

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information		
Name	Levi Noah Steevensz	
Student number	5470285	
Studio		
Name / Theme	Heritage & Architecture – Studio: Zero Waste Church	
Main mentor	Catherine Visser	Architecture - Heritage & Design Mentor
Second mentor	BT	Building technology Mentor
Third mentor	Wido Quist	Research – Heritage and technology Mentor
Argumentation of choice of the studio	<p>First and foremost, redesigning or working with a church building has been a small personal dream of mine. So, the design studio provided an opportunity I simply could not pass. Furthermore, church buildings provide a complex and growing problem, as religious participation steadily declines, and the number of vacant churches continues to grow. As a result of Christianity's prominent role in European history, church buildings are deeply intertwined with city's or village's history, sense of identity, urban planning, and day-to-day business. Therefore, until today, there is a deep local appreciation of these buildings. Hence, why it can be so difficult to find a new purpose for the houses of God, as there are so many different perspectives towards the church buildings, professional, emotional, and sometimes even irrational. This unique case study is one that deeply intrigues me and allows me to approach design in a way I have not done thus far. Hence, my choice for the graduation studio.</p>	

Graduation project	
Title of the graduation project	SAME EMOTION, DIFFERENT CHURCH
Goal	
Location:	The Grote- of Mariakerk in Meppel Kerkplein 21, 7941 BG Meppel
The posed problem,	<p>The decreasing number of ecclesiastical in the Netherlands over the past decennia (Centraal Bureau voor de Statistiek, 2020) presents the harbinger of an upward trend regarding the number of vacant churches. Especially considering that the church's ancillary functions have been taken over by care and welfare institutions and that the church's relevance as an institute has shifted towards the margin of society. Church buildings as houses of worship are becoming obsolete (De Kruijf & De Roest, 2010). Furthermore, the church's main sources of income are voluntary contributions and collections (Beunderman, 2009) and the average heating costs for the buildings are around €70.000,- (Roetman, 2021), this makes maintaining the buildings impossible. As a result, endangering the conservation of the church's cultural values, and unique sense of place, adding to the already substantial problem of high vacancy rates plaguing cities (Dos Santos Goncalves & Quist, 2022).</p> <p>However, public support for preserving the churches shows to be strong within local communities (Rijksdienst voor het cultureel erfgoed, 2011), even among the non-churchgoers (Het Bisdome van Haarlem et al., 2008). The church building's relevance reaches outside of their function, as they are landmarks that contribute to defying the cityscape, the atmosphere of villages ((Post, 2014) according to (Vdovychenko, 2019)), their identity, and function as a place of memory (Rijksdienst voor het cultureel erfgoed, 2011), gathering, commemorations, or ceremonies such as weddings ((NL Times, 2018) according to (Vdovychenko, 2019)). Despite the local support for preserving the churches and strongly resisting demolition plans (Rijksdienst voor het cultureel erfgoed, 2011), the repurposing of churches is a problem (Het Bisdome van Haarlem et al., 2008) ;(Zomer, 2014). The churchgoers and locals hope to preserve the religious function, rituals, and memories that the churches safeguard (Het Bisdome van Haarlem et al., 2008), making repurposing an extremely emotional process (Rijksdienst voor het cultureel erfgoed,</p>

	<p>2011). With their emotional claim, the locals place restrictions on business dealings (Het Bisdom van Haarlem et al., 2008), through protest or arguing for a listing on the monument list (Zomer, 2014).</p> <p>The wish to maintain the church and the emotion it carries for the local community can be interpreted as the desire to maintain the church's sense of place. Sense of place refers to the emotional bond or attachment one develops after experiencing a particular place, ranging between positive and negative emotions (Foote & Azaryahu, 2009), and the importance the place has for a person (Hashemnezhad et al., 2013). By incorporating the local Sense of Place in the process of repurposing, the meaning people convey to the church building can be maintained or carefully worked with. By doing so, maintaining the local wishes, memories, and traditions that the church buildings encompass. Furthermore, adding a 'local Sense of Place' layer to the value assessment and opening the door the new design opportunities that arise when talking to the locals and hearing their stories about the church building in question. As a result, solving the problems that arise during repurposing processes because of the communication rift and diverging interest between the locals and the party in charge of the repurposing. It also helps to provide insight into what the local emotional bond is and what makes it, Smoothen the repurposing process, incorporate locals in the process, and help to leave all stakeholders satisfied with the result. One of these churches, the case study in question, is the Grote- of Mariakerk in Meppel.</p>
<p>research questions and</p>	<p>Main research question: "What is the limit of acceptable change to the sense of place for the local community, when transforming the form and function of the Grote-of Mariakerk in Meppel?"</p> <p>To answer this research question, I pose the following sub-research questions:</p> <p>"What is the sense of place in the realm of architecture?"</p> <p>"What tools exist for measuring the sense of place?"</p> <p>"What elements define the sense of place of the Grote- of Mariakerk for the local community?"</p> <p>"How do transformation scenarios affect the sense of place of the Grote- of Mariakerk for the local community?"</p>

design assignment in which these result.

A well-informed sustainable and Zero-Waste transformation of the Grote- of Mariakerk that incorporates the sense of place for the locals and encompasses the current and possible future needs of Meppel in program and form.

The sense of place refers to the emotional bond or attachment individuals or multiple people develop with locations or environments, ranging from positive to negative bonds. It also describes the uniqueness or character of the place (Foote & Azaryahu, 2009). This sense of place is developed based on the physical and psychological experiences with the particular place and the meaning one conveys to the place. The place, in this case, the church, is defined by its function or activity, its form (physical shape, materials, etc.), and the meaning conveyed to the place or feelings they might have about it (Hashemnezhad et al., 2013). Regarding repurposing the church, its goal is to change the form and function of the place, not the meaning or emotion it carries, which means that repurposing does not exclude the preservation of the sense of place.

The design assignment is to incorporate the local's Sense of Place towards the Grote- of Mariakerk into the redesign. So, while changing the form and function, maintaining the factors of those place components that contribute to forming the Sense of Place. Furthermore, reusing materials within the church. This reuse of known materials or objects, that people have experience with, also contributes to working with the Sense of Place and is in line with the Zero-Waste design when changing the form. the program is repurposed based on the needs of Meppel (existing building stock and shortage in facilities) and with the existing Sense of place. By redesigning the Grote- of Mariakerk in a flexible manner that facilitates the new, possible changing, and future uses of the church. The overall assignment of a well-informed and sustainable design that encompasses the current and possible future needs of Meppel can be accomplished.

Process

Method description

During the research phase:

Research phase:

Literature review I Sub-question 1 + 2

Through literature review, the theory of the Sense of Place is clarified in the realm of architecture, and methods are investigated for measuring it. By investigating various scientific articles, the key concepts of the Sense of Place are defined, a theoretical framework on the theory is created, and methods for measuring (and quantifying the measurement) the sense of place is determined.

Field research I Sub-question 3

Field research is conducted to establish the local Sense of Place and the factors that contribute to forming the local community's sense of place of the Grote- of Mariakerk. Through interviews and surveys (methods defined through preliminary investigation) within the local community of Meppel, the Sense of Place is investigated. Churchgoers and Non-churchgoers are approached for the survey and interviews. The interviews are used to cover the blind spots left by the survey and to provide more depth to the overall research.

Experimental research + Field research I Sub-question 4

Through Experimental and field research the effect of possible intervention scenarios on the sense of place of the Grote- of Mariakerk for the local community is investigated. The interventions on the form or the Grote- of Mariakerk are defined based on the theory of 10+1 Actions for an Adaptive Architecture. The possible new program for the building is defined based on the ABC-analysis, investigation of local news publications, local ideas for the church on social media, projected plans, and local doomsday scenarios. Through interviews, the plans are presented to the local community. For the interviews, the same people are approached as for the research into the local Sense of Place (s.q.3.).

Design phase:

Personal feedback loop:

Designing is a constant process of changing, improving, and critically reviewing design choices based on the ABC-analysis, value assessment, Zero-Waste research, sustainability, and the results of the research into the Sense of Place of the Grote- of Mariakerk.

Sense of Place feedback loop:

In addition to the personal feedback loop and discussions with tutors, the local community of Meppel is approached to provide feedback on design choices or scenarios. During the early and middle design phases they are approached to provide feedback on what design decisions would work best for them, why, and how certain design decisions alter, maintain, or enhance the factors that contribute to their Sense of Place with the Grote- of Mariakerk. As a result, (together with the Sense of Place research) it can be determined if the design does justice to the local emotional bond and appreciation of the Grote- of Mariakerk.

Scenario-based design / Presenting multiple design options:

During the conversations with the local community of Meppel, scenario-based design is used to present different design directions or possibilities. By doing so, creating a platform for discussion, and generating input on how different approaches affect the local's Sense of Place towards the Grote- of Mariakerk. Furthermore, it helps to find aspects of the different scenarios that work well in working with the Sense of Place and possibly shows that certain aspects need to be combined. It also works as a process of elimination and inspires the locals to perhaps come up with design ideas that are inspiring to me (the designer). So, scenario-based design is used as the method for communicating design options with the locals of Meppel, the main products or media for presenting the scenarios will be model making, Visualisations, and sketch design drawings.

Model making:

Considering the transformation of the church is done by a "Zero-Waste" approach. It is important to become familiar with the materiality, proportions, and composition of the Grote- of Mariakerk. Furthermore, modelmaking provides an excellent hands-on tool for communicating design scenarios/proposals with the local community of Meppel. Bringing an 'interactive' model could even provide a platform for discussion and a way for the locals to communicate their design ideas.

Visualisations and sketch design drawings:

Visualizations are a great and striking way for communicating design scenarios or options with the locals of Meppel during design research. It usually is the best way for communicating design ideas, atmosphere, and the overall picture of a design with people who are not trained architects. Especially when combined with sketch design floorplans and sections. Hence, why it is an excellent format for my design process and to use as a tool to communicate design ideas during the meeting with the locals from Meppel.

Literature and general practical preference

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Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?

The graduation topic, incorporating the Sense of Place in the design/transformation process as a limit for acceptable change, relates to the studio topic by addressing the memories, rituals, day-to-day experiences, history, and, well, unique Sense of Place that the church buildings encapture. Furthermore, through a Zero-Waste transformation, the project addresses the second studio topic, as the studio asks us to take a position towards the buildings, "is it heritage or is it waste?" (Dos Santos Goncalves & Quist, 2022). Although they seem like separate topics. The Sense of Place and elements addressed as 'heritage or waste' do relate closely to each other since certain existing building elements are also factors that contribute to forming a Sense of Place. So, reusing those elements consciously is an effort towards maintaining or working with the Sense of Place. The graduation topic relates to the overall master track of Architecture and the Heritage chair, by going into the meaning, memories, and emotional bond that people have with architecture.

2. What is the relevance of your graduation work in the larger social, professional and scientific framework.

The decreasing number of ecclesiastical in the Netherlands (Centraal Bureau voor de Statistiek, 2020) presents the harbinger of an upward trend regarding the number of vacant churches in need of repurposing the Netherlands. Especially considering that in 2021, more than 21% of the Dutch church stock had been repurposed, 4% was already in transition, and hundreds of churches

have been demolished over the last decennia (NPO radio 1, 2021). Church buildings as houses of worship are becoming obsolete. As a result, endangering the conservation of the church's cultural values, and unique sense of place, adding to the already substantial problem of high vacancy rates plaguing cities (Dos Santos Goncalves & Quist, 2022), and the local problems concerning the repurposing of churches (Het Bisdom van Haarlem et al., 2008) ;(Fijter, 2019) ;(Zomer, 2014). The emotional bond that people have with the church in question makes repurposing an extremely emotional process (Rijksdienst voor het cultureel erfgoed, 2011). It hinders the process of repurposing, as with their discontent, the locals sometimes even go as far as placing restrictions on business dealings (Het Bisdom van Haarlem et al., 2008), through protest or arguing for a listing on the monument list (Zomer, 2014).

By determining the locals' limits of acceptable change to the Grote- of Mariakerk's sense of place, this research helps find an answer to the earlier posed problems regarding the vacancy and repurposing of churches, as it should help with the transformation of the church. Incorporating the local's emotional bond, attachment with, and appreciation of the church buildings in the repurposing process should help towards finding a new purpose for the church that leaves both the locals and the other stakeholders satisfied. Furthermore, helping to maintain the heritage object and the cultural values it encompasses. While the research and design are specific to the Grote- of Mariakerk in Meppel, it provides an example and theoretical framework for repurposing other vacant churches. Furthermore, presenting the opportunities that arise when incorporating the aim of producing Zero Waste during the design. So, in short, the case study of the Grote- of Mariakerk provides an example of a case study that incorporates the local's Sense- of Place in the design process. As a result, hopefully, provide a much smoother repurposing process, leaving all stakeholders satisfied, adding a layer to the value assessment, making people feel listened to and part of the process, and possibly opening the door to finding new design directions/solutions.