

# 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](mailto: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:

<b>Personal information</b>		
Name	Bas Nijenhuis	
Student number	4486269	
<b>Studio</b>		
Name / Theme	AR3AH115 Revitalising Heritage; Zero Waste Church	
Main mentor	Catherine M.N. Visser	Architecture - Heritage & Design
Second mentor	Anet Meijer	Building Technology
Third mentor	Wido Quist	Research – Heritage and Technology
Argumentation of choice of the studio	<p>Having always been fascinated by historic buildings for offering a window into a different time, this studio will provide me the opportunity to find new ways to react to this history and use it to create an environment that shows it off to its users. Specifically with historic churches often being highly decorated and prominent in the historic city's image and skyline, they become some of the most recognizable buildings in their city. Also knowing sorely how the demolition of these type of monuments can be lamented for long times from my home city of Zwolle where the neogothic Michaelskerk got replaced by an anonymous, grey and plain warehouse with an info sign placed by the city regretting the demolition of one of the most characteristic buildings in the city center. Therefore it is also very interesting to me to figure out how these buildings can be adapted to remain relevant and alive, while respecting the cultural values and history that the building represents. This studio will provide me the opportunity to explore these historic churches that are turning vacant, as a storytelling device or time machine, making the values that got these buildings the title of monument transparent to users and observers. The challenge of fully understanding a historic building, being</p>	

	<p>able to translate this through architecture to create a level of understanding and intrigue users with the buildings past life as well as giving it a functional new use that allows the building to be sustained and useful for ever changing needs, is one of the things I find most interesting in the field of architecture. Through this studio I can not only research and explore these fascinations, but also put them into practice giving me invaluable experience for future work in this type of context.</p>
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<b>Graduation project</b>	
Title of the graduation project	The story lives on, Optimizing narrative driven design for a zero-waste conversion of churches
<b>Goal</b>	
Location:	Heilige Barbarakerk; Markt 50, 4101BZ Culemborg.
The posed problem,	<p>This late 19th century catholic church can no longer be maintained by the church congregation, and will come up for sale. Due to the limited plans for sustainable new use and the poor state of preservation for major parts of the building, the iconic building on a prominent location along the main market of Culemborg is at risk of closure and demolition. Finding a suitable new use can help maintain the building and keep it visible and accessible for locals and visitors.</p> <p>Additionally the church represents the firm reestablishment of Catholics in the city after being driven out by reform (Frijters, 2011). The catholic symbolism is then deeply rooted in the architecture and decorative elements and furnishings in the church (Thijm, 1858). To do this justice and find a new purpose for these items, they also have to be understood to know how they can be transformed for a new life no longer being religious.</p>
research questions and	<p>How to make the stories that are integrated in religious built heritage legible in a redesign?</p> <ul style="list-style-type: none"> <li>- What is the symbolic value of the Dutch neogothic church architecture of the 19th century?</li> </ul>

	<ul style="list-style-type: none"> <li>- What elements tell stories and carry symbolic value in Catholic religious heritage?</li> <li>- How are the intangible stories and symbolism connected to the tangible building and its elements?</li> <li>- What are the effects of the narrative design approach to the ability to preserve tangible and intangible building elements of the R.K. Barbarakerk?</li> </ul>
<p>design assignment in which these result.</p>	<p>The current Neogothic Barbarakerk will be converted in to a multi-use building that will maintain their appearance in the city as well as keep the interior open and accessible. The day-chapel at the front will remain having its current function in line with wishes from the church as well as keeping the history alive with still holding some of its original functionality. The main part of the church will be transformed to a charity and workshop for traditional craftsmanship where for example the long term unemployed can work and built to help get them into the working life, reflecting the history of charity that is tied into the church (Genootschap A.W.K. Voet van Oudheusden, 2004). This workshop will be able to be transformed to an event space to host events and festivals to help revitalize the center of Culemborg. The back of the church will be extended in the north and east direction to keep the original view from the market square mostly unchanged and creating more functional space in the back where there is more of a mix in historic and modern architecture styles and where a new extension would fit in better in the city structure. This expansion, along with the rear part of the church, will be turned into rentable studio's and offices for startups and companies. This will provide an option for characteristic and flexible offices for special events or significant meetings. The focus for startups is again to reflect the charitable, teaching and helping nature that the church historically stood for, providing a central and practical place where new businesses can establish themselves. These business focused functions will also help creating income for the church that can</p>

	<p>go to ongoing maintenance for the historic church.</p> <p>To keep the intervention sustainable and reflect the renewed appreciation for craftsmanship that came with the gothic revival, the church conversion will be done using local materials and craftsmanship, following the local example of the eco village EVA-Lanxmeer. The extension will be designed in such a way that significant parts can be manufactured in the workshop that will be established in the church itself making it a truly integral and local project, as well as minimizing transport emissions (Stichting E.V.A., 1995).</p> <p>By linking companies with a charity workshop, companies and startups have the opportunity to connect craftsmen to (starting) businesses possibly creating a synergy between them.</p>
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**Process**

**Method description**

The Neogothic architecture is inherently narrative by telling biblical stories and meaning through artworks, symbols and construction (Tkac, 2019). Through literature and archival research the symbolic background of the neogothic architecture and its furnishings are explored and revealed. Understanding these stories reveals the full meaning and historic cultural position of the church. By being able to understand these stories, the architectural interventions to adapt the building for a new use can react to and continue the story. Using spatial, material and practical cues from the buildings history, any new addition will be more deeply rooted in the resulting ensemble, as well as translate the building's original principles to its users and visitors (Tongji University, WHITRAP, & UNESCO, n.d.). Having also been revealed how deeply connected the church and its interior artworks are, it shows the importance of keeping these together and not have the religious artifacts end up in a catholic depot. Instead using their uncovered backstories, a new place can be found within the new church where they still carry meaning. The narrative nature of the neogothic church will then be continued to now demonstrate its history and cultural meaning in the redesign.

In the literature it was revealed that the revival of Gothicism came with a reappraisal for craftsmanship (Frijters, 2011). This craftsmanship will be the guiding theme in the design process. With the done research, the practice and principles behind the construction of the current church were revealed, this forms the foundation of the proposed new use as studio's, offices and a community workshop and event space. The research also revealed the logic behind the construction and layout which can be continued in the conversion. Focusing on local craftsmanship and sustainable local materials, the Zero-Waste and circularity aspect of this studio is primarily explored in the design process. This way a truly integrated and fitting conversion can be proposed that uses the founding principles behind the original construction for the alterations and additions that will be made in the redesign, and uses sustainable methods and materials to execute these principles. For the sustainable methods and practice (Stichting E.V.A., 1995) during the design phase, the eco-village nearby of EVA-lanxmeer nearby the heilige Barbarakerk will be used as the main reference and guide . In this design phase the most effective method of reacting to the existing symbolism while maintaining its character and displaying its history will be tested and compared on how well this can be sustainably executed. This will feed back into the research as a verification on the effectiveness and importance of the discussed main topics.

### **Literature and general practical preference**

For this research, (Historical) literature about symbolism and meaning in the neogothic Dutch architecture of the 19th century is consulted. Furthermore, literature about meaning behind religious icons is used to establish the full meaning and background behind the different assets of the church. For the narrative driven design approach current literature is also explored. This will establish the current theories and practices for making stories known through spatial storytelling and narrative architecture. To test the concepts that are learned through the literary research, case study are analyzed to see how other church conversions deal with religious symbols and iconography, spatial storytelling and the preservation of heritage values and character, and finally the effectiveness of the conversion in terms of use, preservation of the original building and its assets and the perception of the converted building by users, local community and visitors.

For the redesign process the guiding sources for reference will be similar converted neogothic churches like De petrus in Vught for spatial method, and for material and manufacturing method EVA-Lanxmeer will be the leading reference.

## Reflection

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)?

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

By focusing on and understanding the fundamental principles that created the heilige Barbarakerk and all its artifacts, an adaption can be designed that is integrally connected to the building. This follows the graduation studio topic of revitalizing a church at risk of demolition. By trying to understand the background behind interior symbols and artwork, an attempt can be made to give new meaning to these items after religion. This expands the theme of Zero-Waste of the studio to include the interior artifacts that usually get removed and put in depots. Additionally the intangible aspects rooted in the symbolic architecture can be utilized and continued to make sure the Zero-waste also includes the spatial and material values that are integral to the Neogothic architecture.

By researching the best way to translate an existing church to a new use while respecting the heritage values and assets of the original, this graduation project will give me valuable experience and knowledge for future heritage architecture and architecture that deals with converting an existing (significant) building. Therefore this graduation project will not only test my ability to effectively handle such a design assignment, but also help me find methods that I'll be able to adapt and apply in a future architecture career. As sustainability goals and new heritage guidelines make conversion of (significant & heritage) buildings ever more prevalent, this graduation project will be a good test and experiment in a relevant field of contemporary architecture.

This graduation project will explore ways to make heritage more transparent while still optimizing a heritage building for new use. This added transparency means that the reasons why it is heritage (historical and or cultural significance) are clearly visible/legible in the newly converted building. This will add a layer of depth to these heritage buildings possibly connecting them closer and more deeply to their respective communities and users. This could then be used more generally in architecture to make new uses for heritage more planted within the greater context of the heritage itself. In the field of architecture this research will explore the importance of history and connected symbolic stories, and the effects of using this as a guide in a redesign.

## Literatuur:

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