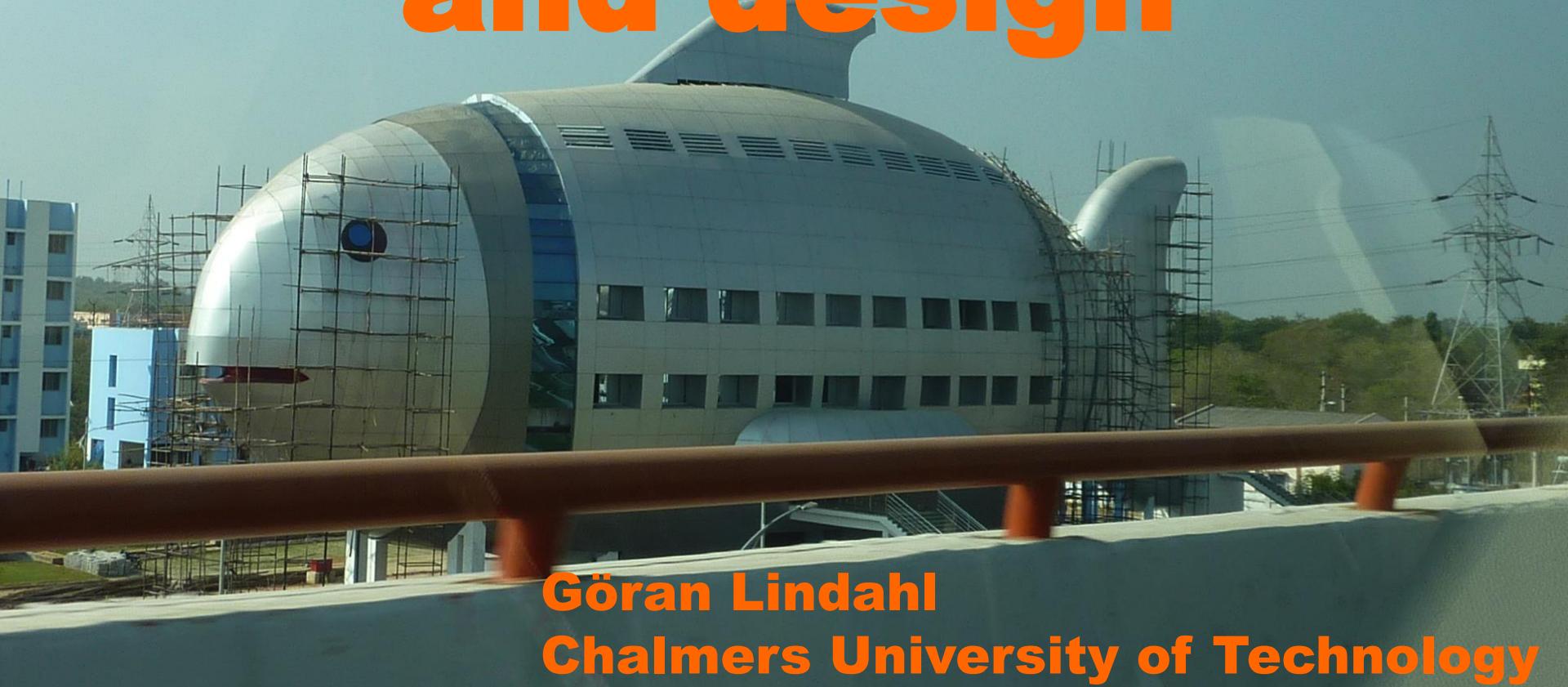


# **Putting users at the center of planning and design**



**Göran Lindahl**  
**Chalmers University of Technology**



Centrum för Vårdens Arkitektur

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Centre for Healthcare Architecture

The Center for Healthcare Architecture (CVA) is a national arena for the creation, translation, exchange and dissemination of knowledge about healthcare architecture in Sweden.

Financed by the Swedish County Councils,  
Chalmers University of Technology and Architect  
firms.

Where I  
come from?

CHALMERS



Centrum för Vårdens Arkitektur

Centre for Healthcare Architecture

**Collect and disseminate existing national and international healthcare architecture research**

**Compile it and distribute it in Sweden**

**Identify new research needs**

**Initiate and implement new research projects**

**CHALMERS**

**How do we plan the  
right solutions?**

An aerial photograph of a large university campus, likely the University of Cambridge, showing a dense cluster of modern and classical-style buildings, extensive parking areas, and surrounding green fields and residential areas.

Today...



# Healing?

# As it often looks



A photograph of a woman with dark hair tied back, wearing a dark t-shirt and light-colored pants, kneeling in a lush green garden. She is positioned in front of a large, reddish-brown building with several windows. The garden is filled with various plants, including a tall tree and several smaller trees or shrubs. A white cylindrical object, possibly a trash can, is visible on the right side of the frame. The overall scene is bright and sunny.

What we want

# We also want!



Stockholm

The image is an aerial photograph of a city area, likely Stockholm, showing a mix of urban residential areas with red roofs and green parks. A large, light-colored rectangular area in the center represents agricultural land or a green belt. A dashed white line runs diagonally across this land area, indicating a proposed railway line. Red arrows point from three text labels on the right side towards this dashed line, highlighting specific challenges.

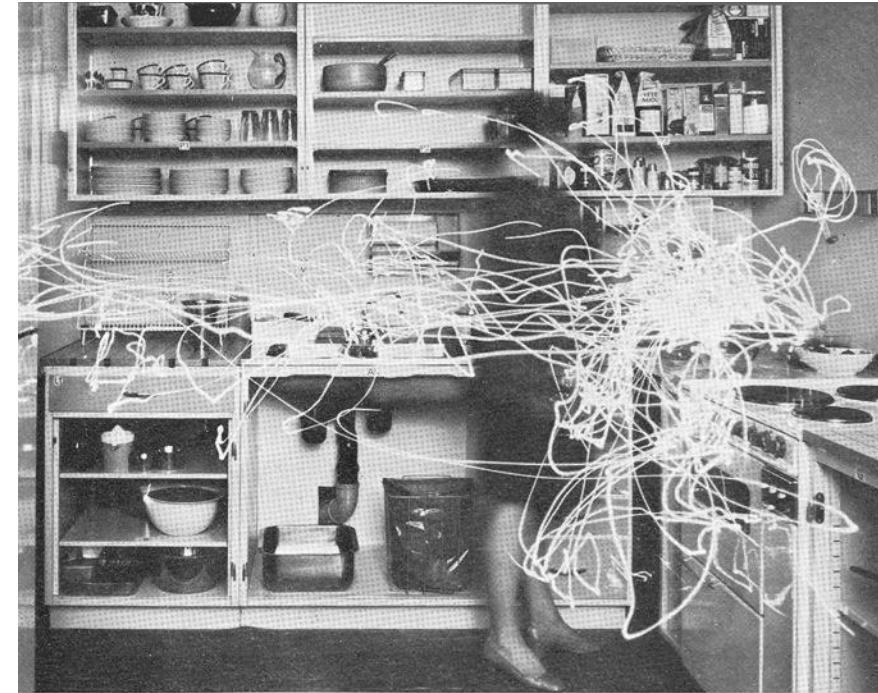
# Challenges

University and  
Hospital Integration

Solna City  
Integration

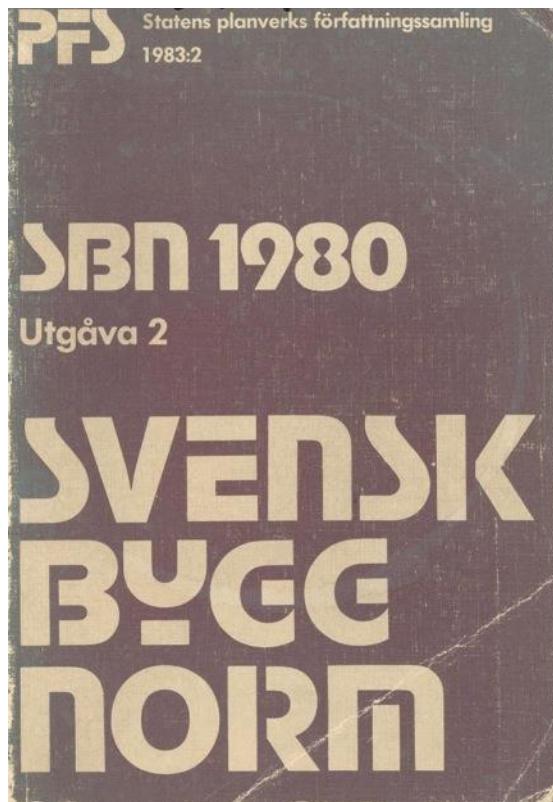
Northern City Entrance  
Connection to Airport

# How do we know what to build?



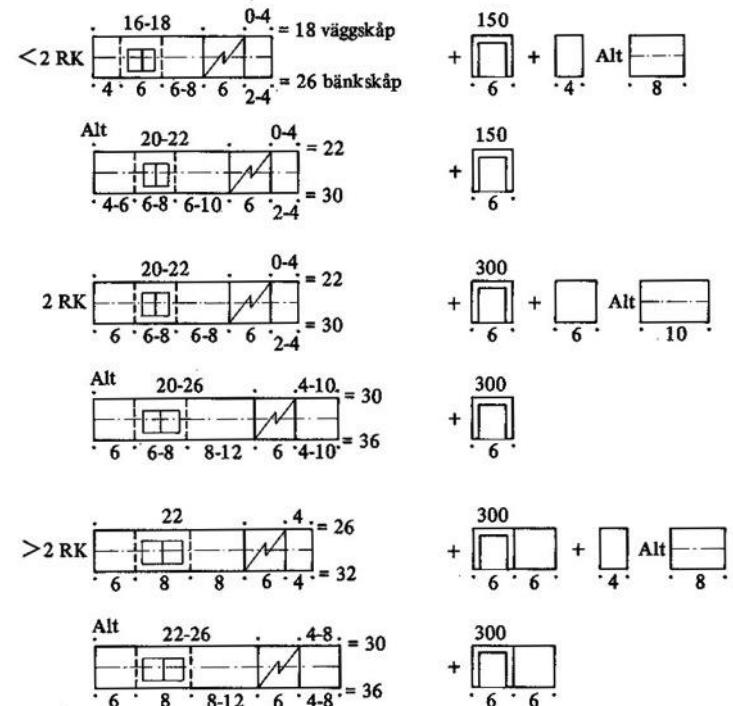
Bilden illustrerar rörelserna under tillagning av fiskgratin med tomater och potatis samt med nyponsoppa som efterrätt. Man ser tydligt det stora sambandet mellan arbetsbänk och spis. Obs! Bilden är tagen i ett vinkelkök. Sambanden mellan de olika köksenheterna är dock i stort sett desamma för alla typer av kök.

# Norms and standards - kitchen

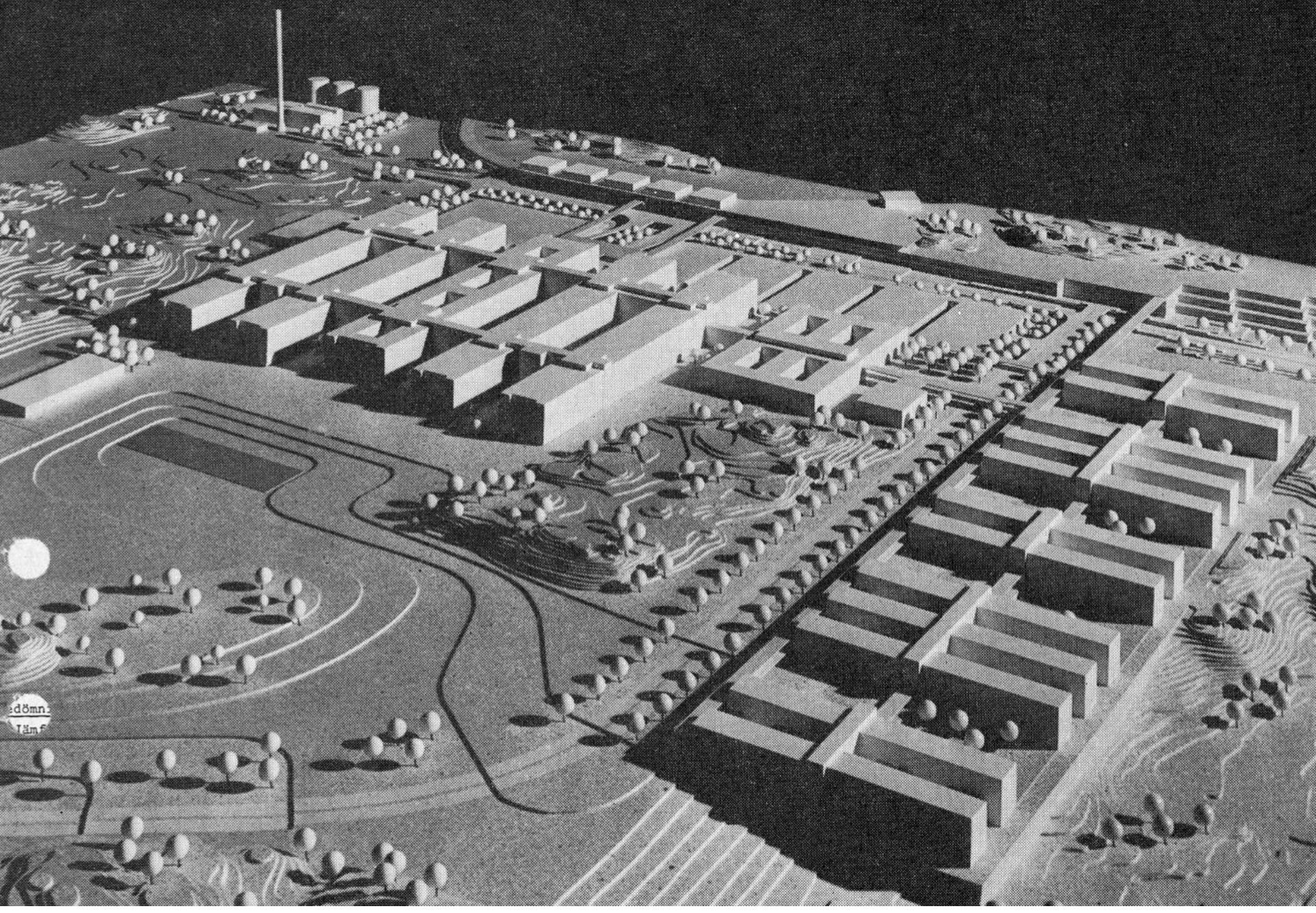


*Exempel på godtagen utrustningsmängd:*

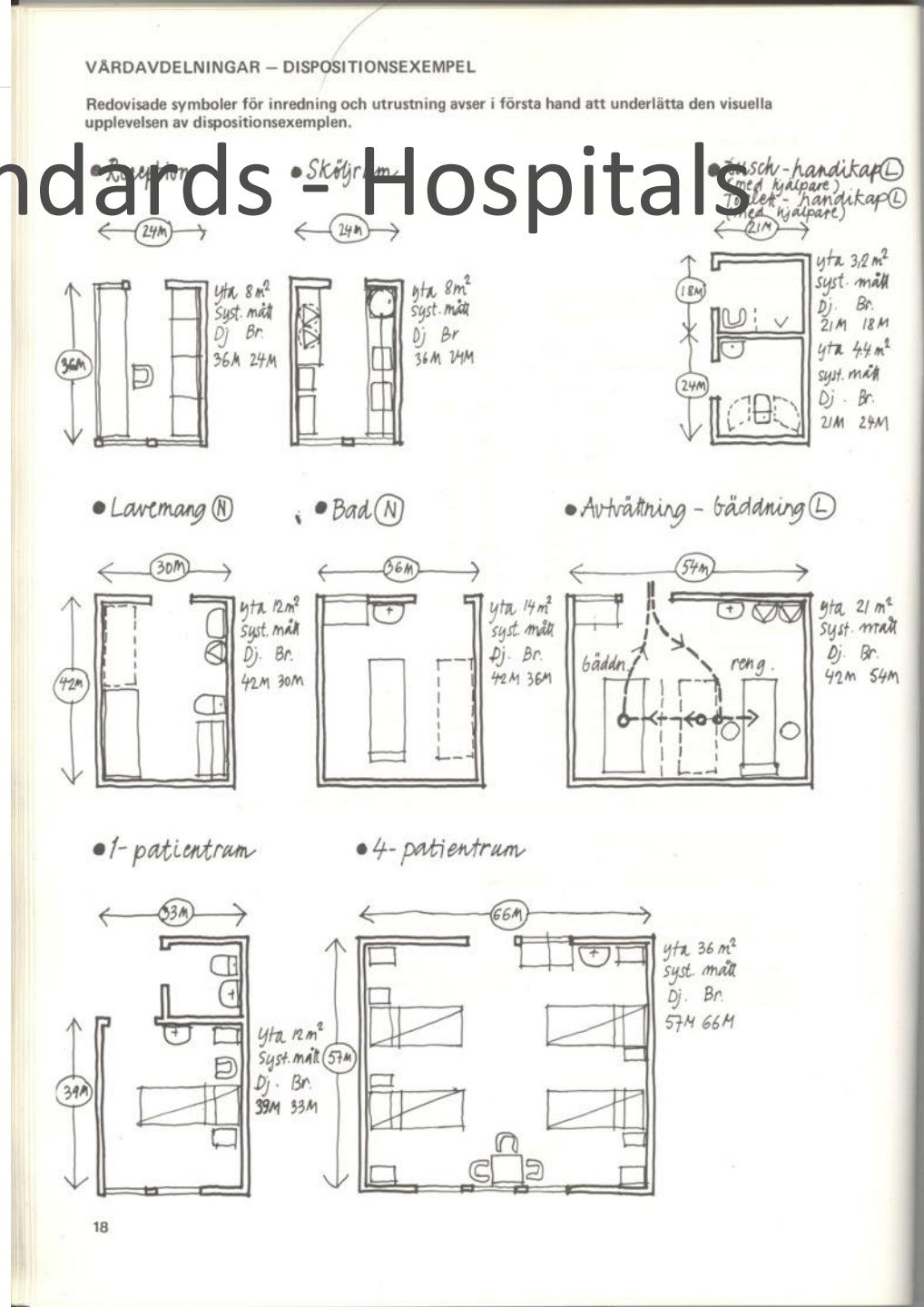
Delmått för godtagen minsta inrednings- och utrustningsmängd ges i figur 71:214.



Figur 71:214. Delmått på godtagen minsta inrednings- och utrustningsmängd för olika lägenhetsstorlekar. Delmått anges i dm. 150 och 300 anger kyl volym i liter.



# Norms and standards - Hospitals



**This world does not  
exist anymore....**

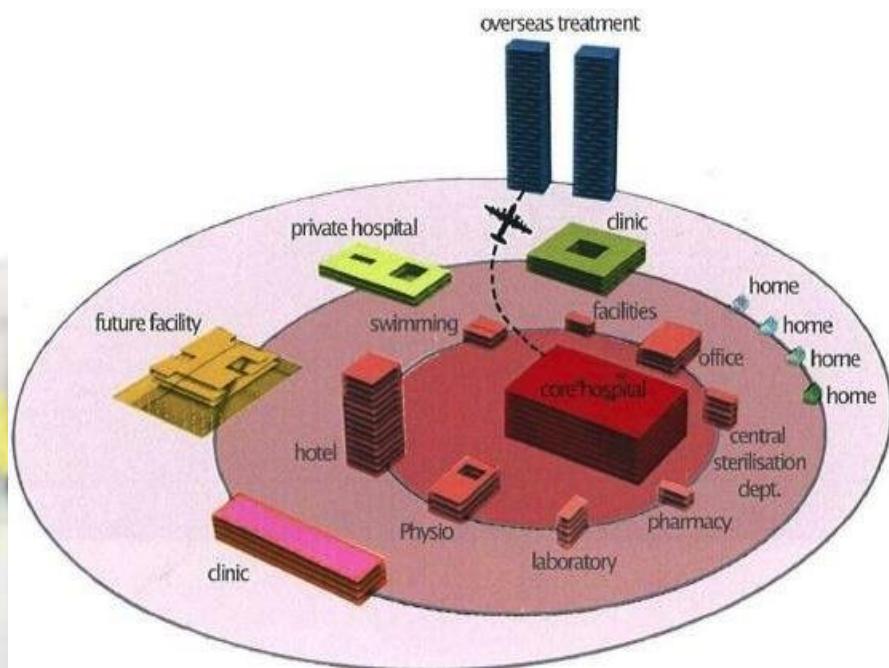
# Health care medical challenges

- Challenges of infections, new diseases and globalization
- Development of healthcare processes increase demands on medical staff
- Patient centered strategies require staff with a broad competence to handle multiple situations
  - Health care settings from homes to hospitals
- Importance for health care excellence to retain and attract competence on hospital and national level
  - Staff quality = care quality

# Health care facilities challenges

- To develop sustainable and effective hospitals considering today's complex challenges
- Care is constantly changing and puts new requirements on the facilities used
- The facilities become a part of the care process
  - Locations, logistics, EBD...
- We have separated and functional organisations... and thus budgets

# Healthcare of the future



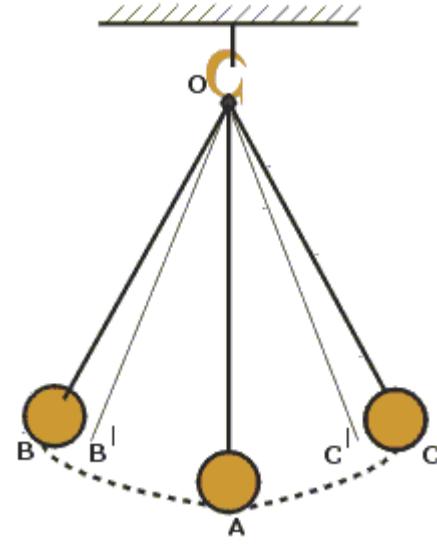
New therapies, new medical technology, ICT, demography...

# Normative – Dynamic – Integrated model of planning



## Normative

Knowledge and development centrally managed  
Standards Guidelines



## Dynamic

High degree of participation  
Customized solutions  
Knowledge and development managed locally



## Integrated model of planning

Dialogue concerning care and facilities based on evidence and experiences



# Swedish context

- Patient centered perspective
- Participation
- Dialogue



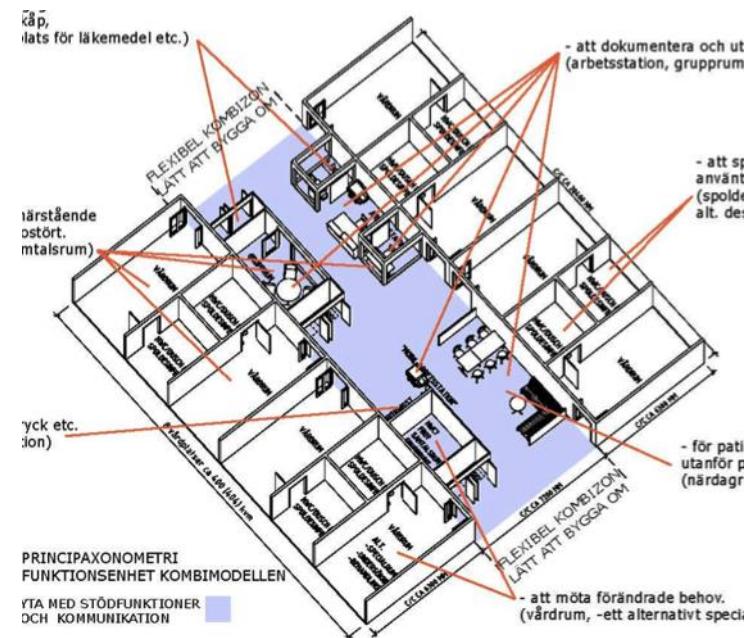
## Workshops with PTS, researchers and architects and planners



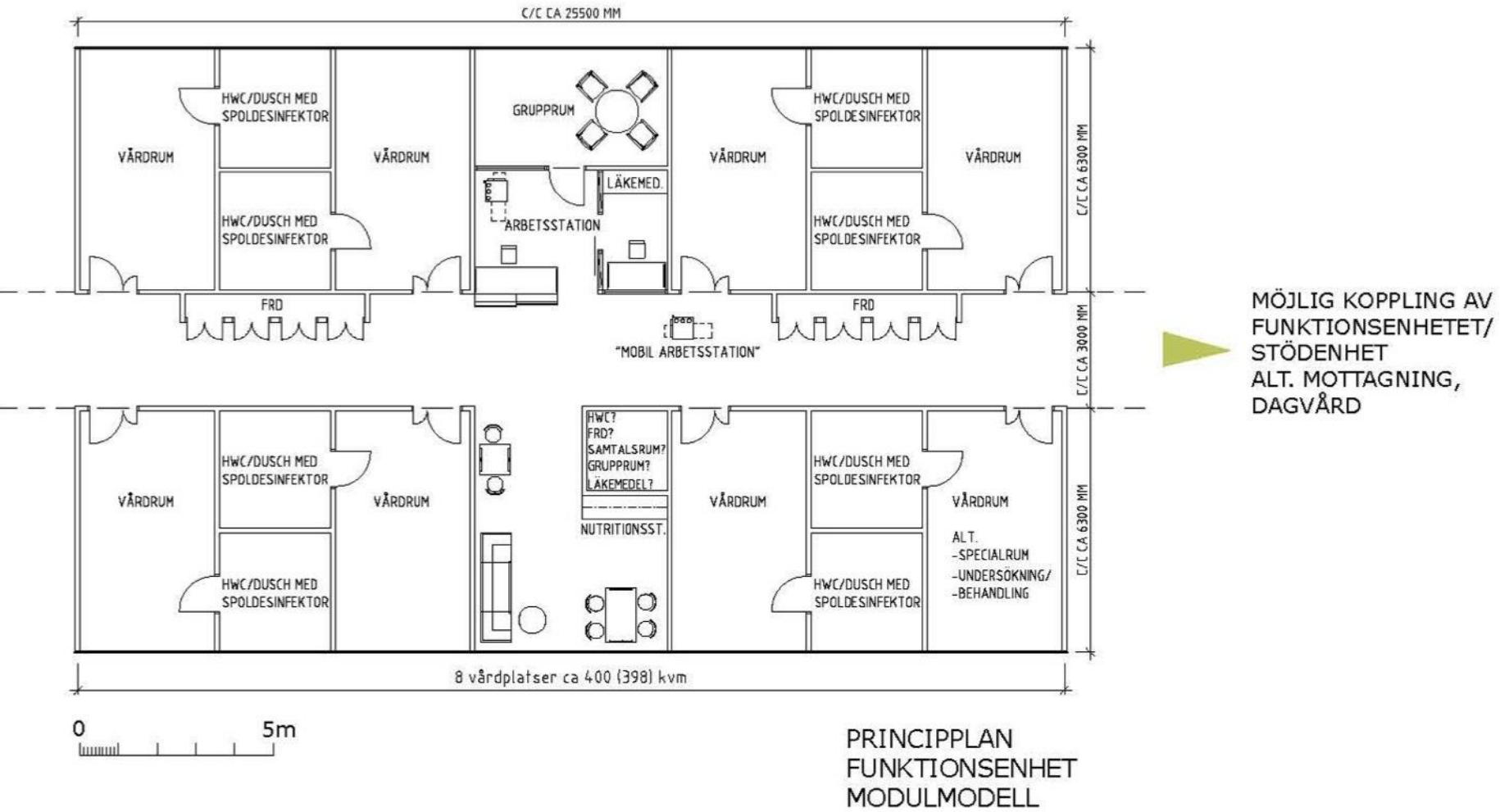
# PTS

- Programme for Technical Standard
  - Started as assembly of "old" norms, developed through workshops and research to become a tool
- Collaboration
  - Counties, 15 of 21 equal to 85% of people in Sweden
  - Practice, architects, planners and engineers
  - Academia, universities,
- Ongoing development and dissemination
- Latest tool is Evidence Based Concept Programs, EBCP

# Evidence based concept programs

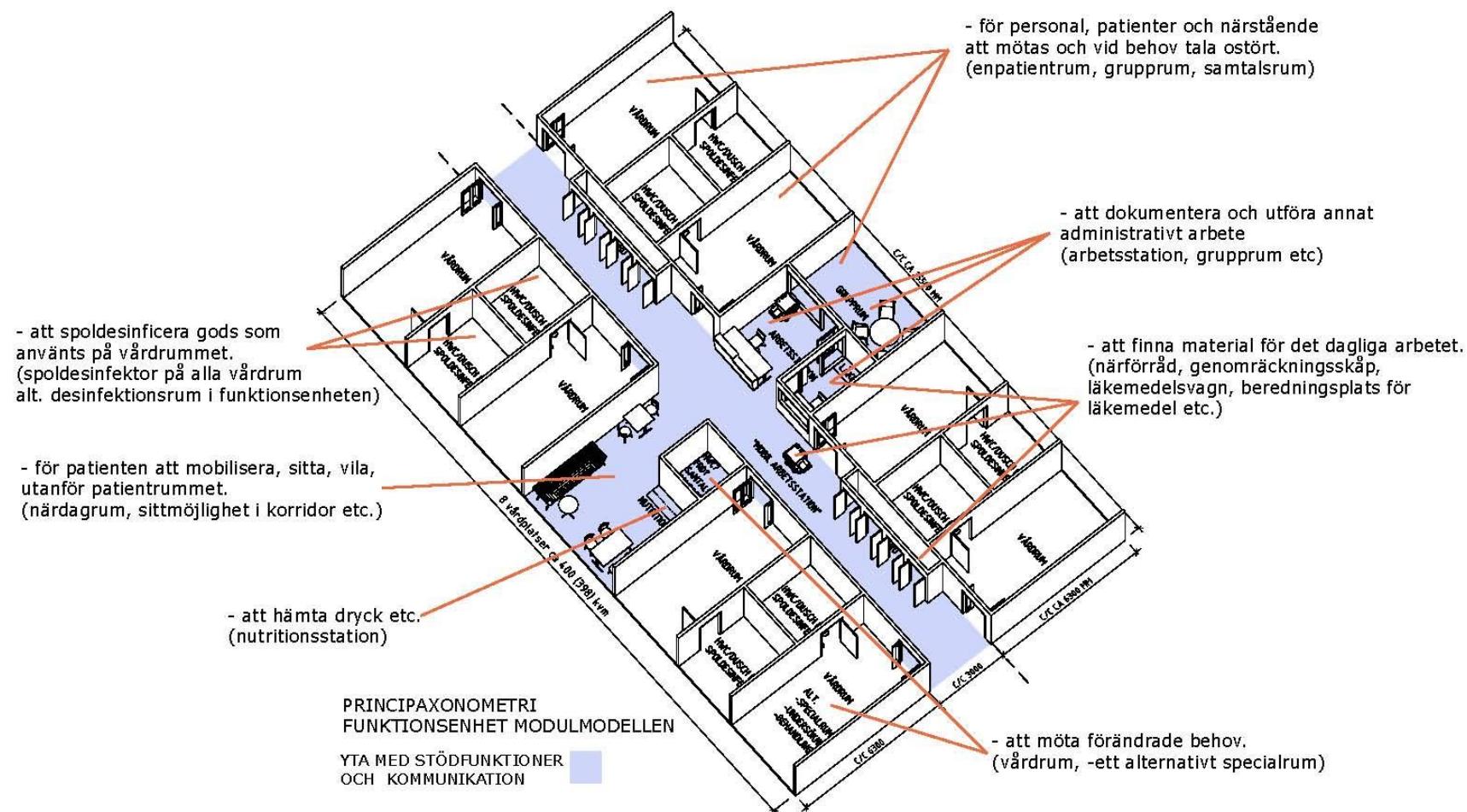


# “The good ward”



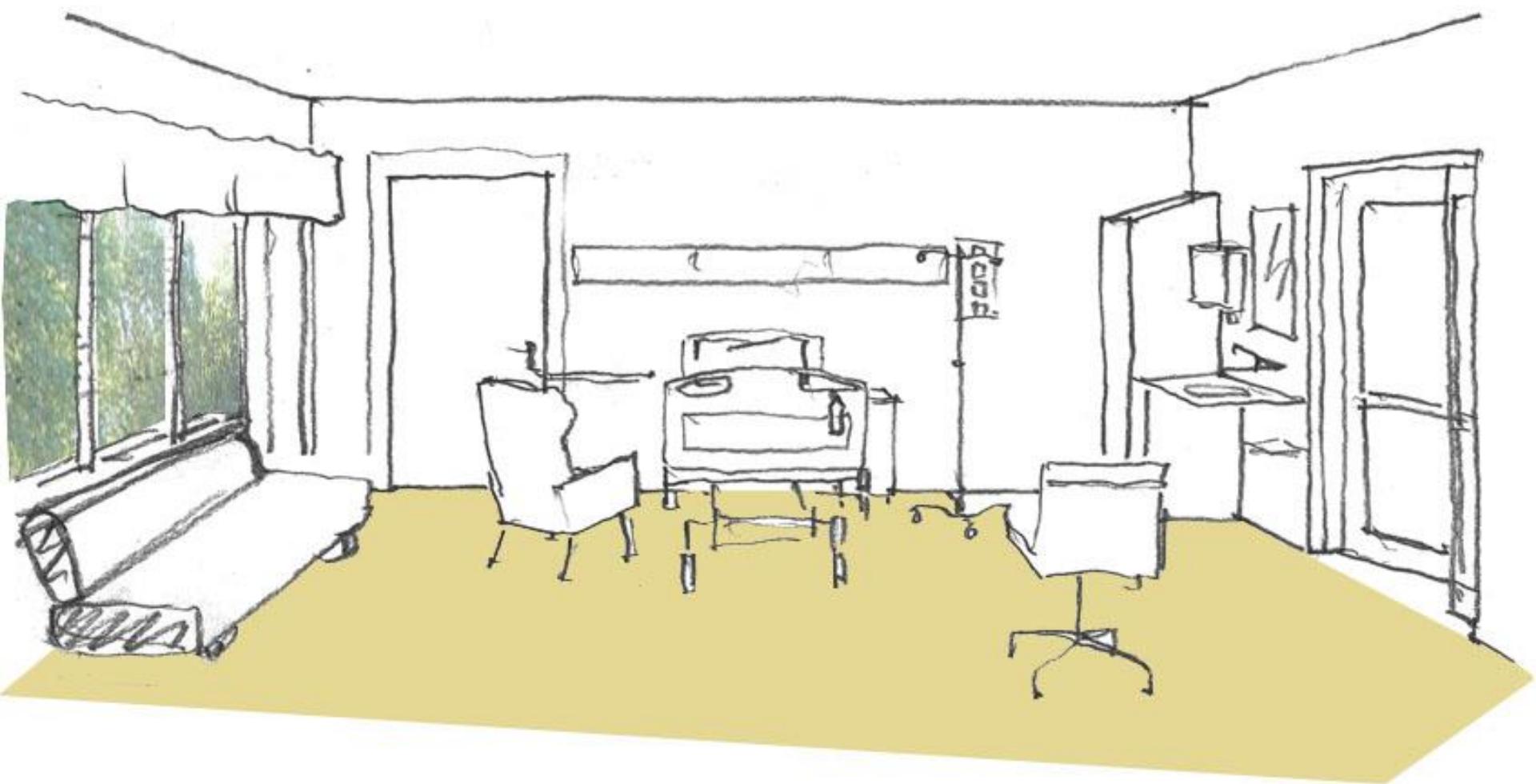
# Standard model – NOT reality

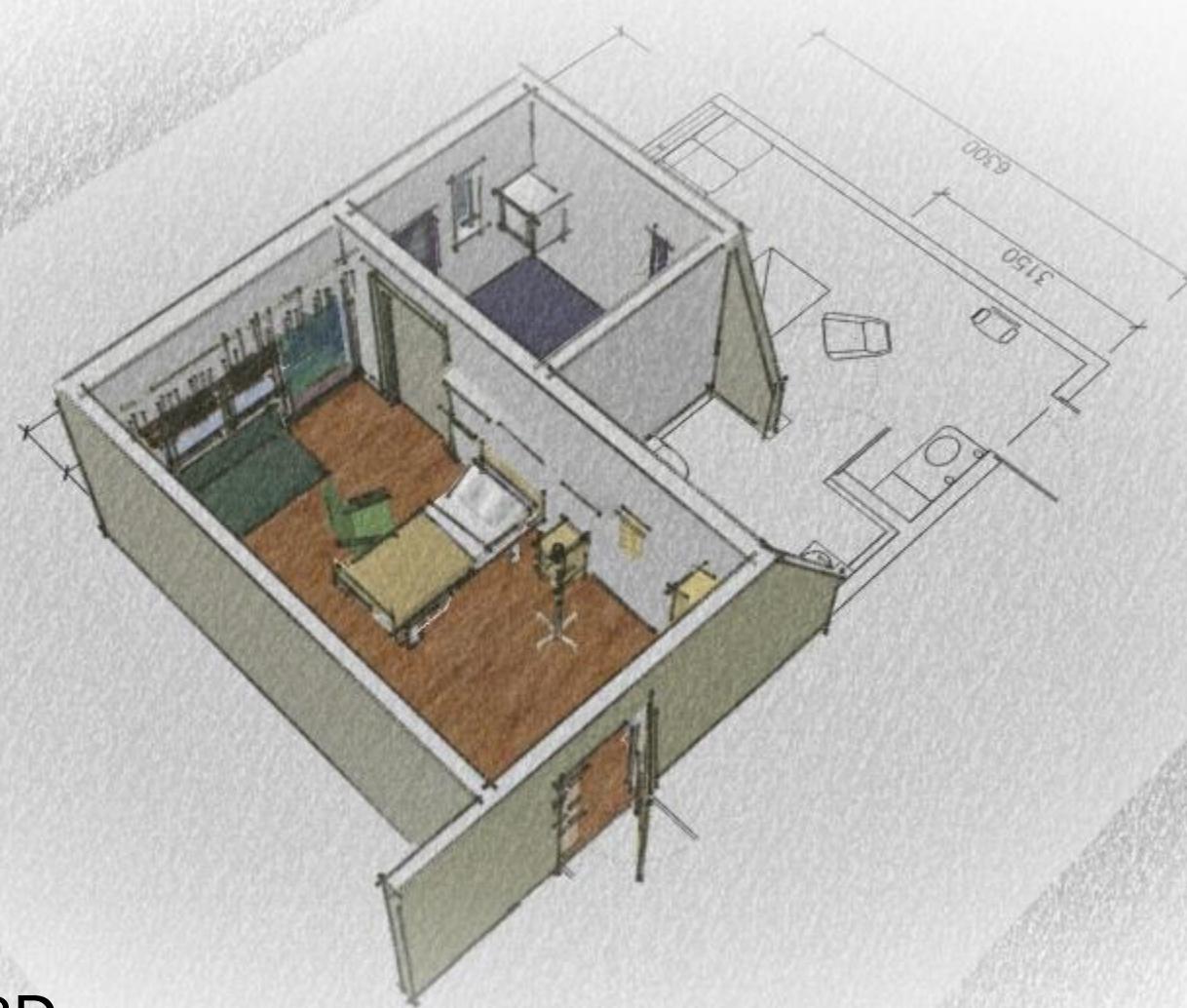
I FUNKTIONSENHETEN FINNS STÖDFUNKTIONER SOM GER MÖJLIGHET ATT:



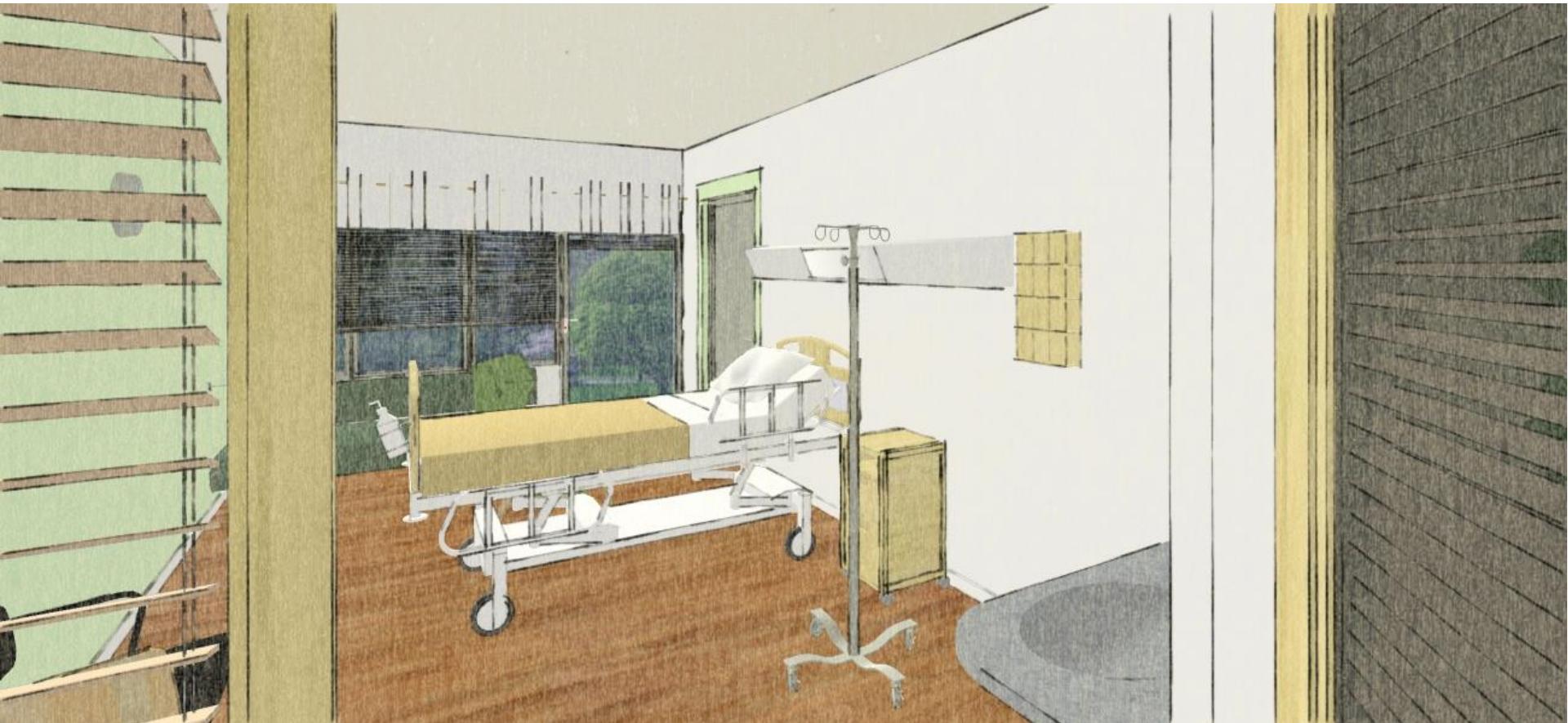
# A visual checklist

# Design of single-patient rooms

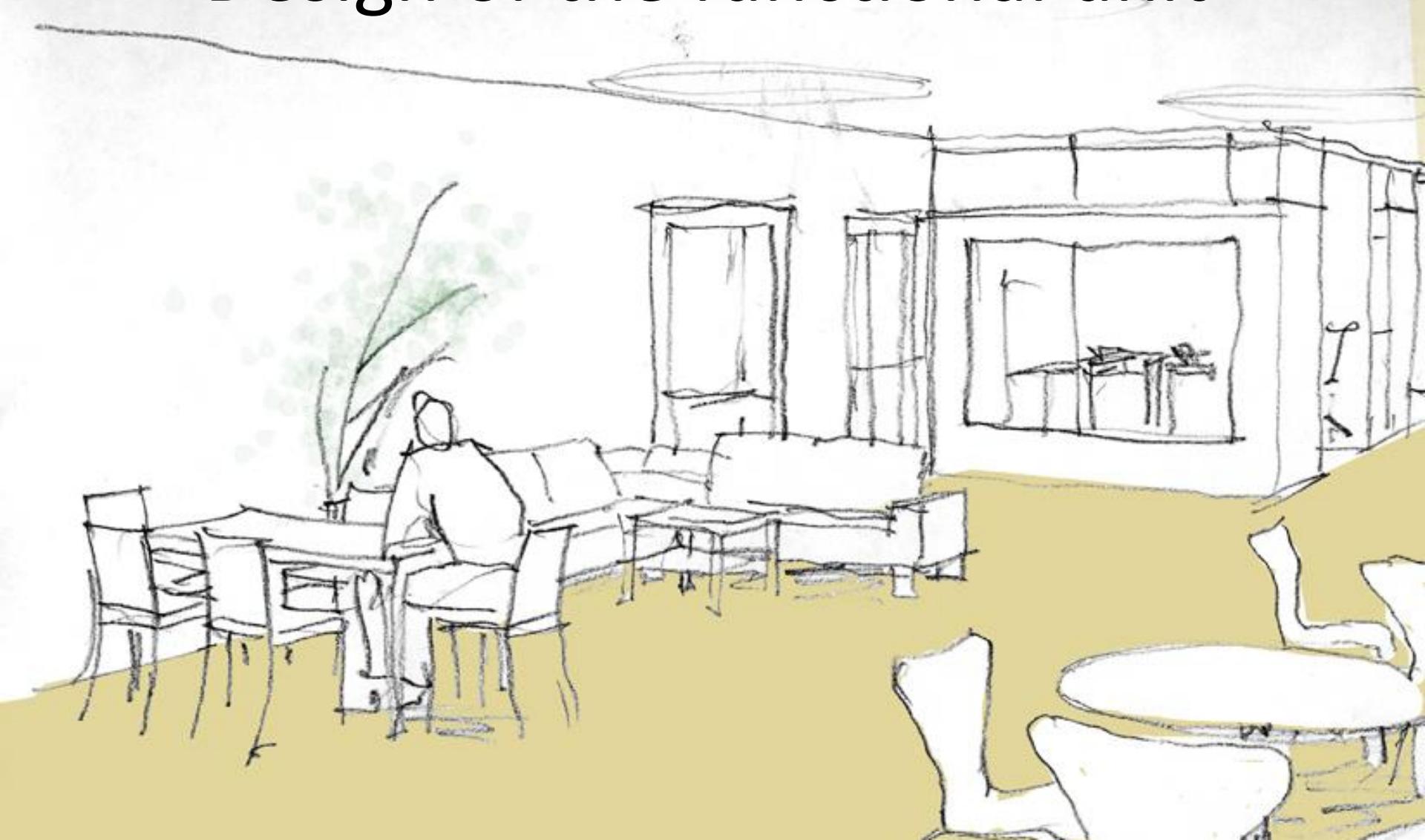




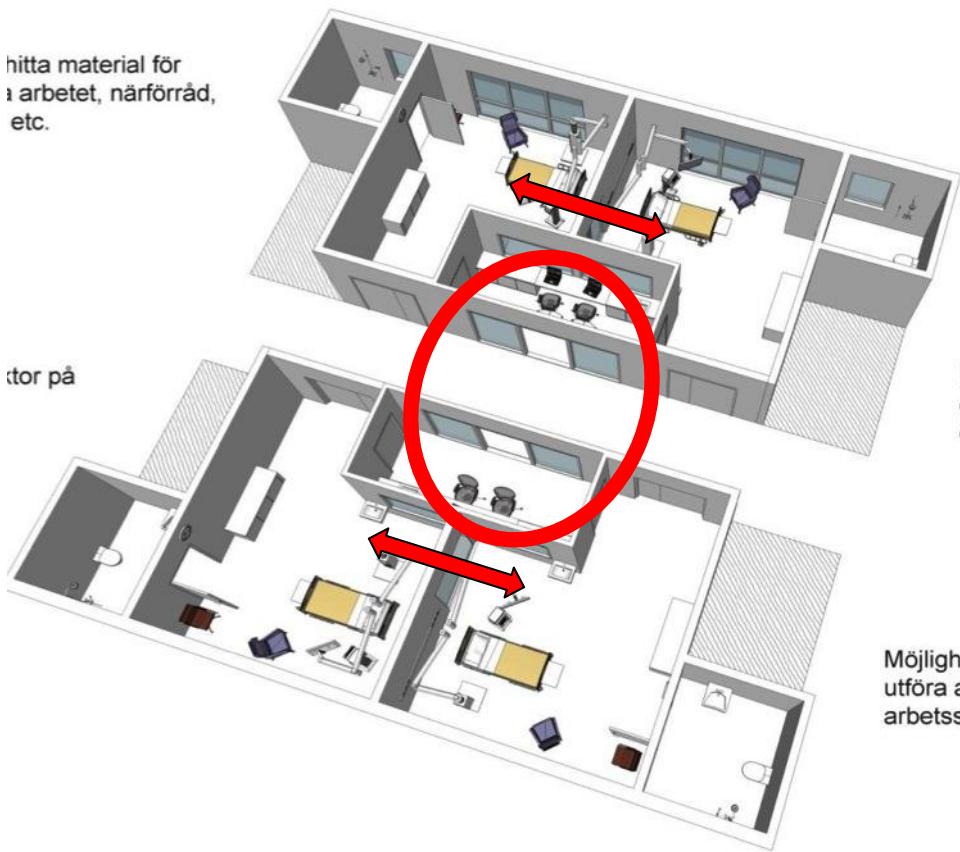
3D



# Design of the functional unit



# Evidence based concept programs



# High tech healthcare environments for ICU and OP

REMISS 2014-08-18

Human Body  
Digest



ADMINISTRATIVA ARBETSPLATSER

*inom vården och dess förvaltningar*

# Evidence based concept programs for administrative workplaces in healthcare



PRINCIPALATEN FÖR TEKNISK STANDARD



CHALMERS

**After all, is there a bigger challenge than to design the spaces where we shall be examined naked by medical professionals and sometimes also die?**

# **Useful contact**

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