

# Poul Henrik Due

## FM Friendly Buildings – Approach, Tools and Results



Musikhushvarteret - Aalborg

# Approach

## Main Points

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### 1. The Change of Focus

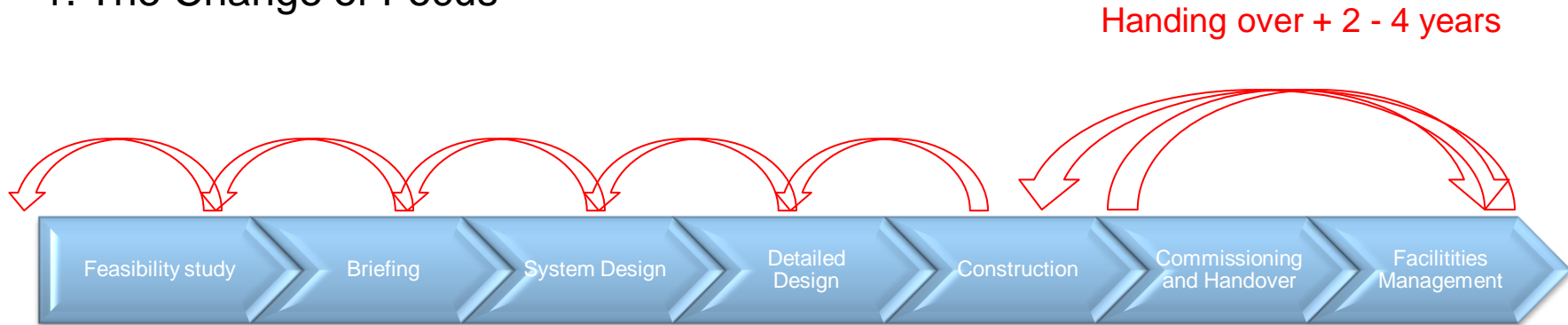


# Approach

## Main Points

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### 1. The Change of Focus



2.

A FM friendly building – thanks!



Christian IV of Denmark

3.



# The Tools and the Proces

## The FM Screening Log

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### Elements

Unique number	Created date	Last change Date	Created Initials	Last change Initials	Demands	Phases of focus	Open/closed	Responsible	Deadline in present phase	Fulfilled Initials	Observations				
											Briefing	System design	Detailed design	Construction	Handing over

- ☐ Administrative information
- ☐ FM demands
- ☐ Phases of focus
- ☐ Observations concerning the fulfillment of the FM demands

# The Tools and the Process

## The FM Screening Log

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### Administrative i Information

Unique number	Created date	Last change Date	Created Initials	Last change Initials	Demands	Phases of focus	Open/closed	Re-sponsible	Deadline in present phase	Fulfilled Initials	Observations				
											Briefing	System design	Detailed design	Construction	Handing over

# The Tools and the Proces

## The FM Screening Log

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### FM Demands

Unique number	Created date	Last change Date	Created Initials	Last change Initials	Demands	Phases of focus	Open/ closed	Responsible	Deadline in present phase	Fulfilled Initials	Observations				
											Briefing	System design	Detailed design	Construction	Handing over

- ☐ Are developed during the phases of the feasibility study or the briefing
- ☐ Workshop with
  - ☐ The future FM-staff (if known)
  - ☐ A representative of the builder's topmanagement
  - ☐ An experienced FM advisor
- ☐ All input is evaluated and demands for the future building are decided upon
- ☐ Final acceptance by the builder

# The Tools and the Proces

## The FM Screening Log

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### Phases of Focus

Unique number	Created date	Last change Date	Created Initials	Last change Initials	Demands	Phases of focus	Open/closed	Responsible	Deadline in present phase	Fulfilled Initials	Observations				
											Briefing	System design	Detailed design	Construction	Handing over

Demands	Phases of focus	Open/closed	Responsible	Deadline in present phase	Fulfilled Initials	Observations				
						Briefing	System design	Detailed design	Construction	Handing over
Cleaning rooms must be placed optimal for the future cleaning of the building	Briefing and system design									
It shall be possible to control all ventilation systems manually from the technical rooms	Detailed design									

# The Tools and the Proces

## The FM Screening Log

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### Observations on the Fulfillment of the FM Demands

Unique number	Created date	Last change Date	Created Initials	Last change Initials	Demands	Phases of focus	Open/ closed	Respons ible	Dead- line in present phase	Fulfilled Initials	Observations				
											Briefing	System design	Detailed design	Construc- tion	Handing over

Demands	Phases of focus	Open/ closed	Respons ible	Dead- line in present phase	Fulfilled Initials	Observations				
						Briefing	System design	Detailed design	Construc- tion	Handing over
Cleaning rooms must be placed optimal for the future cleaning of the buidling	Briefing and system design					Notes and documen- tation	Notes and documen- tation			
It shall be possible to control all ventilation systems manually from the technical rooms	Detailed design							Notes and documen- tation		



# The Tools and the Proces

## The FM Screening Log

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Observations – Information Concerning the Fulfillment of the FM Demands are achieved from

- ☐ Screening of models, drawings and descriptions
- ☐ Participating in central planning and design meetings
- ☐ Screening meetings with the designers
- ☐ Co-operation with the designers on decision proposals for the builder

Demands	Phases of focus	Open/closed	Responsible	Deadline in present phase	Fulfilled	Observations				
						Briefing	System design	Detailed design	Construction	Handing over
Cleaning rooms must be placed optimal for the future cleaning af the buidling	Briefing and system design					Notes and documenta-tion	Notes and documenta-tion			
It shall be possible to control all ventilation systems manually from the technical rooms	Detailed design							Notes and documenta-tion		

# Results

## The future Gødstrup Hospital

Stage 1: 105.000 m<sup>2</sup> / 1.8 bill. DKK

Stage 2: 35.000 m<sup>2</sup>



# Results

## The future Gødstrup Hospital

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### Situation

- ❑ Grontmij with partners (Curavita) designs the hospital
- ❑ One of the four in the top project management:

*FM screening  
is a "must"*



Pernille Walløe, assisting design chief

# Results

## The future Gødstrup Hospital

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### Results

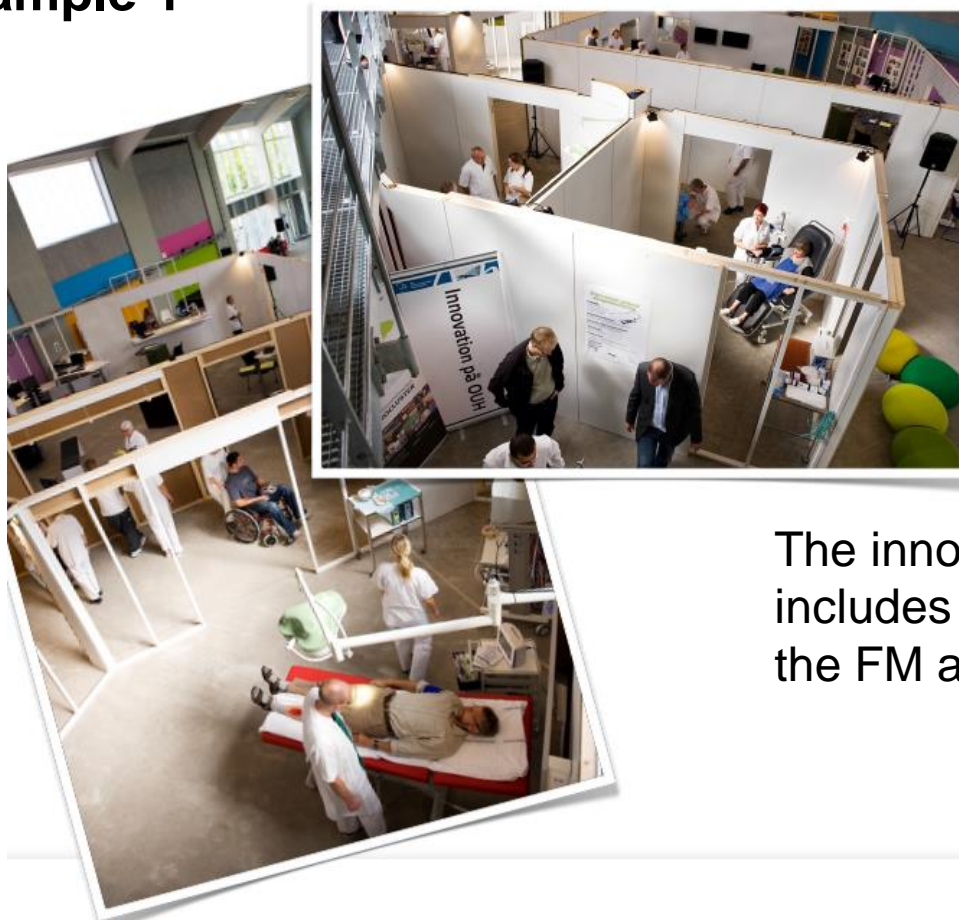
- ❑ Pro-active FM screening from the briefing phase
- ❑ Thorough investigations into challenges of the future FM of the hospital e.g.
  - ❑ The O&M of the facade and roof
  - ❑ The number, location and decor of cleaning rooms
  - ❑ The choice of types of floor
- ❑ Pro-active designers – engineers as well as architects - concerning FM relevant problems
- ❑ Decision proposals first presented for the builder after a FM evaluation of the suggestions
- ❑ Total Cost of Ownership is a part of the resolution presentations when relevant
- ❑ All four members of the top project management have acknowledged the importance of a FM focus

# Results

## The future Gødstrup Hospital

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### Example 1



The innovation hall includes tests related to the FM activities

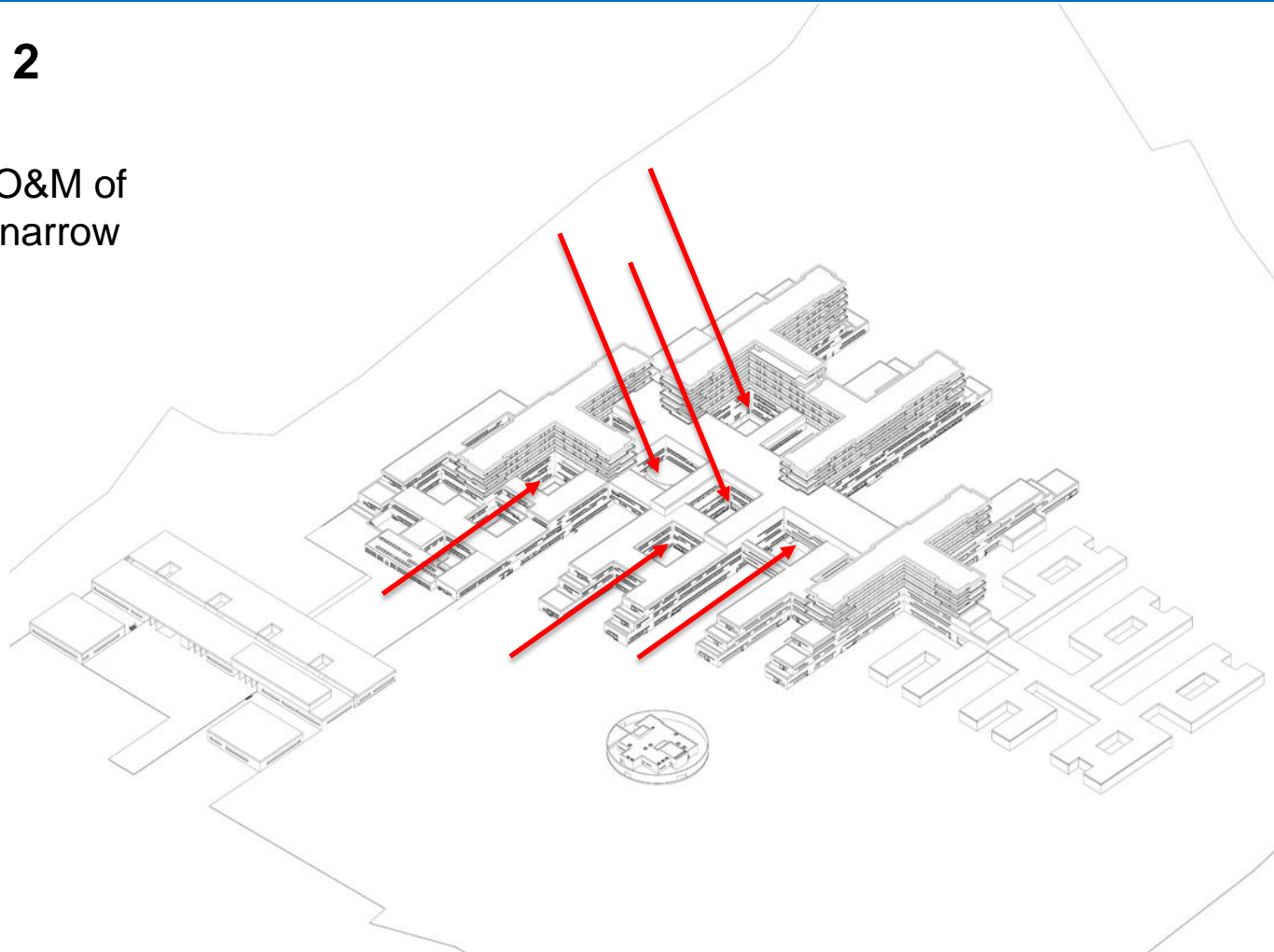
# Results

## The future Gødstrup Hospital

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### Example 2

An example: O&M of the facade in narrow yards





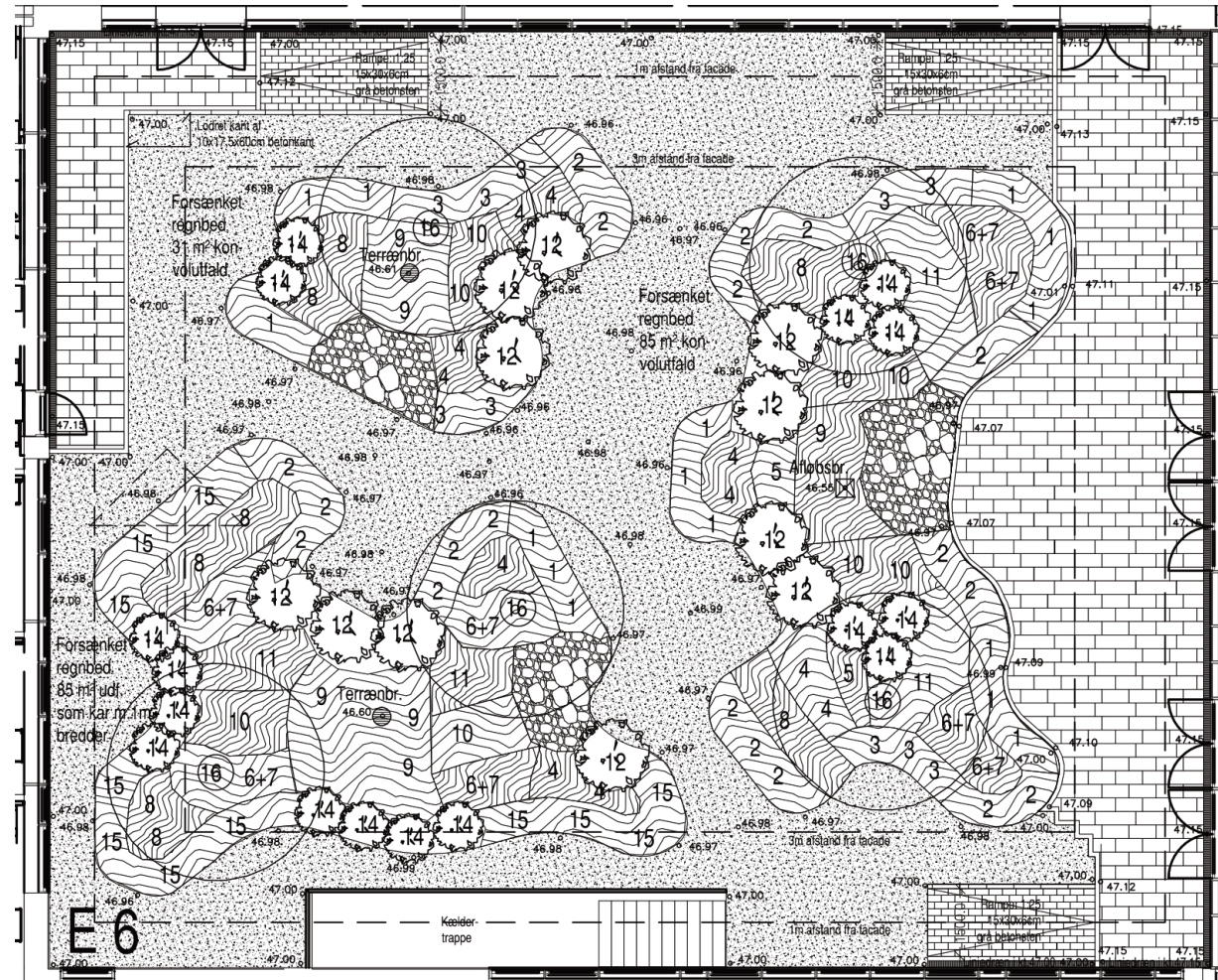
# Results

## The future Gødstrup Hospital

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### Example 2

The architects design the yards with room for the window cleaning



# Results

## The future Gødstrup Hospital

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### Example 3

Design of the balconies – make room for the O&M of the facade

Including tests in the innovation hall





**Thank you**  
**Any questions?**

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