



# Design-build Contracts in Norwegian Road Projects

Helene Riksheim, Ola Lædre and Paulos Wondimu





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BERKELEY, CA 6-12 JULY 2020

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# Research questions

The use of design-build (DB) in Norwegian road projects is increasing, but contractors and owners lack experience:

- How were the DB contracts executed?
- What are the experiences from the DB contracts?



# Methods

- Literature study
- Two cases (different owners, same contractor, approx. US \$ 200 Million each)
- Document study (contracts, organization charts, strategy documents etc.)
- Semi-structured interviews (6 contractor and 6 owner representatives)



# Results, E6 Helgeland North, Norwegian Public Roads Administration (NPRA)



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- Procurement and contracting: Positive experiences from competitive dialogue and a constructive design process. The room for maneuver was restricted after signing an additional contract.
- Execution and commissioning: Contractor identified improvements. Owner insisted on initial plan.
- Operation and maintenance: 15 years period, followed by a three year warranty. The contractor was concerned about the risk, while the owner considered it as a relief.



# Results, E18 Rugtvedt-Dørdal, Nye Veier AS



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- Procurement and contracting: Positive experiences from Best value procurement (one contract for the clarification phase and one for execution) and use of contractor's constructability knowledge.
- Execution and commissioning: Continued improvements of design, but held back by NPRA's handbooks and manuals.
- Operation and maintenance: Owner had an option to include maintenance for 20 years, but did not use it. Caused discussions about the interface between warranty and maintenance.



# Discussions



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- Both projects have positive experiences from procurement and contracting, when the parties got to know and develop the project.
- After the final contracts were signed, the projects had more or less traditional Design-Build contracts.
- The 15/20 years maintenance/warranty made the contractors design sustainable solutions and choose good materials.



# Conclusions



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- In future projects, they should clarify risk responsibility and room for maneuver up front.
  - The owner organization should be structured approximately the same way as the contractor organization during design.
  - NPRA's handbooks and manuals restricted room for maneuver. E6 Helgeland North did not use the available room for maneuver after the final contract was signed. E18 Rugtvedt-Dørdal did.
  - Both the contractor and the project owners need to gain experience and adapt to design and build contracts.
- ...Similar contracts can be used differently



# Questions?



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