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Designing the healthcare and housing concept of tomorrow: a reflection on Participatory Design methods for complex healthcare situations.

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Abstract

This paper discusses a participatory project that entailed the conceptualisation of a new, innovative healthcare and housing concept for elderly in Sint-Huibrechts-Lille (BE). Starting from the premise that the traditional residential care facilities fail to anticipate the needs and wishes of this growing group (Lieten, 2013), the goal of this project was to involve the neighbourhood and other stakeholders (caregivers, care receivers, policy makers, etc.) in defining and developing such a concept for the near future.

Rooted in the principles of Participatory Design (PD) (Ehn & Badham, 2002), the participatory trajectory entailed a sensitizing event and participatory mappings that - by using 'MAP-it' (www.map-it.be) (Schepers, Dreessen & Huybrechts, 2014) - mapped different aspects of the concept. Next, the results of these mappings were summarized and 'translated' into a visualisation that functioned as input for a first preliminary architectural design of the concept. After that, a feedback moment was organized, allowing participants to formulate their feedback on the design.

By describing the project in detail, this paper focuses on how PD methods can bring aspects of complex healthcare situations to the surface. It focuses on the advantages and disadvantages of a participatory trajectory in the domain of healthcare, both for participants and architects¹. While doing so, this paper touches upon topics such as the expectations of the participants in a PD process, the 'translation' of the participants' ideas and the benefits and drawbacks of PD methods in healthcare projects.

Keywords: Participatory Design, methods, healthcare and housing concept, architecture

¹ We refer to 'architects' as the specific architects commissioned with designing the new concept for elderly in Sint-Huibrechts-Lille.

Introduction

By 2050 over 30% of the Flemish population will be sixty years or older. Moreover, the next decennia the amount of persons aged eighty or over will triple (Lieten, 2013). The municipality of Neerpelt, and specifically the sub-municipality Sint-Huibrechts-Lille (BE), is no exception to this and is witnessing an ageing of its population (Gemeente & OCMW Neerpelt, 2012; Van den Bosch *et al*, 2011).

These demographic evolutions will result in a further increase of the demand for care. By 2030, Flanders will need 30.000 extra healthcare and housing facilities (De Vleeshouwer, 2013). Since prognoses for Neerpelt show that an increase of residential healthcare and housing facilities is needed (Gemeente & OCMW Neerpelt, 2012), currently permits for the construction of a new facility are expected to answer to this growing demand.

However, in doing so, several trends, developments and bottlenecks need to be taken into account, from the care recipient side as well as from the caregiver side (Bossaerts, Declercq, Huyghe & Uytterschaut, 2011). For instance, the care recipient has increasing quality requirements and wants to be engaged in his/her community. Challenges concerning caregivers include a shortage of (qualified) personnel and the affordability of healthcare. Traditional housing facilities are no longer sufficient in meeting these trends, developments and bottlenecks (Lieten, 2013). There is thus a growing need for new, innovative healthcare and housing concepts (Huijben, 2011; Vlaamse Overheid, 2009).

A new, innovative healthcare and housing concept in Sint-Huibrechts-Lille

In this line of thought, this paper discusses a participatory project that entailed the conceptualisation of a new, innovative healthcare and housing concept for elderly in the sub-municipality Sint-Huibrechts-Lille². Local embedding in and interaction with the neighbourhood was essential in working out this concept. Therefore, residents of the neighbourhood, care recipients, caregivers and the city council participated in the project. To facilitate participation, Participatory Design (PD) methods were applied. PD is a set of theories and practices that starts from the conviction that people have the right to participate in the design of the system of their concern. It stimulates an approach of designing *with* (instead of *for*) people, ensures an increased involvement and establishes a sense of ownership among them (Ehn & Badham, 2002).

² The project 'The elderly care centre in Sint-Huibrechts-Lille' is a collaboration between University College Leuven-Limburg, Social Spaces (LUCA, School of Arts), Woon- en zorgcentrum Sint-Jozef, OCMW Neerpelt and Gemeente Neerpelt.

The project comprised five phases (see: Figure 1): (1) desk research; (2) a sensitizing public event; (3) several 'MAP-it' mappings; (4) interaction with the architects and (5) a final, public feedback moment. We will now discuss each phase in more detail.

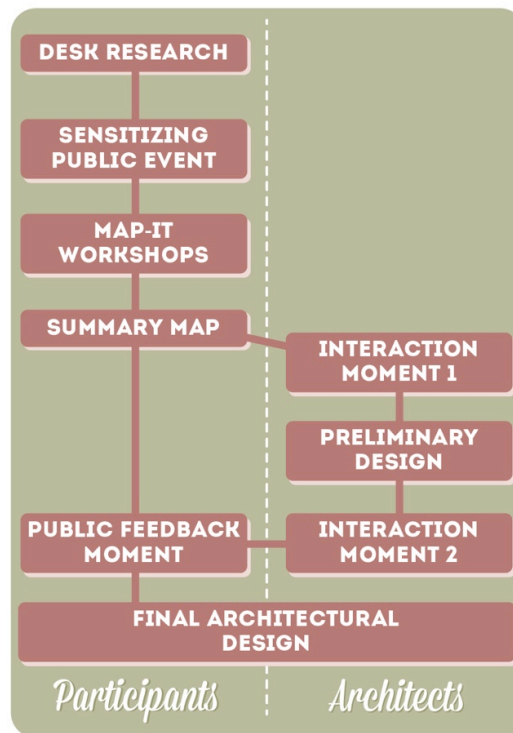


Figure 1: Schematic overview of the project

Desk research

The first outlines of the new concept were put forward, based on desk research of policy documents, output of conferences and workshops (e.g. 'Ruimte voor zorg', June 2013) and a state-of-the-art of inspiring healthcare and housing concepts. Based on this, several conclusions were drawn for the conceptualisation of a new concept that distinguishes itself from traditional housing facilities. These conclusions formed the input for the research questions and themes of the participatory project phases for the participants to work further upon. Five central themes were formulated which focused on different stakeholders or aspects of the new concept: (1) care recipients; (2) caregivers; (3) the neighbourhood; (4) care network and (5) spatial aspects of the concept.

A sensitizing public event

To sensitize people to participate and be co-owners of the project, a public event was organized. Sensitizing is a process that prepares participants to access, express and - afterwards, in group

sessions - discuss their experiences, and which enhances the quality and quantity of participants' contributions (Sleeswijk Visser, Stappers, Van der Lugt & Sanders, 2005). To sensitize the participants properly, the event took on the form of an open forum, wherein people could interact with healthcare experts via stands or informal meetings. The event, which was visited mainly by inhabitants of Sint-Huibrechts-Lille, started with the director of the future elderly centre and the involved researchers presenting the project. Additionally, policy makers (e.g. the Flemish Minister of welfare) were present to point out the importance of participation.

MAP-it mappings

Next, a series of five 'MAP-it' mappings was organised (see: Figure 2)³. MAP-it is a playful participatory mapping method and toolkit (www.map-it.be) (Dreessen, Huybrechts, Laureyssens, Schepers & Baci, 2011). Participants – supported by moderators – answer a research question by (re)positioning stickers on a background map. As mentioned above, the research questions for these particular mappings were inspired by the desk research. MAP-it also includes 'risk-stickers' that playfully introduce friction and push people to give feedback to others (Huybrechts, Dreessen & Schepers, 2012). Afterwards, the data from the mappings was analysed via a 'qualitative content analysis' (Krippendorff, 2013).



Figure 2: Participants in one of the mappings

In general, the mappings resulted in recommendations on the level of (1) the architectural design and (2) services of the new concept. E.g.:

1. The concept should be an open, green and accessible facility that functions as a meeting place for residents and people from the neighbourhood. This should be reflected in the architecture of the facility itself, without disrupting the panorama of Sint-Huibrechts-Lille.

³ In total, 82 participants – of 25 – 70 years old – took part in the five mappings. A large majority of the participants entailed local residents of Sint-Huibrechts-Lille as well as caregivers.

Moreover, the facility should function as a multifunctional campus facilitating the needs and wishes of the residents and the people from the neighbourhood. Hence, its infrastructure should entail a cafeteria, meeting spaces for local organisations, a fitness club, etc. Furthermore, the concept should entail a mix of housing facilities (e.g. facilities for people with dementia combined with service flats). These should each be equipped with a standard set of furniture and technological aids, upgradeable at any time. This confirms findings of the desk research stating that the new concept should be modular to accommodate bespoke care.

2. The participants in the mappings discussed the idea of a central care coordinator, available for residents and people from the neighbourhood, who redirects all (care-related) questions to the right (healthcare) organization. Furthermore, actively contributing to society (e.g. helping with homework) and participating in the social life of Sint-Huibrechts-Lille (e.g. playing cards) should be stimulated, which also relates to findings of the desk research entailing that local embedding in and interaction with the neighbourhood is crucial. Other services that were suggested include the appointment of a volunteer coordinator and the set up of a non-binding barter system.

A summarizing, visualising phase

The above-mentioned qualitative content analysis of the results of the mappings formed the input for a 'summary map' (see: Figure 3): a visualisation that combined, summarised and clarified the results of the mappings. In contrast to mere textual documentation, the visual character of such a map increases the readability of the results for people that were not involved in the mappings (Schepers, Dreessen, Huybrechts & Laureyssens, 2013; Fischer & Giaccardi, 2004). In this case, the summary map functioned as a 'translation' of the participants' ideas of the healthcare and housing concept to inform the architects.



Interaction moments with the architects

At this point in the project, the open tender procedure for assigning the architects was initiated and, subsequently, a team of architects was appointed. To brief them about the results of the previous project phases, two interaction moments were organised wherein the researchers presented the summary map and an accompanying report. Afterwards, the architects organised a small-scaled participatory trajectory themselves by involving history organisations, elementary schools and other local stakeholders. Based on the first interaction moment, a preliminary architectural design was created that formed the input for a second interaction moment. The goal of this second moment was to match the design with the recommendations from the mappings and resulted in some minor changes to the design.

A final feedback moment

During a final public feedback moment, the results of the mappings as well as the architectural design were presented to (the already involved) residents of the neighbourhood and other interested parties. It provided them with an opportunity to formulate feedback on the presented results, by placing 'like-stickers', 'bomb-stickers' and stickers of warning triangles (for aspects they - respectively - considered to be positive, negative and problematic) on a print of the architectural design (see: Figure 4).



Figure 4: Feedback on the architectural design

Except from some minor remarks (e.g. saddle roofs instead of flat roofs and practical issues concerning parking space and traffic flow), the participants in general reacted enthusiastically to the presented architectural design. In particular, the fact that the plan foresaw a space for the central, care coordinator and that a room was allocated to house some communal facilities were highly appreciated.

Reflection

Reflecting on the project, we focus on the advantages and disadvantages of a participatory trajectory in the domain of healthcare, both for participants as well as architects.

As we experienced in this and other participatory projects (Schepers *et al*, 2014), a sensitizing phase is crucial for recruiting participants and inspiring them to reflect about the issue at stake. Although this can provide the participants with more in-depth knowledge about the issue, sensitizing can influence the participatory trajectory and should therefore be evaluated critically. For example, an information stand about a barter system was included in the sensitizing event and, subsequently, this idea was raised in each mapping. Evaluative interviews with participants proved that they picked up the idea during the sensitizing event and would possibly not have raised it otherwise. Furthermore, the presence of policy makers at the public event proved to be important in terms of recruitment but also for the project to gain legitimacy.

Due to the tender procedure being not yet initiated, the architects were not involved from the beginning of the project. The data of the MAP-it phase (i.e. background maps and discussions during the mappings) showed that this allowed an open character for the mappings since no

architectural or spatial restrictions were imposed. Although this resulted in diversified insights, interviews indicated that it also hindered some participants in putting ideas on the table (Finke, Ward & Smith, 1992). However, the absence of the architects entailed some drawbacks as well. Since they were not present during the mappings they had to rely on the report and summary map to get informed about the results. This was compensated with the organisation of two interaction moments. We acknowledge that this will not entirely make up for the loss of collecting first-hand data and not participating in the mappings. Therefore, we believe that involving the architects earlier would have been beneficial for the process.

Interviews with participants showed that the final feedback moment proved to be an essential part of the participatory process: it provided the participants, local inhabitants and others with a chance to interact with the architects, researchers and principals. In general, the participants were pleasantly surprised about how a large amount of ideas raised during the mappings were eventually incorporated in the architectural design. Although this was the goal of the project, numerous participants remained sceptical about the actual impact of their participation. In an evaluative interview with the architects, they acknowledged the added value of a participatory process, although it brought about additional uncertainties: it entangled their design process since they not only had to take into account the demands of principals but of an entire community.

The project lasted one year in which the involvement of the participants was primarily stimulated in the first four months (through the sensitizing event and the mappings). In retrospect, it would have been better to organise in-between events to preserve the involvement of the participants. In addition, the participation of the neighbourhood is only limited to the concept- and design phase of the concept. However, it would be interesting to look for ways to preserve the involvement of the neighbourhood during the construction phase as well. In future projects, specific attention will be paid to developing and/or using PD methods that will facilitate this long-term involvement of participants.

Conclusion

As this paper shows, healthcare situations can be complex and require participation of various stakeholders having different opinions, perspectives and interests. To deal with such a complex situation (namely, traditional facilities being insufficient in meeting the above-described developments), a participatory project entailing the conceptualisation of an innovative healthcare and housing concept in Sint-Huibrechts-Lille was set up.

In this project, PD methods proved to be particularly valuable in facilitating participation. The results of the participatory project phases supported the desk research that took place beforehand, in terms of results (i.e. the conclusions that resulted from desk research were tested against the participatory process) and practical setup alike (i.e. the desk research inspired the research

questions for the mappings). However, we believe it would be beneficial – particularly in complex healthcare projects – to use PD methods that specifically enable and stimulate *long-term* involvement of participants.

To conclude, the project benefited from the involved architects being open for participation (i.e. a specific requirement in the open tender). To deal with their absence at the start of the project, several ‘translations’ were incorporated into the project to inform the architects about the wishes and needs of the participants (e.g. the summary map). However, this paper illustrated that when the involved architects are indeed open to participation, this can positively affect the participants whose ideas are integrated into the project results and whose sense of ownership in the project is established.

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