium 2016

Governing the Front-End of Major Projects

The contract strategy at Ringeriksbanen



Stein Berntsen
Managing Director
Dovre Group Consulting AS
Norway

Ringeriksbanen is a 30 billion NOK railway project between Hønefoss and Sandvika, aimed at reducing the travelling time between Oslo and Bergen, the two largest cities in Norway, by one hour, and joining the area of Ringerike into the greater Oslo working region. There is also a motorway project being planned between Hønefoss and Sandvika. Two main contract strategy directions needed to be decided upon was:

Would it be beneficial to combine the railway and the motorway projects into one project with common project management, considering potential cost savings and execution risk?

Would it be beneficial to use contract models with early involvement of the entrepreneurs, like private-public-partnership or similar contract models, for a combined project or a separate railway project?

Dovre Group and the Institute of Transport Economics presented the results of an analysis covering these questions and others to the Ministry of Transportation and Ministry of Finance in 2015. This presentation highlights the framework and assessments made related to the above two main directions for the contract strategy.

Keywords: Economies of scale, Risk Management, Private Public Partnership, Contract Strategy



Source: Jernbaneverket

CONTRACT STRATEGY FOR THE RINGERIKSBANEN RAILWAY PROJECT

Concept Symposium no. 7, Sola Strand Hotel 7-9 September 2016

DOVRE GROUP AND TØI

DOVRE GROUP

- Consulting and resourcing for major projects
- Project Management and Procurement
- Established 1984, 520 employees

INSTITUTE OF TRANSPORT ECONOMICS (TØI)

- Research and consulting in transportation
- Multidisciplinary transport research
- Established 1958, 95 employees

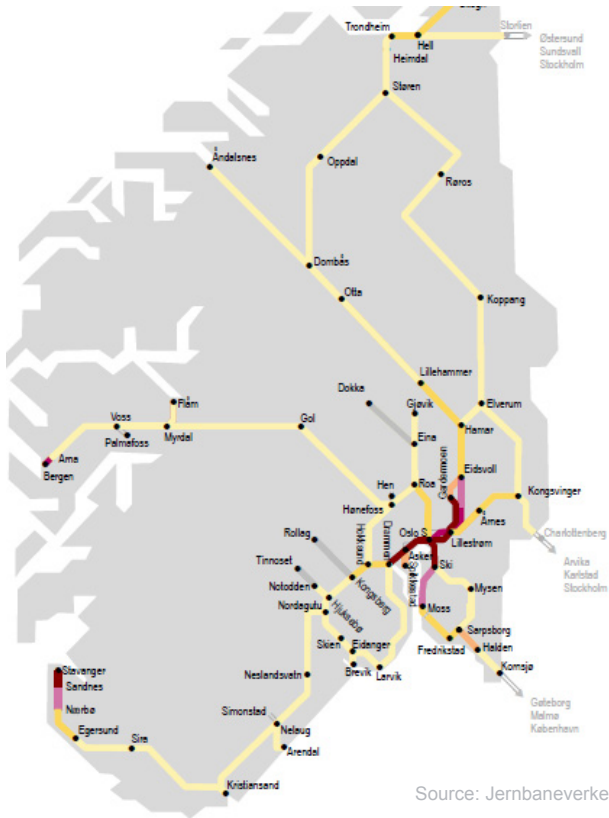
JOINT VENTURE

- Partners for QA framework agreement
- Cooperation since 2001

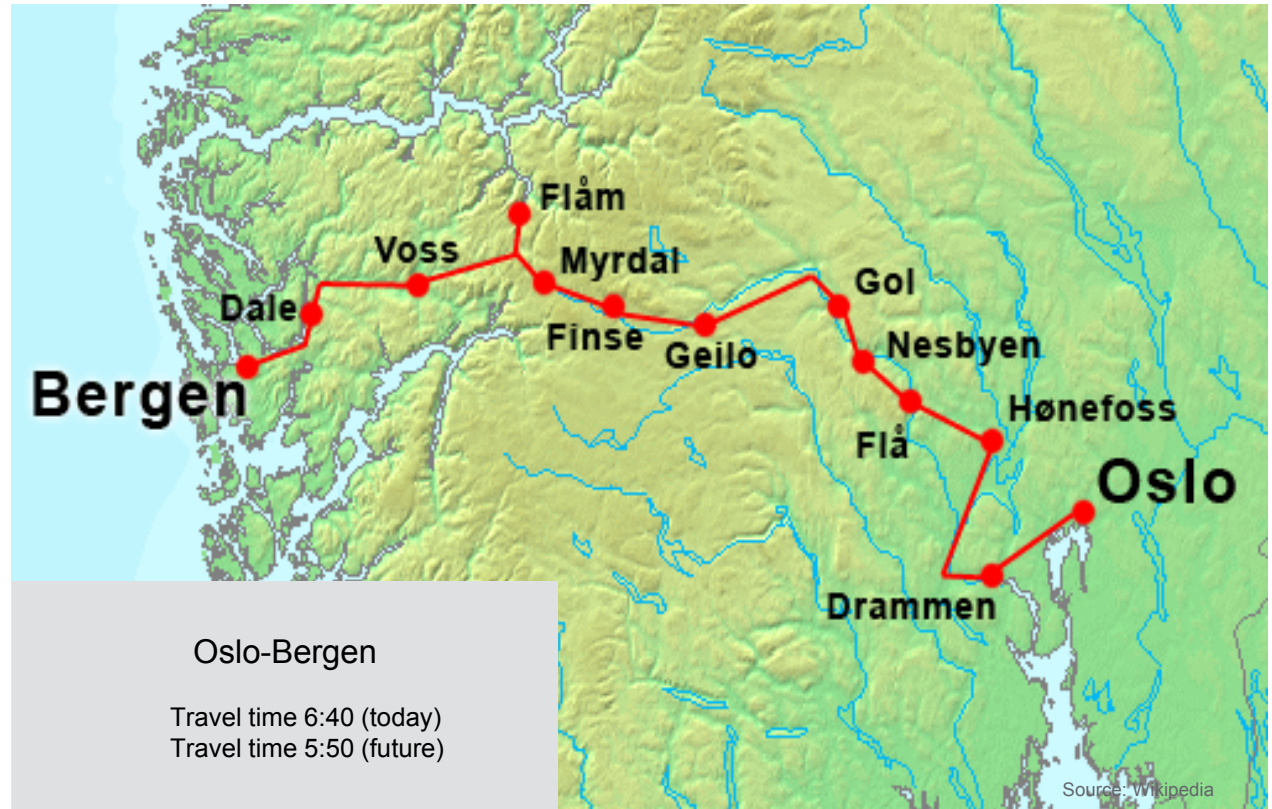


Source: NRK

THE OSLO-BERGEN RAILWAY LINE (BERGENSBANEN)

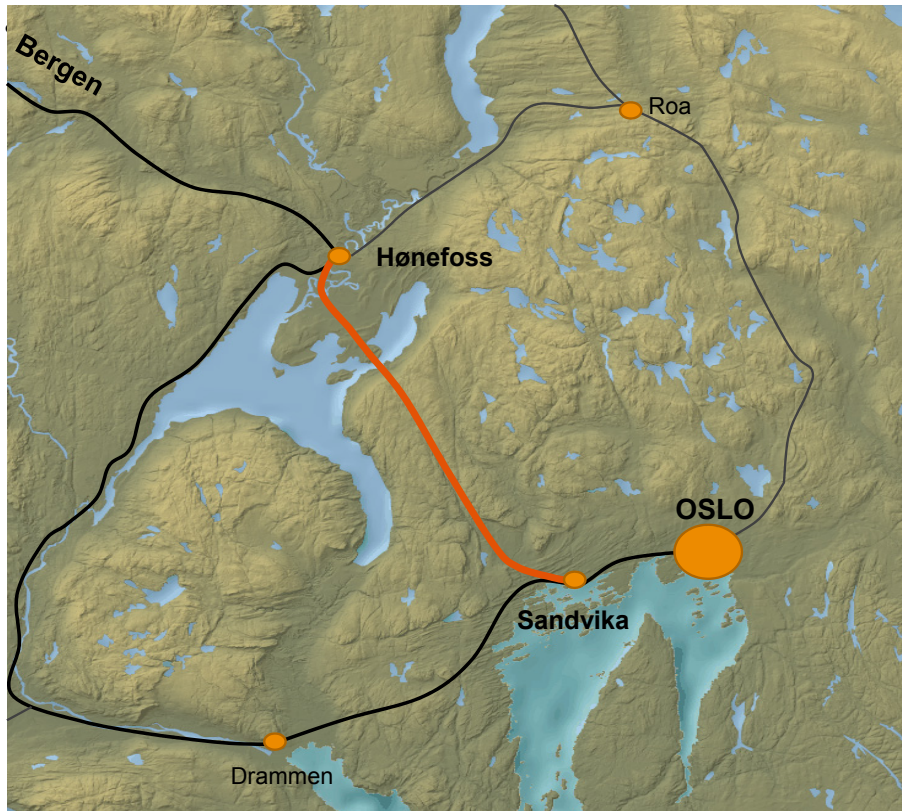


Source: Jernbaneverket



Source: Wikipedia

THE OSLO-RINGERIKE RAILWAY LINE (RINGERIKSBANEN)



RINGERIKSBANEN

THE RAILWAY PROJECT

- 40 km double-tracked railway line:
26 km tunnel, 2 km bridges and 12 km above ground
- Cost estimate 19 BNOK (2014), upper est. 26 BNOK

CONTRACT STRATEGY

- Would it be beneficial to combine the railway and the motorway project?
- Would it be beneficial to use private-public-partnership?





Source: Radissonblu

COMBINED PROJECT E16 AND RINGERIKSBANEN?

REFERENCE: E6-DOVREBANEN

- Joint project between the Road Authorities and the Railway Authorities
- 22 km of high standard road between Gardermoen and Kolomoen. Cost estimate 4.1 BNOK (2011)
- 17 km double-tracked railroad between Eidsvoll and Hamar. Cost estimate 3.9 BNOK (2011)
- Combination synergies estimate 0.4 BNOK (2011) or 5 percent
- 3 large civil work contracts for sections of both the road and the railroad part of the project
- Main cost savings due to more efficient handling of rocks and gravel. Surplus material from the road was used as foundation for the railroad



COMBINED PROJECT

Railway Sandvika-Hønefoss and motorway Skaret-Hønefoss.
Cost estimate 26 BNOK

POTENTIAL EFFECTS

- Combined planning process
- More efficient handling of rocks and gravel
- Reduced project management cost
- Better prices through larger contracts
- Reduced environmental impact in the construction period

ASSESSMENT

- Less relative potential than E6-Dovrebanen
- Limited cost saving potential: 50-300 MNOK (1 percent)
- Reduced environmental impact
- Limited increase in execution risk





Source: Aminafina

PUBLIC-PRIVATE- PARTNERSHIP FOR RINGERIKSBANEN?

PUBLIC-PRIVATE-PARTNERSHIP

ORIGINAL BUILD-OPERATE-TRANSFER (BOT) MODEL

- Financing
- Effectiveness and efficiency

MOST PPP MODELS IN NORWAY

- Design, Build, Finance, Operate, Maintain and Transfer
- Annual fee throughout contract period
- Separate fees for investment and maintenance/operation
- Fees may be adjusted for activity level, availability etc.
- Transfer at the end of the contract period

GOVERNMENT PPP MODEL FOR TRANSPORTATION PROJECTS

- Contract period 25 years, majority of investment paid back early, after start of operation, to reduce financing cost
- Annual fee throughout contract period covering maintenance, operation and a smaller portion of the investment, for LCC incentive



GOVERNMENT CRITERIA - PPP

- Long continuous distance, efficient to maintain and operate
- Possible for the private party to assess all relevant risk
 - Avoid PPP for modification of existing infrastructure with complex traffic conditions
 - Avoid PPP in complex city-like conditions where unpredictable problems are likely
- Projects that are clearly defined, i.e. lines outside of central areas
- Due to substantial transaction costs, the projects must be of a certain size but not so large that the total risk becomes too high
 - Road projects of 3-6 BNOK in value may be suitable for PPP
 - Road project with moderate risk – up to 8 BNOK may be suitable
- Added value compared to other execution models
- Engineering should be performed by the private party



Source: Regjeringen

GENERAL CRITERIA PPP

- Can suitable functional requirements be established?
- To what degree may design, construction, operation and maintenance be seen as one?
- Can all relevant risk be realistically identified, priced and transferred contractually?
- What is the remaining risk for the public party?
- Can sufficient competition and interest from private suppliers be obtained?



Source: Aftenbladet

PPP FOR RINGERIKSBANEN?

RAILWAY AUTHORITIES

- Planned budget allocations does not hinder efficient execution
- Project size and risk likely to give high risk premiums
- Project size and risk may hinder sufficient competition
- Interfaces with national traffic control
- Reduced flexibility in operations phase

DOVRE GROUP / TØI (ADDITIONAL)

- Part of national traffic system with changing requirements, due to other projects and optimisation, outside of suppliers control
- Economics of scale in operation and maintenance (in combination with other lines) difficult to achieve
- The Combined project would add to the complexity in terms of interfaces, technical solutions and overall management
- PPP is not recommended for Ringeriksbanen





Source: Sola Strand Hotel

THANK YOU!

Stein Berntsen