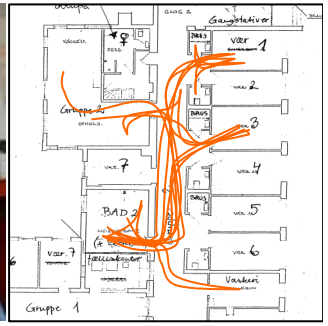
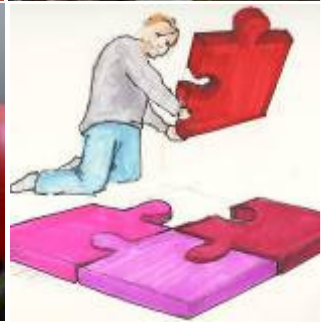
NEXØHUSET
Nexøhuset


Gangtilsiver
Gruppe 1

CAFE



“The Nexoehouse is changing”

Service Design Demonstration project
for the Danish Enterprise and Construction Authority

Report by:
Architect/Industrial Designer Annette Krath Poulsen
AKP Design
March 2008

INDEX

- CHALLENGE
- USERDRIVEN METHOD
- RESEARCH AND ANALYSIS
- IDEA AND CONCEPT
- RESULTS

CHALLENGE

- From co-housing scheme for adolescents to co-housing scheme for the adults
- From institution to sheltered housing units with integrated services/support
- From manual processes to it and digital processes
- From old converted building to ”tailor made” new built
- From most time spent on care and nursing to more time spent for learning, training and social interaction
- From outings with relatives to ”coffee get together” where the relatives are engaged to their ability (many themselves are pensioners)
- From few social events to more events arranged by the users and their relatives.
- From isolated institution to possibly engaging other citizen groups to interact with Nexoehouse – e.g. pensioners’ clubs, mothers’ groups, swimming clubs, other elderly people or people with disabilities.

THE NEXOEHOUSE IS CHANGING!

The Nexoehouse –
a sheltered residential accommodation
for adults with multi handicaps

The co-housing institution for multi handicapped adolescents: Nexoehouse, is to be rebuilt and extended to become a residential accommodation scheme for disabled adults.

This will result in the residents getting more space and larger degrees of freedom.

The new Nexoehouse will be more spacious but the staff resources and number of residents will remain the same. At the same time the residents will have a growing need for care as they get older.

This represents a challenge: How can the new larger building offer the same sense of security for the staff, the residents and their relatives – the latter often being old age pensioners and often the only relatives.

Regarding to the residents, relatives and staff the focus is to continuously ensure a sense of security in the new and improved settings.
In 2008 AKP Design analyzed the set of challenges presented by the management of the Nexoehouse.

Through observation and interaction with users and care personal AKPDesign has concluded that focus must be on the residents' individual needs, self sufficiency and potential, created through new work processes and newest assistive technology for care personal supported by new forms of communication between residents, relatives and staff.

The Nexoehouse (Nexøhuset)
Stenbrudsvej 23, Nexø, Municipality of Bornholm Region, Denmark.

A sheltered residential accommodation for adults with multi handicaps.
Management 2008:
Marianne Kofoed Pedersen

AKP Design
Harsdorffsvej 10, 1874 Frederiksberg C, Denmark.
www.akpdesign.dk

A Danish design and innovation studio specialized in developing new concepts for healthcare and rehabilitation in the public service sector.
Project management:
Annette Krath Poulsen, Architect/Industrial Designer

ATTENTION POINTS

The staff at the Nexoehouse is short of time and “free hands”– there are few people to care for ever more required needs from the users.

Much time is used on practical care tasks and too little time is available for training and rehabilitating the users.

The staff have to remember and keep mental note about lots of information during the work day. A 30 minutes overlap is used to communicate and transfer information between co-workers.
Thus the risk of forgetting information and making mistakes is high.

Activities take place in the Activity Centre and the Sensory Room 2-3 hours each morning as plenary sessions. These rooms are mostly empty for the rest of the day.

Almost all residents are woken up to attend activities at the same time (bathing, eating, social and training activities, resting, medicine, coffee, relaxing). During the day ”bottle neck” situations occur and residents experience a lot of waiting time on their own.

The lay-out of the building is out-dated in relation to Danish standards as they are 20 years old. Toilets and bathrooms are in corridors and not in apartments.

The majority of residents require physical support in all daily activities.

The service is not only covering basic care but also involves help with socializing, training/rehabilitation and leisure activities.

There is not much time for one-on-one support additional to the basic care but the residents still depend on support by staff to access leisure activities such as puzzles and musical instruments as well as social activities.

Outside the Sensory Room and the use of audio tapes there are no technological aids that might self-activate the residents.

As the users of the Nexoehouse are adults aged 40 years or more, the majority of the relatives are old age pensioners. They find the task of helping their disabled son/daughter ever more overwhelming. They might no longer feel able to bring their relatives out or for home visits without the support of staff. They also worry about the future and about who will take over when they are no longer around.

For information and communication with the Nexoehouse relatives often prefer letters and posters to digital communication such as SMS texts or emails.

There is not many visitors to the house other that the relatives and there are no exchange of services with other local institutions regarding for example use of facilities (Sensory Room, Activity Centre).

THE USER DRIVEN METHOD

The project is carried out using AKP Design's experienced methods of user involvement in design and innovation:

PROCESS

Research and analysis > Ideas and concepts > Implementation

DOCUMENTATION

All workshops for staff and relatives are documented using photographs and dicta phones.

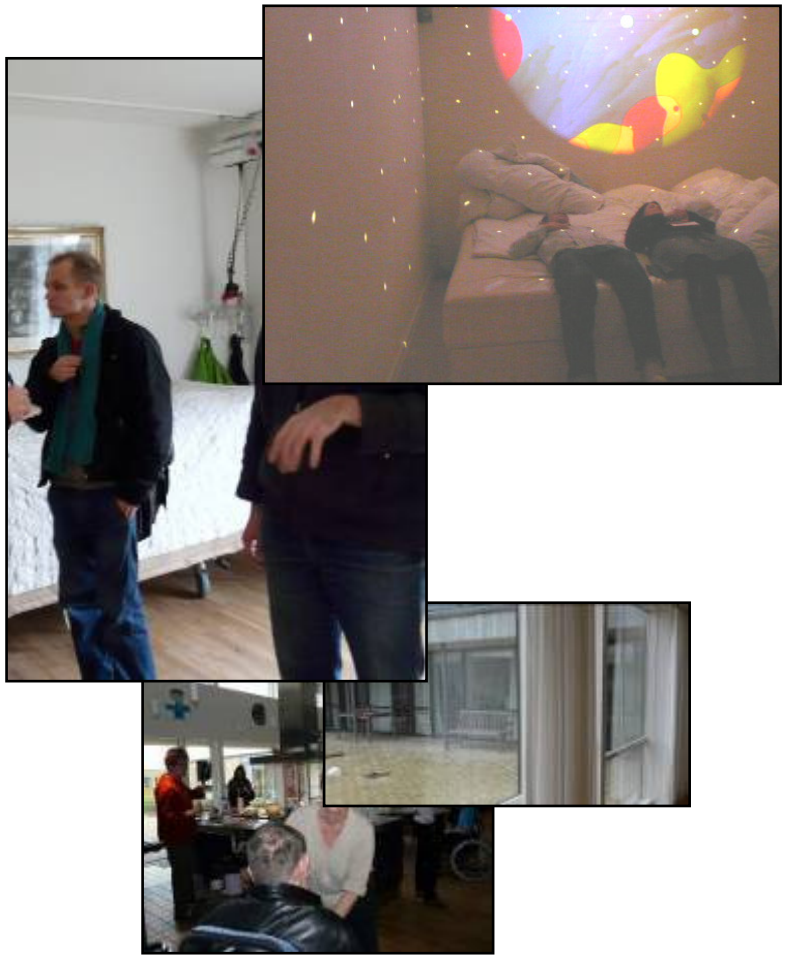
PROJECT TEAM

A focus group of 7 people picked broadly among the staff including the management + relatives have been working with AKP Design.

The residents are not themselves able to contribute directly and have been represented by staff and relatives.

Experts on building for people with disabilities as well as experts on new technology were part of the selective process.

THE USER DRIVEN METHOD

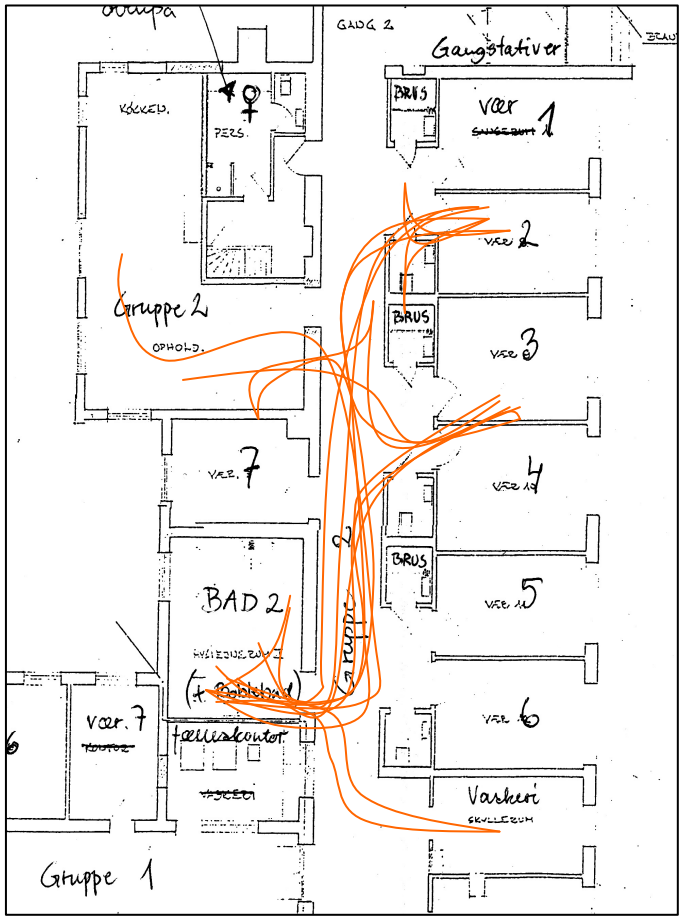


RESEARCH

Global research was done in the areas of smart/intelligent housing for people with disabilities, technological equipment and it- systems.

Networks with other institutions and distributors/developers were established for exchange of knowledge.

THE USER DRIVEN METHOD



FLOWCHARTS

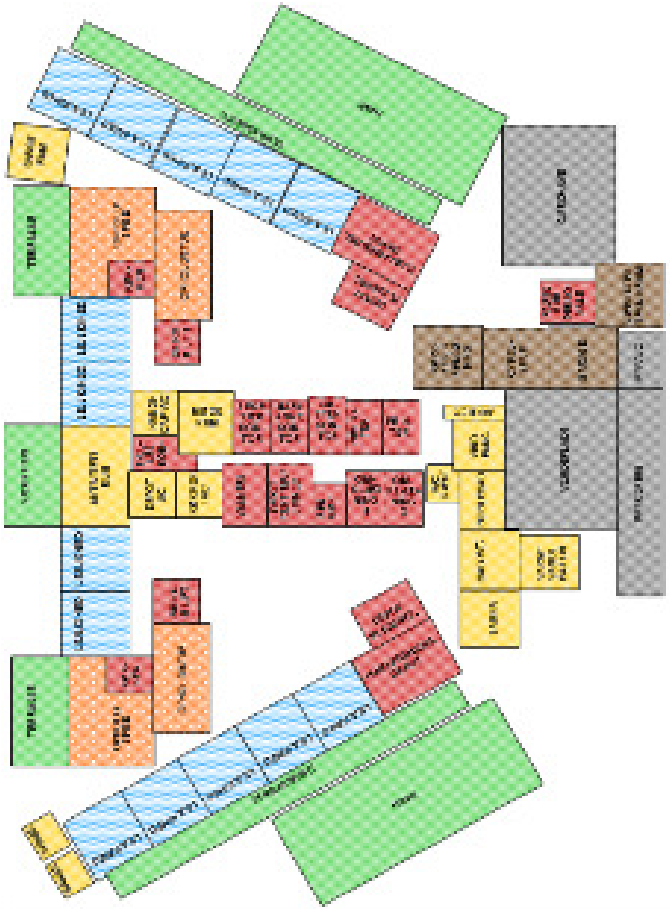
Two designers moved in to the Nexoehouse to observe and engage with staff and relatives. They followed a member of staff during both day and night shifts. Based of their observations a flow chart was drawn up. This chart illustrates the “route” of one member of staff during a 2 hour work period. In this time the staff member attends to two residents during their morning routine which involves waking up, getting out of bed, toileting, washing, getting dressed and finally resettling in the living room for breakfast

The chart represents a significant “wow” experience for both the staff, the management and the architect programming the new building. The orange lines illustrates how many times the staff member in question has repeated the same distance.

From the summary of the observation it is apparent that many trips were to collect things needed to support a task (clothing, linen, nappies, assistive technology or colleges)

The conclusion is that key function rooms are to be placed in close dialogue and very rational in the building to minimize these extra trips during the work day.

THE USER DRIVEN METHOD

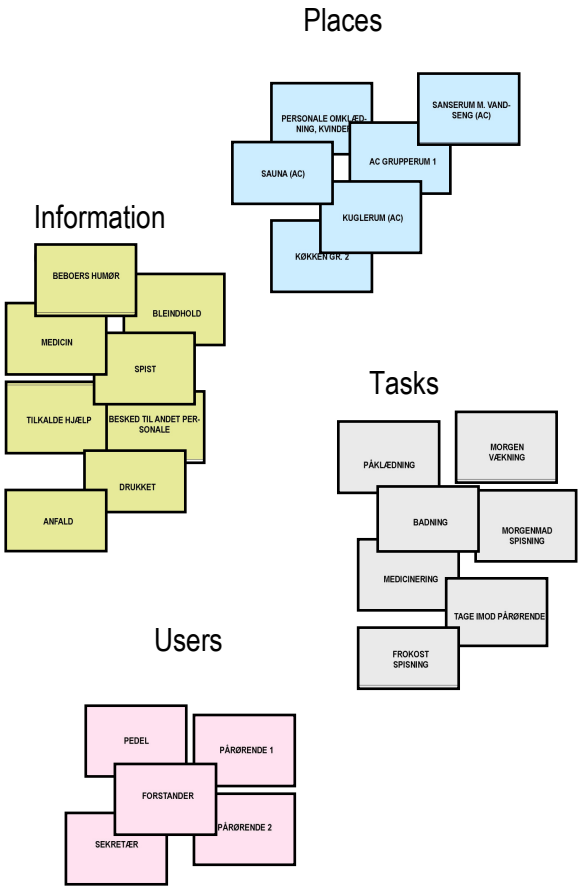


ROOM FUNCTIONALITY

Knowledge on physical facilities, technical equipment, rooms and interior is connected with knowledge on work processes for staff and life quality for the residents and their relatives.

This enables staff to discuss how rooms should be placed and which functions they should have in relation to each other.

THE USER DRIVEN METHOD



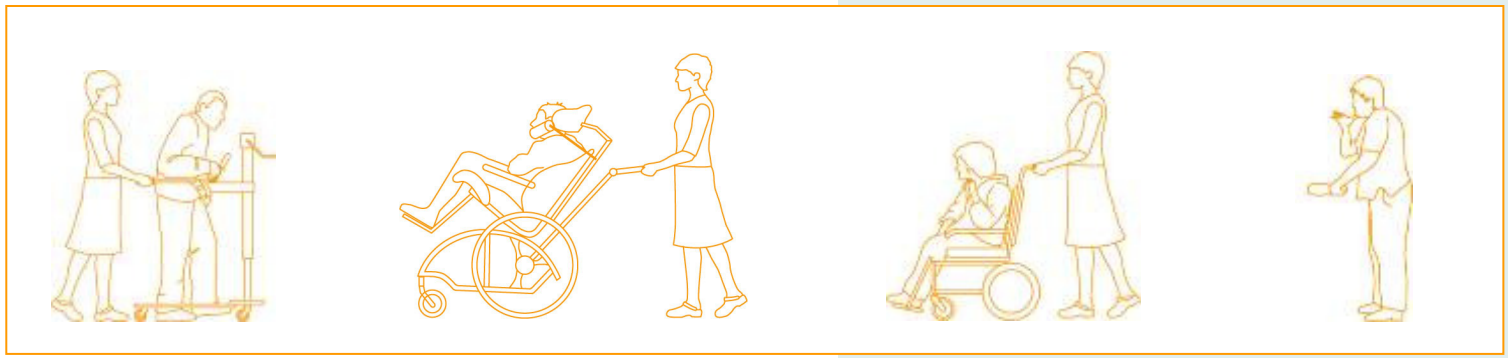
STORYTELLING

Tools for conducting interactive interviews, role play and games were used to collect and qualify knowledge about the existing Nexoehouse and map the potential changes.

THE USER DRIVEN METHOD

PERSONAS

Profiles describing the functional level and the abilities of the individual users in Nexoehouse were defined in close collaboration with staff and relatives.



THE USER DRIVEN METHOD

wake up > empty urine bag > transfer
> wash > dress > get assistive aid >
get colleague > transfer > change nappy >
remember things about the resident >
give breakfast > get medicine, nappies etc. >
notify cleaning staff > check calendar >
coordinate wit h colleague > transfer to activities >
activities > activities outside >
activities in the Activity Centre >
transfer back from AC > waiting >
toileting > give medicine > check calendar >
collect information > check shift plans >
prepare lunch > eat lunch > clear up after lunch >
prepare for nap > answer telephone >
prepare medicine > wake up from nap >
staff meeting > visits from relatives >
prepare dinner > eat dinner >
clear up after dinner > evening school >
watch television > coffee > prepare for night >
rapport to journal system > overlap

EXPERIENCE MAP

The designers compiled the information generated from the research and analysis regarding the facilities and buildings, the users, the equipment, the processes and the service experience in general.

The journey through the day is mapped in a complete EXPERIENCE MAP that is later used together with JOKERS to generate a perfect concept for new ideas.

THE USER DRIVEN METHOD

JOKERS

Concepts for the living units were generated through JOKER games where new ideas can be put in play for better flow and better user experience. All ideas are evaluated with the residents and relatives.

Ideas for both low- and hi-tech changes were suggested. New work processes, work habits and traditions, new assistive technology, new ways of engaging and communicating with relatives, new lay-outs for the house planning were conceptualized.

Ideas have been discussed, evaluated and prioritized, further qualified through questionnaires and score games to enable prioritizing through involving the management and other staff, the residents and relatives.

RESULTS AND OUT COME

IDEAS FOR CHANGE IN 3 LEVELS

A) Changes that can be implemented directly into the existing Nexoehouse. Selected ideas have been realized all ready in 2008, e.g.:

New ways for dialogue with relatives through new information services and new ways of meeting.

The more individually adjustable day for each user - changing especially the morning routines, the hot/cold meal routines and the activity center routines.

B) Changes requiring further development before implementation in the Nexoehouse and elsewhere. Selected ideas that are being developed with support from Danish government from 2009 onwards:

Digital work tools to support care personal in communication, reporting and journalizing and prevent stress factors.

Intelligent assistive technology for a better work environment as well as a better user experience. E.g. “The Optimum Care Toilet” and “Technology to support users own potential” are two innovation projects initiated in 2009 with support from Danish Government.

C) Changes to be implemented as part of the rebuilt project in the Nexoehouse:

The interior design and planning of e.g. activity rooms and rooms for personal hygiene, bath and toilet based on information generated by the project are being implemented in the new buildings.

AKP design USER INVOLVING PROCESS

Generating ideas and possibilities ▪▪▪▪▪▪▪▪▪▪▪▪▶ *Forming Ideas into concepts with users* ▪▪▪▪▪▪▪▪▪▪▪▪▶ *Specifying and prioritizing with experts*

EXCISTING KNOWLEDGE ON ….
assistive technology – health care – ageing – handicap – accessible building – processes – market global perspectives – experience in user involvement

PROCESSE AND WORKFLOW monitoring fall prevention alarms breath heart beat sensors robotter mobile it touch screen tactile interface speech meeting

ROUTINES AND HABITS
eating sleeping smoothies cooking wellness swimming pool hanging out socializing

ACTIVITIES music on-of training mobility self containing potential Snoezel stimuli swing relaying

COMMUNICATING WITH RELATIVES
info-board red-thread-portfolio book a helper

BUILDINGS AND INTERIOR PLANNING
activities as part of the building light sound projections silence room sensors no bad smells rfid-tags locks

ASSISTIVE TECHNOLOGY outdoor wheelchairs and lifts automatic toilet lifts in ceilings robot seal for caring self activating activities

GENERATED KNOWLEDGE THROUGH….
observation – interview - trials - discussion – interaction – involvement of users, relatives, staff and experts

DIGITAL TOOLS FOR CARE PERSONAL

ACTIVITIES ALL OVER ALL DAY

NEW WAYS OF MEETINGS AND INTERACTING

A BUILDING THAT STIMULATES THE SENSES

TECHNOLOGY FOR SELF SUPPORT

ACQUIRED KNOWLEDGE BY…
demanding - specifying - evaluating – scaling – planning - choosing – prioritizing – calculating – effectiveness – measuring – implementing

CONCEPT OF CHANGE NO1:
”NEW HABITS AND NEW TRADITIONS IN THE NEXOEHOUSE”

CONCEPT OF CHANGE NO2:
”MORE INDIVIDUAL EXPERIENCE FOR RESIDENTS IN THE NEXOEHOUSE”

CONCEPT OF CHANGE NO3:
”IT, TECHNOLOGY AND TRAINING TO UPDATE STAFF”