

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:	Joël Carl Leroy Göres
Student number:	5670314

Studio		
Name / Theme:	Complex Projects, Bodies & Buildings Berlin	
Main mentor:	Ir. Henri van Bennekom	Architecture
Second mentor:	Architect Eng. Georgios Karvelas	Building Technology
Third mentor:	Masha Finagina	Architecture
Argumentation of choice of the studio:	The studio was chosen because of a personal fascination with big complex projects. Complex projects graduation studio had both. In addition, the personal interest into Germany and Berlin was also one of the reasons.	

Graduation project	
Title of the graduation project:	New Adaptable Bundestag Building
Goal	
Location:	Germany, Berlin, Tipi am Kanzleramt/Skulpturenpark
The posed problem:	<p>The Bundestag is the German federal parliament and with its 736 representatives it is the biggest freely elected parliament in the world (Mayer, 2021). The size of the Bundestag fluctuates every election term because the German voting system works with overhang and levelling representatives (Federal Ministry of the Interior and Community, N.D.).</p> <p>The range of possible mandates varies from 598 to over 1,000 members, highlighting the considerable variability and uncertainty in the system (Vehrkamp, 2021).</p>

	<p>With more than 7 employees per representative (Bundestag, 2022)., the Bundestag can fluctuate with over 3.000 employees per election term.</p> <p>This creates the obvious problem that it is very difficult for the Bundestag administration to know how many facilities are needed. In the Bundestag, there is a forced use of home office, wooden container offices, and temporarily built offices, to try to facilitate the Bundestag (Ismar, 2021). This is also a problem on the sustainable side because temporary facilities are not sustainable and energy inefficient.</p> <p>These problems are also true for any proposed designs for a new parliament building for the Bundestag. So, to counter these problems, a new Bundestag parliament building should be able to adapt to the change of users per election term.</p> <p>Some questions that arise when looking at the possible solution of adaptability are: how are architectural elements related to this and how can the program best be used? How can digitalization play a role and is it may be possible to have programmable and adaptable floorplans or room uses? How will cyber security be accommodated for possible digital meetings? And how can all this adaptability help in sustainability?</p>
<p>Research questions:</p>	<p>The research and design question that follows out of these questions: How to design the adaptable Bundestag parliament of the future to sustainable facilitate the fluctuating number of members?</p>
<p>Design assignment:</p>	<p>The final goal is to design a new sustainable Bundestag parliament building that is adaptable in use and program, and not negatively affected by the fluctuating number of members of the Bundestag.</p>

Process

Method description

To answer the research question and come to a conclusion/final design, the research into the client will be done by gathering information through internet, interviews, and written questions. For the site the main research methods will be mapping information and site visits. And for the program the research will be done by case studies on other federal parliamentary lower house buildings. Because the Bundestag is idiosyncratic in its fluctuating size, the comparisons will be in square meter per employee.

Literature and general practical references

Literature used for the information in this form:

Federal Ministry of the Interior and Community. (N.D.). The voting system. Retrieved from Federal Ministry of the Interior and Community: <https://www.bmi.bund.de/EN/topics/constitution/electoral-law/voting-system/voting-system-node.html>

Mayer, T. (2021, July 14). Das größte Parlament der Welt wächst und wächst. Retrieved from Focus: https://www.focus.de/politik/deutschland/bundestagswahl/btw21-frag-mayer-das-groesste-parlament-der-welt-warum-sich-der-bundestag-immer-weiter-aufblaehrt_id_13492686.html

Vehrkamp, P. D. (2021, July 12). #Mandaterechner - Wie groß wird der Bundestag? Retrieved from Bertelsmann-stiftung: <https://www.bertelsmann-stiftung.de/de/unsere-projekte/monitoring-der-demokratie/projektnachrichten/mandaterechner-wie-gross-wird-der-bundestag>

Bundestag. (2022, April 01). Mitarbeiter. Retrieved from Bundestag: https://www.bundestag.de/abgeordnete/mdb_diaeten/1334d-260806

Ismar, G. (2021, October 23). Home- Office und ein Holz-Provisorium. Retrieved from Tagesspiegel: <https://www.tagesspiegel.de/politik/736-abgeordnete-aber-zu-wenig-buros--wie-der-bundestag-mit-platzmangel-kampft-8015566.html>

Additional Literature:

Groák, S. (1992). The Idea of Building: Thought and Action in the Design and Production of Buildings. London: E&FN Spon.

iea-ebc. (2001, November). Assessing Buildings for Adaptability. Retrieved from iea-ebc: https://www.iea-ebc.org/Data/publications/EBC_Annex_31_Assessing_Building.pdf

Larsson, N. K. (1999, September 26). Sustainable Development and Open Building. Retrieved from Researchgate: https://www.researchgate.net/profile/Nils-Larsson/publication/259871951_Sustainable_Development_and_Open_Building/links/0a85e52e52758025d4000000/Sustainable-Development-and-Open-Building.pdf

Bundesland Berlin. (N.D.). Umweltatlas. Retrieved from Berlin: <https://www.berlin.de/umweltatlas/>

Bundestag. (2021, October 18). Election of Members and the allocation of seats. Retrieved from Bundestag: <https://www.bundestag.de/en/parliament/elections/arithmetic>

Bundestag. (2023, August 24). Die Verwaltung des Deutschen Bundestages. Retrieved from Bundestag: <https://www.bundestag.de/parlament/verwaltung>

Bundestag. (N.D.). From the Parliamentary Council to the most visited parliament in the world. Retrieved from Bundestag: <https://www.bundestag.de/en/parliament/history/history-197590>

Bundestag. (N.D.). Parlament Aufgaben. Retrieved from Bundestag: <https://www.bundestag.de/parlament/aufgaben#:~:text=Die%20wichtigsten%20Aufgaben%20des%20Bundestages,der%20Bundeskanzlerin%20oder%20des%20Bundeskanzlers.>

Bundestagsverwaltung. (2023, October 26). 2.1. Gesetzliche Mitgliederzahl des Bundestages. Retrieved from Official German Bundestag web site: https://www.bundestag.de/resource/blob/196182/9c5db9e4c8724bde1ef4e8105da57772/Kapitel_02_01_Gesetzliche_Mitgliederzahl_des_Bundestages-data.pdf

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)?

The "one of Berlin" type of building and the environmental aspect of this graduation project fits in the Energy aspect and the Bodies & Buildings Berlin Complex Projects graduation studio. The designing of a new (parliament) building relates to the master track Architecture and master programme MSc AUBS.

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

The relevance of this research is there, because the problem is a real problem in the Bundestag and a problem that has real consequences. Next to that the current Bundestag administration is not able to sustainably solve the problem (Ismar, 2021), thus research into how this could be done is important.

It can be stated that this research can help in achieving sustainable goals by making sure that the most efficient adaptable Bundestag will be designed. With this it is possible to construct less and use less of the building area than in traditional ways. Both reducing construction and building size could result in high savings in energy and materials. Also, the fact that the hybrid use of a building is related to commuting to and from a building could help in energy use reductions.

On the architectural topic this research is relevant to possible future designs because it can help in realizing environmental goals that architects must work with, and it could be used for similar building types like offices.