Designing for care
Towards an inclusive living environment
Neighborhood Observation

Elderly Mobility
Movable Distance for 10 minutes depending on the moving methods.

Short Movie: “Daily Journey of Old lady” (2018) / Film by E. Hong
Rotterdam: Parkflat & Acadia

Social Isolation
Not accessible beautiful park
Surrounded by moat
Isolated and not in use
Nice garden
Arcadia & Parkflat

The best place in the whole building is occupied by DOCK which is the elderly care company; however, they are not working for the Arcadia & Parkflat. Beautiful garden, a lot of natural light, accessibility to every part of the building.

Apartments from Arcadia cannot enter Parkflat. Parkflat can pass both ways.
Arcadia Parkflat Park

Conflicts between pedestrians and vehicles

Pedestrian walkway isn't in use at all

Stop / waiting

Loading / Unloading

Bike parking

(Recorded 20 min. per each hour / 3 hours in total / 8am - 5pm)

Short Movie: "A day of Parkflat, Rotterdam" (2018) / Film by E. Hong

a Day of
Parkflat Rotterdam
17 Oct 2018 / 8am - 5pm
Seoul: Grandmother’s funeral

Family

Yu, Hosuk
(1925 - 2018)
Family issues

1. Increasing needs of family caregivers

2. Family structure changes

3. Physical distance
By 2060, there could be as few as one potential carer for 51 persons aged 80 and older
2. Family structure changes

Traditional Family

Beanpole Family

Male  Female
3. Physical distance
The need for a new family
Problems in developing intimate relationships in current situation of the elderly

Decrease in physical mobility

Large scale of institutional elderly home

Loss of link with society after retirement

Decreased social role of the elderly
### Decrease in Physical Mobility

<table>
<thead>
<tr>
<th>Condition</th>
<th>Without Mobility Problems</th>
<th>With Mobility Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less Happy</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Less Content with Life</td>
<td>31</td>
<td>27</td>
</tr>
<tr>
<td>Few Contacts with Family</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Few Contacts with Friends</td>
<td>4</td>
<td>11</td>
</tr>
</tbody>
</table>

### Large Scale of Institutional Elderly Home

---

- Without mobility problems
- With mobility problems
How to make a new family?
Social relationship development structure
“Gradual expansion of social environment for intimate relationship”
Social interaction steps

Young people

Elderly people
“Where is the link to the neighbour who lives next door?”
Intimate in-between space

“Intimate relationship with your direct neighbor”
Playing game

Having dinner together
Tea time - Expanded living room

Jacuzzi bath
Public Water features
Why not the elderly?
Canal

"Inaccessible water
High risk of falling into water for the elderly
Lack of space around"
Shallow mirror pool

"Accessible water
Less risk of falling into water
Silent water feature
Available in various seasons"
Water Fountain

“Semi-accessible water
Meeting point
Outward direction
Sounds of water”
Dry fountain

"Accessible water
No risk of falling into water
Active water feature for all ages
Multi-functional space
Sounds and rhythm"
Lake

"Accessible water
Natural water feature
Surrounded by nature
Large scale
Various activities"
Artificial water stream

“Accessible water
Water flow
Active water feature for all ages
Small scale
Directional”
Urban water stream

"Accessible water
Water flow
Active water feature for all ages
Small scale
Directional"
Social relationship development structure
Social relationship development structure

Common values and experience
Relation with Society

Social relationship development structure

Common values and experience
Volkstuin
(Community Garden)

“Link between the elderly and society“
Characteristics of community garden

**Membership**
Sense of belonging / Social participation / Collectivity

**Sharing**
Gardening resources / Knowledge to young people

**Small scale**
Self-sufficient life / Autonomy

**Activity**
Interact and socialize with neighbour
Benefits of community garden

**Social**
Spend time with family /
Strengthening social relations in the neighbourhood.

**Education**
Sharing knowledge, introducing children about gardening and food production.

**Food**
Produce own local food.

**Health**
Allowing people to spend more time in nature.
Stimulate a healthier lifestyle.
De volkstuin als groen wijkcentrum: 'Kom je nog eens uit je bubbel'

De volkstuin als het groene middelpunt van de wijk. Het is de voorstelling van de landelijke organisatie van hobbytuinders AVVN, nu de populariteit van volkstuinen een nieuw hoogtepunt bereikt. Wachttijden voor een stuk grond lopen in extreme gevallen op tot twintig jaar. De tuinen moeten daarom een andere rol krijgen, vindt AVVN-voorzitter Ruud Grondel. "Er is steeds meer belangstelling voor groen, natuur en gezond voedsel. En je ziet ook dat stedelingen die in een appartementje wonen op zoek zijn naar een stukje groen."

Om toch zoveel mogelijk mensen van de volkstuin te kunnen laten genieten, krijgt de tuin steeds vaker de rol van een gemeenschappelijk park waar iedereen uit de buurt welkom is. Ook als je zelf op dat park geen tuin hebt. "Je kan er een broodje eten, er even doorheen wandelen of van het lekkere weer genieten. Die kant willen we steeds meer op. Wat ons betreft komt er in iedere woonwijk een volkstuin."
Living in the ‘Volkstuin’ (community garden)

Gradual expansion of social relationship to make a ‘New Family’

‘Volkstuin’ as a link between the elderly and society
Volkstuin Living system in the society

- Family
- Rent out garden plot
- Take care of garden
- Experience / Knowledge
- Day care for child
- Natural
- Family visiting
- Elderly people
- Close relation with neighbors
- Social belonging
- Society
- Rent out garden plot
- Housing Developer

Volkstuin Living
Single Plot Shelter Storage Bench Water stream Shallow mirror pool Dry Fountain Market stall Garden table Pergola Playground Kid’s Game court Scoot Mobile Tool sharing Bike Parking Waste Office Communal Living & Kitchen Education Care Volkstuin Living Ingredients
Private Units

Single elderly: 38 m²
Couple elderly: 60 m²
Young Family: 75 m²
Family: 80 m²

60% 40%
A New Family Clusters

4 units
min. 4 people
max. 12 people

6 units
min. 6 people
max. 16 people

8 units
min. 8 people
max. 22 people
Space Program and Access
Sustainable transformation according to social needs
Low rise building
It is difficult to have interaction between floors in multiple floor buildings. Double floor building enables people to communicate between floors and have much close connection with neighbors live in different floor.

Easy access to courtyard
Courtyard is surrounded with corridor. Along the circulating corridor, doors are located in every side which helps easy access to the garden.

Recessed bench around courtyard garden
There are many benches in the cluster and also around the courtyard. Elderly people can sit whenever they need to take few minutes while they are walking.
**Greenhouse**
Greenhouse with aquaponics can be an alternative for growing vegetables on soilless rooftop. Also, it doesn’t block the sunlight entering the courtyard garden.

**Sharing**
Sharing is the key sense of the Volkstuin. Not everyone needs to own their own things.

**Raised garden bed**
Raised garden beds enable people with disabilities and the elderly people with mobility issues to garden.

**Courtyard**
The courtyard is a place where people who live in the cluster share their common goals and values which can build a new family.

**Stairs**
Access to the vertical circulation passes through main communal space, courtyard, to increase contact with the cluster community.
Memory shelf

Elderly people can display their personal belongings, interests, and memories. They can interact with neighbors indirectly.

Recessed furniture

Memory shelf, front door, and bench are recessed with structural columns which prevents columns bumping by wheelchair, walker, and scooter mobile.

Window towards corridor & courtyard garden

From in side of house, the elderly can have view towards corridor and courtyard garden. This makes keep visual connection from home-corridor-garden. Of course if they don’t want people seeing in side of their home, they can always blind the window.
Greenhouse with Aquaponics

Aquaponics systems are self-contained and require no digging in the ground, heavy lifting of soils and even watering is at a minimum with the Aquaponic system. Aquaponic can be an ideal gardening system for the elderly.

‘My’ house

Not only interior materials but also exterior cladding can be customized depending on the elderly’s preference. The sense of ‘My’ house can be recognizable from the outside of the cluster.

Care supporting

Main care facility is not placed in the cluster which prevents the care from dominating the elderly residential area. Instead, there is an supporting space for care in the cluster, so elderly people can find the caregiver at any time.
In-between units space are also starting point of connection to the other cluster. By each of the elderlies preference, this space can be open to public or private by green fence.

Customized Activities

It is difficult to provide spaces for various hobbies of elderly people that satisfies everyone in small scale elderly home. Thus, by providing extra spaces, elderly people can do their own activities they want and need. This is similar characteristic of 'Volkstuin'.

In-between space

In-between units, extra outdoor spaces are placed with deck. This extra space can be mainly used by two direct neighbors and this space can help the elderly to build intimate social relationship as smallest scale.
Scoot mobile sharing

Like mobile sharing these days for the yougers, the scoot mobile can be shared to the elderly which enhances their mobility to extend their daily life to the surrounding neighborhood.

Volkstuin (Community garden)

Volkstuin acts as an essential link between the elderly and society. People from neighborhoods and the family of elderly people can do gardening just next to the elderly home which can have more contact with the neighbors and their family. Elderly people can share their knowledge regarding gardening and take care of other people's garden during the weekday.
Greenhouse living room

Communal greenhouse is not only for growing plants and vegetables but also can be used as kitchen and living room. People can have a coffee, breakfast, lunch together. Especially, during winters, elderly people are more likely to stay in their rooms and less contact with nature and greenhouse can help them not to stick in their private room.

Smooth corner

In the corridor, rounded shape corner makes easier for the elderly without bumping to the edge.

Visual connection

Corridor and courtyard garden are closely connected visually and physically. Main entrance of cluster and stairs to upper floor are located around the courtyard garden which makes more contacts with their family neighbors. If they don't want to be seen by others, they always can use sub entrance from outside of cluster directly connected to their house.
Roof
30*38mm Scottish larch timber cladding
30*40mm Battens every 480mm
30mm Ventilation gap
120mm Wood fiber Insulation
124mm CLT Structural panel

Facade
30*38mm Scottish larch timber cladding
18mm Timber cladding clip / Ventilation gap
30*40mm Battens
120mm Wood fiber Insulation
124mm CLT Structural panel
50*35mm Battens / Air gap
10mm *2 Gymsum fiber board

Floor
17mm 1860 x 189 mm Normadie Solid wood
(Suitable for floor heating and cooling)
3mm Flexible adhesive
45mm Cement screed
45mm Floor heating pipe / pocketed polystyrene
20mm Sound proof Insulation
160mm CLT Structural floor (40/20/40/20/40)
External Wall:
- 10mm *2 Gymsum fiber board
- 50*35mm Battens / Air gap
- 124mm CLT Structural panel
- 120mm I-joists with insulation / Wood fiber Insulation
- 30*40mm Battens / Ventilation gap
- 18mm Timber cladding clip / Ventilation gap
- 30*38mm Scottish larch timber cladding

Internal Wall:
- 10mm *2 Gymsum fiber board
- 124mm CLT Structural panel
- 10mm *2 Gymsum fiber board

Stairs:
- 120mm CLT Structural panel

Door:
- 1220*2200mm Outswing Triple glazed solid wooden frame door

Floor:
- 400*400mm Anti slip Grey Ceramic Tile

1:20 Horizontal Section
Roof
- 30*38mm Scottish larch timber cladding
- 30*40mm Battens every 480mm
- 30mm Ventilation gap

Internal wall
- 10mm *2 Gymsum fiber board
- 124mm CLT Structural panel
- 10mm *2 Gymsum fiber board

Door
- 40mm Triple glazed glass
- 78*100mm Oak Solid wooden profile
- Treated with hard wax oil
- Aluminium Barrier free door sill

Foundation
- 120mm Rigid Insulation
- 10mm Tight fit dowels
- 20mm concealed metal plate connection
- 150mm Reinforced Concrete foundation

Floor
- 17mm 1860*189 mm Normadie Solid wood
- (Suitable for floor heating and cooling)
- 3mm Flexible adhesive
- 45mm Cement screed
- 30mm Floor heating pipe
- 20mm Sound proof Insulation
- 160mm CLT Structural floor
- 100mm Rigid Insulation
Dank je wel!