# Updated Guideline for Hospital Evaluation in Norway with focus on Pre-Occupational Evaluation

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## Background

Sykehusbygg HF is state-owned by the four Norwegian Health Authorities and is responsible for hospital planning, construction and knowledge development. In 2025, Sykehusbygg HF published an updated guideline for evaluation of hospital construction projects based on a review of 16 evaluations (2018-2025). The guideline defines three stages: pre- and post-occupancy evaluation, and evaluation of the planning and construction process. The guideline clarifies timing, responsibilities, and use of results for learning and improvement.

*Pre-Occupancy Evaluation* (PrOE) aims to assess how an existing hospital performs in daily use during planning of new facilities.

This study will present the updated guideline with focus on PrOE and results from a recent evaluation of a hospital in Norway.

- As a minimum requirement in a PrOE, the guideline recommend that a baseline measurement must be carried out towards the end of the concept phase (e.g. KPIs).
- A more comprehensive assessment may be conducted prior to the concept phase to provide deeper insights into strenghts and areas of improvement.

## Aim

In 2018, Sykehusbygg carried out an evaluation of Sykehuset Østfold Kalnes, which at that time had been in operation for about three years. We will show how this evaluation functioned as a comprehensive PrOE in inpatient units with focus on:

- What worked well in the existing hospital and was carried forward
- What was improved during the planning of the new building

## Method

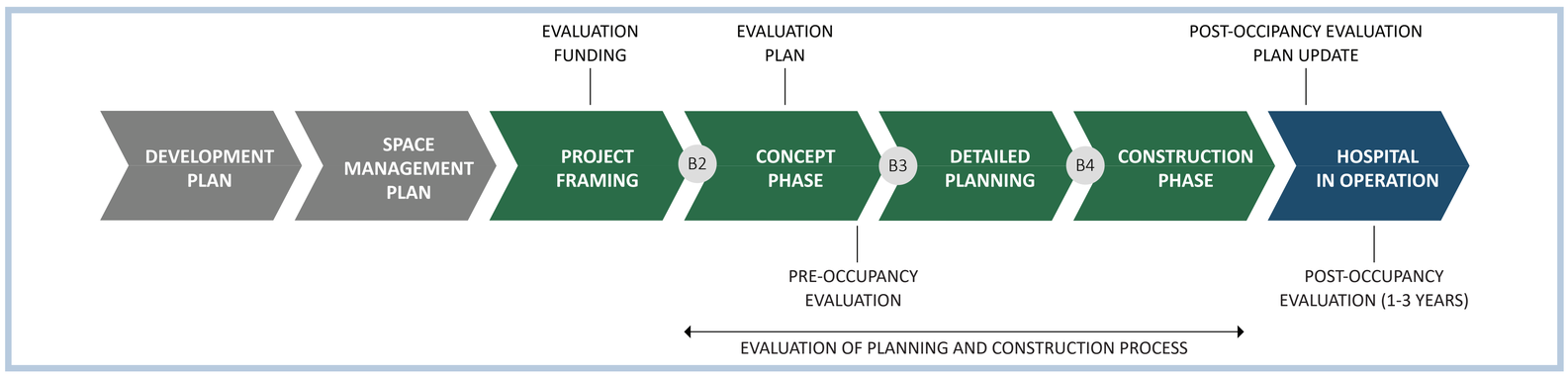
A mixed-methods approach was used, combining document studies, surveys, and dialogue meetings, as well as activity data, interviews, and site visits.

## Results →

## Conclusion

The evaluation highlighted the importance of visibility and walking distances.

Insights from PrOEs are critical for the planning of new healthcare facilities. A comprehensive assessment of the existing hospital, combined with lessons learned from prior evaluations provides a robust foundation for the planning process.




*Evaluation in relation to project phases (B2, B3, B4 are decisions to go from one phase to the next)*

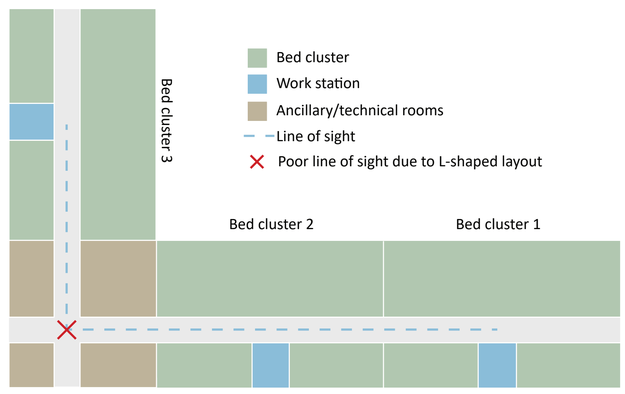
## Results

The PrOE showed that bed clusters with single patient rooms and private bathrooms functioned well and was carried forward in the new building.

A bed cluster consists of eight to ten single patient rooms with an integrated workstation and storage. The idea behind the bed cluster-concept is that shorter walking distances make it easier for nurses to observe patients, while also freeing up time for direct patient care.

**Important challenges identified in the PrOE**

- Angled or L-shaped layouts, e.g. 2+1 clusters, limited visibility between clusters.
- L-shaped layout created physical barriers that reduced overview within the ward
- Two bed clusters placed side by side, with a third located separately, are clearly less effective than layouts where clusters are arranged in a continuous sequence.
- Bathrooms blocked visibility from the corridor into patient rooms. Nurses had to enter the room to check on the patient, instead of being able to maintain visual contact from the corridor.




*PrOE - L-shaped layout*

**Planning of the new building**

- *Clear lines of sight* within the corridor and between workstations influence collaboration, sense of safety, job satisfaction, knowledge sharing, and staff well-being.
- *Angled bathroom* wall and a window or glazed section in the door make it possible to keep an eye on the patient from the corridor.

Alternatively, bathrooms could be placed towards the façade or between patient rooms, but that solution has not been chosen in this project.

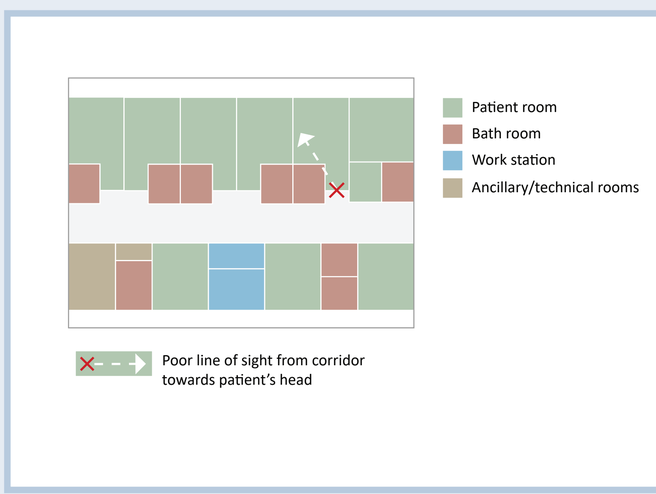
**Enhanced observation**

- Windows between the workstation and the nearest patient rooms and sliding doors between three patient rooms, can facilitate observation and collaboration between staff.

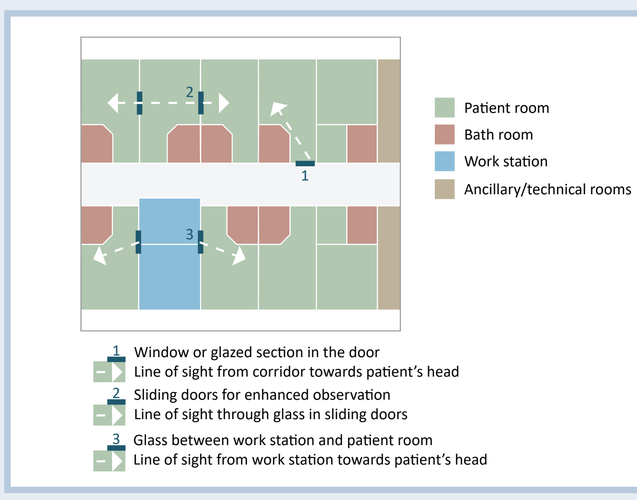
To summarize what will be carried forward and improved in the new inpatient units:

- Bed clusters with single patient rooms
- A high degree of standardization
- Sightlines between bed clusters
- Visibility from the corridor to patient room
- Enhanced observation of patients


*Improved line of sight in new building*




*PrOE - Poor line of sight from corridor to patient*




*Line of sight from corridor and between rooms*

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