## Data attached to Work Package 4 of the Designing for Healthy Cognitive Ageing (DesHCA) Project

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## Data Archive Link and Reference

McCall, V; Rutherford, A (2024): Serious game data archive for the Designing for Healthy Cognitive Ageing (DesHCA) Project. Version 1. University of Stirling, Faculty of Social Sciences. Dataset. http://hdl.handle.net/11667/227

## Background

The Designing for Healthy Cognitive Ageing (DesHCA) aimed to test, understand, and identify facilitators and barriers for various stakeholders, including older people, in achieving cognitively sustainable housing, in both new-build and retrofit contexts.

The DesHCA project has developed a co-produced legacy tool called ‘Our House’ as part of its Work-Package 4, led by Professors McCall and Rutherford. The archived data attached to this work-package has been generated from 10 playtests of the serious game legacy tool that was developed. Our House is a serious game that was developed to generate research insights on how to deliver housing for older people that is cognitively sustainable and inclusive.

## Overview

These are the second set of notes (2 of 2) from playtest session 2, which took place on the 24th of April 2023. The playtest comprised of 11 participants.

These notes have been fully anonymised, with all identifiable characteristics, including the participants’ names, removed, or replaced with pseudonyms.

**SERIOUS GAMES WORKSHOP 24th April 2023 10 am-12 pm Glasgow 11 participants plus one R.F (12)**

Notes for participants Table 2 (2.1, 2.2), Table 3 (3.1, 3.2), Table 4 (4.1, 4.2)

**BACKGROUND**

Susan Vignette: 2.1- Olivia: Senior Inclusive Design Consultant and 2.2 -Rebecca- Architect

Derek: 3.1-Quaid- Housing consultant with Local Authority and 3.2-Leon- Team Lead Architect

Shawn and Kerry Vignette: 4.1- Verity- Housing Officer and 4.2- Kerry- CEO Architect

**Table two**

**Round one**

**Well-being scale** started at level 10, they felt Susan’s situation wasn’t too bad. In round two, it moved to 7 because they felt Susan’s health was not great and she was not doing well financially. In round three it went down further to 6.

Scale=10:7:6

They decided to build their house based on the bedrooms on the vignette, then after the bedroom, they worked their way to the other rooms. They said it was a typical local authority council flat. A standard kitchen, a little garden with level access, standard living room and bathroom. They also said that Susan was comfortable in her neighbourhood, and knew the area and the neighbours, which would be more and more important as she got older.

They felt with dementia, she may not want to move, and it would not be wise to move her as it might make her disoriented.

However, they did not like that she was too far from the centre.

**Adaptation**

They also said they were trying to balance costs and future adaptations needed to mitigate the need for major adaptation by future-proofing current homes. They reasoned dementia is progressive and would only get worse, so they imagined that in the next stages of vignettes, they may need to adapt the home to meet Susanne’s needs.

**Round two**

2.1 and 2.3 advised that Susan was ‘vulnerable’ and her dementia had gotten worse they said the police had brought her back home a few times. They said they wanted to future-proof the home for her safety and also for her daughter’s peace of mind. They felt she was well-known by Local Authority, they assessed that she needed technology gadgets to keep her safe such as alarms, memory aids and anything else that might aid her memory and keep her safe at home and they feared that her cognitive health would only get worse in the future.

They were not too bothered about the cost of adaptation because they figured, as a council flat, the council would be happy to provide any adaptation. They felt they had a strong case for the adaptation, and they would get it.

I interjected and asked what made her so sure that the council would do it; [**REDACTED**]. She added that even if the person could have afforded the wet floor shower, the council funded it because it was not means tested and got 100% funding, while if the private homeowner can’t afford it they are still not offered by the council a free one.

They did not have enough money for adaptation they applied for a grant that was approved.

**Final round**

Susan’s physical and cognitive condition had declined, home environment was challenging and was relying on her daughter more and more. They felt that her well-being had declined too but remaining in the same neighbourhood she had lived in for 40 years was beneficial. 2.1 said:

‘*Your home is part of your community; you do not want to leave your community.*’

They also felt Susan continued access to the garden was very important to her overall health. They applied for further funding and 50% was approved and made the adaptations needed.

**Table three**

**Well-being** started at 13 felt Derek was cognitively ok, physically not great but had family support. In round two they moved it to 11 as Derek’s physical health changed. In round three it went down to 9 due to the physical changes that they felt would impact his overall well-being.

Scale- 13:11:9

**Access**

The participants started by thinking about the access they felt it would be pointless to have a house that the resident cannot access. They said the stairs had already been decided and they would not have much choice on them they are pre-defined. They placed great importance on stairs, particularly Participant 3.1, he said:

‘*How can we decide without knowing what type of stairs the home has.’* .

I realised he was frustrated by this that the vignette had not indicated the type of stairs. I wondered why this was important and a deciding factor before considering other rooms. So, I asked why this was necessary he replied:

‘*Access is very important and a deciding factor if someone can access bedrooms upstairs.’*.

So, I advised them they could decide what access stairs they needed based on their budget, and this seems to have resolved this issue, therefore, they selected the one with a higher physical score and said they were future proofing with the anticipation that Derek’s physical ability would get worse than better.

**Garden**

The team considered the garden important but felt that the large garden was unnecessary, especially with Derek’s physical health they felt management and maintenance of a garden is a big task and if he employed someone it would be extra money so they felt if the vignette had not said he had a large garden, they would have picked small garden if it was up to them. 2.1 said:

‘*Also access to the garden is important, what is the point of a garden you can’t access.*’.

They said there was no way of knowing if there were steps to the garden and if the game required them to add an access card for the garden, but they decided it was level with the house and, therefore, a wheelchair could be wheeled to the garden.

**Layout**

The team said cognitive was not a concern, and with Derek being a lawyer, finances were not a major problem, and he had a 5-bedroom semi-detached home. They said they built what they thought he could comfortably live in. When needs and the budget changed, they changed his bedroom from an ensuite and changed a double room to a single they thought that should be enough. They were frustrated that they were stuck with a large garden that he did not need or would struggle to manage. So, they said they built what was a perfect house and then would negotiate later as his needs changed by playing about with the bedrooms and bathrooms.

**Mathematical Challenge**

Table three, as they worked on the initial task, they felt there was too much focus on the budget, not on individuals’ needs and what they would want their house to look like. 3.1 said:

‘*I am sorry, this is not to critique the game, but I must say it feels more like a mathematical challenge squeezing the limited budget provided than trying to build a house based on the person’s needs, and I am relying on 3.2 to do the maths he is good at it.’.*

He continued to say:

*‘It feels like building a fantasy house because in real life people have fixed parameters, but with a 1970s house like we suspect this one to be, there may be adaptations that can be done, but they won’t be cheap*.’.

**Round two**

The participants said that Derek’s needs had changed, and they needed to adapt his physical ability had worsened, increasing from level 2 to 3, and his cognitive was 2 having declined. They needed to adapt five of six rooms, the two bathrooms, living room, access, bedrooms, and the kitchen. They said they according to their assessment on what Derek needed they had enough budget because they did not see the need to adapt all bedrooms that he did not need those that guests use. Also felt he could survive with a small bedroom adapted to meet his needs.

They said that idea on the game of needing to adapt to match the budget point was a bit flawed in real life because no one would adapt a house more than necessary would just be the bedroom of the person’s physical challenges other than adapting all rooms in the house. So, they decided to follow the serious game rules since they did not have enough budget to adapt the house according to Derek’s needs they would apply for a grant and make a case that the grant was not needed and the extra room did not need to be adapted by raising its physical adaptation to level 3 and could remain at level 2. The grant manager agreed with them, so the grant was rejected. On reflection, they said that it would be counter-productive to apply for a grant and then convince the panel why they should reject it. However, they said it was a good exercise for the purpose of the game. They also acknowledged that in real life, Derek as a homeowner would have been expected to self-fund or at least contribute. They felt in Dereks’s case he was asset-rich and financially poor, living in a very big family home.

**Round three**

They both said they were considering the adaptability of old buildings, accessibility and compromises that needed to be made. 3.2 said:

‘*We are prioritising the bedroom access above everything else such as house storage, bathrooms, and family room, it doesn’t matter if some rooms are not accessible, for example, the garage is not adaptable too expensive and probably doesn’t drive it is of no use.*’.

Having depleted the finances and the grant was rejected in the previous round, they put a new case of the grant application to now adapt some rooms, and it was granted; however, they said it would have made sense to move from that big house but were unclear of the process of moving. They also said Derek’s ability to access the garden was a major priority because:

‘*What is the point of a garden if stuck inside and can’t access it*?’.

**Table four**

**Well-being scale** started at 14 based on good physical and cognitive health and well-off financially. Then in round two moved it down to 11 due to slight changes. In round three moved up to 13 due to all the adaption despite the cognitive decline, they felt the money was an equaliser of the situation, and Shawn and Kerry were not too affected overall.

Scale- 14:11: 13

**Round one**

**Decision making**

Table four participants were very keen to start and seemed to be racing to finish their house. They were already making their decisions during the presentation, so we missed that conversation. Once I started my observation, they said they had already decided that the house would not be suitable, and Kerry and Shawn needed to move home. They concluded current home was not suitable because Shawn needed access to public transport, and where he was living, there was not. They also said he was disabled, and they could predict that it would only get worse and therefore wanted to move before it was worse.

They seemed determined that they were done and needed to know the next part of the game if their final decision was to move. I had not encountered this during other games practice, so I was slightly taken aback. Having evaluated the situation, I advised that they could be right and, yes, their situation could get worse, while I understood their thinking and decision-making I urged them to take a step back and build Shawn and Kerry’s home with the current information on the vignette then wait for part two and three of the vignette, then if they decide that best option was still to move then we can discuss that later. They settled down, and they started building the home.

They put all cards on the board to see what they could build with their budget and what could be adapted in future. This was constant on their mind; the futureproofing thinking things could worsen next round. They said they wanted to maintain an open mind incase Kerry developed Alzheimer’s. 4.2 said:

‘Y*es, this is us planning for ageing.’*.

**Adaptation**

They started by looking at the cards and the financial cost, and because it was a big home, they laid down all the rooms indicated on the vignette. However, they settled on open plan kitchen and living areas; 4.1 said:

‘*I think with a large house like this, open plan will be better.*’.

Then 4.2 said:

*‘Let's go for a large bedroom that will be easy to adapt for later when his mobility changes or if the wife gets Alzheimer’s, we can double up and have two beds, it will be easy to adapt a big room.’.*

4.1 then said:

‘Y*es, that would be a great idea, lets double up storage and make it ensuite and ensure we get a good option for stairs*.’.

**Round two**

Both participants said they felt lucky, after enquiring if there were any challenges, 4.2 responded:

‘*No because we are minted, we can do a lot with our money, more than we need.*’.

They said they only needed to change storage and bathroom from 1 to 2 on cognitive changes, which was not a problem for them.

They decided they had enough money and feared they would lose it when they got to the next round, so they decided to adapt the house for futureproofing by thinking about what could get worse. They added smoke detectors in case Kerry left food unattended on the cooker. They put a sensor on the doors in case she would be a ‘*wanderer*’. They looked at the different technological adaptations they could implement for dementia. They got Alexa in different rooms for prompts, got an accessible chair and felt that it would encourage more interaction by sitting comfortably in the living room. 4.2 said:

‘*We are saving on adaptations by trying to predict the future since Kerry is becoming forgetful and even had a fall so we shall adapt the house to the max to keep her safe in her own home, which is what we think she would want to stay with her husband*.’.

**Final Round**

They also thought Kerry had the ability to be pro-active and had money to make various adaptations, 4.1, said:

‘*She could have a small bedroom with a wet-floor shower by looking ahead when she might need her own accessible room with privacy.’*.

They also widened the doors in case mobility worsened and a wheelchair was needed. They added a few grab rails that they thought necessary, added non-slip flooring in the bedroom, kitchen, and bathroom. Assistive technology was added in the kitchen and the bathroom. They also wanted to maintain the garden and its access because they felt its key to Kerry’s mental health. 4.2 said that a:

*‘Big garden could be a source of anxiety, so we are keeping the small garden.’.*

**Summary**

Overall, the three teams really enjoyed the serious game. They said they learned a lot in a more creative way than sitting down and someone telling them what to do. They felt it was a half-day well spent and were glad to have been part of the research. Some commented they would have wanted more time, especially they were enjoying the conversations.