



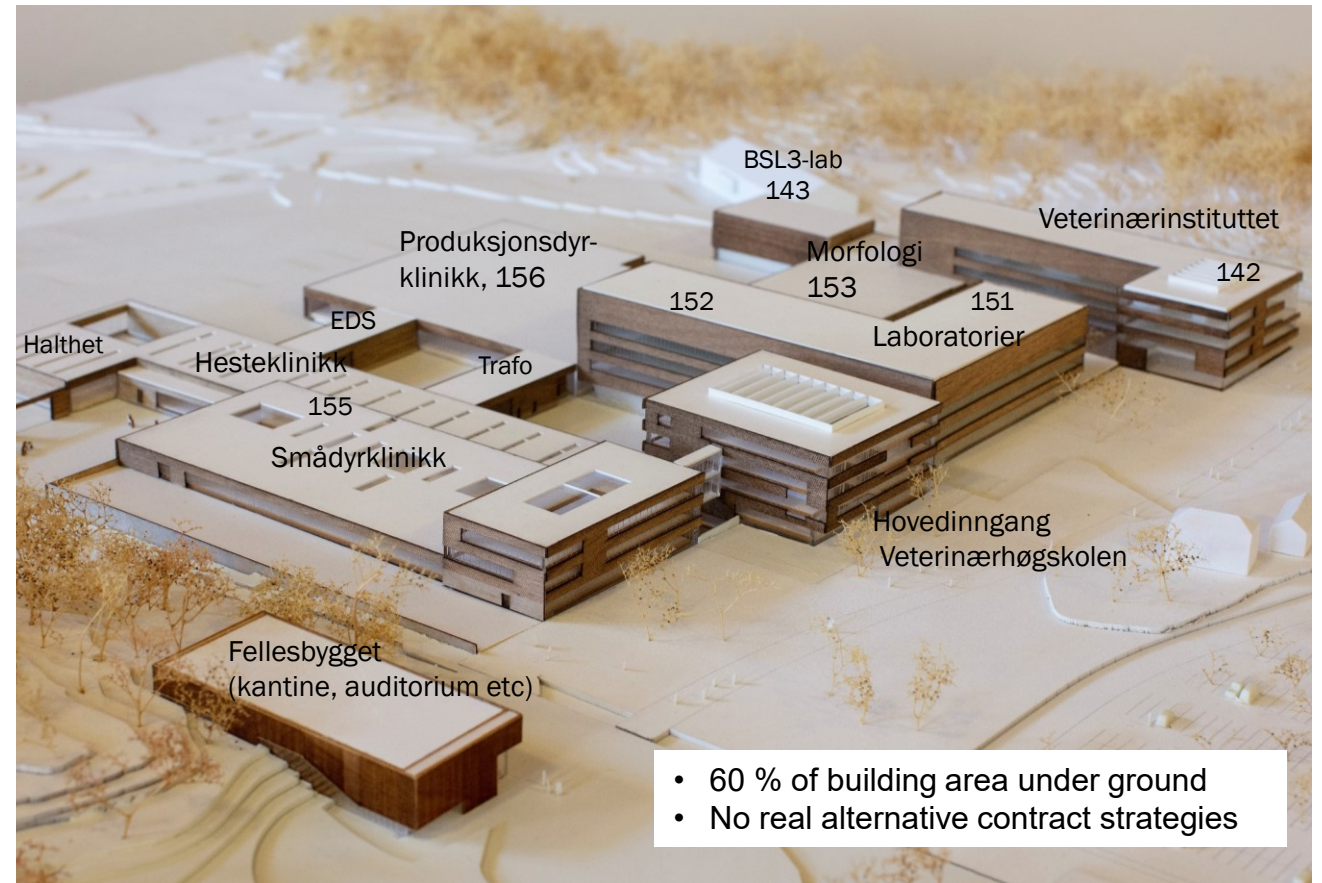
PROJECT EVALUATION – CAMPUS ÅS

Concept Symposium, Holmen Fjordhotell 22-23.09.2022

THE CAMPUS ÅS PROJECT

Collocation of the Veterinary education at NMBU and the Veterinary Institute (VI)

- The collocation project (SLP) 63 300 m²
 - Laboratories 14 000 m²
 - Animal clinic 14 000 m²
 - Technical rooms 17 000 m²
 - Offices and meeting rooms 10 000 m²
 - Studying facilities 8 000 m²
- Centre for animal experiments (SHF) 12 100 m²
- Kindergarten 500 m²
- Fish laboratory 1 800 m²
- User equipment



- 60 % of building area under ground
- No real alternative contract strategies

MASSIVE COST OVERRUNS AND DELAYS

Buildings approved by Parliament in 2013

- P50 estimate 5 388 mill. kr
- P85 budget 6 325 mill. kr
- Completion H2 2019

Current status (by the end of 2021)

- Current estimate 8 575 mill. kr
- Moving in H1 2021
- BSL3-laboratorium not in use

User equipment approved in 2015

- P50 estimate 1 060 mill. kr
- P85 budget 1 080 mill. kr
- Current estimate 1 245 mill. kr



EVALUATION MANDATE AND PROCESS

MANDATE

- Learning for all involved parties
- Main focus on the execution phase
- Main causes for cost overruns and delays

- Project management
- Project council
- Incentives for cost control
- Recommended 'stop' situations

PROCESS

- Conducted H2 2021
- 33 interviews with key stakeholders
 - Ministries
 - Statsbygg
 - Project team
 - Main suppliers
 - Users
- Open and constructive process
- Results presented to management and project teams in Statsbygg and the Norwegian universities

CHALLENGING FRAME CONDITIONS



QA2 RECOMMENDATIONS NOT IMPLEMENTED

Recommendations that was not implemented (the other recommendations was implemented)	Implemented
Project Management competence in the Project Council	No
Strategic control plan at line ministry	No
Target cost for Project Manager (below P50 estimate)	No
Firm Change Management at line ministry to avoid scope creep	No
Get user commitment for implementation of potential scope reductions (cut-list), if required	No
Implement potential scope reductions as options in the contracts	No

Recommendations for future projects

- Line ministry need to follow up QA2 recommendations formally
- Including recommendations for both the ministry and agency

MAIN CAUSES FOR COST OVERRUN AND DELAYS





PROJECT MANAGEMENT AND PROJECT GOVERNANCE

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APPROVED GOAL PRIORITY NOT COMPLIED WITH

Approved goal priority

1. Cost: Below P50 estimate
2. Quality: According to basic engineering
3. Schedule: SLP complete by H2 2019
SHF complete by H2 2015

Potential scope reductions (cut-list)

- SLP: 261 mill. kr
- SHF: 40 mill. kr

Few cuts on the list realized

- Insufficient user commitment to cut-list
- Cuts not implemented as options in the contracts
- Decision process for cuts too late to get effect

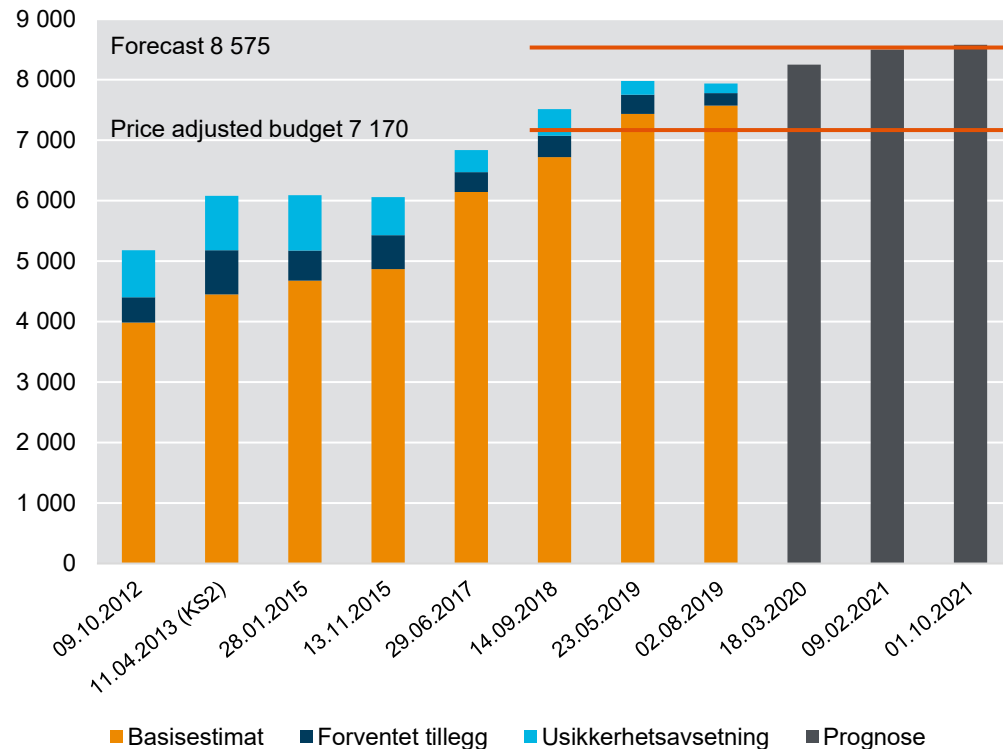
Schedule prioritized

- No instructions from ministry to prioritize schedule
- High focus on achieving the 2019 milestone in Statsbygg
- Several cost-driving initiatives to achieve schedule

Result

- The project is in reality quality and schedule driven

OPTIMISM BIAS IN RISK ANALYSES

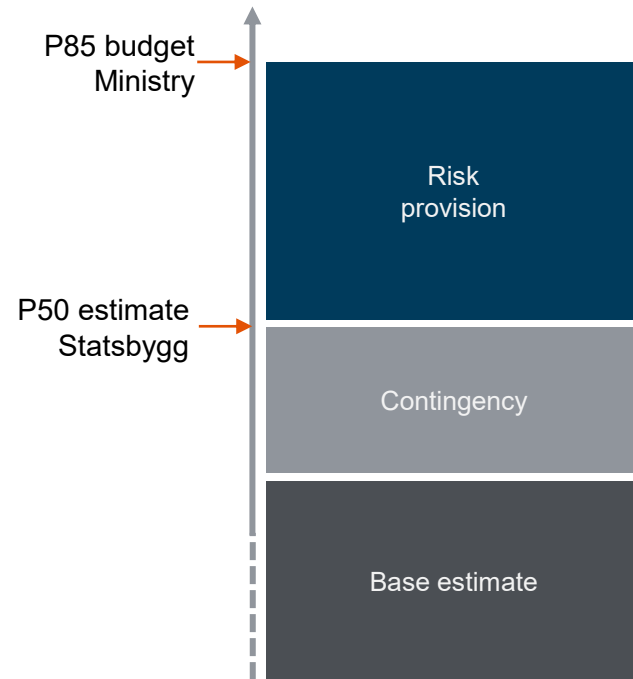


- No formal risk analyses after 2019
- Too optimistic assessments
- External facilitator – still internal analyses
- Budget increase in 2020 and 2021 without risk analysis

Recommendations for future projects

- Formal risk analyses minimum once a year, based on proper baseline updates for cost estimates and schedules
- External risk analyses by significant adverse cost development
- Budget adjustments based on formal risk analyses

WEAK INCENTIVES FOR COST CONTROL

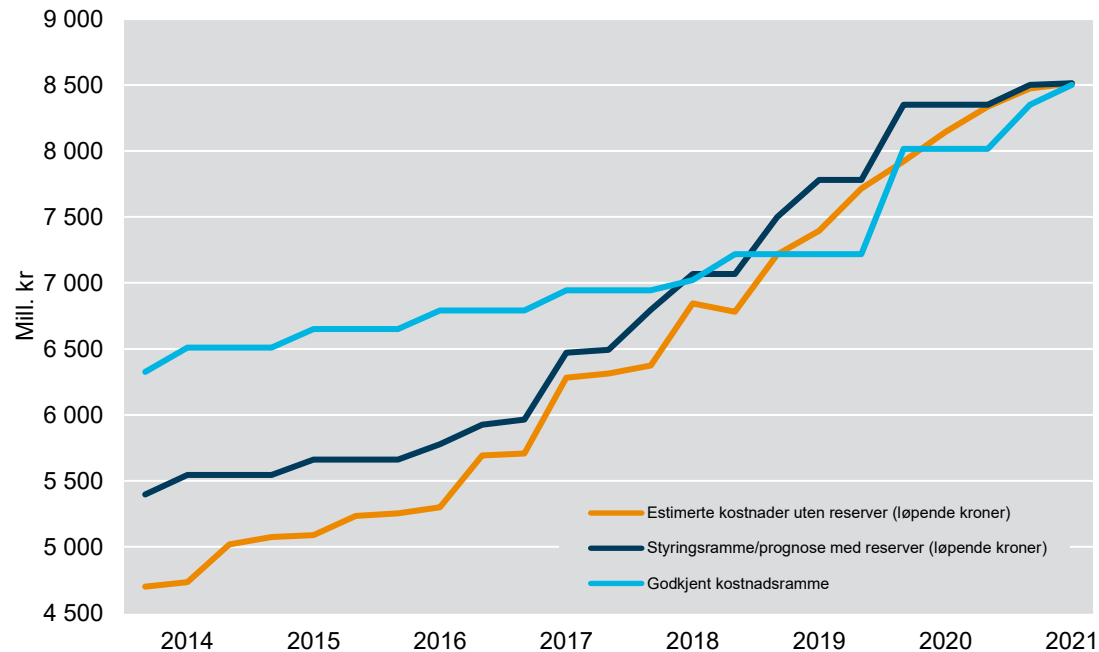


	Incentives	Strength	Direction
KD	<ul style="list-style-type: none"> Cost overrun does not effect future annual cost Total investment budget not affected directly 	Weak	Positive
KMD	<ul style="list-style-type: none"> Portfolio cost overrun for Statsbygg 	Weak	Positive
Statsbygg	<ul style="list-style-type: none"> Statsbygg manages budget up to P50 Line ministry approves overruns up to P85 budget Cost overrun has led to minor reductions in funds 	Weak	Positive
Users	<ul style="list-style-type: none"> Annual rent is not affected by investment cost overruns Strong incentive for best possible facilities 	Strong	Negative

- Overall weak incentives for cost control (not to exceed P50 estimate)
- Users have strong incentives to increase the quality and no incentive to hold back. Cost-driver in this project.
- Stronger common incentives are key for systems like *Cost Based Project Development* to work as intended

COST FORECASTS AND RELEVANT STOP POINTS

In this evaluation a «Stop» is defined as: A situation where extraordinary reporting and decisions involving the ministry is required

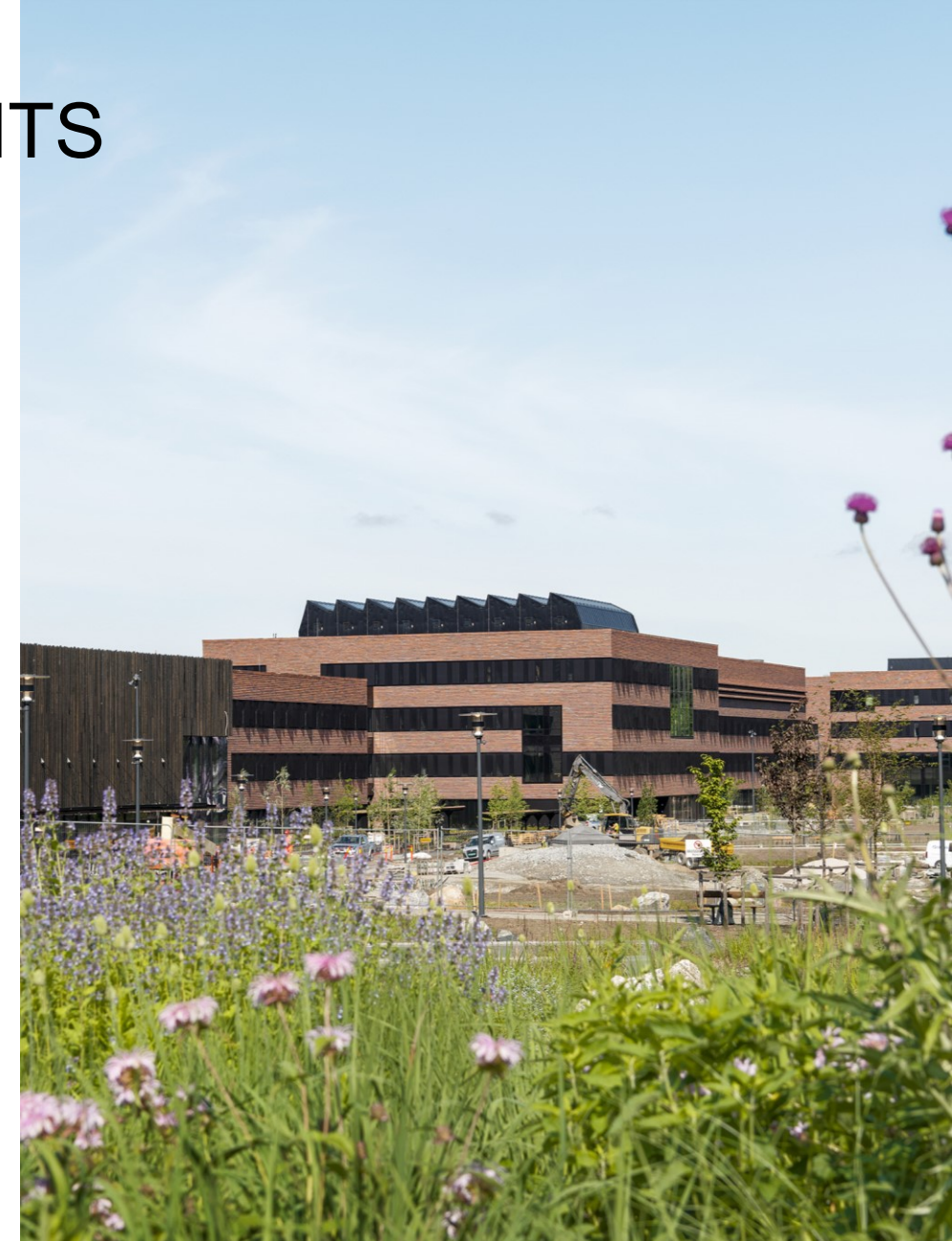


The project could/should have «stopped» at these points

- Warning about a 70 % increase in engineering cost in 2015
- Warning that the P50 estimate was «under pressure» in 2016
- Warning about schedule problems and a one year delay in 2016
- Assessment of potential scope cuts in 2017
- Reallocation of cost to get forecast below P85 budget in 2018

RECOMMENDATIONS ON STOP POINTS

- Best practice is to «stop» if cost or schedule goals are threatened
- To assess whether it is right to «stop», realistic forecasts for cost and schedule must be available
- Situations where it might be right to «stop»
 - Contingency level is reduced too much, too early
 - Current forecast is higher than P50 estimate
 - P85 from the current risk analysis is higher than the P85 budget
 - Forecasted delay in completion date or other important milestones
- Line ministries need access to senior project management competence, to be able to assess the seriousness of a situation and the need for corrective actions, and conduct independent reviews if necessary



PROJECT COUNCIL

Observations

- Composition according to guidelines: KD (leader), KMD, LMD, NFD, NMBU, Statsbygg, VI
- Arena for information-sharing and discussions.
- Focus on reporting rather than future challenges and plans
- Not sufficient information or competence to reveal the challenging situation in the project
- Significant frustration at times. User representatives critical due to insufficient status reporting
- Lack of subject matter expertise has limited the opportunity to challenge the user requirements
- Little attention to operational phase matters

Recommendations for future projects

- In multi-owner and multi-user projects, decision-making boards or councils should be considered. A project board or council should
 - Prepare for decisions to be made in the meetings. Formal decision authority may be by the board or by one party in the council
 - Discuss and decide on all critical issues, including operational issues
 - Have sufficient project management competence and be able to conduct independent reviews on critical matters
 - Have access to subject matter expertise
 - Have clear goals and goal priority
 - Have a common responsibility to achieve the goals
 - Keep monthly meetings

SUMMARY NOTES

KEY TOPICS

- Execution strategy impact on design
- Professional project governance
- Proactive vs reactive project management
- Structured user involvement
- Consistent goal priority
- Quality cost and schedule risk analysis
- Incentives for cost control
- Best practice stop-points
- Project council

Project governance
in Statsbygg and
line ministry

Project
Management

Complexity, size,
frame conditions



THE END!

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