



# Concept Symposium 2016

## Governing the Front-End of Major Projects

### Learning across hospital projects by a shared evaluation agency



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Until the Ministry of Health and Care Services (HOD) established the Norwegian Hospital Construction Agency (Sykehusbygg HF) late 2014, most new-builds/hospital projects in Norway were executed by the project owner's organization (i.e. the Hospital). Planning and constructing of a new regional/local hospital is considered a "once in a lifetime" project for the hospital in charge, and the required hospital project expertise is normally not available with the project owner's organization. (Although exceptions exist).

Before 2015, most hospitals executed their projects by contracting expertise from the consultancy market. Several private agencies with in-depth knowledge and width-expertise on hospital projects have over the years acted as the main experience transfer arena. By establishing Sykehusbygg HF, the ambition of HOD is to evaluate hospital projects across Norway for better projects and increased standardization. Each single hospital project will benefit from learnings and experiences from new-build hospitals, in Norway and abroad.

Pitfalls: Sykehusbygg HF should avoid being too bureaucratic, too rigid and too conservative, preventing innovation to take place. Also, Sykehusbygg HF needs to maintain the collaboration with the consultancy market both for resources and for knowledge sharing. The main focus for Sykehusbygg HF should be towards project development in the early phase rather than the execution phase.

Keywords: evaluation across hospital projects, experience transfer, collaboration with the consultancy market

# Helse Stavanger HF SUS2023



Learning across hospital projects  
through a shared evaluation agency



# Agenda:

1. Background Stavanger University Hospital (SUS) and SUS2023 project
2. Experience transfer «as is»
3. Learning across hospital projects by a shared evaluation agency (Sykehusbygg HF)
4. Pitfalls

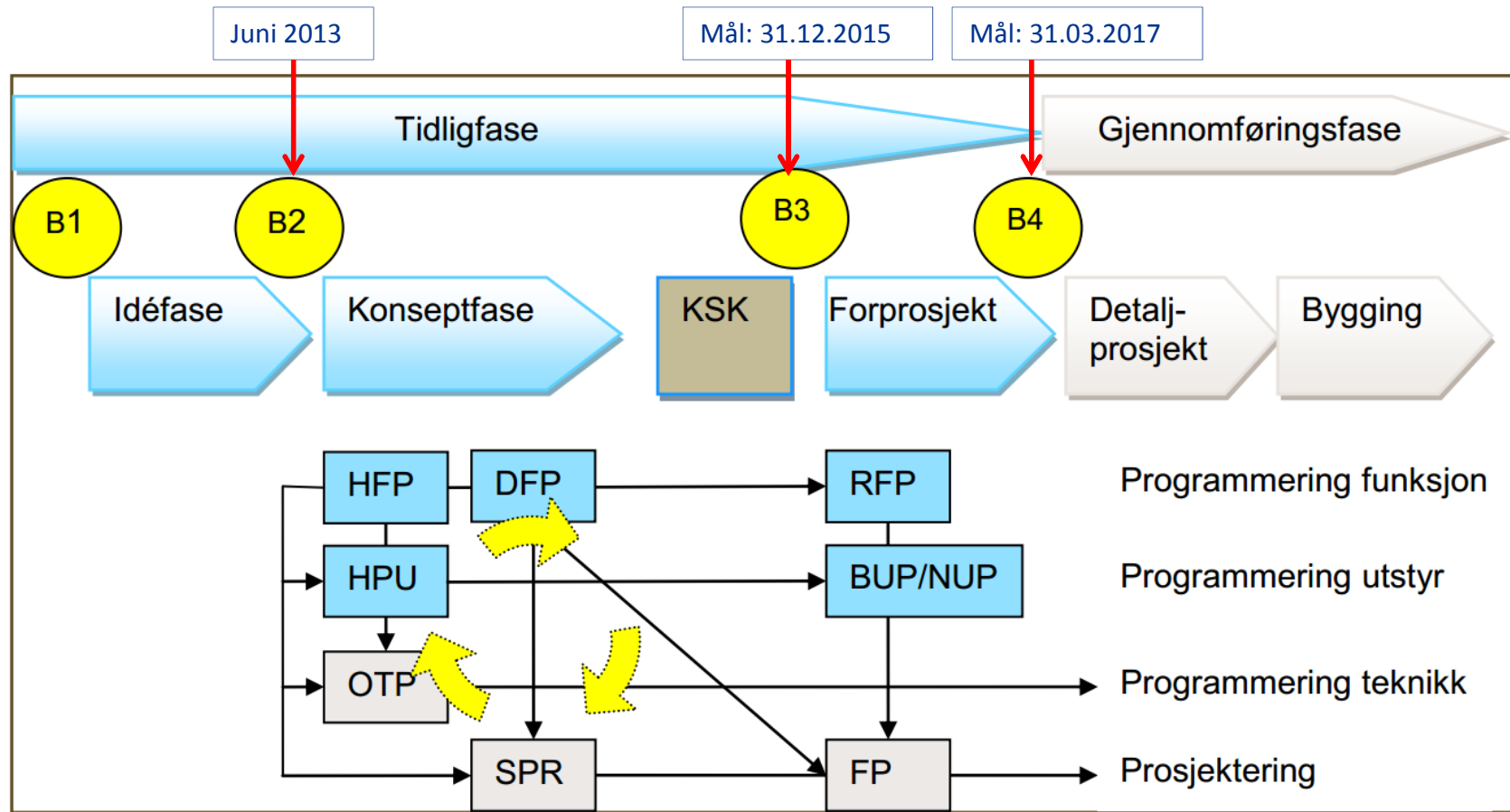
# 1. Background SUS2023

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# «Requirements for early-phase planning in Hospital Projects»

## «Veileder for tidligfaseplanlegging i sykehusprosjekter»



Figur som viser sammenhenger mellom programmering og prosjektering fra Helsedirektoratets «veileder for hovedfunksjonsprogram». Figuren er basert på illustrasjonen av «Hovedelementer i et samlet prosjektforløp» fra Helsedirektoratets «veileder for tidligfaseplanlegging i sykehusprosjekter».

**AART** / arch  
tects

**COWI**

**SLA**  
Strategy | Strategy | Landscape

**AAS-JAKOBSEN**

**nordic**

OFFICE OF  
ARCHITECTURE

After a pre-qualification process Autumn 2014:  
Nordic-COWI was appointed the combined  
architect/engineering contractor



**Deloitte.**

## Kvalitetssikringsrapport

Kvalitetssikring av Helse Stavangers  
konseptfase for sykehusutbygging

Oslo, 20.11.2015



**KSK**

**«Quality review report»**



# Overall conclusion:

- The Project is recommended to proceed past B3, and continue to the pre-engineering phase
- The Ullandhaug-alternative was considered the best alternative, overall, subject to some improvements





**Step 1 Ullandhaug –concept, ca. 95.000 m<sup>2</sup>, plan: finalised 2023**  
**During the pre-engineering phase the concept will be optimized**  
**and the foot print reduced**



**All single bed-rooms /bath**



...and the decision is: Ullandhaug

8 billion NOK P85= step 1

11.januar 2016

Bent Høie twitret mandag 11. januar om at han ville fortelle hva som blir beslutningen for nytt sykehus på Solamøtet den ettermiddagen. På Solamøtet ble det klart at det nye sykehuset skal bygges på Ullandhaug.



95.000 m<sup>2</sup>





Area of regulation 2016  
Ullandhaug University area





Where is SUS2023 located?

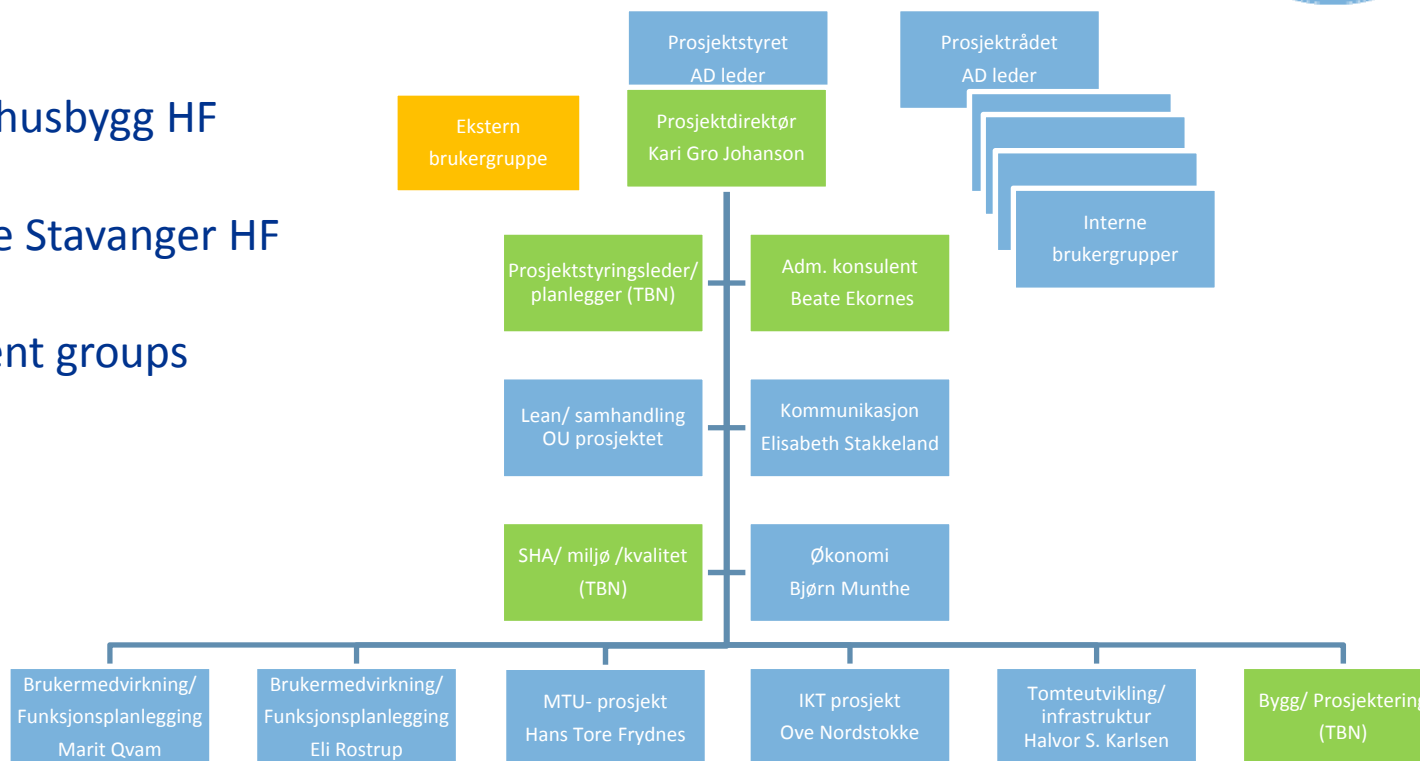




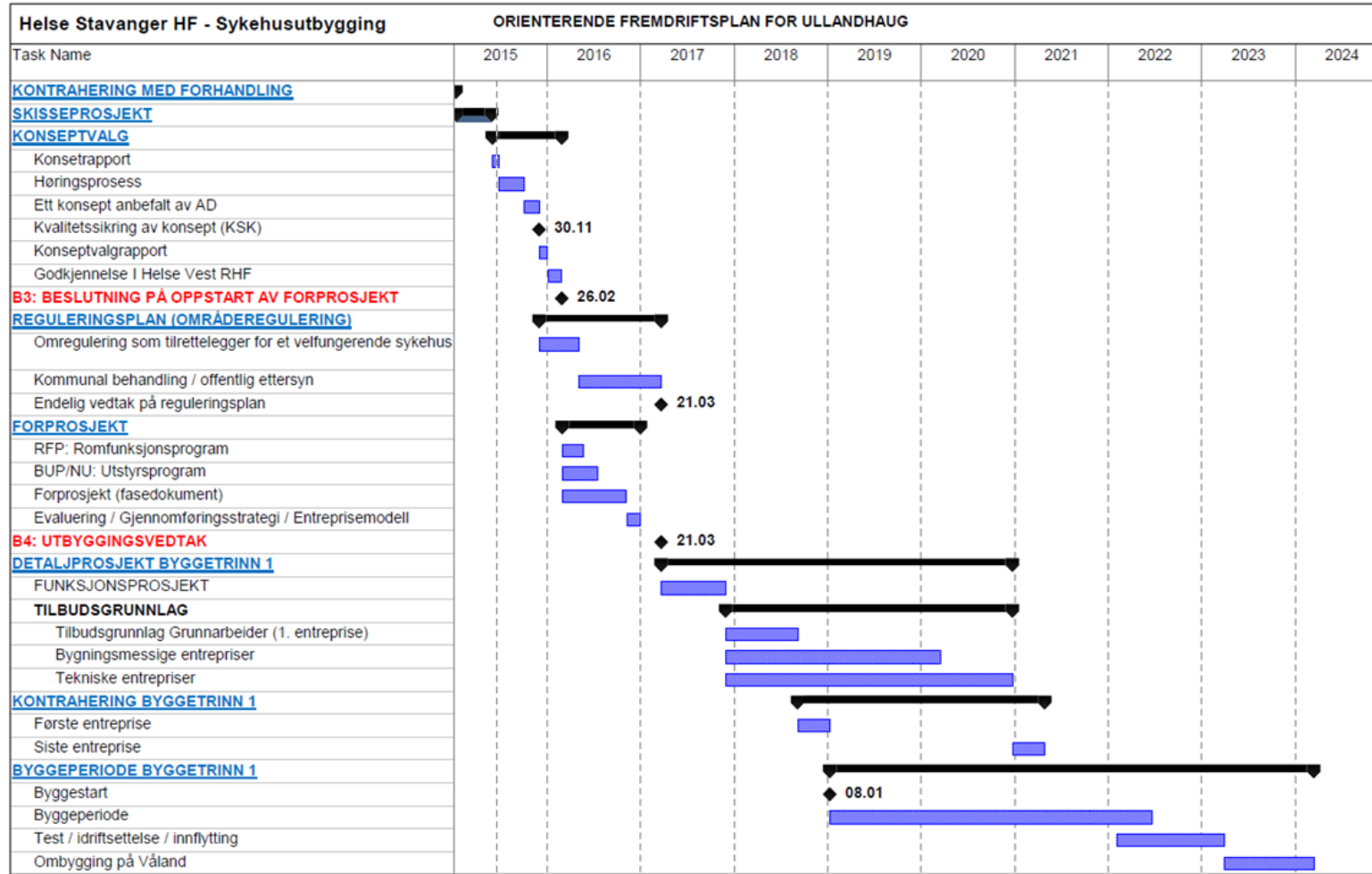
# Organisation chart pre-engineering



- = Sykehusbygg HF
- = Helse Stavanger HF
- = Patient groups



# Overall plan:



# 2. Experience transfer «as is»

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# Planning the new hospital project in Helse Stavanger:

- A «once in a lifetime project» (100 years)
- Limited project competence within the local hospital organisation
- The planning process in compliance with the requirements described in the «best practice for early phase planning» -document
- External competence from consultancy companies needed
- Project Director appointed internally, but in-depth expertise hired from the external consultancy market for both the development plan and the Idea-phase continuing into the Concept phase
- All programming documents prepared with consultant in lead
  - HFP, DFP, HPU, OTP
- Experience/competence transfer through hospital visits and contacts with other projects, but not on a systematic basis
- **Keywords:** flexibility, standardisation, elasticity
- **The consultancy market = the experience transfer body**

# The new National Agency: Expectations

- **A national/governmental Centre of Excellence** responsible for:
- Developing standards, governing documents, best practices
- Project Management methods and models
- Project Management tools
- Experts in Hospitals (logistics, programming, costs etc)
- Competence in early phase development
- Peer reviews on demand
- Resources for early phase planning
- Bench marking figures
- Cost data-base for experience transfer ++

# 3. Learning across hospital projects through a shared evaluation agency

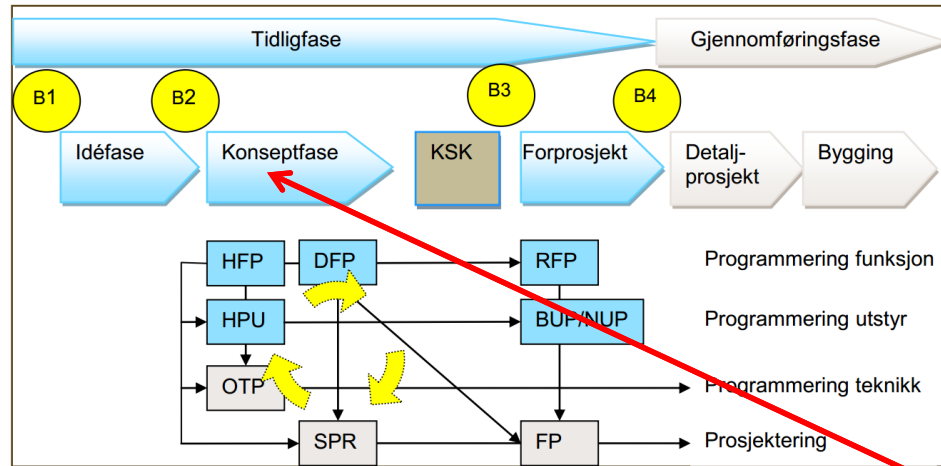
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Norwegian Hospital Construction Agency  
Sykehusbygg HF

# Sykehusbygg HF – overall purpose:

- Established October 2014, owned by the RHF's (regional Health Authorities)
- Responsible for developing a highly competent environment for planning and construction of hospital projects
- Required for all hospital projects > 500 million NOK
- Contribute to provident development of hospital projects by learning across projects, evaluation, innovation, experience transfer and exchange of competence
- Deliver resources to all other HF's (Health Authorities)
- De-centralised organisation structure, head offices in Trondheim
- ...contribute to standardisation, experience transfer, optimal use of resources, all Project Directors to be employed by Sykehusbygg
- **But Project Owner** will still be the financing body (Helse Stavanger HF for SUS2023)

# How should the competence and experience be transferred?



1. **Primary source: Digitalised through the homepage of Sykehusbygg HF**
  1. Based on the «early-phase planning model», **clickable**
  2. All working processes described, including programming and best practices
  3. Organisational charts/agreements/best practice documents etc
2. **Networking, work-groups, seminars, NTNU?, peer reviews**



# What do we mean by standardisation?

- Need to define what should be requirements and what is best practice!
- Divide between early phase and execution phase
- Early phase:
- At B3: requirements rather than best practices

# Early phase: standards needed for:

- Work processes
  - Including organisaitonal models
- Methods/models describing:
  - Models for projection (should be a common, required method)
  - How to calculate capacity and space/area-requirmenets
  - Logistics (patients and goods)
  - ICT
  - Execution models
- Assumptions behind estimates of area/size?
  - Opening hours
  - Occupancy rate and average days in hospital
  - Space requierements for different types of rooms (operating theaters, bedrooms etc)
- Project reserve (P85 vs P50)
- How to calculate efficiency gains

# Execution phase: standards needed for:

- **Detail engineering/construction phase:**
  - Execution models
  - Reporting formats(for both Sykehusbygg HF and project owner)
  - Project tools:
    - Project planning tools
    - Project control
    - Project management («all inclusive»)
    - Common tools for comparing/benchmarking
  - Project work breakdown structure

# What kind of competence should be available?

- «Start-packages» for early-phase projects?
- Standards and guidelines
- Experience transfer reports, and database
- Cost databases/benchmarking data
- Project reports
- Research reports/results
- Best practice documents
- News/trends?

# Area/room-standards from HFP

## Need to develop standards wrt programming!

Kvm netto	HFP SUS	Bemerkning	NØS	St. Olavs Hospital	Nye A-hus
Kliniske funksjoner					
Sengeområder normal	30		27,8	24 (BT1)	27,6
Dagplass somatikk	20		15	15	15
Poliklinikkrom standard	30		30	30	30
Spesialrom somatikk	40		40	50	46
Hotellseng	23		23		
Observasjonsseng	30	12 senger a 15 m <sup>2</sup>	22	20	20
Medisinske servicefunksjoner					
Intensivsenger	40		42,5	40	40
Intermediærsenger	35		30	31,2	31,2
Postoperativ	12		16	16	16
Operasjon inneliggende	105		110	120	110
Operasjon dag	105		110	90	110
Billeddiagnostikk	80		90	90	90
Intervensjonslaboratorier	100		90	90	90
Fødestue	50		60		70
Ikke medisinske servicefunksjoner					
Kontorarbeidsplasser	8,5		8,5	9,5	9,5
Kontorplasser administrasjon	9		9	10	10
Møterom	1,8	pr. plass	1,8	1,7	1,7

# 4. Pitfalls

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# Pitfalls:

- Becoming too bureaucratic
- Conservative, preventing innovation to take place
- Need to maintain the collaboration with the consultancy market both for knowledge sharing and resources
- The main focus for Norwegian Construction Agency (Sykehusbygg HF): project development in **the early phase**
- In the construction phase, consultants have the expertise
- «More of the same» (limit international influence)
- Important to maintain input from other industries
- Through NTNU and other bodies!

# Organisational development

- «Patient first»
- Organisational development needed
- Lean-hospital thinking
- Work processes should be re-designed and tested/implemented before SUS2023 is finalised
- Changes to the project needed?





# Questions?



# Strategy and decisions in the early phase

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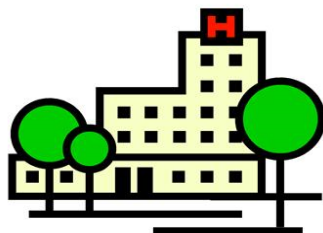
Virksomhetsmessig utviklingsplan – Helse Stavanger HF

April 2012

Pasientgrunnlag, epidemiologi og beregnet framtidig arealbehov



Bygningsmessig utviklingsplan - Helse Stavanger HF



Sept 2012

Utviklingsplan for Helse Stavanger HF

Dec 2012



B1

Idéfaserappport

Prosjekt sykehusutbygging

B2



Juni 2013

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