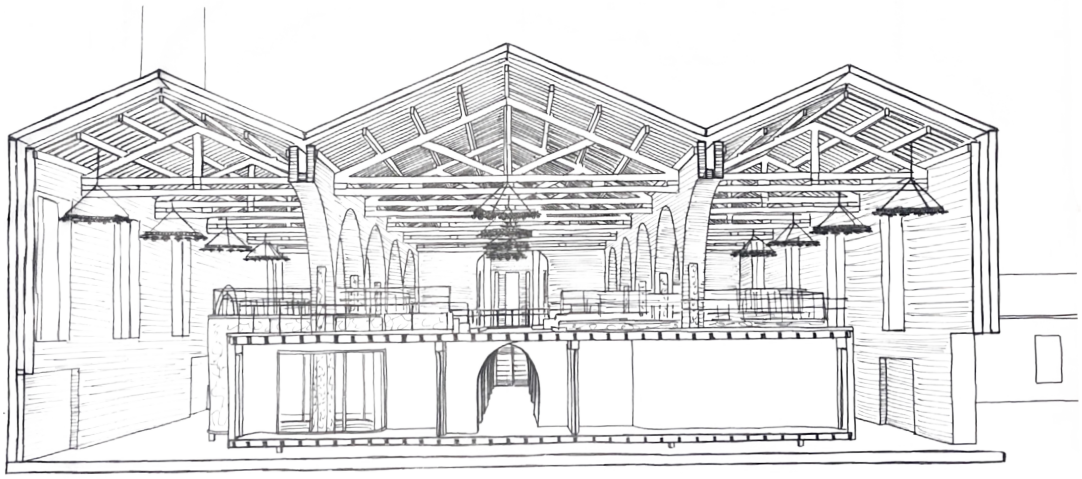
Graduation project transformation of 'Kerk van het Nieuwe Verbond'

Reflection Report



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Introduction

This report is a reflection on the graduation project of the Master Architecture, Urbanism and Building Sciences, Track Architecture, following the studio Heritage. The purpose of this report is to reflect on the process and look critically at the choices made during this graduation year. Therefore, the used methods, research and design integration, academic and societal relevance and personal growth during the research and design process will be evaluated.

1. Relation topic to mastertrack and program

The graduation studio Heritage is about Resourceful housing - Adapting 20th century heritage. The studio focuses on how to deal with post war heritage in the city area of Amsterdam New West. Hereby the goal is to balance technological and architectural solutions related to the increasing need for the preservation and adaptive reuse of buildings, including those with cultural significance. Dealing with the existing building stock is essential in today's times. Researching and designing for creative and innovative solutions in the built environment can contribute to the occurring problems of housing shortage, sustainability challenge and vacancy.

The self-selected topic for the graduation project is the combination of two current and relevant problems. On the one hand, the vacancy of Christian religious heritage and on the other hand the low resident satisfaction in Amsterdam New West. Christian religious buildings are increasingly becoming vacant, due to demographic changes (Lo Faro & Miceli, 2019; MOCW, 2022;). However, these buildings are too valuable to remain vacant. They occupy too much unused space in a densely populated city like Amsterdam, vacant buildings are easy targets for vandalism and they are often significant and important landmarks in the built environment (Velthuis & Spennemann, 2007; Davison & Russell, 2017). The low resident satisfaction in Amsterdam New West relates more to the social field, which the municipality of Amsterdam has been struggling with. Amsterdam New West is portrayed as a problem area, where the resident satisfaction rate is the lowest every year (Bos & Dignum, 2022). These two topics provide an opportunity for an adaptive reuse project to contribute to an improved resident satisfaction in which the cultural significance of the church in the built environment is preserved when researching and designing for technological and architectural interventions.

2. Integration of Research and Design

The integration of research and design have coincided on several moments both ways. Firstly, the insignificant conclusion of the research regarding the values and needs of residents to improve the resident satisfaction towards the adaptive reuse of the case study led to a follow up research. In order for the adaptive reuse to be significant for the satisfaction of the residents the missing link between the case study and the residents needed to be made. Follow up literature review revealed that the impact of adaptive reuse heritage projects increases on its surrounding when there is a form of community participation (Yung et al. 2014; Niemczewska 2019.) This research conclusion introduced a new step in the design process, namely a participatory design in the form of a co-creation workshop. The Framework for Organizing the Tools and Techniques of Participatory Design by Sanders, Brandt & Binder (2010) was used as a method to set up a usable and feasible program for the workshop.

Secondly, the design principle of flexible spaces in the church hall in order to minimize the deterioration of the heritage values asked for research. The goal of the pods was to create a box-in-box system, where the pods have a closed off indoor climate within the hall. Research was used on how these pods are detailed and how the climate systems must be constructed in such a system.

Thirdly, there was an idea of bringing back the original church tower that was originally designed, but never executed. Since the church has lost its original function, a new function was needed for the tower to warrant the construction. The tower turned out to be a good opportunity for a sustainability principle as a solar chimney. The tower is designed using the Earth, Wind & Fire concept by Bronsema (2013). The thesis was the foundation for materialization and calculations regarding the dimensions and energy profit.

The examples above show a constant interaction between developing designs based on scientific research, while simultaneously testing design options that need to be further researched for the specific application.

3. Approach, method and methodology

During the process multiple methods were applied for both research and design. As discussed in paragraph two these methods also overlap between the research and design. Below are the approaches, methods and frameworks listed that are used during the process.

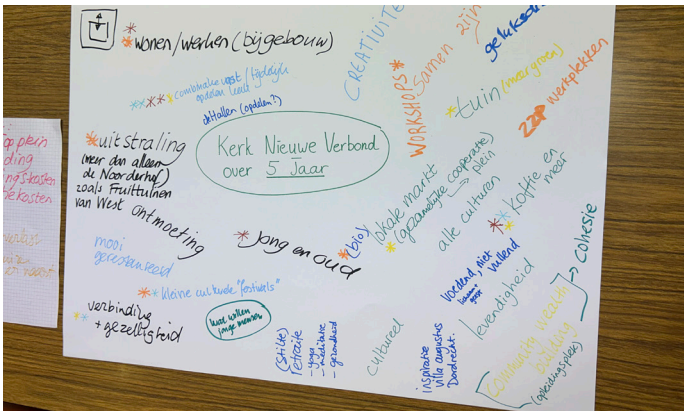
3.1 Imagine Ballarat interview method

The method used for collecting data about the residents opinion was the Imagine Ballarat interview method by Buckley et al. (2015). This method is structured to use three positively and open-ended questions to identify the values and needs of residents towards the built environment. To make the method more usable for the project, the questions were translated into Dutch and expanded from three to seven questions to generate more data. In retrospect, the expansion of these questions could have been more extensive, as the data proved less relevancy towards the case study. The respondents didn't mention the case study themselves and weren't asked about the religious heritage case study, which means that concluding a result of adaptive reuse on this case study could not be linked. Heritage was expected to be mentioned more naturally, as it was in Ballarat. This has been an error of judgment and could have been foreseen, looking at the difference in built environment between Amsterdam New West and Ballarat. At the same time, this method also brought many interesting and new insights precisely because of the less structured formulation of the questions. It was immediately apparent that respondents did take pride in their neighborhoods and, in doing so, valued the people, their interaction and the greenery.

3.2 *Participatory design framework*

Due to inexperience in the field of participatory design and co-creation it was desirable to have a good theoretical basis for setting up a workshop. The workshop could also only take place once, so it was important that it was well put together to generate the most useful data and results. For setting up the co-creation workshop the framework by Sanders, Brandt and Binder (2010) was used.
The conclusions drawn primarily from this study is that a workshop is most successful when all three types of activities are performed, namely making, telling and enacting. Setting up a program where these three types of tasks were incorporated and could be accomplished within the two hours of the workshop was quite a challenge. Enacting was the most difficult to include because it's the most time consuming and is also more intense for participants. In the end, the three assignments were as follows: Take pictures of valuable elements and explain why you took these pictures (telling), make a mindmap of new functions that embrace the qualities of the building (making) and make a mindmap of the future of the building and draw that into the existing floor plan (making/enacting). These assignments provided useful information, both intangible values such as the valuable atmosphere of the space but also specific functions such as art studios, a cafe and living space for the elderly (See Figure 1). Through the use of the framework the workshop was well structured and there was a realistic expectation of what this workshop was going to generate.

Figure 1: Generated products during the co-creation workshop



Reflecting on the approach employed for the co-creation workshop, the programming could have benefited from utilizing the Imagine Ballarat method. This method would have provided a consistent framework, facilitating a more straightforward comparison of results between the workshop and subsequent interviews.

There are already significant overlaps between the workshop's three assignments and the Imagine Ballarat method. The first assignment, where participants took pictures of valuable attributes, aligns with the Imagine method's questions on what participants love and want to retain. Similarly, the third assignment, which involved mapping the future of the building, corresponds with the Imagine question about envisioning the case study's future.
Employing the Imagine Ballarat method for both the interviews and the workshop would have enabled a direct comparison of outcomes, providing deeper insights into the residents' perspectives. However, during the process, a different methodology was chosen because the Imagine method initially appeared to lack sufficient depth for this project's specific needs. Using the same method across both the workshop and the interviews could have created a more cohesive understanding of the community's vision and priorities. This consistency would have enhanced the ability to draw meaningful comparisons and conclusions from the collected data, ultimately enriching the project's development and ensuring that the design is firmly rooted in the residents' collective values and needs.

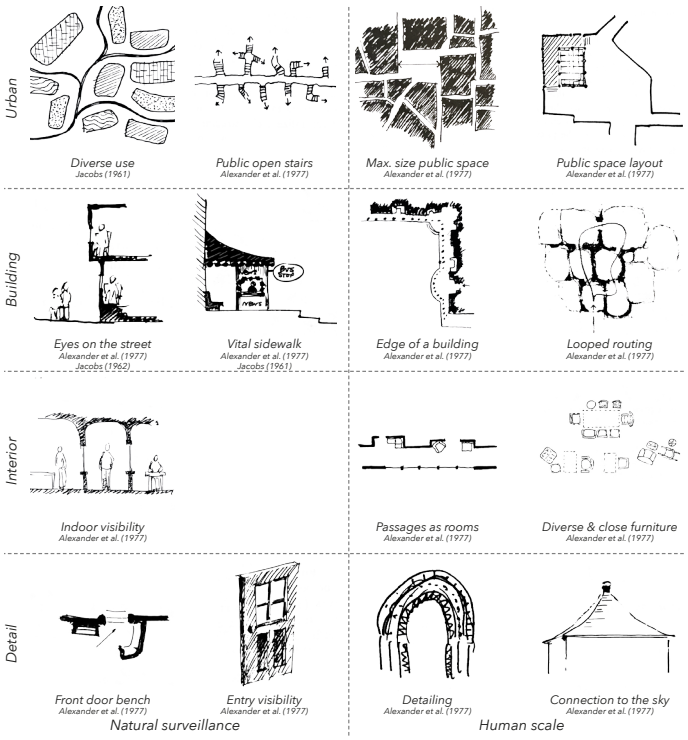
3.3 *Value Framework (imagine and workshop)*

To classify the data through the Imagine method and the first workshop assignment, the Value Framework by Pereira Roders (2007) was employed. For the Imagine method raw data was converted to categorized data which was then classified using the framework. The advantage to this method was that clear categories could be created within value types. The unsuitable part of this method was that the framework is intended for heritage and the participants spoke little about heritage, so classification sometimes became difficult and subjective. This was the contrary when classifying the picture assignment from the workshop, because by then there was already much more focus and guidance towards heritage and also a clear explanation was given per picture.

3.4 *A Pattern Language*

A Pattern Language (Alexander et al., 1977) provides a language for building and planning with underlying theory and implementation. This method is used as a design principle towards the P2 presentation. There's a selection made of the practical language that facilitates designing for natural surveillance to improve safety and implementing the human scale for social interaction (See Figure 2). Improved safety and social interaction were two important themes for the residents concluded from the Imagine method (Buckley et al., 2015) and classified in the Value Framework (Pereira Roders, 2007). The strength of this method is that it provides concrete applicability and relevant theory behind these principles. This means that after switching case studies, the same principles were predo-

Figure 2: P2 drawn interventions from A Pattern Language



minantly applicable to the other building. The downside of this method is that they are all separate interventions and there's no guarantee of success when a selection has been applied. Furthermore, this publication creates a solid foundation but is quite outdated and improved variants of the language have already been created.

4. *Academic, social and ethical values*

The academic value of the research and design project is valuable in various fields. There are multiple methodological contributions to the scientific field in this graduation project. Firstly, the adapted Imagine method for mapping the values and needs of Amsterdam New West residents. Secondly, the participatory design method for an adaptive reuse project with the involvement of residents. Thirdly, the value framework method for classifying the Imagine and workshop data. These methods and results can be reviewed for other studies that have overlapping goals or research questions. This project also included technological research for design that's valuable for the scientific field. This includes the technical research for the climate design of the Earth, Wind & Fire concept applied to a church. Additionally, the technical research for a box-in-box system in poorly isolated spaces.

The social value of this project can be found in multiple aspects and phases. First of all, one of the main topics and starting points of this project is the social issue of the resident satisfaction in Amsterdam New West. This project aimed to research and design with the goal of an improved resident satisfaction. Related to this, the workshop is a relevant method for projects with social tasks in the built environment. Another social value of this project is the current problem and approach to disused churches and heritage in general, with an adaptive reuse approach. The last social value entails the further development of community participation. This relates to participation in adaptive reuse projects, in Amsterdam New West, participation with residents, participation regarding a church etc.

The ethical aspects of this project were taken into account from the start of the process. In fact, prior to conducting the interviews, approval was sought from the Human Research Ethics Committee (HREC) at the TU Delft. Later on in the process a comment can be made regarding ethics in obtaining the drawings of the case study. The vast majority of churches are registered with the city of Amsterdam as 'sensitive objects.' This means that the drawings are not public and permission is required from the building owner to receive the drawings. Contact with church councils was difficult and it soon became clear that drawings are not easily provided to third parties. Eventually, the drawings became available through an outsider who had access to them. Comments could be made regarding the ethical principles for obtaining the drawings without permission.

5. *Transferability of the project results*

As discussed in paragraph four there are several methodological and technical research parts valuable to the academic field. The methods and results of the research can be transferable to other projects. For instance, the methodology of the Imagine method can be used in other social studies that want to establish the values and needs of the residents of a neighborhood or city area. Simultaneously the municipality of Amsterdam, that executes the recurring research about resident satisfaction, could also exploit the contradicting results.

The results and process of a co-creation workshop is transferable to many other projects that aspire to implement community participation in an adaptive reuse project. The project doesn't have to be an heritage or religious building. However there needs to be enough interest in the project by the residents or other stakeholders, otherwise it is difficult to recruit participants for a workshop. Luckily in the case of this project, there was already immense interest in the church and the future of the building.

The research and design for a box-in-box system is transferable to other buildings besides churches. A box-in-box system is relevant for buildings with large spaces that have poor insulation and an uncomfortable indoor climate. This system can therefore be used in church halls, as well as sheds or industrial halls. This system can also be a solution for heritage buildings where it is desirable to minimize deterioration of valuable attributes.

A specific element in the project is the reuse of the church interior for staircases. This strategy is less transferable to other projects but it's a relevant and helpful way to deal with church interiors.

6. *Personal growth*

In the early stages of the project, I struggled to maintain a clear overview and strategy, which hindered progress of the research. However, through flexible thinking and adjustments, these challenges are in the end navigated and established as a coherent and significant project. This experience underscored the importance of taking a step back in order to refocus.

One of the biggest achievements in personal goals of this project was the proactive approach to networking and initiative-taking. Despite time constraints, I took the assertive step of contacting relevant individuals and organizing a workshop from scratch within a week. After the workshop the contact was maintained and led to a valuable

next step in the process. This experience not only improved networking skills but also reinforced the importance of seizing opportunities and taking decisive action in pursuit of project goals.

A recurring challenge throughout the project was the tendency to immerse deeply in research and analysis, potentially delaying the transition to the design phase. While thorough research is essential, there's a need to streamline the transition process and allocate sufficient time for design exploration. Nevertheless, the research has provided a strong foundation for the design and made rapid product development possible.

7. Co-creation workshop evalutation

In order for the research and design method to have actually been effective in improving resident satisfaction, feedback on the design by the residents is essential. During the co-creation workshop opinions and perspectives on the future of this church in their neighborhood were collected. However, the output is analyzed and translated towards a design while simultaneously implementing personal viewpoints and architectural preferences into the design. The purpose of the co-creation workshop wasn't to adopt the residents' opinions uncritically and blindly, but rather to use them as a guideline during the process.

7.1 Co-creation Evaluation methodology

After the P4 a similar presentation as the P4 is given to the residents. The presentation took place on the 23th of May in the building itself as well as the co-creation workshop. The participants were six of the same residents that were present at the co-creation workshop. The first reason for presenting is to thank the residents for their participation and show what their effort has led to. The residents remained interested in the project after the workshop and wanted to stay informed. The second reason of the presentation is to evaluate how effective the co-creation workshop was regarding an improved resident satisfaction. So, therefore the evaluation is entirely about reflecting the process based on the design presented and not about testing the design to see where things need to be adjusted to match residents' expectations.

To evaluate the success of the co-creation workshop a survey is set up using the Co-evaluation Framework by Pires (2019). The author set up the framework addressing 12 evaluation parameters. For this project nine relevant parameters are selected. For each parameter is a short description given and a modified question for this graduation project (See Table 1). When conducting this co-evaluation, it must be kept in mind that long-term evaluation is difficult to capture (Mäkelä et al., 2018; Rodriguez et al., 2019; Roemer et al., 2020; Scott et al., 2020). This will certainly apply to a project that is only presented and not realized.

Table 1: Nine selected parameters for Co-evaluation Framework by Pires (2019)

Parameter	Description	Survey question
Acceptability	Attitudes towards the initiative, satisfaction, receptivity	How would you rate your satisfaction towards the changes proposed in the design?
Direction	Awareness about which tasks to perform and how the work being done is related to the main goal and objectives	Is it clear what the end product is and what will happen to the building?
Inclusion	Involvement from the community and other actors; diversity of the actors involved	How would you rate the involvement of the residents in this process?
Communication	Promotion to the community, connection with the stakeholders	How would you rate the communication towards the residents in this project?
Alteration and deviations	Translation of initially co- created plans into the actual activities, changes made and reasons why	How would you rate the differences between your given input and the final design?
Appropriateness	Perceived fit of both the co- creation process and planned goals and objectives, relevance	How would you rate the appropriateness of the design for the building and its context?
Ownership	Value given to stakeholders' control and their feeling of ownership over the progress of the project	Do you feel any ownership of the work that is presented
Support	Support received and given by the stakeholders participating in the project	How would you rate the given information about the project and design?
Contribution	Contributions from all levels	How would you scale your contribution to this design?

7.1 Co-creation evaluation conclusion

In reflecting on the co-creation workshop the survey results, presented in Appendix A through diagrams and resident quotes, provide insightful feedback. The residents expressed satisfaction/high satisfaction towards the design, appreciating the programming, the aesthetic appearance, as well as its respectful approach to heritage. They also found the design to be highly appropriate. The survey further highlighted residents' approval of the project's communication and their involvement, noting effective collaboration between the architect and the community.

However, areas for improvement in the workshop process were identified, specifically in the parameters ownership, alterations and deviations, and project direction. One resident emphasized the need for more frequent workshops to foster a deeper sense of ownership and richer contributions. Although the project's time constraints made this difficult, it is a valuable consideration for future co-creation processes. More frequent workshops could also reduce the likelihood of alterations and deviations, allowing for interim feedback on the project's progress. Additionally, the project's direction was unclear to some residents. This led to mixed feedback: while one resident felt the drawings effectively conveyed the proposed idea, another suggested that an additional 3D image of the first floor would help in better understanding the design concept.

Overall, while the workshop was successful in many aspects, these insights point to potential enhancements for future co-creation initiatives to ensure even greater resident engagement and clarity.

8. Future steps

8.1 Municipal monumental regulation review

The initial idea for the co-creation workshop wasn't only to invite residents, but also stakeholders from the municipality with heritage knowledge. The employees of the Monument department weren't able to attend, but a proposal was made. The monument department could be involved in the project through a monumental review. The added value to the project would be testing the final design using their

method. This result contributes to estimating the feasibility of the project in terms of monumental regulations. Due to time constraints, this didn't succeed during the project process, but this could be a relevant follow-up step after completion of the graduation project.

8.2 Continuation project with 'Stichting buurt en kerk'

After graduation, the project will progress further, thanks to the active involvement and enthusiasm of the residents who participated in the workshop. They have invited me to attend meetings with 'Stichting de Kerk,' a foundation by the residents dedicated to developing a plan for 'De Kerk van het Nieuwe Verbond.'

The primary goal of these ongoing meetings is to collaboratively evaluate and refine the design, ensuring that it aligns with the community's vision and needs. This collaborative approach aims to move the project from concept to reality, with the potential for partial or complete realization of the design. Working closely with 'Stichting de Kerk' will be instrumental in advancing the project. Their expertise and resources can provide valuable support in refining the design and planning its implementation. This partnership will also help in aligning the project with broader community goals and ensuring its sustainability.

In proceeding with the project, the concluded points of the evaluation will be taken into consideration. The evaluation highlighted the importance of continuous and meaningful community engagement. Moving forward, it is crucial to maintain regular communication with the residents to ensure their voices remain central to the project. This will help sustain their sense of ownership and ensure the project reflects their collective aspirations. Another significant lesson from the workshop was the value of more frequent sessions. Regular workshops can provide opportunities for ongoing feedback, reducing the likelihood of significant alterations and deviations. This continuous loop of input and adjustment will be vital for refining the design and addressing any emerging concerns. Lastly, the feedback regarding the clarity of the project's direction underscores the need for clear communication. Utilizing diverse visualization tools, such as additional 3D images, can help convey complex design ideas more effectively. Ensuring that all residents have a clear understanding of the design will facilitate better discussions and more informed decision-making.

The future project process requires dedication, open communication, and a commitment to collaboration. With these guiding principles, the project holds great promise for creating a lasting and meaningful impact towards heritage and the community.

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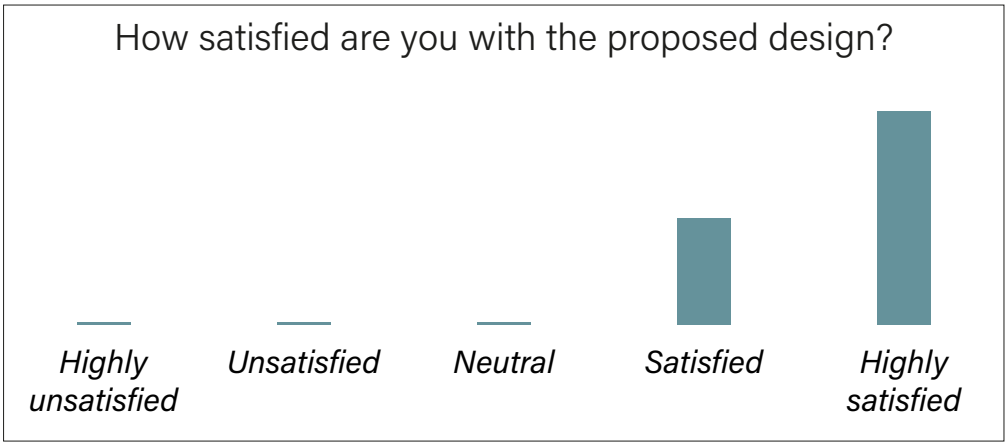
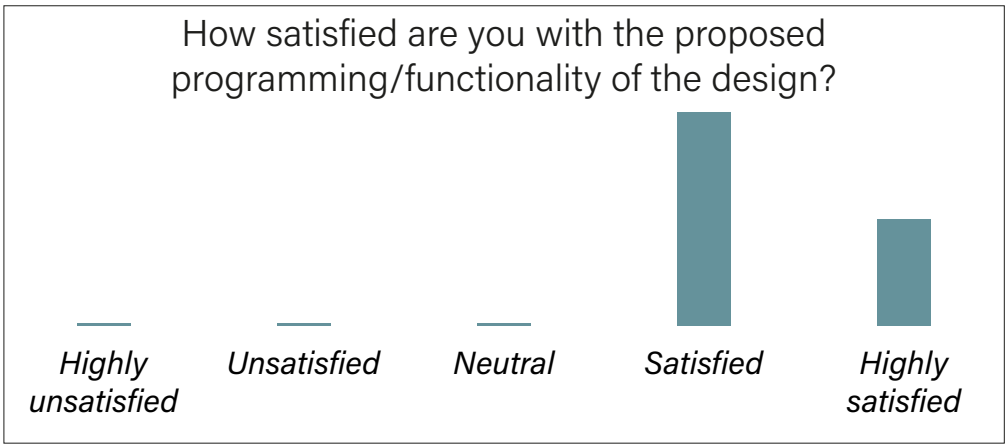
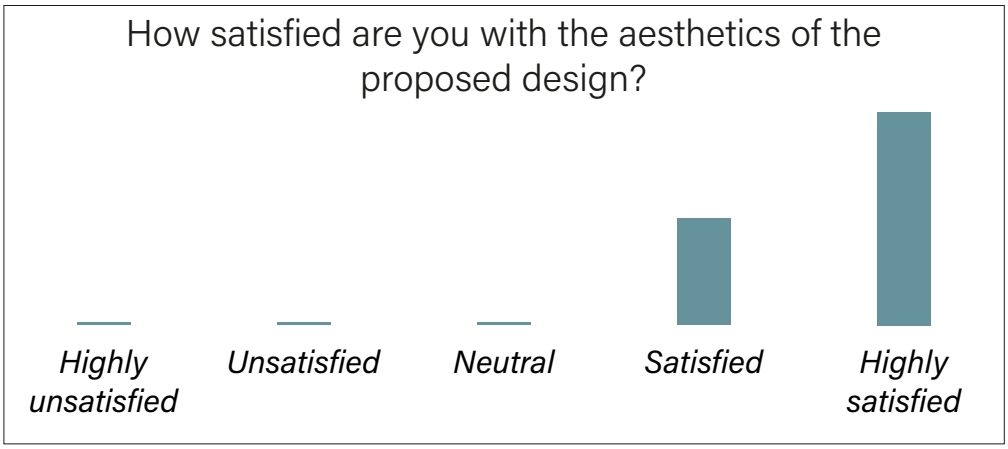
Satisfaction



"Surprising solutions, such as the height, heating of the space, and the spiral staircases."

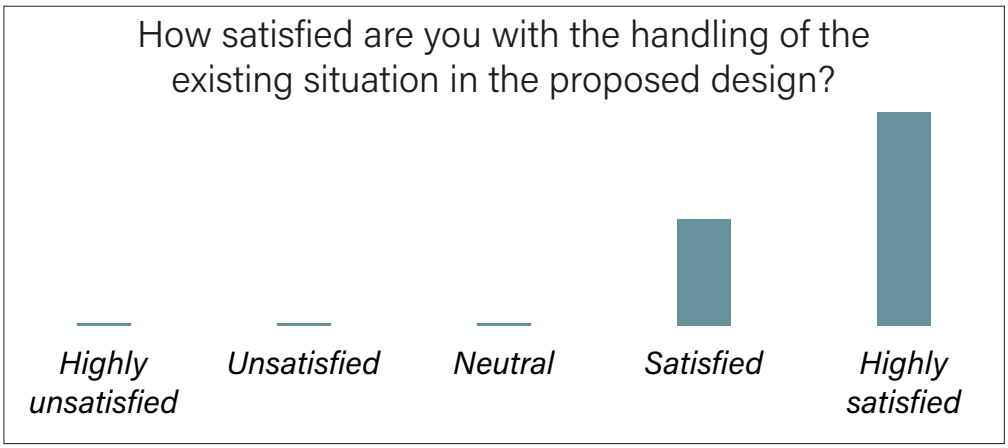
"I'm very impressed by the solar chimney."





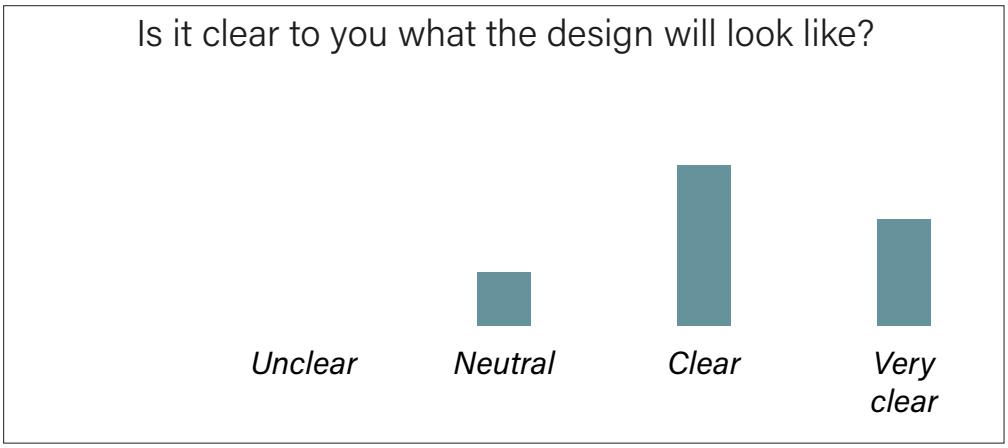
"Very beautiful! The application of the plastic number works very well."

"Beautiful staircase, where the wood from the benches is reused."



"Great respect for the existing monument."

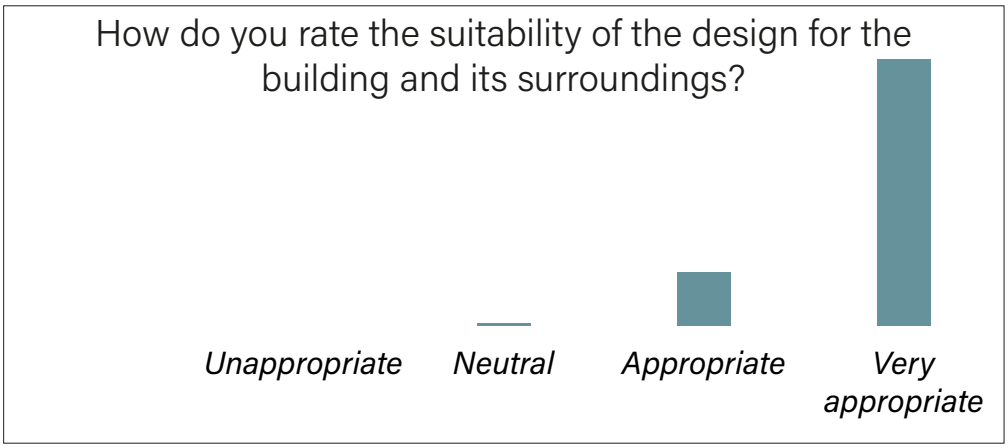
Direction



"First floor is needed in 3D"

"Great drawings. that give a good impression of the proposed idea."

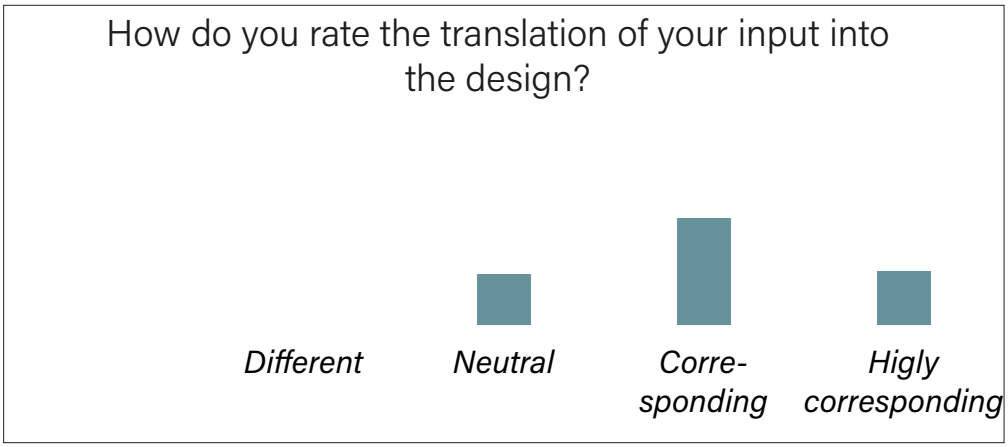
Appropriateness



"A lot needs to be done to be able to execute the plan"

"I can totally see this happening!"

Alteration and deviations



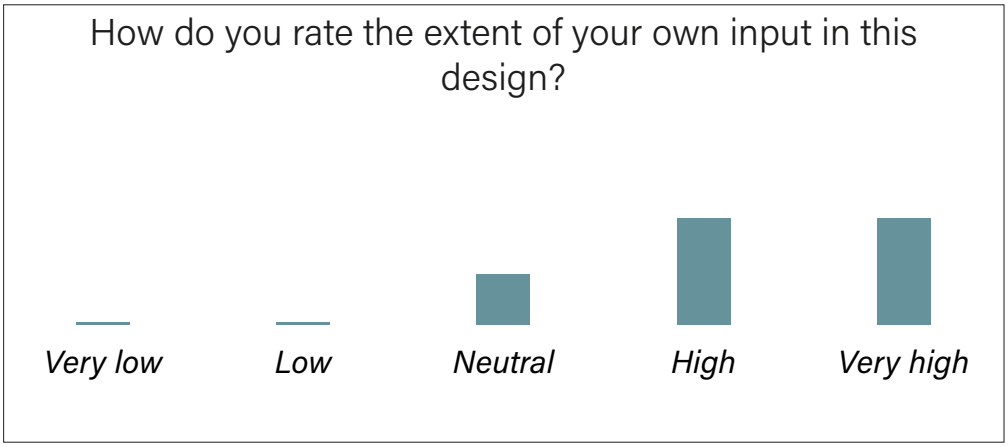
"The use as a concert hall is not yet fully developed."

"There was a lot of input where it's impossible to address everything."

"I see and hear a lot in the design of what was brought up!"

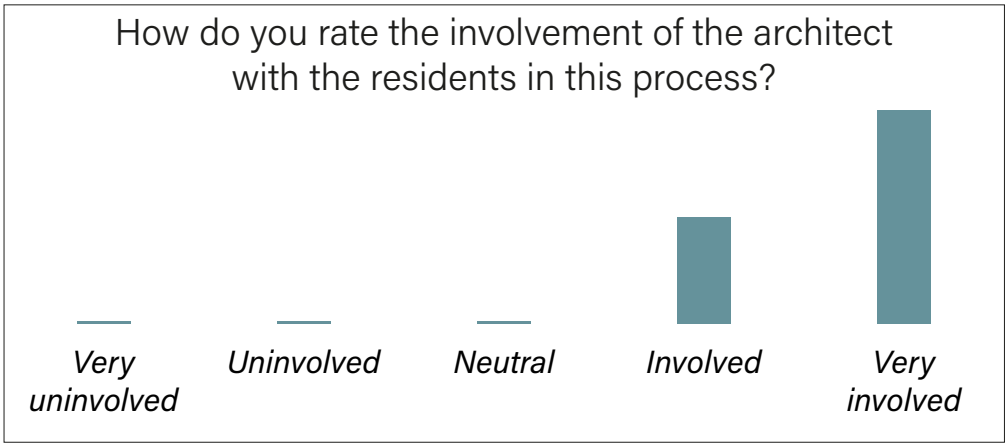
"I was hoping to see more of the dwellings in the outbuildings. Unfortunately you only focussed on the church hall."

Contribution



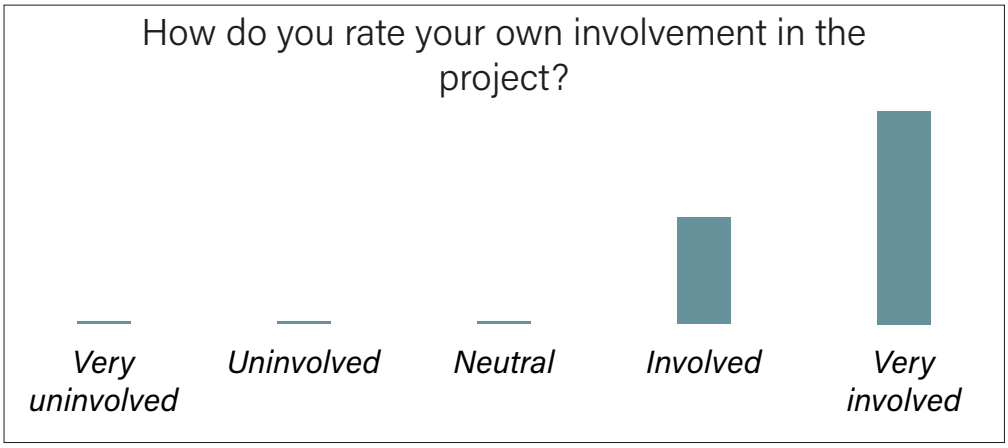
"Good opportunities for participation."

Inclusion



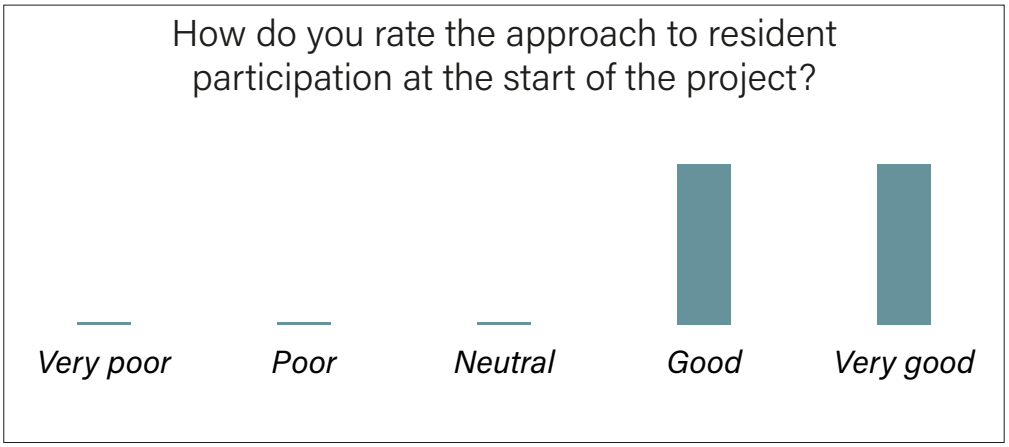
"There were quite a few complications; you handled them well."

"You listened well and took everything into account."

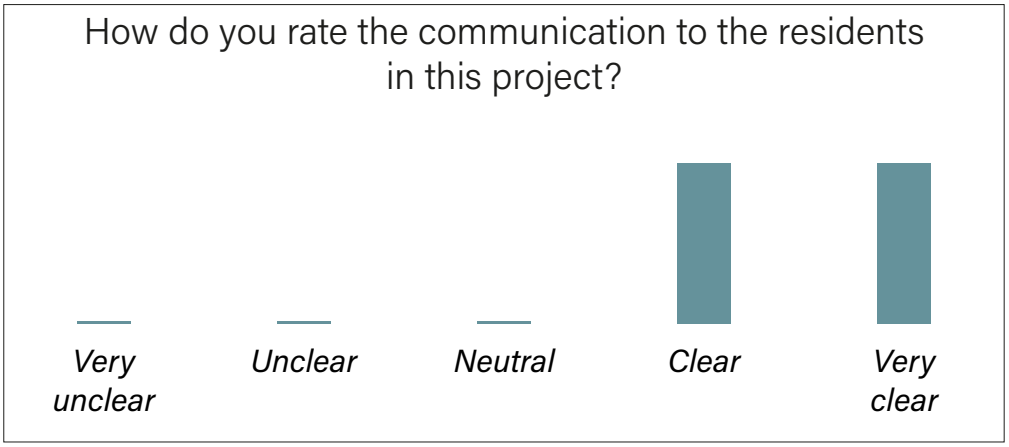


"A lot needs to be done to be able to execute the plan"

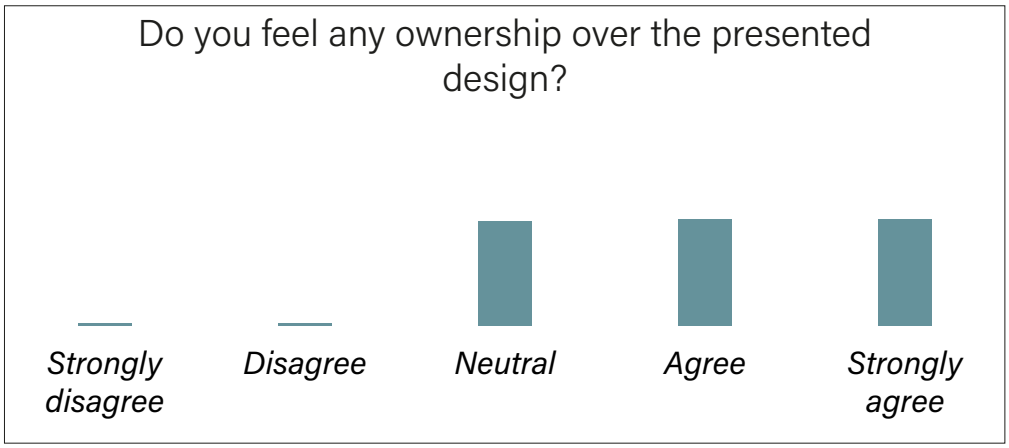
Communication



"I am amazed by your ability, your creativity, your patience, and your social skills. It's beautiful to see."



Ownership



"It was fun to participate, but ownership requires a much more intensive/frequent contribution."