



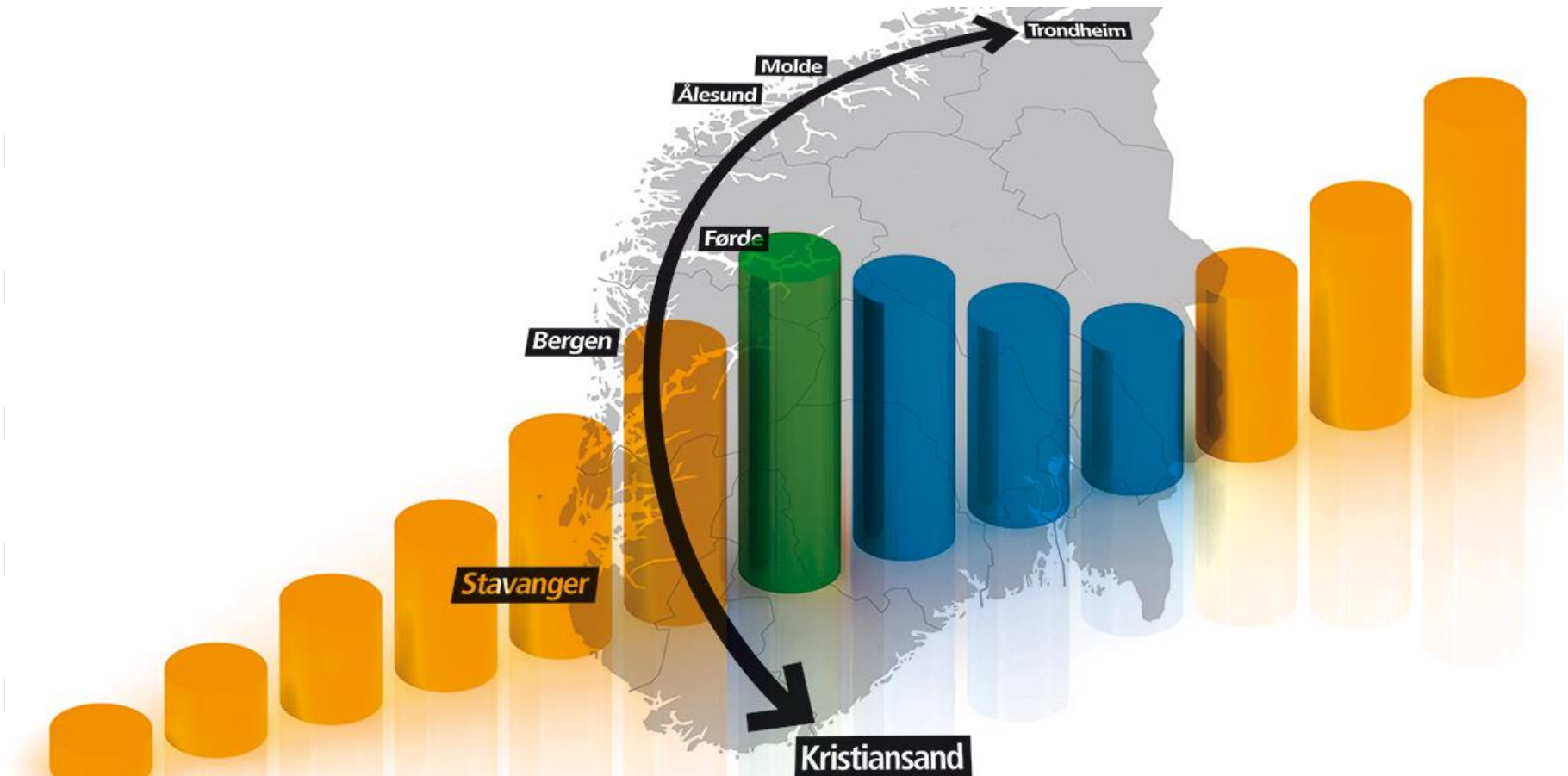
Statens vegvesen

Teknologidagene
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Costal Highway Route E39

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Kjartan J Hove / Kjersti Kvalheim Dunham / Jan Eirik Henning





Implementation strategy

- How should the project be designed and carried out ?
- Organisation ?
- Contract type ?
- Contract size ?
- How should the project be financed ?
- Completion time ?



Implementation and Contract

- Route E39; from south to north aprox 1100 km
- Development and design as part of the project «Ferjefri E39»
- **Open competition, announcement in the EU database (TED)**
- **The respective NPRA Regional office is the Contracting Agency (3/5) (Region Sør, Region Vest and Region Midt)**
- Contract type?



Project delivery and contract types

- Project delivery:
 - Bid – Build (BB)
 - Design – Build (DB)
 - Design – Build – Operate (DBO)
 - Design-Build-Finance-Operate (DBFO),
Private Public Partnership (PPP)
- The best solution is to use a contract type which involves and develops all players in the market



Contracting practice

BB: Bid – Build

- **The detailed design and Bill of Quantities prepared by NPRA (own staff or consultants).**
- **BB in a traditional Unit Price Contract is dominating today: ~95%**
- **Normally:**
 - No prequalification
 - Fixed construction period
 - Fixed quality requirements



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DB: Design – Build

- **Major parts of the detailed design is carried out by the contractor.**
- **Used on a regular basis, however currently comprises less than 5 % of the procurements**
- **Will increase in light of upcoming challenges**



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DBO: Design – Build – Operate

- **Detailed design is carried out by the contractor, incl. responsibility for operations and maintenance for a number of years after construction.**
- **No experience so far, however:**
 - **Development contract in the Northern Region, Trunk road E6 Helgeland**



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DBO – Design Build Operate/ Competitive dialogue

- **Prequalification of tenderers**
- **Competitive dialogue, qualified tenderers submit proposals**
1-1 dialogue between NPRA and each tenderer
- **Basis for deriving a common platform for the competition**
- **Design – Build - Operate competition**
- **Contract award**



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DBOF: Design – Build – Operate – Finance (PPP Public Private Partnership)

- **Current experience: 3 project roads are in use, 25 years period of operation and maintenance**
- **More to come**



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General Conditions of Contract:

- NS 8405:2008 Norwegian building and civil engineering contract (for BB, bid an build contracts)
- **Adopted by the NPRA:**
NS 8406:2009 Simplified Norwegian building and civil engineering contract (for BB contracts)
- **Adopted by the NPRA:**
NS 8407:2011 General conditions of contract (for DB/DBO contracts)
- All 3 standards are issued in English versions (NS 8405E, NS 8406E and 8407E) and can be purchased on the internet from Standard Norge at www.standard.no



Contract language

- **Tender documents and tenders, the official contract language and formal communication on site is in Norwegian.**
- **Some vital manuals/documents are translated into English for information only.**
- **One person in a work team must understand Norwegian. Traffic guards (“flag-men”) must be able to communicate in Norwegian**



Procurement procedures

- For this project it is natural and necessary to involve both contractors and consultants in the process of finding optimal and good solutions – based on common expertise and experience
- This can best be achieved by means of a design–build contract, preceded by a dialogue among the players in the industry
- In the Norwegian Public Procurement Act and appurtenant regulations, this form of procurement is described as competitive dialogue



The purpose of competitive dialogue

- Develop and optimise solutions, among different solutions from each bidder, based on dialogue in an early stage of the project

Procedures for the implementation of competitive dialogue:

- Prequalification
- Qualified contractors are invited to participate in a dialogue
- Confidential dialogues are carried out with contractors, based on their individual concepts
- All aspects of the contract may be discussed
- It is important the the client ensures equal treatment of all bidders
- The client shall not disclose solutions to other bidders
- After the dialogue phase, a normal restricted-bidding competition is held for a design-build contract

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Statens vegvesen

Halsafjorden, 2 km, 5–600 m

Moldefjorden, 1,6 km bru, 5–600 m (+ 13 km Subsea tunnel, minus 330 m)

Sulafjorden, 3,8 km, 500 m

Vartdalsfjorden, 2,1 km, 600 m

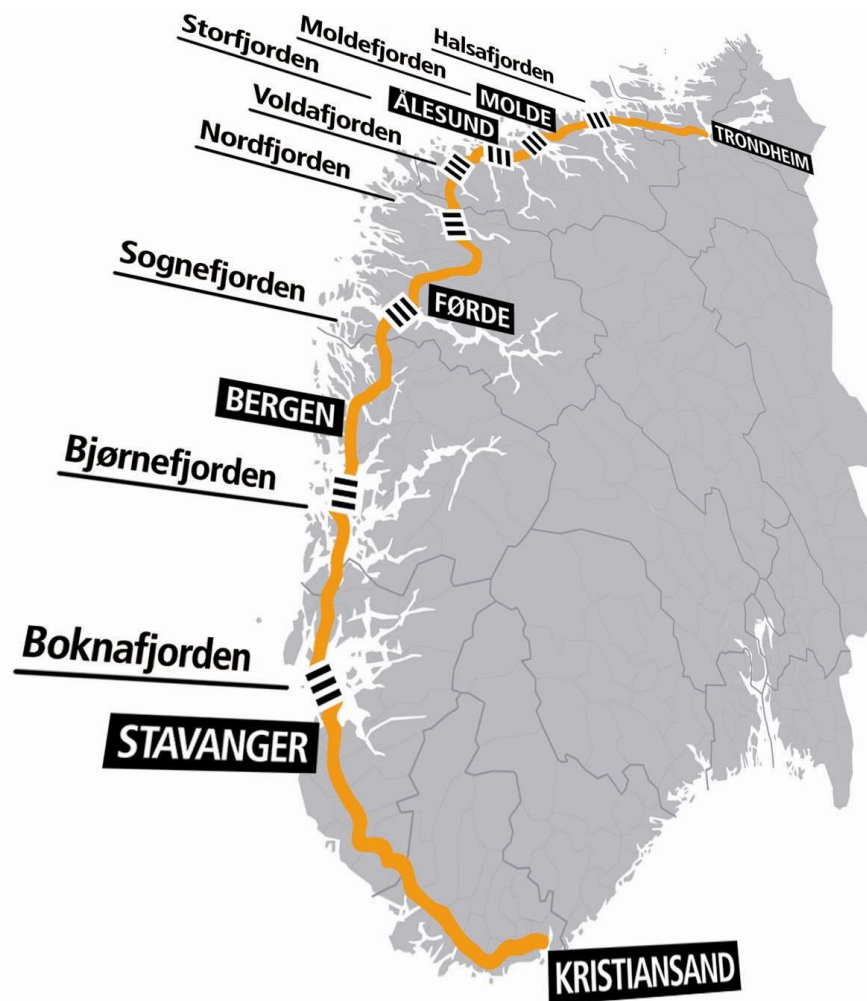
Nordfjorden, 1,4 km, 500 m

Sognefjorden, 3,7 km, 1250 m

Bjørnafjorden, 5 km, 5–600 m

Langenuen, 1,3 km, 500m

Boknafjorden, (Rogfast subsea tunnel 27 km, minus 390)





Governments Proposal for E39

- National Transport Plan (NTP) is updated every 4 years
- This period is 2014–23
- E39 ambition:
 - Replace all ferries and upgrade corridor within 20 years
 - Cost frame of NOK 270 billion (US\$ 29 billion)
- Proposal pass The Stortinget on 18th June 2013
- Transport Committee agrees except one political party (SV)



Ferjefri E39/Coastal Highway Route E39

Ferry-free Coastal Highway Route E39, Kristiansand–Trondheim

- Tunnels (sub sea)
- Fjord Crossings (bridges)
- Characteristic features of the "extreme" fjords:
 - Width: 2–7,5 km
 - Depth: 300–1300 m
 - Varying degree of exposure to natural loads (waves, current, wind)
 - Considerable amount of shipping
 - Low traffic volumes (normally two-lane highway)