

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 | Paula Goldebeld |
| Student number | 4664051 |

| Studio | | |
|---------------------------------------|--|--|
| Name / Theme | AR3AH115 - Sustainable Libraries – Revitalising Heritage | |
| Main mentor | Uta Pottgiesser (Design) Emeline Lin (Research) | Heritage & Technology |
| Second mentor | Paddy Tomesen (BT) | Architectural Engineering + Technology |
| Argumentation of choice of the studio | I chose the Heritage studio for several reasons. Firstly, renovating existing buildings offers a sustainable approach to creating renewed spaces. Additionally, blending old and new structures can lead to exciting design approaches. Finally, I have a strong interest for designing cultural and public buildings. All of these factors have contributed to me choosing this studio. | |

| Graduation project | |
|---------------------------------|---|
| Title of the graduation project | Building Balance: Spatial Strategies for Research and Public Functions at the Koninklijke Bibliotheek |
| Goal | |
| Location: | Koninklijke Bibliotheek, Den Haag |
| The posed problem, | The modern library of the 21st century has evolved from a static repository into a multifunctional 'third space' that fulfils a diverse range of social needs. While public libraries increasingly prioritize social functions - such as makerspaces, event spaces and cafés - national libraries like the Koninklijke Bibliotheek (KB) in The Hague require quiet and focused environments for research. Therefore, the KB faces a unique challenge: balancing their core mission as a research institution and preserver of cultural heritage with growing societal demands for openness, accessibility and public programming. |
| research questions and | According to the problem statement, the following research question is defined: |

| | |
|---|---|
| | <p><i>How can spatial strategies in the building of the Koninklijke Bibliotheek contribute to creating an effective balance between research and public needs?</i></p> <p>Sub-questions to answer this research question:</p> <ul style="list-style-type: none"> - <i>What are the challenges and opportunities in the library design to fulfil the researcher and public needs?</i> - <i>What spatial functions and environments do researchers and public users require?</i> - <i>How can spatial strategies for the Koninklijke Bibliotheek be formulated based on user surveys and case study analysis to balance research and public functions?</i> |
| <p>design assignment in which these result.</p> | <p>The design assignment: How can the architectural design of the Koninklijke Bibliotheek create a balance between research spaces and vibrant, inviting public zones without compromising the functionality of either? The design proposal for the Koninklijke Bibliotheek will be informed by the spatial strategies identified by the research.</p> |

Process

Method description

1. Case study Analysis:

Three Libraries, Oodi Helsinki, OBA Amsterdam and the Seattle Public library will be analysed to identify challenges and opportunities in library design. For each case, architectural drawings, floorplans and photographs will be collected and examined according to four spatial themes: zoning and functional layout; flexibility and multifunctionality; acoustic strategies; accessibility and circulation. All findings will be organized in a comparative matrix highlighting common solutions and innovative approaches for library design.

2. User Survey:

A survey will be conducted among visitors of the KB. This survey will be conducted in collaboration with fellow group members of the Heritage Studio and will take place both online and on-site, in and around the KB. The users will be divided into two groups: researchers (who require access to collections and quiet study environments) and public users (who do not use collections but visit for social, cultural, or community activities). The survey results will be analysed separately for each group, followed by a comparative analysis to identify differences and similarities in the spatial needs of researchers and public users. This will facilitate a more nuanced understanding of the spatial functions and environments that are required for the KB and how these align with findings from the literature on other libraries.

3. Semi-structured interviews:

Semi structured interviews will be conducted with KB users to gather insights into their experiences, preferences, and perceptions of the KB building. Each interview will be audio-recorded, transcribed and analysed. These qualitative findings will complement the survey data.

4. Comparative study:

Findings from the case study analysis, user survey, and semi-structured interviews will be combined and compared to formulate spatial strategies for the KB.

Literature and general practical references

Aabø, S., & Audunson, R. (2012). Use of library space and the library as place. *Library & Information Science Research*, 34(2), 138–149. <https://doi.org/10.1016/j.lisr.2011.06.002>

Abulude, F., Ademilua, O., & Gbotoso, A. (2024). Noise Pollution in Libraries: Impacts, Strategies, and Recommendations *Indonesian Journal of Multidisciplinary Research*. 4, 127–144.

Athens, L. (2007). Design for Social Sustainability at Seattle's Central Library. *Journal of Green Building*, 2, 1–21. <https://doi.org/10.3992/jgb.2.1.1>

Berg, M. van den. (2018). National Library of the Netherlands, on transformation.

BIBLIOTHEK – Forschung Und Praxis, 2018. <https://doi.org/10.18452/19505>

Caan, S. (2011). *Rethinking Design and Interiors: Human Beings in the Built Environment* (1st ed). Laurence King Publishing.

Ching, F. D. K. (2007). *Architecture—Form, space, & order* (3rd ed). John Wiley & Sons.

Choy, F. C., & Goh, S. N. (2016). A framework for planning academic library spaces. *Library Management*, 37(1/2), 13–28. <https://doi.org/10.1108/LM-01-2016-0001>

Farmer, L. S. J. (2016). Library Space: Its Role in Research. *The Reference Librarian*, 57(2), 87–99. <https://doi.org/10.1080/02763877.2016.1120620>

Garnar, M., & Tonyan, J. (2021). Library as place: Understanding contradicting user expectations. *The Journal of Academic Librarianship*, 47(5), 102391. <https://doi.org/10.1016/j.acalib.2021.102391>

Hall, K., & Kapa, D. (2015). Silent and Independent: Student Use of Academic Library Study Space. *Partnership: The Canadian Journal of Library and Information Practice and Research*, 10(1), Article 1. <https://doi.org/10.21083/partnership.v10i1.3338>

Hermans, M. (2018). *De Transformatie Naar Multifunctionele Accommodaties*. https://www.academia.edu/81766535/De_Transformatie_Naar_Multifunctionele_Accommodaties

Hoogstraten, D. van. (2007). *Bedachtzame dynamiek: Het gebouw van de Koninklijke Bibliotheek, 1982-2007*. NAI.

Janssen, Koenders, & Kwant. (n.d.). *KB Jaarverslag 2023*. KB Nationale Bibliotheek.

Jochumsen, H., Hvenegaard Rasmussen, C., & Skot-Hansen, D. (2012). The four spaces – A new model for the public library. *New Library World*, 113, 5–5. <https://doi.org/10.1108/03074801211282948>

Latimer, K. (2018). 2050: A Library Space Odyssey. *Planning the Future Library*. *Legal Information Management*, 18(4), 203–209. <https://doi.org/10.1017/S1472669618000439>

Lehmann, S. (2024). Reimagining the Library of the Future. From Social Condenser and Community Hub to Regenerative Design. *Public Library Quarterly*, 43(2),

223–259. <https://doi.org/10.1080/01616846.2023.2242626>

Lushington, N., Rudorf, W., & Wong, L. (2016). *Libraries: A design manual*. Birkhäuser

Mady, C., & Hewidy, H. (2025). The public library building as nexus for social interactions: Cases from Helsinki. *City, Culture and Society*, 40, 100610. <https://doi.org/10.1016/j.ccs.2024.100610>

Mickiewicz, P. (2016). Access and Its Limits: The Contemporary Library as a Public Space. *Space and Culture*, 19(3), 237–250. <https://doi.org/10.1177/1206331215596478>

Ministerie van Onderwijs, C. en W. (2020, May 6). *Werken met Woorden—Beleidsplan kB [Rapport]*. Ministerie van Algemene Zaken. <https://www.rijksoverheid.nl/documenten/rapporten/2020/05/06/beleidsplan-koninklijkebibliotheek-2019-2022>

MLA. (2010). What do the public want from libraries? Ipsos Mori. https://www.culturehive.co.uk/wp-content/uploads/2013/11/Libraries_technical_report.pdf
Publieke ruimte onder druk. (n.d.). Retrieved 15 March 2025, from <https://www.bibliotheeknetwerk.nl/publicaties/dossier-trends/publieke-ruimte-onder-druk>

Schloffel-Armstrong, S., Baker, T., & Kearns, R. A. (2021). Geographies of the public library: Institutions, architectures, interactions. *Geography Compass*, 15(10), e12592. <https://doi.org/10.1111/gec3.12592>

Stanwicks, K. (2016). Zoning the Library for Silent, Quiet, and Collaborative Study. *JLAMS*, 12(2). <https://scholarsarchive.library.albany.edu/jlams/vol12/iss2/4>

Sternheim, J., & Bruijnzeels, R. (2021). *Imagination and participation: Next steps in public library architecture* (J. Tee, Trans.). nai010 Publishers.

Vinden en binden van publiek. (n.d.). Retrieved 13 March 2025, from <https://www.bibliotheeknetwerk.nl/publicaties/dossier-trends/vinden-en-binden-van-publiek>

Wood, E. (2020). *Libraries Full Circle: The Cross Section of Community, the Public Sphere, and Third Place* (SSRN Scholarly Paper No. 3556605). Social Science Research Network. <https://papers.ssrn.com/abstract=3556605>

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)?

My graduation project focuses on a sub-component of the studio topic “Designing a sustainable library”. Specifically, my project focuses on finding a new spatial strategy for the KB based on user insights.

This aligns closely with the Architecture track of my master, incorporating several themes that were prevalent throughout the master: performing value-assessments for existing buildings to inform new designs, repurposing existing buildings in a sustainable manner and incorporating social and cultural

perspectives in building design.

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

The findings from this research will give direction to the spatial (re)design of the KB and also contribute to theoretical insights on reconciling multifunctional requirements within national libraries.