

Design with concerns: A community-based senior center in Germany

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Abstract: Community-based care facilities have a positive effect in supporting older adults and people with dementia thus improving their well-beings. Despite authoring empirical studies focused on providing design interventions, researchers often remain unclear about whether and how exactly practitioners and architects should implement these interventions. This paper presents an on-going project of a senior center in a small municipality in Germany. It aims to explain how the municipality (the client) and the design team (the architect) cooperate to apply updated research-based interventions, and how trade-offs are made. It discusses several research-based interventions during the design process. They include: 1) the early engagement of architects into the planning process; 2) the use of small-scale care units as care concept; 3) offering easily accessible and visible communal areas within the building; 4) providing an area open to the neighborhood; and 5) taking into consideration of the local urban form and materials. The article enables the readers to gain an insider look of the design process of a care facility and become familiar with some of the common trade-offs in design practice. Sufficient access to research materials and efficient communication with the client from the beginning of a project are the key elements to successfully implement research-based design interventions.

Keywords: *senior center; design practice; real project; application of design interventions*

1. Introduction

Germany, as well as several western European countries, are facing the problem of an aging society (Pötzsch & Rößger, 2015). The increasing number of older adults requires more support from care facilities. Several studies have suggested that community-based care facilities

benefit both the society and older adults. This is due to the close-by care services they provide, which helps older adults to stay independent as long as possible and thus lower the care expenses of the society (Wiles, et al., 2012; Verbeek, et al., 2009; Mason, et al., 2007; WHO, 2007).

Despite a great need of community-based care facilities and the increasing academic interest in providing design suitable interventions, the reality remains disheartening. Current research encourages the application of the updated interventions. However, practitioners and architects find the implementation process challenging mainly due to the lack of practical models (Rudolph et al., 2016; Curran et al., 2012; Golembiewski, 2010).

This article illustrates the process of applying research-based interventions to design practice and the corresponding challenges.

2. Description of the project

The senior center is located in a small municipality, with approximately 10,000 inhabitants, in Germany. It aims to house 70-80 single bedrooms with full-time care services to its older residents.

The design phase of the project started in the fall of 2018 and is projected to last until the summer of 2019. This is followed by the construction-drawing phase. The construction of the building is expected to be accomplished by the year 2021.

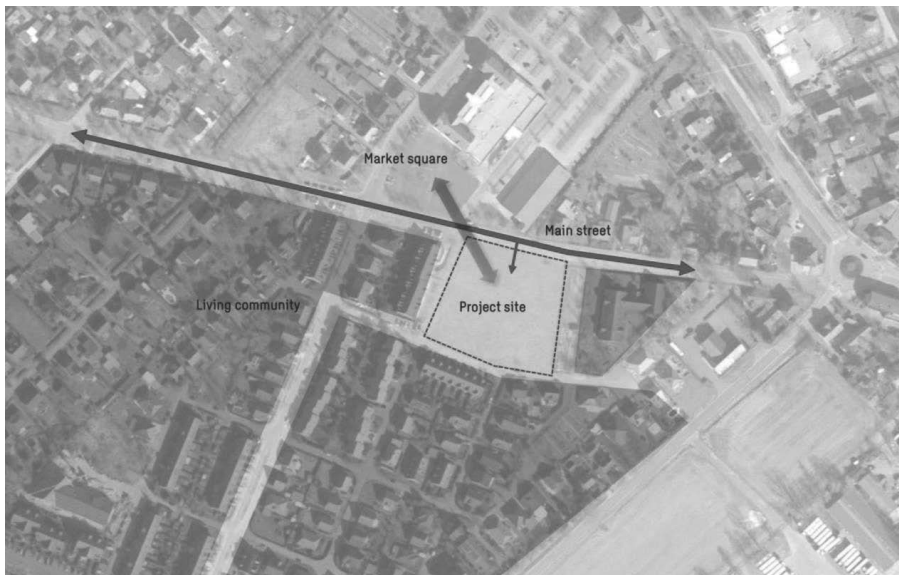


Figure 1 The site of the project is in the center of the town and has a good access to its market square and the main living community.

The plot size of the project is 6,300 m². The total built area will be approximately 5,000 m². Considering the urban form of the surrounding environment, the height of the building is set to three floors.

The municipality invited experts from different backgrounds starting from the kick-off meeting: professional care practitioners, insurance institutes, senior council of the municipality, as well as architects. It considers the project as a significant local care infrastructure. Besides providing homelike care service to its older residents, the municipality desires the facility could potentially host other public events. Along with the consultancy with other parties, the municipality and the architect planned the “design task”¹ of the facility together.

During the planning of the facility, five research-based design interventions are considered:

An early involvement of architects in the planning process:

An early involvement of architects is a positive move in order to achieve a better design solution (Rudolph et al., 2016; Punter, 2007). In this project, the architect stays active in exchanging ideas with the client. They are engaged since the beginning and involved in the project planning, including decision-making on the size of the station and the function of the facility.

Compared to the normal situation (where architects receive the design task and then process it with little influence on the actual planning of the facility), the early involvement of architects in this project shows great advantages.

1. Design proposals from the architect are discussed while the planning of the facility is still on-going. Therefore, this allows the design to reach its full potential.
2. The experiences and opinions of the client and the architect are exchanged and discussed from the beginning, rather than conflicting in a later stage.
3. The timely idea-exchange (once a week) grants a higher control over the project from the perspective of all parties. Most importantly, it largely reduces the “back-and-forth” in the design process, which is often caused by inefficient client-architect communication.

Small-scale care units:

Several research reviews show that small-scale care units (under 16 residents) are helpful in improving the well-being of older adults (Marquardt et al., 2014; Day et al., 2000). Therefore, to apply small-scale care unit in this project is one of the first considerations raised by all parties. Consequently, several rounds of design proposals with small-scale stations (13 single bedrooms per station) have been suggested (Figure 2).

¹ “Raumprogramm” in German. It is a document that is often provided by the client, in which the technical framework of the project will be explained, including the overview of the project (purpose and location) and the basis demands for building planning (size and function).



Figure 2 Small-scale care units with less than 15 positions are suggested in the first and second proposal (floorplan of the 1st floor). Each station has its own nurse station and independent communal area for dining activities.

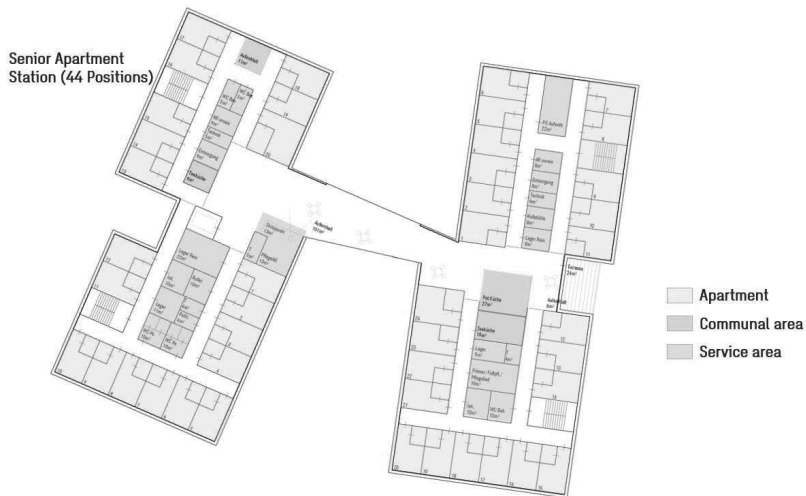


Figure 3 Due to consideration over the expenses, the current design proposal abandons the small-scale care stations but keeps the layout of the building. The current station houses 44 single bedrooms, one nurse station, one large communal area in the connecting bridge, and several small communal areas (the red ones) (floorplan of the 1st floor).

Despite acknowledging the advantages, the client later expressed concerns over such a solution due to a tight budget and potentially higher care expenses in future utilization. For instance, each station would require an independent nurse station, meaning more care providers and larger office areas. As a result, a trade-off is reached: the current design consists of two medium-scale stations, with each taking one entire floor area and housing 35-40 single bedrooms.

However, the client and architect still sought to achieve a small-scale care experience for the residents. Most specifically, the current design solution kept the previous layout. It reduced the size of the service areas and re-planned the communal areas, but enabled the small size of the residential group: 11 to 13 bedrooms located in each wing of the building (Figure 3). This solution hopefully compensates the care expenses while creating a quasi small-scale care experience for the residents.

Accessible and visible communal areas within the building:

Easily accessible and visible common spaces within care facilities have a positive role in supporting social activities and movements of its residents (Hou, 2018; Büter, 2017). The architect therefore intends to offer two types of communal areas inside the senior center in order to encourage more activities among its residents: the central-located communal areas for everyone in the station and the close-by open areas within each wing of the building for the small residential group.

One of the challenges during the planning of such close-by open areas is the German fire safety regulation. It restricts the creation of small open spaces along the corridors since they constitute the fire escape route². This also limits the type of chosen materials in these areas. As compromise, the architect planned a closed kitchenette in each wing of the building to provide the residents a space for casual social activities (Figure 3).

Accessible area open to the neighborhood:

Care facilities that provide accessible areas open to the neighborhood can invite local older adults to engage in social activities and therefore benefit their well-beings (Aspinall et al., 2010). The location of the senior center in the town enhances public activities for the municipality. The client therefore requested a public café in the facility that is open to the town and can host small public events.

This idea is realized in all rounds of the design proposals, with slight differences on the location of its entrance.

In the current design, the architect planned the café with an entrance facing the main street. The prior version entailed an entrance through the yard. The new proposition grants the café a greater openness to the public and adds a new tempo to the façade (Figure 4).

² In the German Fire safety regulation DIN 14096, it is stated that in order to hinder the spread of fire, it is forbidden to keep inflammable materials such as paper and furniture in the escape and rescue routes. In addition, the escape and rescue routes serve the fire department as access routes to the fire and thus allow for the quick rescue of persons who are unable to leave the building without help, and therefore have to be free from placing any objects within.



Figure 4 In one previous version, the café is located at the corner of the entrance yard, and has a relatively quiet openness to the public area of the town; while in the current design, the café is with a larger size and located directly facing the main street.

Consideration the local urban form materials:

Shaping public space is considered the first order of urbanism by architects and urban designers (Krieger, 2006). In this project, the architect is keen to enhance the central area of the municipality through a building that suits the surrounding aesthetics as well as its architectural language. Gable roofs and brick façades, which are the most representative urban form of the area, are chosen for the building (Punter, 2007). With this design language, the architect hopes to create a modern building that stands out with its aesthetic performance and provides a welcoming vibe to its residents at the same time (Figure 5).

Summary and recommendation for future studies:

Applying research-based design interventions requires a tight collaboration between clients and architects. Moreover, the sufficient knowledge to updated research and the early engagement of architects into the process are key elements. In Germany, such a model of involving architects in the initial planning of care facility is relatively new but quickly maturing, especially for care facilities such as nursing homes and senior centers.

In this project, the general feedback from the client towards such a model is positive. However, it is unclear how beneficial such an early engagement of several parties actually is, in regards of the cost or the actual realization of the project. Future studies could focus on quantified feedbacks from the perspective of experienced clients to compare the difference.



Figure 5 The design language of the building is based on the local urban form with gable rooms and brick façade.

3. Complementary Data Description

An appendix document illustrating the project is included to this submission, which presents key information of the project:

- *The site analysis of the project:*
the project is located in the center of the town,
facing its market square and adjoining a large residential area.
- *The drawings:*
the floorplans and the sections of the building present a clear view
of the organization of the space, including the size of the care units,
the design of its interior space, and the consideration over the landscape.
- *The visualization of the building:*
to illustrate the shape and the façade design of the building.

4. Technical Information for Exhibition

A small workshop, with the possibility of using a projector/monitor to present the drawings of the project, would be ideal. A 10-15 minute presentation and a 10-15 minute Q&A session are necessary. The architect can introduce the background of the project and the development of the design, and then leave the time for audience discussions. Key aspects of the discussion are expected to be the process of implementing the research recommendations in practice and the cooperation with the client.

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