Design game

Housing Design: Research and Practice
Anne Tervo 8.11.2021

What can we share? A design game for developing the shared spaces in housing

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Demographic and economic changes challenge urban housing and highlight the need for resident-centred design. This paper discusses a design game created to study the perceptions towards shared spaces among solo living tenants. The game was based on the identification and weighing of significant home-related spaces, functions and services in a framework defined by a minimum dwelling complemented with optional shared facilities. It included an economic variable to simulate real-life choices. The design game provided a tool for gathering user knowledge, opened up different resident profiles, and guided the participants in explicating their preferences as well as negotiating the boundaries between shared and private spaces. This method could be utilised when developing new housing concepts or for reprogramming existing spaces.

Keywords: architectural design, built environment, design games, design research, participatory design

A method to gather user knowledge, regarding the perceptions of residents towards *shared domestic spaces*, for the use of design process when

1. developing new housing concepts
2. reprogramming existing spaces

Why this type of method is important in terms of housing concepts based on sharing?

The existing housing stock largely determines what is considered possible and desirable by laypeople (Clapham, 2005). Thus, asking residents' opinions is unlikely to lead innovations (ref. Antti Pirinen's lecture later on this course).
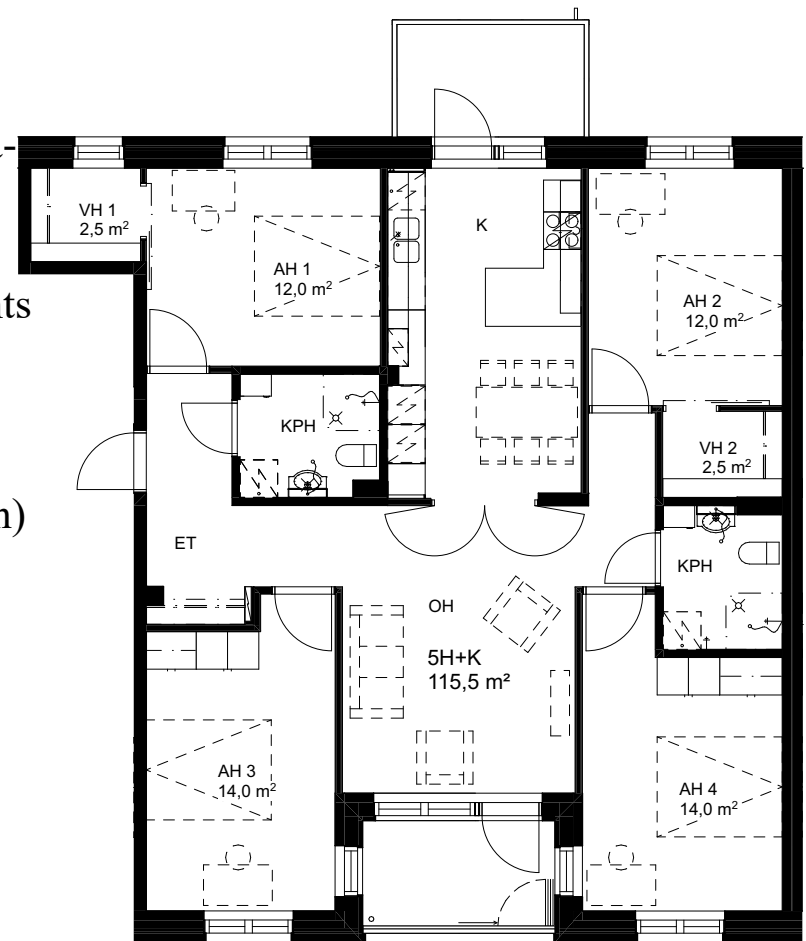
A Finnish example of an innovative housing concept based on sharing: Group tenancy

- Homes with space solutions that combine privacy and shared space
- Each tenant has own tenancy agreement
- Differs from student dormitories in that residents can choose who they live with

Architecture and Design Talli + A-kruunu, pilot project, Turumankatu, Helsinki (under construction)

More information: https://www.a-kruunu.fi/en/development-projects/group-tenancy

Check Talli's web pages for other interesting projects: https://www.talli.fi/en

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Info

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Re-thinking Urban Housing

Better housing quality through cooperation

In terms of forms of housing, blocks of flats are very characteristic of Helsinki. The construction of the rapidly-growing city is hinged on an increasingly dense urban structure and good public transport arrangements. 86% of housing units in Helsinki are located in blocks of flats. The aim of the City of Helsinki's Re-thinking Urban Housing programme is to increase the quality and appeal of living in blocks of flats and integrate new personalised solutions into it.

The Re-thinking Urban Housing programme responds to technical, functional, aesthetic, social, housing policy and construction-related development needs pertaining to the design and construction of blocks of flats.

The programme provides developers with the opportunity to try new things and receive valuable guidance from city experts for the development efforts. It also bolsters the visibility of the development project. For residents, the programme equates to new housing alternatives and examples of how to improve the quality of living in blocks of flats.

The Re-thinking Urban Housing programme was established in 2009 and has thus far encompassed some 30 projects. The projects have mainly been carried out on city-owned land, but some have also utilised private plots and existing property. The projects have covered all forms of occupancy.

The programme is coordinated by a city working group consisting of members of the City Executive Office and the Urban Environment Division. Applications for involvement in the programme are being continuously accepted.

Other innovative housing concepts in Helsinki: https://www.hel.fi/kanslia/re-thinking-urban-housing-en/

The main objective was to determine the conditions under which shared domestic spaces might interest these residents.

Asking residents' opinions is likely to reproduce the available housing options, and related attitudes (and prejudices).

Statement: If there were a shared living space, I would use it (e.g. reading newspapers, recycling, meeting neighbours).
Respondents are **NOT USING** shared spaces available in their current housing.
(1 = Completely disagree, 5 = Completely agree)
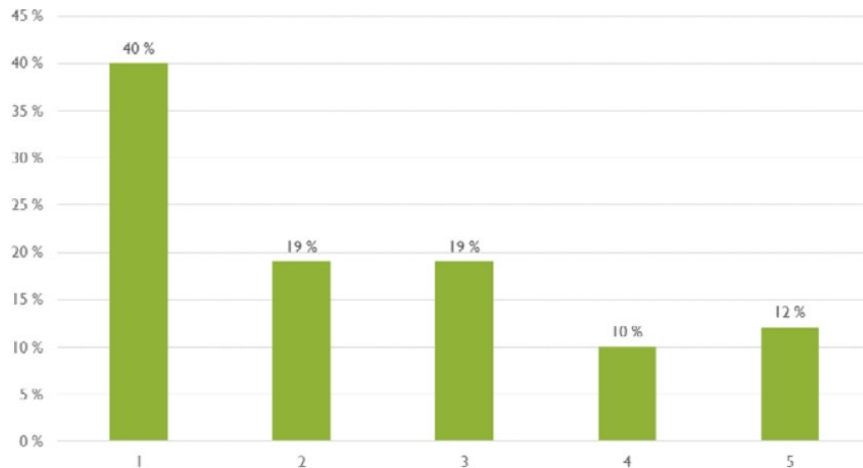
Statement: If there were a shared living space, I would use it (e.g. reading newspapers, recycling, meeting neighbours).
Respondents **ARE USING** shared spaces available in their current housing.
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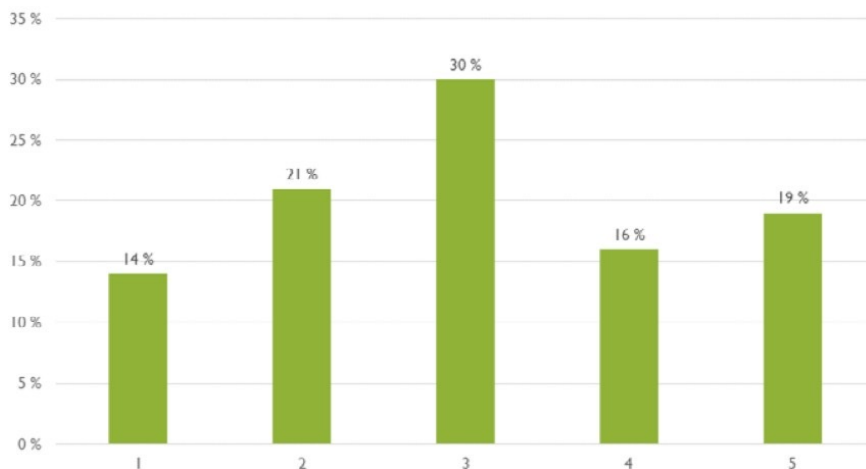
Survey (N = 170) preceding the development of the game method.

Source: Tervo, A., Meriläinen, S. & Pirinen, A. (2018). *Jaetut tilat*. Asumisen rahoitus- ja kehittämiskeskuksen raportteja, 1/2018. https://www.ara.fi/download/noname/%7B1679 903A-B358-4648-BBE7-A446F8D8E4E6%7D/135593
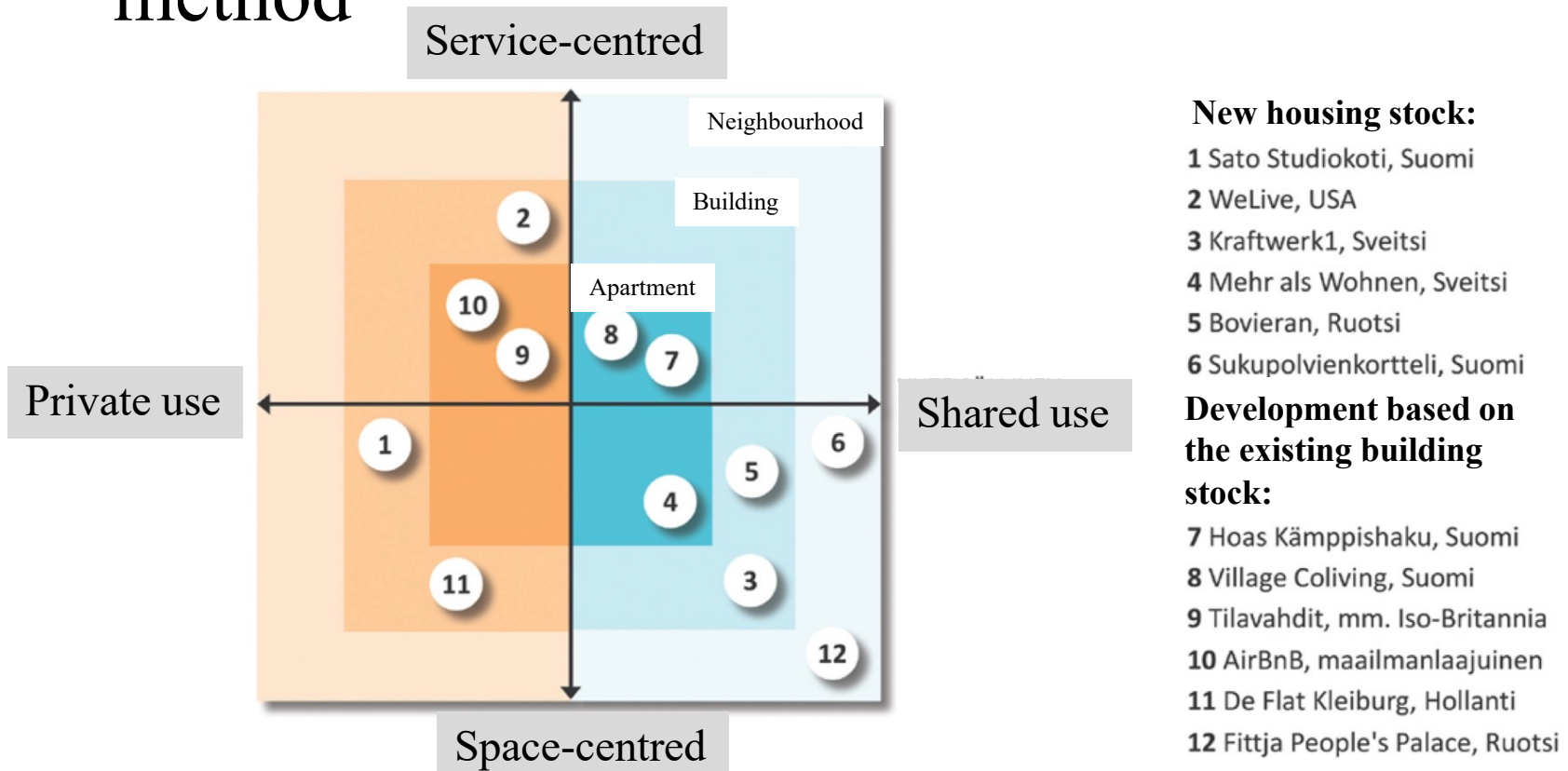
Expert knowledge vs. lay persons' knowledge

Kuva 3.6. Kraftwerk1 Heizenholzin jokaisessa asuinkerroksessa on kalustettava yhteisterassi, jon-ka kautta on sisäänkäynti asuntoihin. (Kuva: www.kraftwerk1.ch/heizenholz/siedlung.html.)

Kuva 3.7. Heizenholz-talossa on kaksi yhteisasumiseen tarkoitettua 330 m2:n klusteriasuntoa. (Kuva: www.kraftwerk1.ch/heizenholz/siedlung.html.)

Kraftwerk1 Heizenholz (2012), Zürich, by Adrian Streich: Innovative collective housing project with sustainable goals, 26 apartments and approximately 85 residents, dwelling: 10 smaller apartment, 12 larger family apartments (79–156 m2), one ten-room shared apartment and two luxurious cluster apartments (330 m2) with spacious shared common areas. Each floor has "terrasse commune" leading to apartments.

Two phases preceding the development of the design game

1. Analysing 12 case examples
2. A survey

In addition, connecting the game with on-going discussion on housing in the Helsinki Metropolitan Area (HMA):
- Decrease in average dwelling size
- Need for micro-houses? Heated discussion.

Connection between case examples and game method

New housing stock:
1 Sato Studiokoti, Suomi
2 WeLive, USA
3 Kraftwerk1, Sveitsi
4 Mehr als Wohnen, Sveitsi
5 Bovieran, Ruotsi
6 Sukupolvienkortteli, Suomi

Development based on the existing building stock:
7 Hoas Kämppishaku, Suomi
8 Village Coliving, Suomi
9 Tilavahdit, mm. Iso-Britannia
10 AirBnB, maailmanlaajuinen
11 De Flat Kleiburg, Hollanti
12 Fittja People's Palace, Ruotsi

Focusing on shared spaces on three levels:
1. same floor as the participants' dwelling
2. in the apartment building in which the respondents' home was located,
3. in the surrounding block or neighbourhood.

Survey (n = 170)

Our aim was
1. to recruit participants for game sessions
2. to find out the residents' attitudes an perceptions towards shared domestic spaces

Who are the respondents and how to reach them?
1. Without respondents you don't have data.
2. Include this to your research plan.
3. When working with organizations you may be able to use their customer data bases (no extra costs): if you want representative data, then the survey has to cover background information (i.e. year of birth, household size, place of residence)
4. Motive the respondents (when first contacting them): Emphasize the importance of their participation. People are tired after work, mention that you provide at least coffee and pastries (budget, allergies and diets). Compensation for the participants (also budget issue)?

Connection between survey and game method

Understanding the significance between private and communal use of shared spaces.

If there were a shared living space, I would use it (e.g. reading newspapers, recycling, meeting neighbours)

I would like to have bobbies (e.g. music, DIY, handicrafts), and I wish that there were space suitable for these activities close to my apartments (e.g. same house or block)

I would be ready to have smaller apartment if I could use various shared spaces (e.g. block living space, recreation/ hobby spaces, quite work space)

I am interested in shared spaces only if I could book them for my own use.

I would not be interested in shared spaces even if they would be developed in line with the residents' desires.

Statement	Value
Shared living space	2,66
Hobbies space	2,99
Smaller apartment	1,96
Book for own use	3,13
Not interested	2,63

(Scale: 1 — 1,5 — 2 — 2,5 — 3 — 3,5 — 4 — 4,5 — 5)
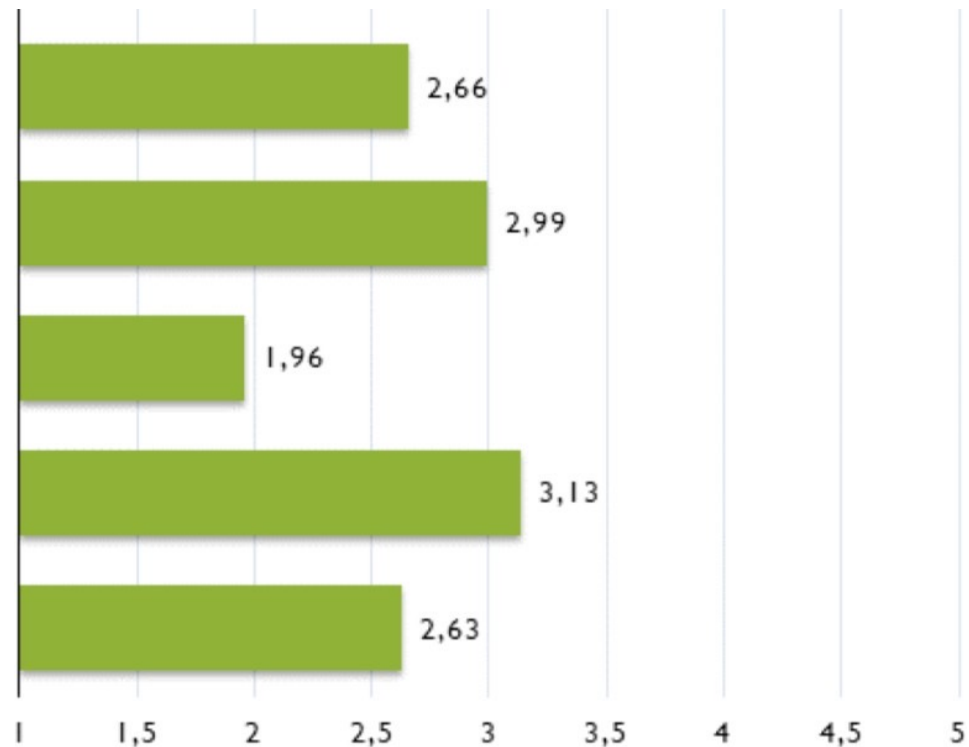
SHARED SPACE IN
PRIVATE USE
(OWN SHIFT)

OWN BLOCK / NEIGHBOURHOOD

SHARED SPACE IN
COMMUNAL USE
(USED WITH OTHERS)

OWN BUILDING

OWN FLOOR

OWN APARTMENT

100e

75e

50e

50e

25e

25e

10e
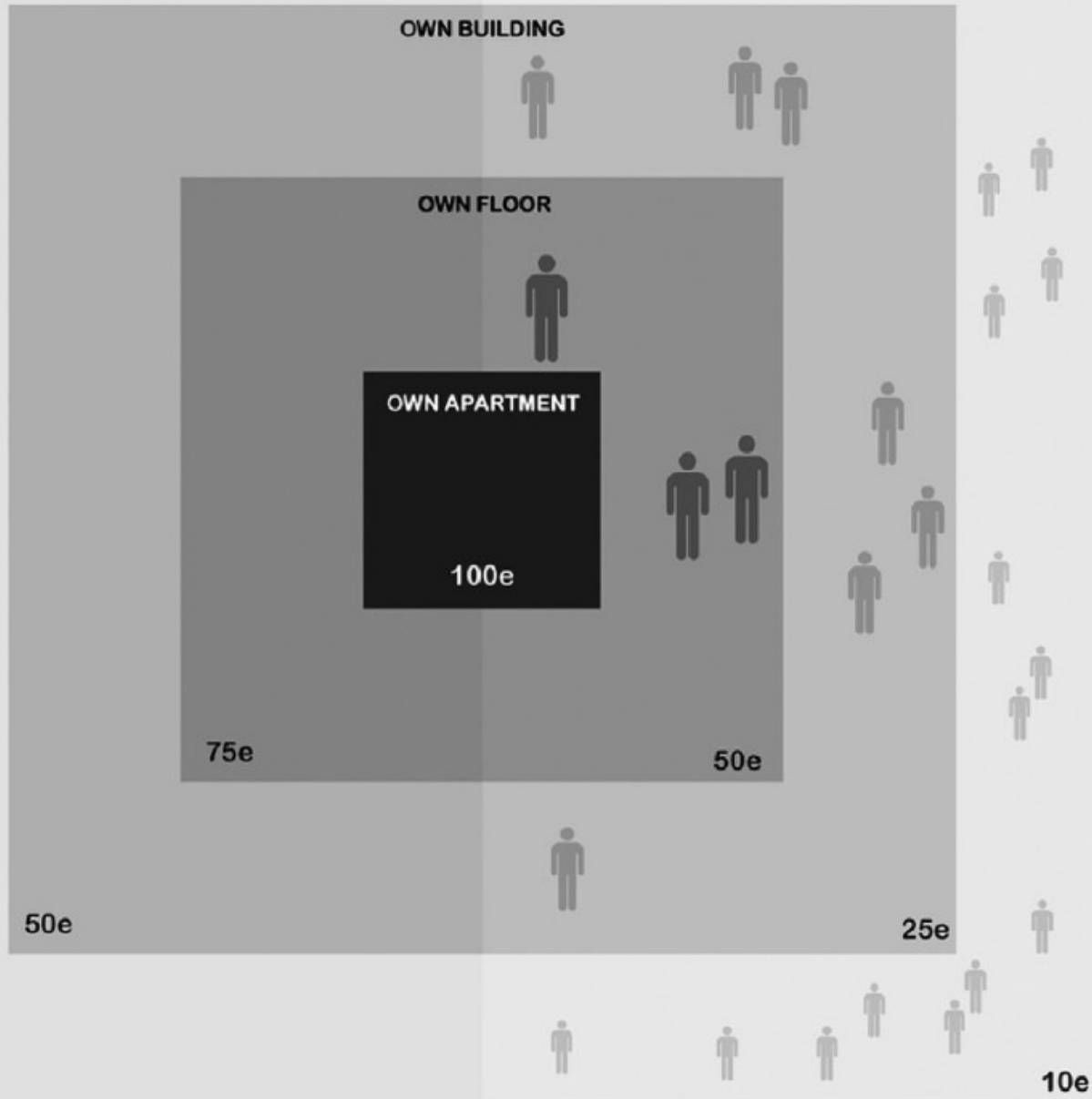
Planning the workshops

Due to last minute cancellations (snow storm, other reasons), we had only 24 participants in three workshops (respondents were provided three dates out which they could choose).

Try to be a perfect host:
1. Invest on easy access and clear instructions
2. Send a friendly reminder before sessions.
3. Make sure that everyone knows why the events are organized and how the data will be used (anonymity, research)
4. Plan for misbehaving participants (substance use, mental problems, misbehaviour)

Manuscript for workshops (2.5 hours)

Time used for data collection is relative short.

		minutes
1	Registration (code + first name), choosing a table	5
2	Welcoming words, presenting moderators, repeating the aims	10
3	**Participants' induction in tables: positive and negative points regarding shared domestic spaces**	**15**
4	"Consultant" presents housing options suitable for solo dwellers	15
5	**Dreaming: What would you like to have (individual task)?**	**15**
6	Coffee break	15
7	Game instructions	5
8	**Playing the game**	**25**
9	Discussing the results in tables	10
10	Introducing the results for other tables, comments.	30
11	Final words, thanking the participants	5

"Consultant" presents housing options suitable for solo dwellers (1/4)

Options for small private apartments?
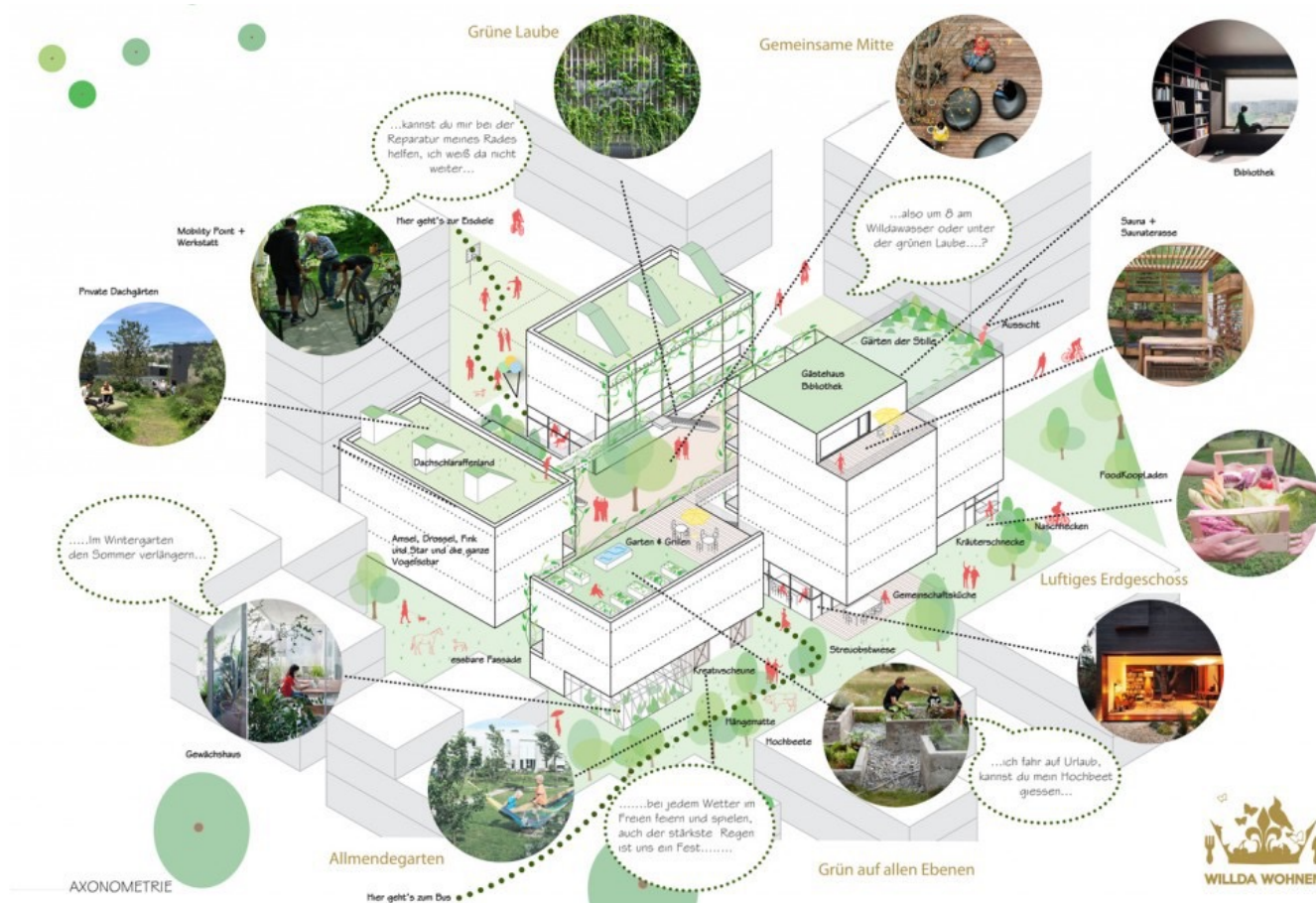
"Consultant" presents housing options suitable for solo dwellers (2/4)

How about micro apartments?

"Consultant" presents housing options suitable for solo dwellers (3/4)

Small apartment AND shared domestic spaces

"Consultant" presents housing options suitable for solo dwellers (4/4)

Shared spaces on three levels: own floor, own building and own block

Participants' introduciton in tables: positive and negative points regarding shared domestic spaces

Dreaming: What would you like to have (individual task)?

What would you like to do at home? What would make your living more fun?

Choose <u>three</u> things/ tasks.

Game rules in a nutshell

1. Minimum dwelling (20 m²) as a starting point.

2. Total housing cost is 500 euros out of which 200 euros is reserved for optional shared spaces and facilities. It is also possible to extent own dwelling: Sharing is not compulsory.
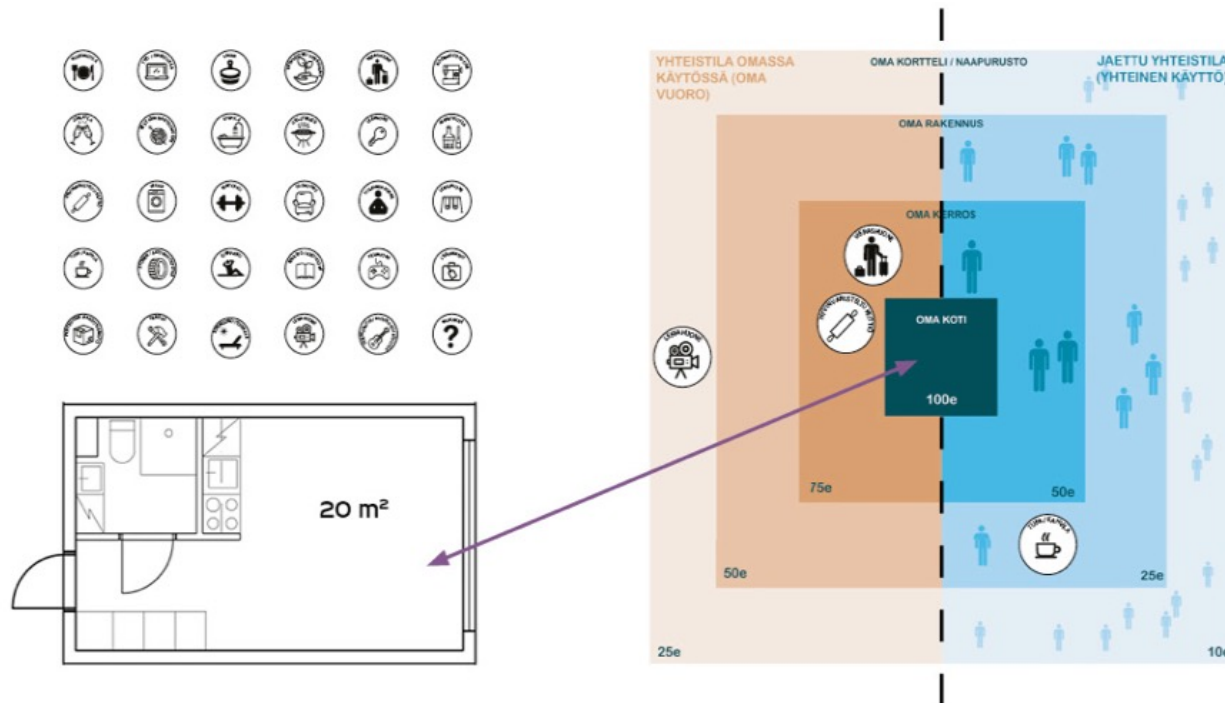
Playing the game (25 minutes)
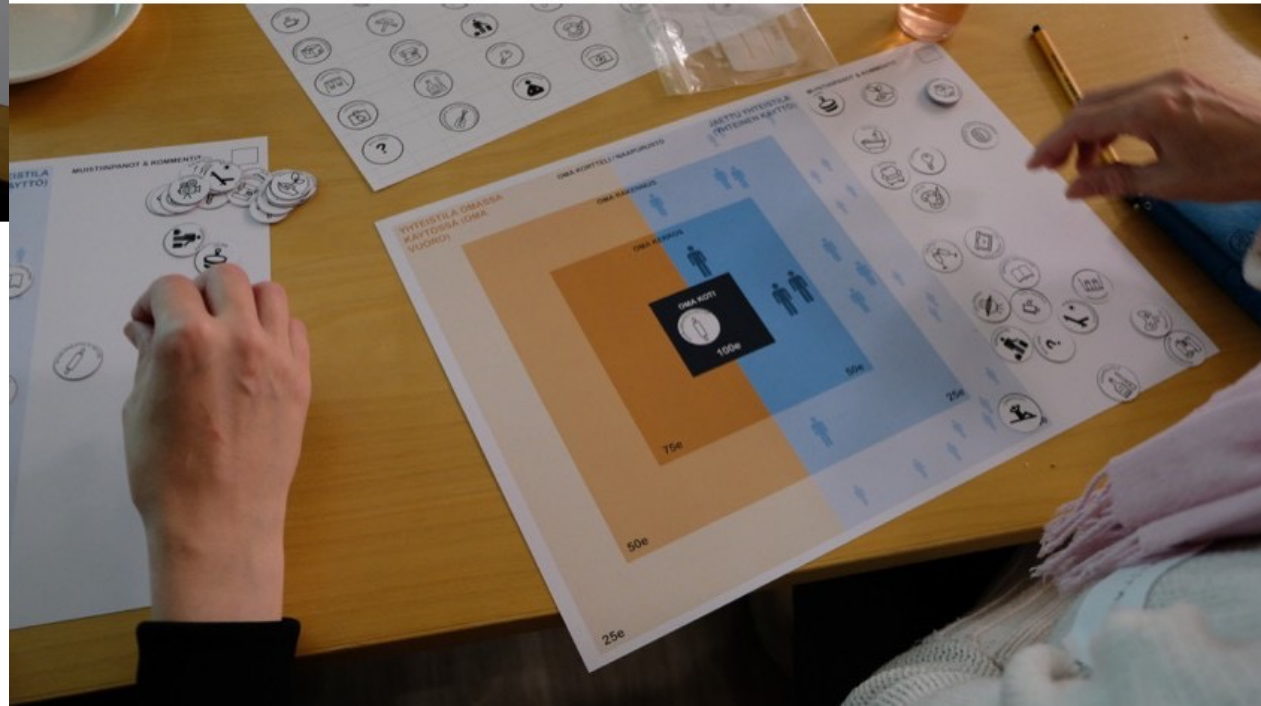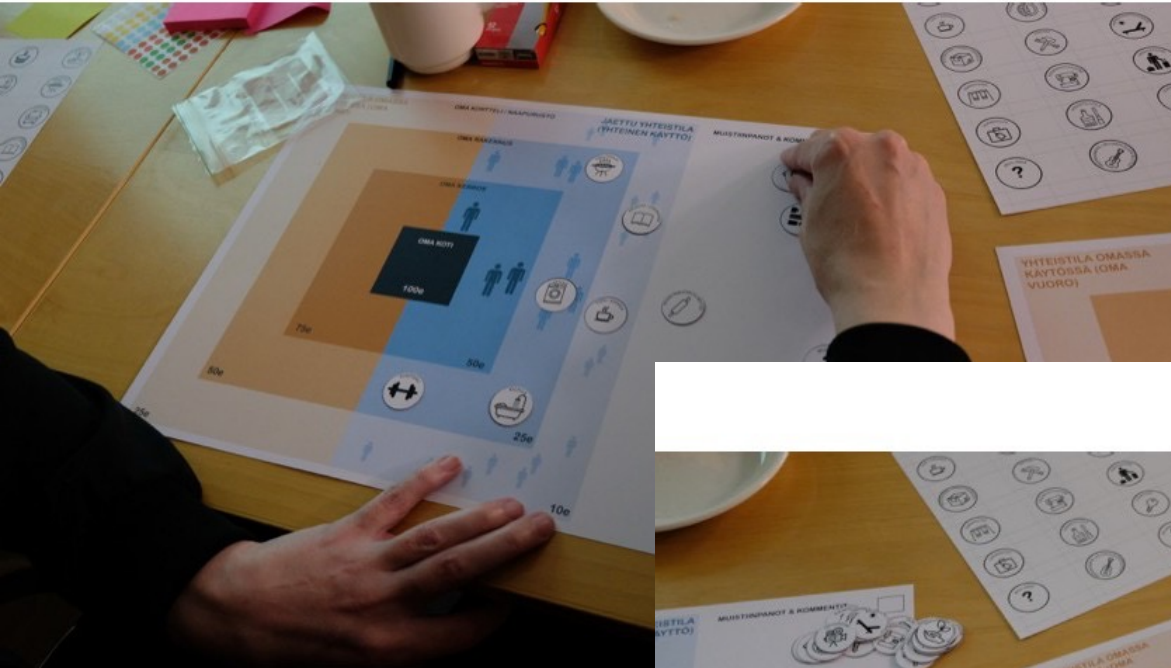
Game twist after 20 minutes

Extra 100 euros: How would you use it (red dots)?
Now also services available, 50 euros each per month (additional sheet).

Services

In our case, the available services were:

- Groceries home delivery
- Cleaning
- Handyman
- Shared car
- Personal trainer
- Lending of tools and machines
- Something else, what?

Data and its analysis (1/3)

Data = Individual game boards

Analysis:
Table presenting 1. spaces available (game chips), 2. how often they were chose, 3. location of these space (three levels), 4. and the ways of sharing them (private or communal use)

Familiar spaces were chosen first, sauna (18), laundry room (14), followed by lounge/cafes, barbecue terraces, and greenhouses/ winter gardens (13 responses each).

	Oma koti	Oma kerros		Oma rakennus		Oma naapurusto		yht
		omassa käytössä	jaettu tila	omassa käytössä	jaettu tila	omassa käytössä	jaettu tila	
Hyvinvarusteltu keittiö	5		3	1		1	1	11
Ruokailutila			1	1	1	1	1	5
Tupa/kahvila				1			12	13
Juhlatila				1		1	6	8
Sauna	2	1		3	1	1	6	14
Kylpylä	2			4	1		1	8
Pesula				1	4	2	11	18
Kodinhoitohuone					1		3	4
Käsityö-/askartelu-huone			1		2		3	6
Askartelutila				1	1		4	6
Ateljee				1				1
Verstas					1	1	3	5
Pyörän/auton huoltotila					2	2	7	11
Kuntosali					3		7	10
Jumppasali					1		6	7
Hiljainen tila						1		1
Olohuone	2			1	1		2	6
Kirjasto/lukuhuone							6	6
Työtila					2		1	3
Vierashuone	1	2		2	1	2	1	9
Postihuone					1		5	6
Leikkihuone							5	5
Leffahuone				1			4	5
Musiikkitila						1	2	3
Pelihuone								0
Kisakatsomo								0
Auringonottoterassi				1	3		3	7
Grilliterassi				2	**5**	1	5	13
Kasvihuone/Viher-huone			2	1	3	1	6	13
Lisävarasto				1	3			4
Lisähuone	3			1		1		5
Muu, mikä: tanssisali				1				1
Muu, mikä: kierrätys-huone							2	2
Muu, mikä: koirapuisto/-leikkihuone						1		1
Muu, mikä: rollaatto-ritila			1					1
Muu, mikä: parveke	2							2

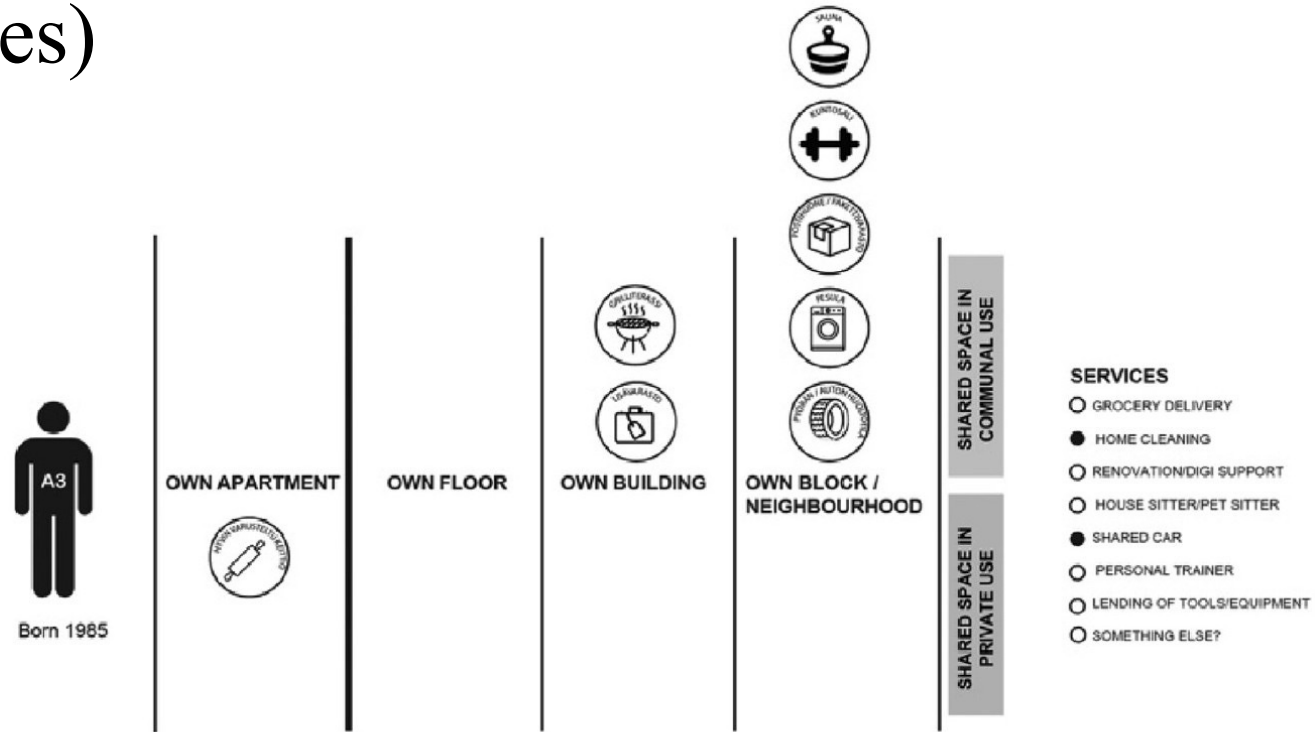# Data and its analysis (2/3): Resident segments (profiles)

Figure 6 A "service-oriented" resident profile based on the design game

Four segments were identified:
"Private", "Communal", "Service-oriented" and "Practical".

Our next steps: Developing the analysis method.

Data and it analysis (3/3): "Space bundles"

The largest bundle (in the centre) contains a guest room, playroom, well-equipped kitchen, dining room, and living room.

When used in conjunction with a real project, this kind of grouping, including the number of potential users, could inform the programming of shared spaces
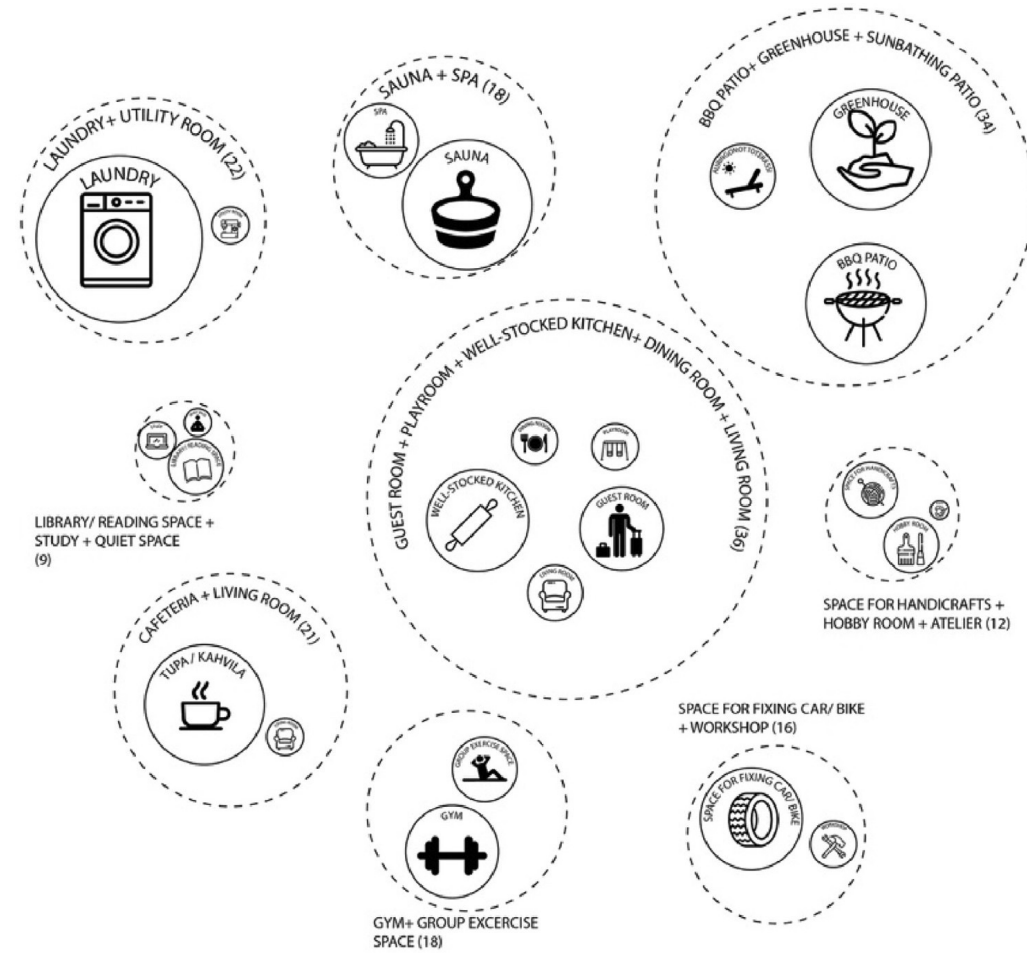
Solo dwellers' domestic spatial needs: Not that different

1. x