

Solving housing shortages by transforming buildings into comfortable homes

Marjolein E. Overtoom^{ab} and M.G. Elsinga^a, M.A.R. Oostra^b, P.M. Bluysen^a

^aArchitecture and the Built Environment, Delft University of Technology, Delft, The Netherlands; ^bKC Noordruimte, Hanze University of Applied Sciences, Groningen, The Netherlands



m.e.overtoom@tudelft.nl

How to find out what students, starters, and other new households of transformed buildings need to create a home environment with a comfortable climate without losing meanings attributed to the home?



Users:

- Students
- Starters
- Refugees
- Other new households

Method

A) Literature review in comfort, architecture, psychology discipline

B) Review of governmental reports of transformed buildings in the Netherlands:

- 1) original function of the building
- 2) changes made for comfort
- 3) arguments to decide on the users

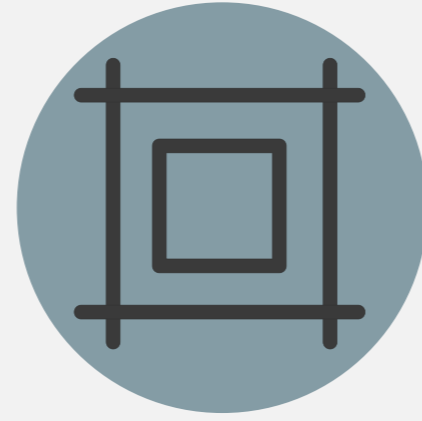
C) Case studies based on the target group and location:

- 1) how the different stakeholders were brought together
- 2) how the users were chosen
- 3) any situation specific factors
- 4) the expected and real outcome of the completed process

Literature review

Vacant buildings are transformed to provide quick housing, but it is not sure whether this provides a comfortable home, both from an indoor climate and a meaning making perspective.

Identified important factors:



Building guidelines



Indoor climate



Meanings



Size



Separations



Envelope



Accessibility



Lay-out



Green



Services



Location



Fire safety



Costs



Sound



Light



Air quality



Thermal comfort



Social



Experiences



Activities



Continuity



Happiness



Appropriation



Security



Identity

Case studies



Factory
• students
• starters

Nurse flat
• Students

Nurse pavilions
• International students

Care-home
• Seasonal workers
• Assisted living

Faculty building
• Students
• Refugees (20/1)

Bank office
• Medical students

Office
• Buyers
• Investors

Container studio
• Students
• Refugees (1/1)



Conclusions



- No say
- Wants
- Health effects

Differences between buildings (B + C)

1. Buildings transformed for longer periods have a higher quality level

- daylight entry
- sound insulation
- thermal insulation
- quality of materials used



2. Buildings in better locations and better shape are for the buying market

- central or more valuable area
- depth and height of building



3. Temporary/rental ->
• no incentive to adjust or invest



Current regulations and standards appear inadequate to function for temporary transformation projects. Especially the user-perspective suffers, as can be seen from the factors that are present in the lower segments of transformed buildings.

Future directions

It is currently not known what users need from a building to function as a *comfortable home*:

Users would be more satisfied, *owners* would have more knowledge beforehand on what to do with their building to have it used, and *designers* would be better able to design the fixed elements to fit in the temporary elements adjusted to the user's wants and needs.

It is necessary to develop a way of *measuring meanings attributed to the home* including the *relationship with the indoor climate* for different types of buildings used for living.

