

# The demographic challenge Housing for elderly in Norway

## Challenges and Research questions



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The SINTEF Group ([www.sintef.no](http://www.sintef.no)) is the largest independent research organization in Scandinavia.

"Based on the vision *Technology for a better society*, SINTEF provides research-based knowledge with the purpose of strengthening the industrial competitive power and stimulating new industrial activity."



# Need for innovation!

The Norwegian welfare model is working, but use a lot of money 70 mrd N kr., need a lot more resources than available and we can also see that the future elderly have extremely high expectations to the services and the built environments.

The Official Norwegian Report, NOU 2011:11, Innovation in Care, state the need for new ways of solving the challenges of future care, and points out three areas with great potential of innovation

- New technology
- New focus on the built environments
- New ways of organizing the service



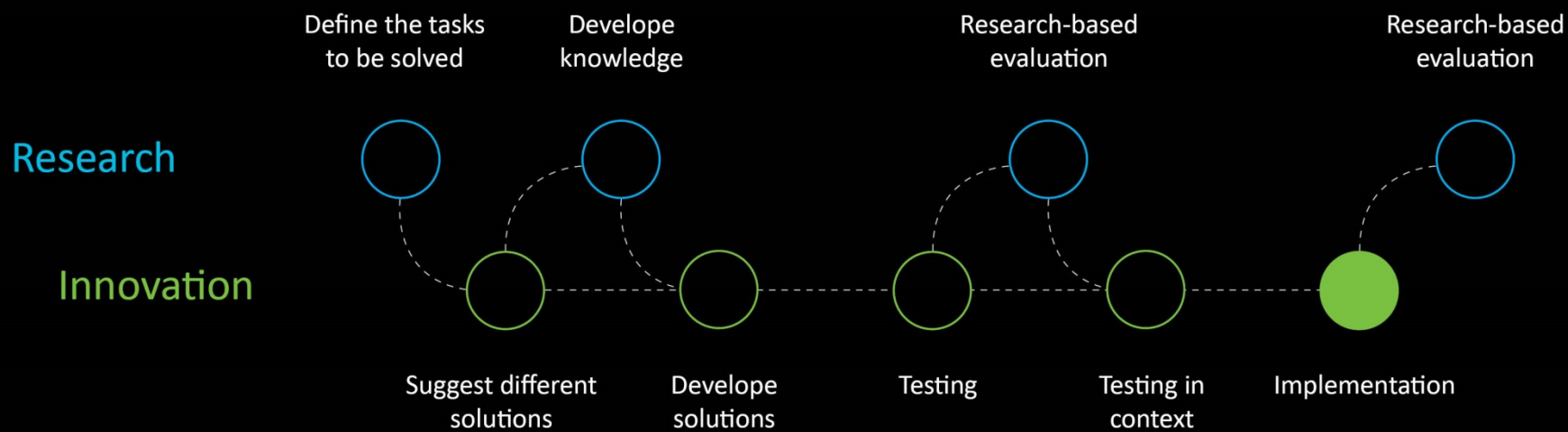
Innovation is not only reserved to business development and new technology. The term encompasses far broader and can be considered as a way to deal with tasks – also in the public sector!

Innovation can result in new products, but also completely different ways to resolve needs for service and care!

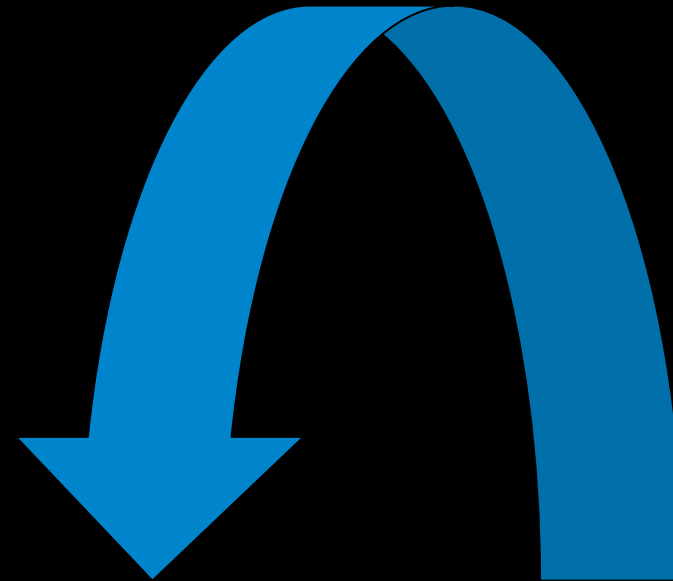
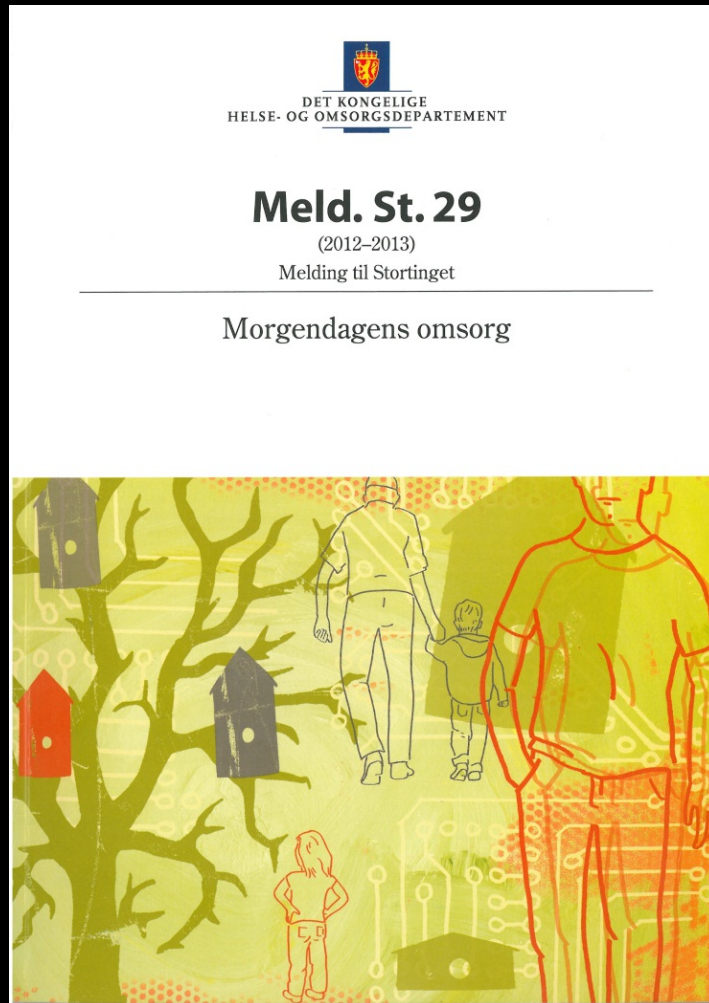
Innovation requires risk-taking, **but also a more systematic evaluation** of the effect of the experiments that have been tested.



# From knowledge to innovation



## What should the environment do:



Which qualities do the physical environment attempt to support seen from a **society's** perspective?

**Sustainable welfare model**

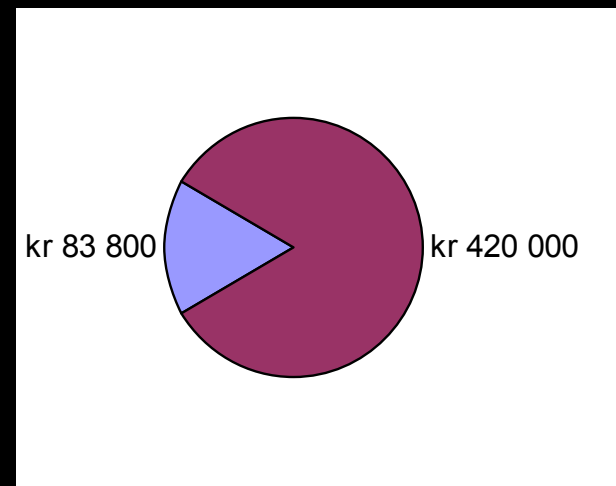
1: better health in late life

2: Participation in society and manage everyday life despite of disabilities/chronic diseases

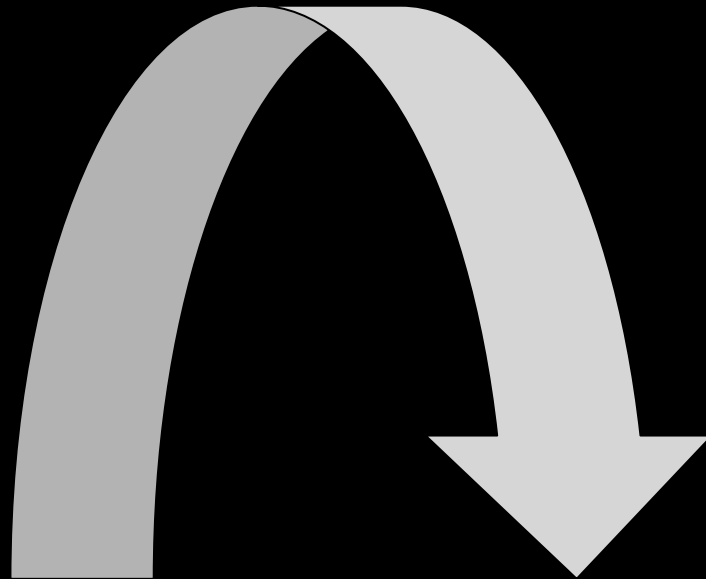
3: Stimulate and support the interplay of public, private and voluntary services. **Adjust for family, Nabors and friends**

4: High quality and **cost-effective care.**

Make everyday life easier for those who provide care.



# Quality of life Individual



Which qualities do the physical environment attempt to support seen from a **user** perspective?



## What should the environment do:

What are seen as premises for a good old age in a Scandinavian context? What does research about frail elderly tell us?

"Homeliness" a matter of design and a way of care? Paper in print KH



It is particularly important that the intentions of what the building try to solve, are expressed and written in a program

A planning process is a process with many participants, to achieve this it requires:

- 1.Common knowledge and Insight.
- 2.Common language to discuss with
- 3.Common goals

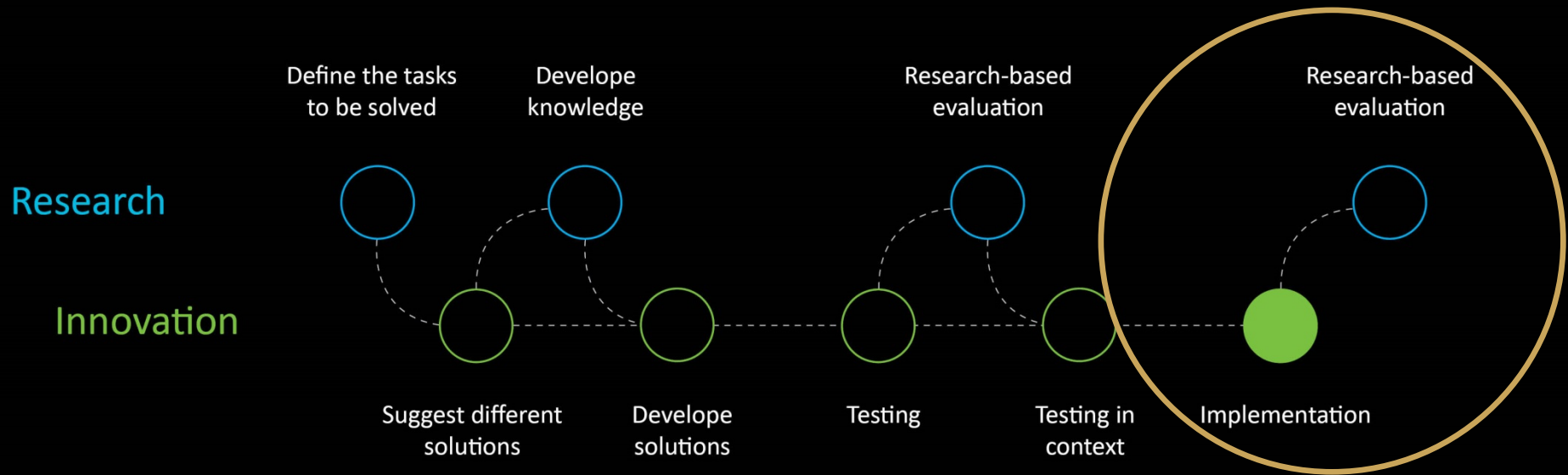


It is almost impossible to build prototypes and test before being built



Systematic evaluation of "pilot buildings" can serve as an alternative

# From knowledge to innovation



## The interplay between people and the environment are complex

Understanding the interplay between people and environment

- Direct and visible influence
- Indirect and non-visible influence



The theoretical framework provides an understanding of how the different dimensions interplay between users and physical environment (functional, communicative, social, relational and perceptible). *Jan Paulsson, Inge Mette Kirkeby*





Effects by Going-out Behavior on the Elderly with Dementia:  
Changes in Behavior of the Nursing Home Residents  
by Utilizing a Satellite Day Room

IAPS 2006, Alexandria

Mari Kinukawa , Shinya Tsukamoto, Ken Miura, Mitsuo Takada

# Changes of Mental Condition ④

## Walking back to Nursing Home



16:34:12

Going back

16:35:18

Walking

16:36:38

Talking to mom&baby

16:38:15

Chatting



16:38:45

Talking to a boy



16:40:14

Talking about the boy



16:40:37

Seeing a local resident



16:42:28

Looking at flowers



16:45:00

Avoiding a car



16:46:53

Talking about Ms. SD



16:49:44

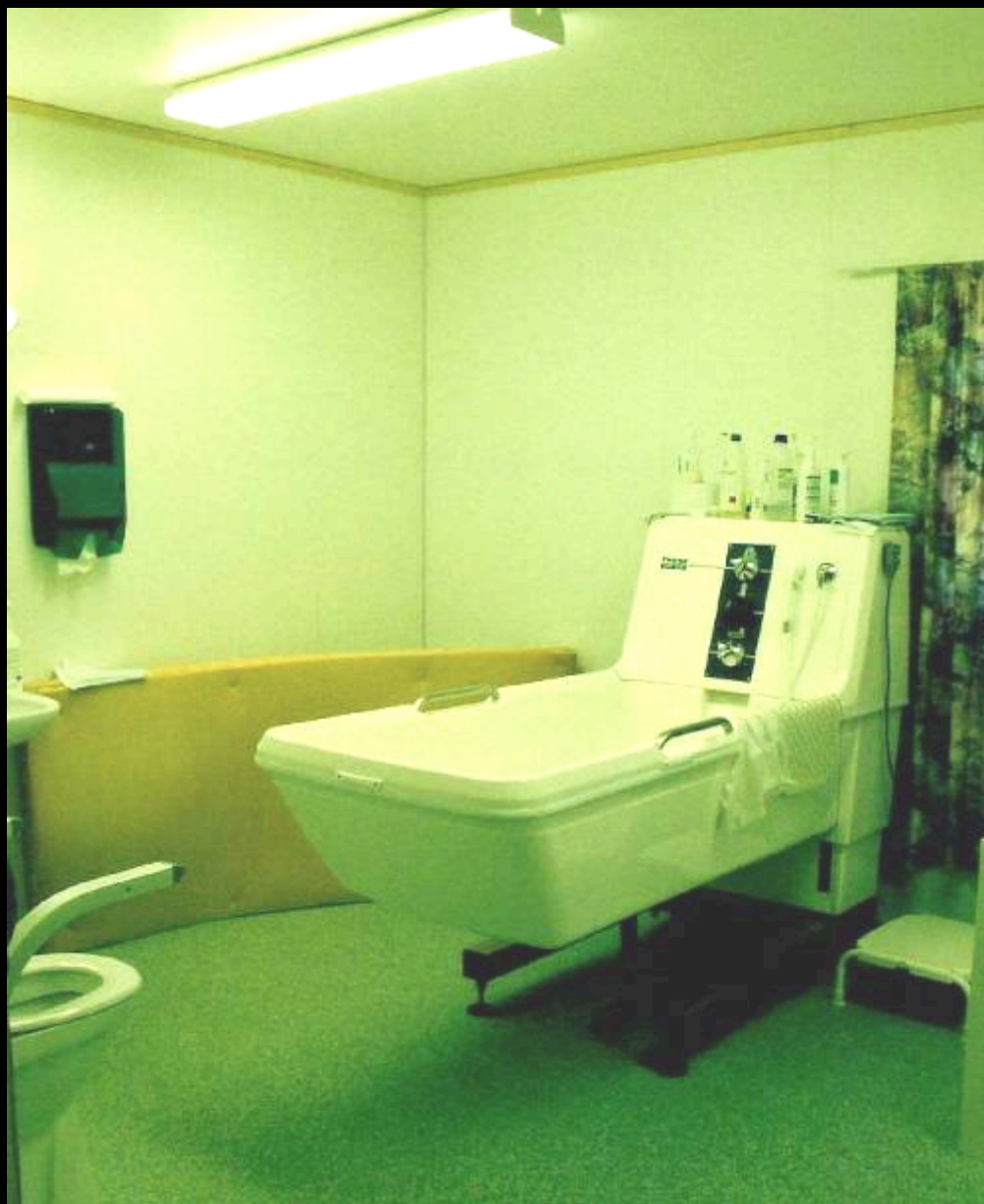
Almost nursing home



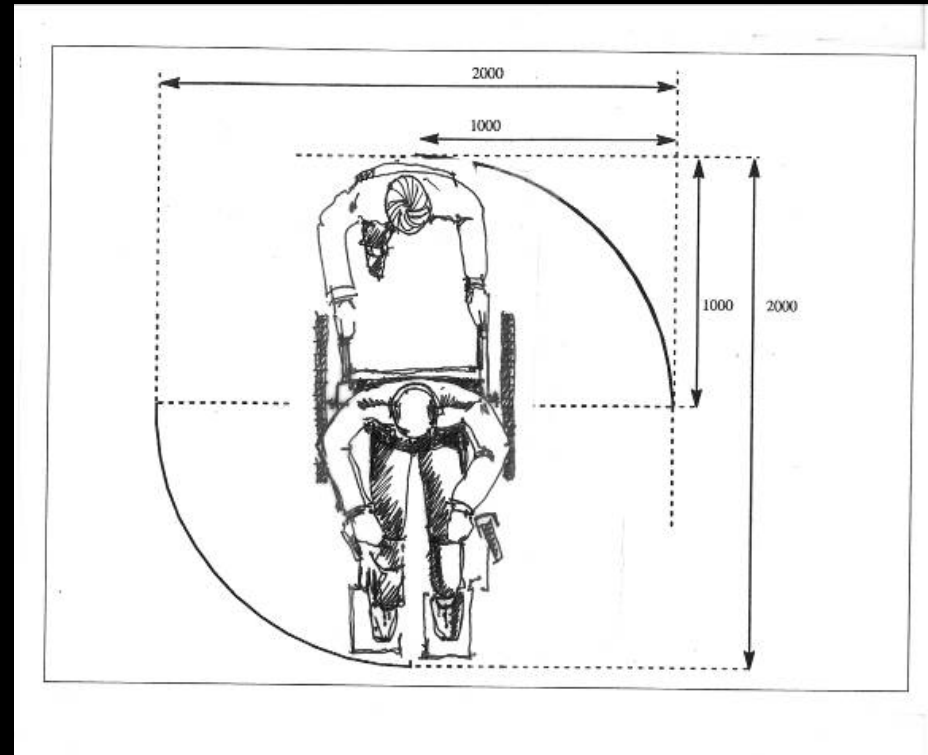








*"What is important for the "user groups" of future elderly?"*



## Cognitive dysfunction

*Better mental  
and physical  
health reduces  
the risk of  
falling*

*Increased social  
contact can  
delay cognitive  
decline*

**Falls**

**Loneliness**

*If the fear of falling is reduced,  
the possibility of social contact  
may increase*

# Stimulating to better health in old age

- Places to walk...
- Attractive places to meet....
- Age friendly neighborhood....



# How can elderly manage their own everyday life in spite of functional reductions

How can new technology and environments support this?



# More resources into the care field...

*.. from other areas than today:*

*Local society, voluntary sector,  
social entrepreneurship, user-  
driven associations, relatives/  
next of kin, social networks*





**Stimulate to all kind of private and volunteer care. Adjust for family, neighbors and friends.**

How can new technology and environments support this?

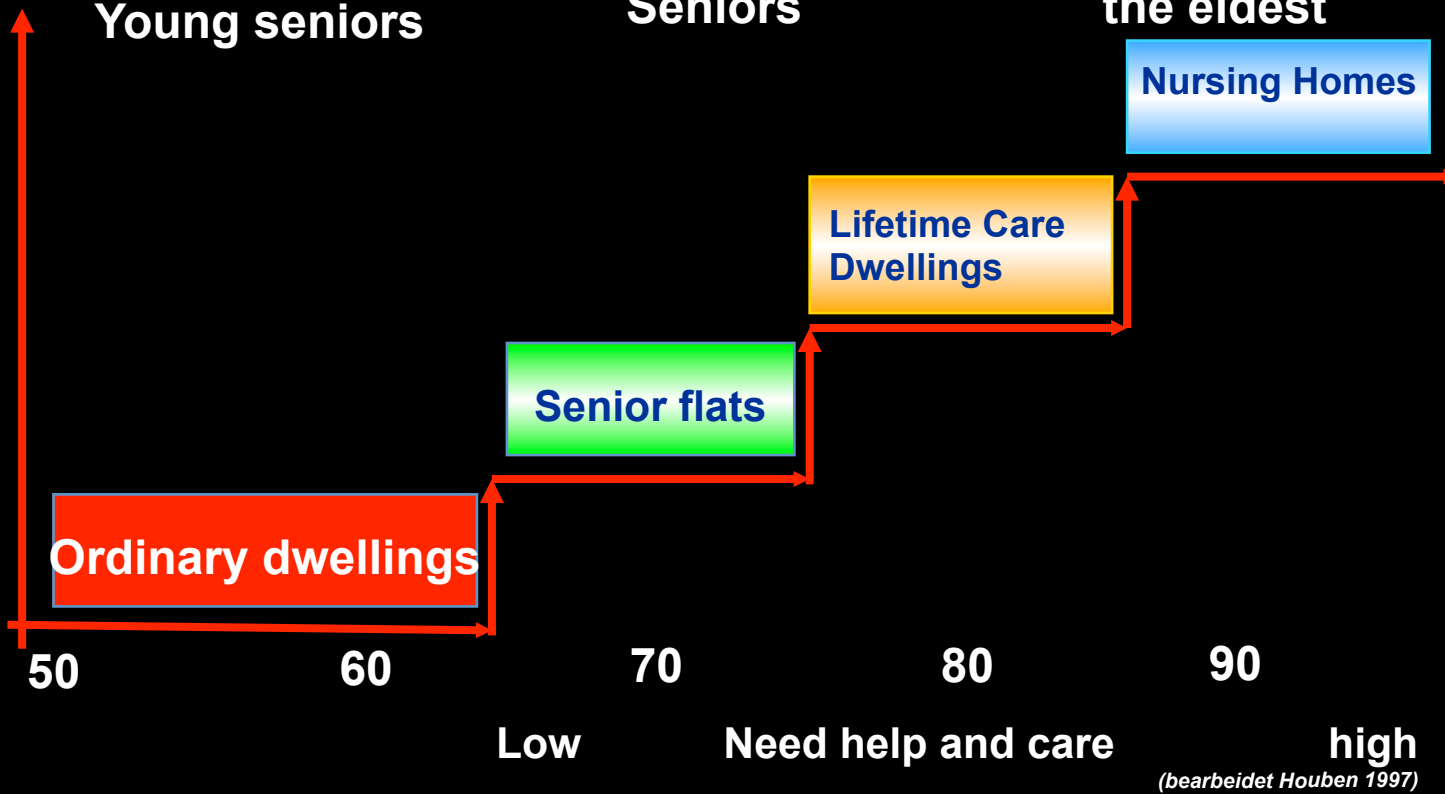




**Young seniors**

**Seniors**

**the eldest**



*(bearbeidet Houben 1997)*

Figure 1. The old precedent moving from step to step in solutions with fixed house and care. Houben ,1997



**Young seniors**

**Seniors**

**the eldest**

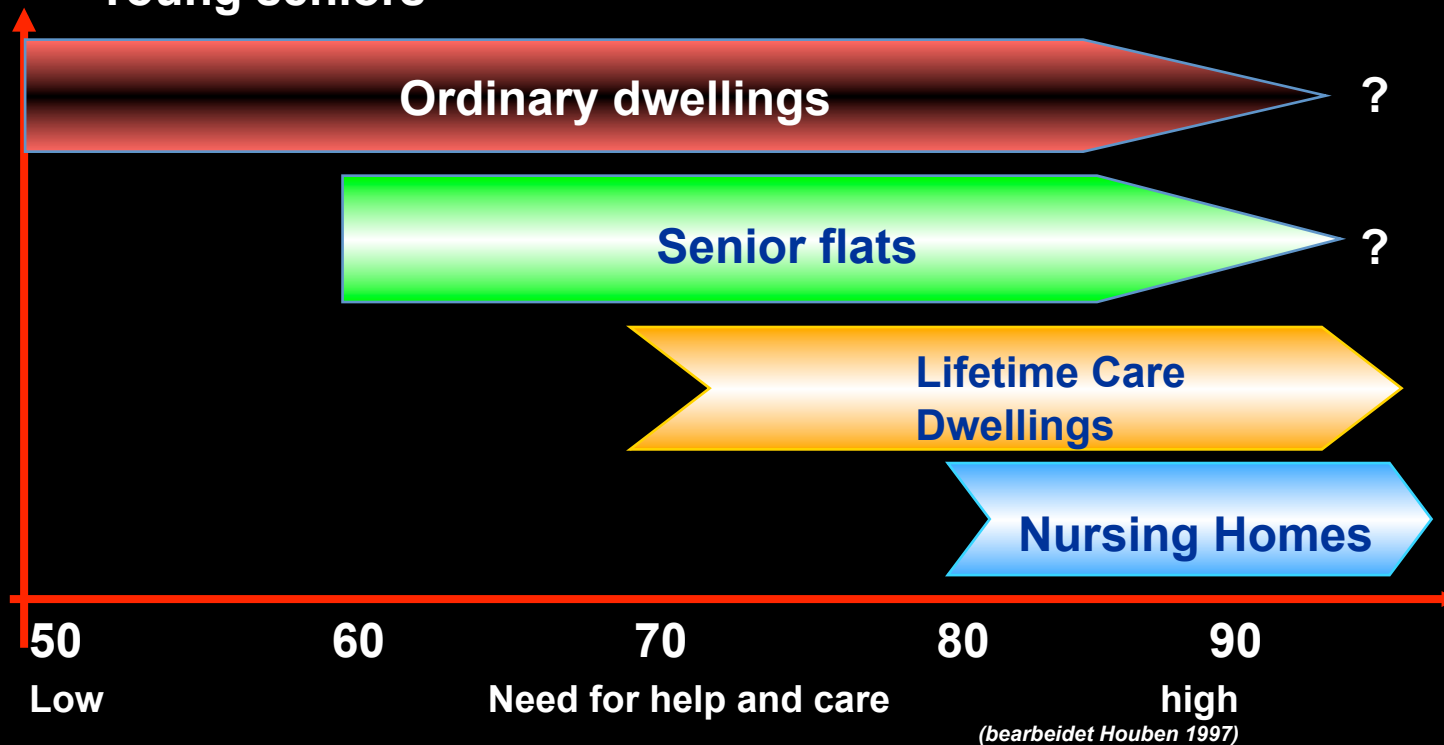
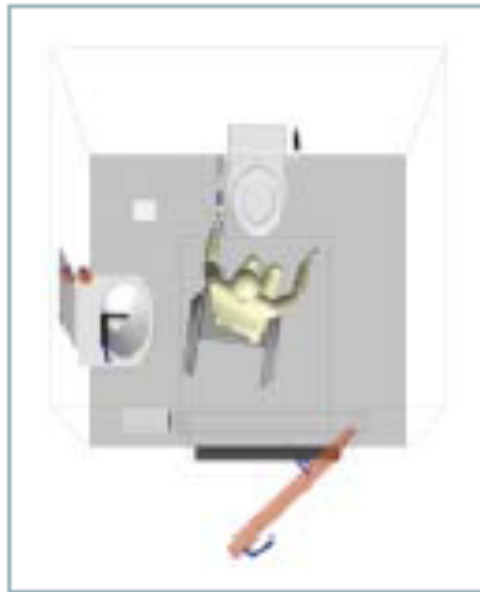
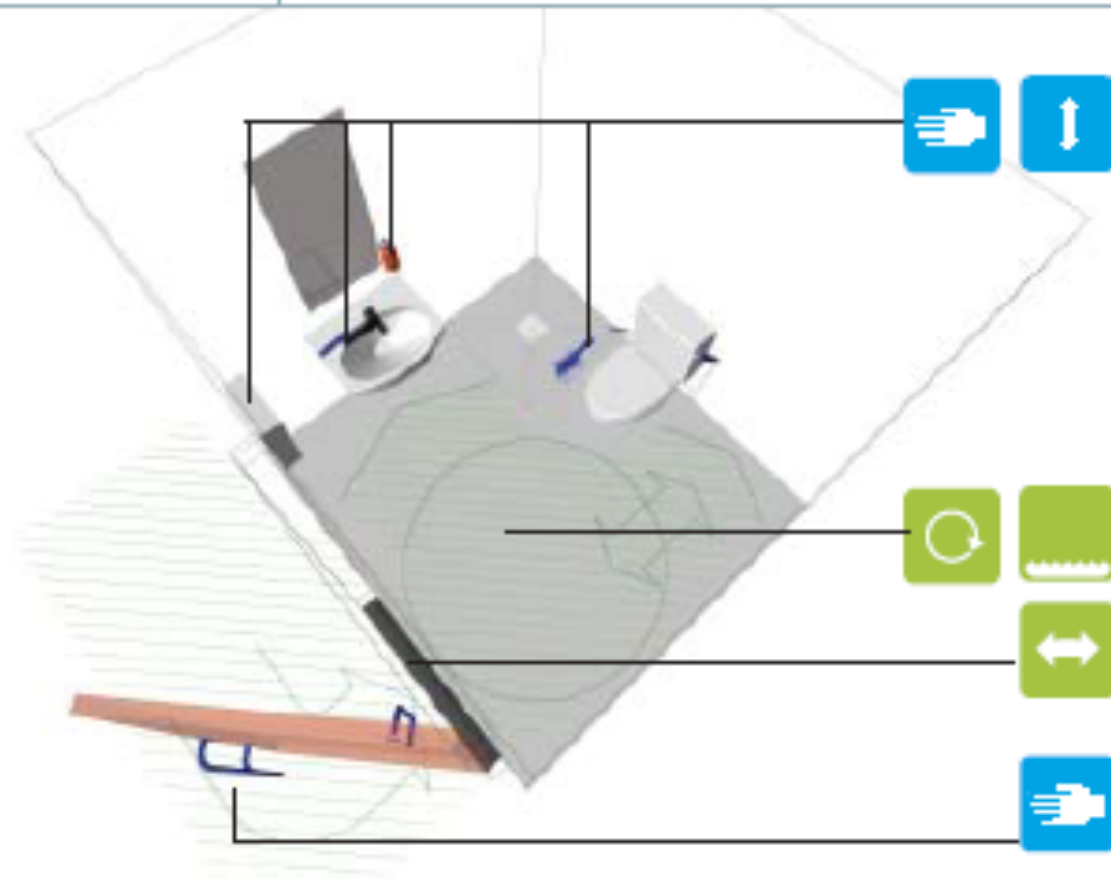


Figure 2. Different housing solutions that fits to different needs in a more dynamic model. The services given preferably to the persons that need it most, not depending on where they live.



### AKTUELLE MÅL FOR TOALETT I PUBLIKUMS- OG ARBEIDSBYGNINGER

INGANGSDØR	Bredde 10 M
SNUPPLASS	Diameter 1,5 m
SIDEPLASS	Minimum 0,9 m på begge sider av WC (1,1 m fra senter WC)
PLASSERING WC	Forkant WC minimum 0,85 m fra bakvegg
PLASSERING VASK	Minimum 0,9 mellom vask og wc for passasje til sideplass

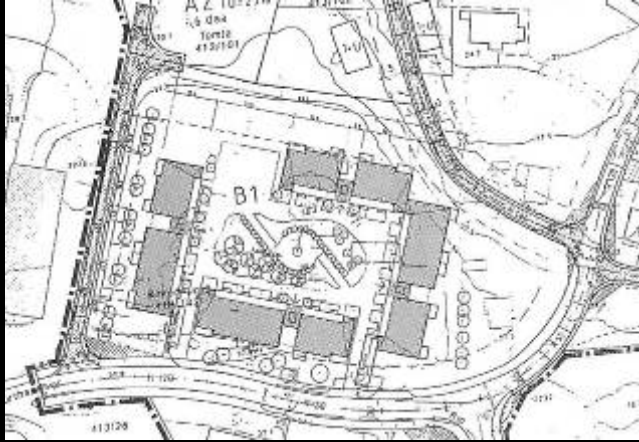


> Utstyrsplassering og fri gulvplass er kritisk i toalettrom.

# Eldre -10 år etter

Et forskningsprosjekt om bokvalitet og hverdagsliv for eldre





Ferdigstilt i 1995. 80 % av beboerne mellom 60 og 80 år.  
50/50 enslige og par.

Totalt 77 beboere (2008) i 53 leiligheter fordelt på 4  
blokker rundt et tun.

Svalgangsløsning inn mot tunet samt private uteplasser  
på utsiden av bygningskroppene



**Livsløpsstandard i alle leiligheter. Heis og P-kjeller.**

15-20 min å gå til nærmeste butikk.

**Siden 1997 har 15 har flyttet, 28 er døde. "Flere som dør  
enn som flytter"**

**Hjemmetjenesten anser botilbudet som godt tilrettelagt  
også ved livets slutt!!**

Botilbudet vurderes som godt, bortsett fra et elendig  
kommunikasjonstilbud. (ref. beboere og omsorgsytere)

# Birkehaug Seniorboliger





**Young seniors**

**Seniors**

**the eldest**

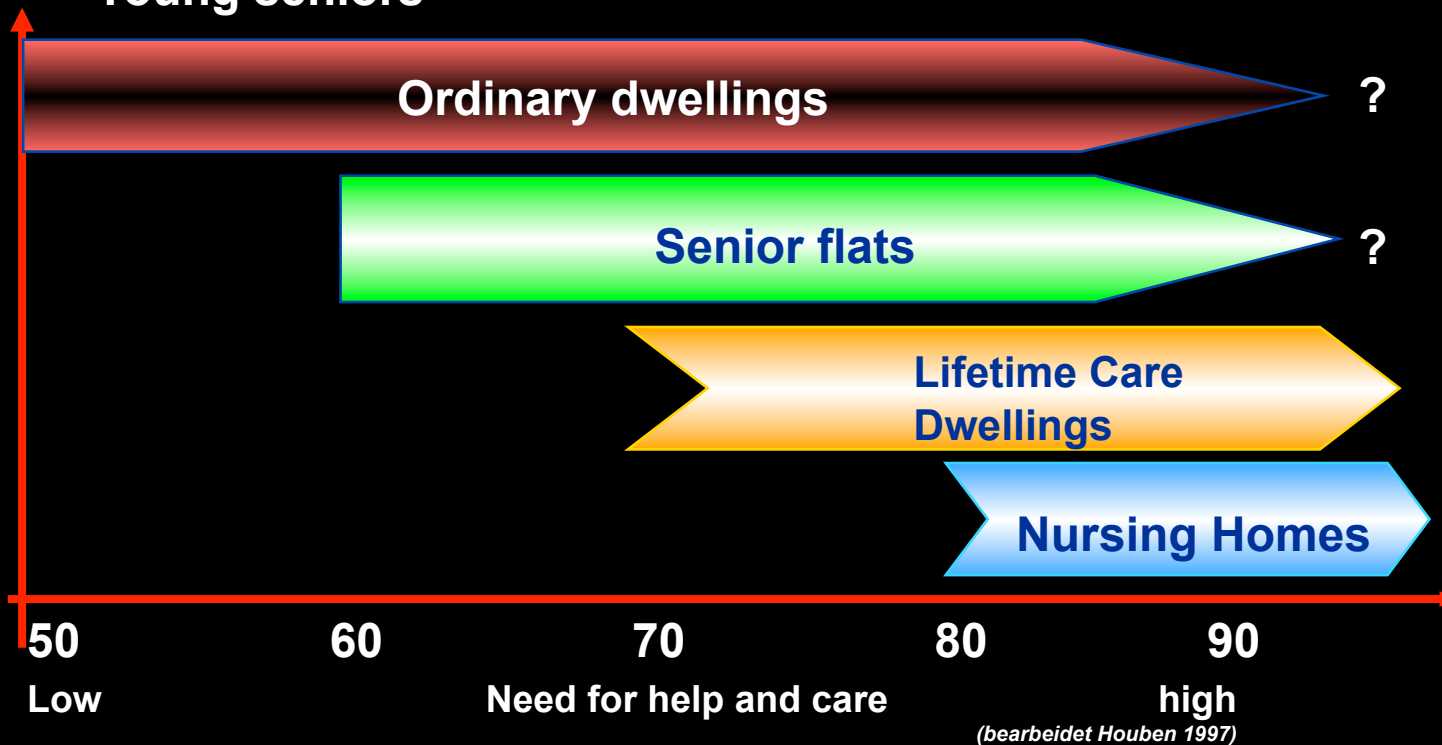


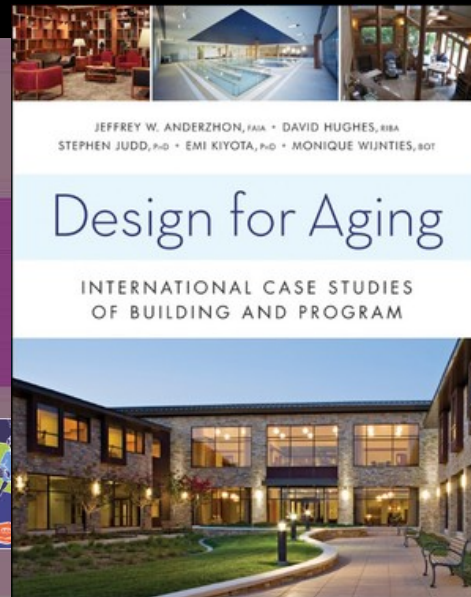
Figure 2. Different housing solutions that fits to different needs in a more dynamic model. The services given preferably to the persons that need it most, not depending on where they live.



**An important challenge is to achieve homeliness even in institutions and assisted housing facilities.**

**The feeling of homeliness may be threatened when your home also is a workplace for carers, or when a group of residents have to share a home when they have not chosen to live together.**





## What are the solutions attempt to support?

- Experience of home and homeliness.
- Experience of being part of the community.
- Experience of continuity in life
- Experience of reciprocity
- Experience of being safe
- Experience of meaning

## **"We think we are good at creating a home. "**

Individuality is preserved and set high. There is freedom of choice with them. They stand up when they want and lie down whenever they want. They help to maintain a certain level of normality in everyday life, life is not characterized by routines.

- "Doktorløkka Porsgrunn"



When safety is present residents are relaxed.

Its all about predictability. The staff is the treatment. It is stable. Minimal need for medicine.

(Klyve Gate)



True story:



# DOKTORLØKKA SYKEHJEM

SYKEHJEM FOR  
FRISKE DEMENTE



14







3

4

6

8

5

7

2

↓

1

Kafé/resturant/kino

DOKTORLØKKA SYKEHJEM





## Sum up

We see more need for **systematic evaluations**.

Making it possible to gain and share valuable insights from pilot projects, making it standard to start at a higher level with next projects, not reinvent the wheel each time.

*"What is the best solution", "for whom"* are questions to be asked

Future elderly are as diverse in personality, preferences, motivation and life style as any other groups of people. This causes a need for great variation and a range of different housing solutions and a need for flexibility within the care system, to motivate seniors and elderly to prepare their selves for age.



# New ways of organising nursing Homes. Experiences from three new buildings.



- The aim of this project is to contribute increased knowledge about how the buildings influences on operating services, expenses and how the residents experience the housing and care.
- As a developer you are confronted with several different approaches:



- 1. The demand of low building costs.**
- 2. The demand on low operation cost.**
- 3. The demand on increased user-friendliness**

# Methods:



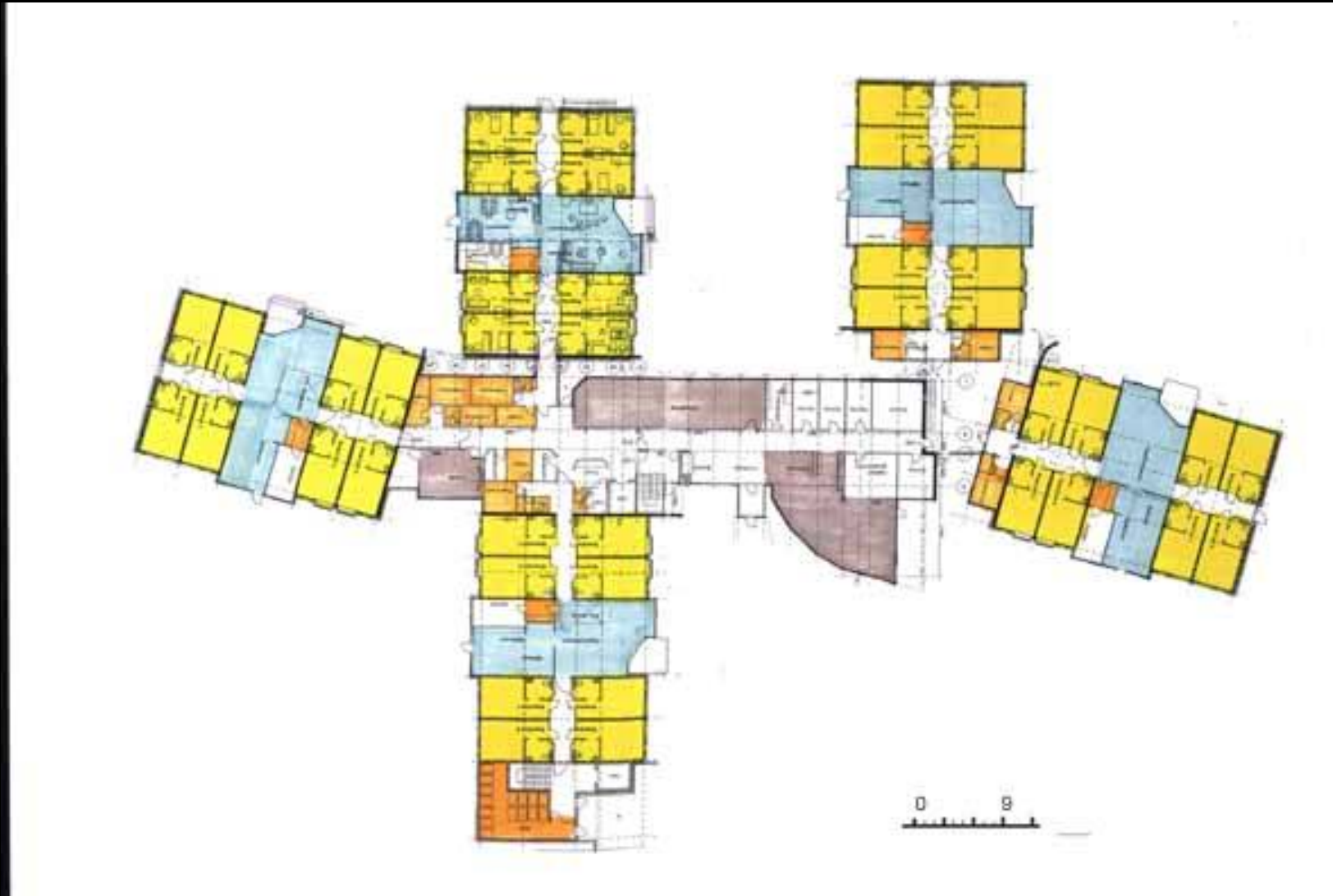
- Interviews with both director, staff and residents.
- Questionnaires to staff .
- Questioners to the residents relatives.
- Observations made by the participants.
- Step- counting registration.
- Account analyses.
- Information about building expenses was obtained..
- Evaluation of the buildings based on prepared checklist.

# Skjoldtunet sykehjem, Bergen





Ground floor.





**It seems like having your own room with private things is important for keeping your own dignity even though your conditions are poor. It helps staff to “see” each personality.**



- **The relatives leave no doubt. Smaller units gives a more quiet, pleasant and welcoming atmosphere.**
- **Smaller units makes it easier to get to know the staff. This is an important thing for relatives.**

## Meals are important:

- The meals take time but the staff learns to know the residents and they think they are able to talk with each one of them.
- Spending time on the meals stimulates the residents to be more self-sufficient.



## Outdoor area:

**The survey shows that how often the residents get to go outside is directly related to accessibility and design of the outdoor areas**

- **From interviews: many residents want to spend more time outside.**
- **They tell that they get in a good mood by being outside.**



Research project 2:

## Methods:



- Interviews with both director, staff and residents.
- Questioners to the residents (relatives).
- Account analyses.
- Evaluation of the buildings based on prepared checklist.

**Studying 10 different project.**





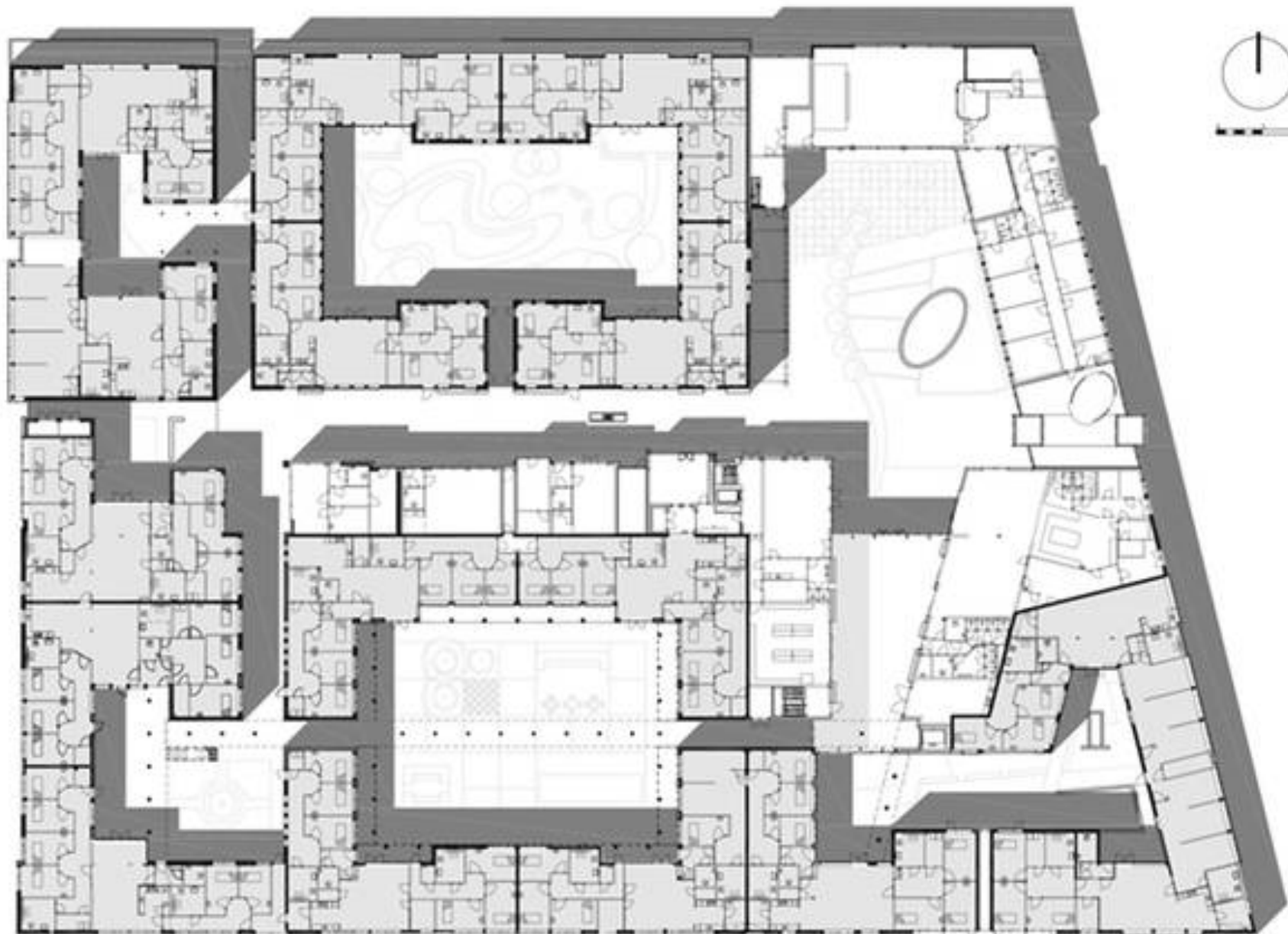


The Hogeweyk staff includes 240 people, with 170 full-time employees. And the workers are all-inclusive, including care workers—doctors and nurses—as well as restaurant, supermarket and cinema workers.

The 0.84 care ratio not include the doctor and after time the soothing effects of the village help residents to be less aggressive and less restless.

While there is no treatment for the disease, many residents do seem to get better as they are happy in these environments. “It’s all part of the methods,” according to Eloy. Residents are in a place that is recognizable, normal, safe and secure.







Måltider photograph: KopArt, Amstelveen



Helping to prepare the food, photograph: Anita Edridge

- *“We want to be a neighbourhood that is as ordinary as possible. We want to attract other people in precisely because ... our residents can no longer leave the neighbourhood. Our facilities are therefore open to people from the outside too.”*

Eloy van Hal  
Facility Manager, De Hogeweyk





In addition to the common areas of the dementia care village, each home is designed to match the class and culture of one of 7 different resident lifestyles:

*Stads* — Urban, casual

*Goois* – Upper class

*Ambachtelijke* – Working, farmers class

*Indische* – Indonesian/Dutch East Indies

*Huiselijke* – Homy

*Cultural* – Arts and culture

*Christelijke* – Christian



'Cultural' lifestyle, photograph: KopArt, Amstelveen









And the De Hogeweyk complex is set up like a village with an old fashioned supermarket, town square, theater, pub and café restaurant, so that residents can live social lives, despite their conditions. After all, having fun and enjoying life is essential for quality of life—important ingredients responsible for some of De Hogeweyk's success.



Thanks you for your attention!  
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