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	Stijn Drolenga
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Studio		
Name / Theme	Complex Projects – Bodies & Building Berlin 2022 - 2023	
Main mentor	Henri van Bennekom	Architecture
Second mentor	-	-
Argumentation of choice of the studio	Amongst other things, the fascination for the process as seen in previous work of the studio made me initially choose for it. After speaking to some former students I envisioned myself doing this studio. Besides, I was also attracted to the proposed site for this years project, Berlin. Before the academic year I've never been there and I getting to know the city through an academic project would be super fun.	

Graduation project	
Title of the graduation project	Klimaforum Berlin
Goal	
Location:	Heizkraftwerksite Moabit, Westahfens, Berlin, Germany
The posed problem,	Research shows that typical climate change communication (within mainstream media and education) doesn't seem to move people to act on climate change and keeping the warming of the planet under the critical 1.5C^{o} as agreed upon within the framework of the Paris Climate Agreement.
research questions and	<u>Main research question:</u> In which ways can Immersive Experiences in Klimaforum Berlin contribute to a greater awareness about climate change?

	<u>Sub-questions:</u> - How can the museum make immersive experiences as accessible as possible? - What are immersive spaces and how are they constructed? - In which ways can one reflect on the museum-experience?
design assignment in which these result.	The Klimaforum, seeks a different way of communicating climate change. The new art, science & technology museum aims to share knowledge through art. More specifically the museum seeks to communicate the climate message in a different, more complete manner. Through immersive 'climate' zones the visitor is able to form a more complete view on the subject, with the ultimate aim to provoke action on climate change. The immersive space makes use of different means to communicate, including sound, texture, light, sight etc. Besides 'the exhibition', Klimaforum also provides spaces for 'slow stay'; low-threshold, mostly free places, where people come to relax, debate, watch, participate and listen. Think of auditoriums, pop-up shops, restaurant, café, bookshop, lounge etc. Klimaforum located on former Heizkraftwerksite Moabit along the Spree. Initiated by the German Ministry of Culture and Media (BKM) and the municipality of Berlin. Operated by Klimaforum (part of Staatliche Museen zu Berlin) and exploited by TU Berlin and several private companies and NGO's. The project has a GFA of approx. 25.000 m2 and expects to welcome around 1.000.000 visitors each year.

Process

Method description

Program

In order to better understand program and eventually to be able to synthesize a design brief for the new museum it is important to study precedents and relevant case studies. In the program analysis relevant case studies will be selected according to each individual sub-question. For instance, while studying entrance areas, I will try to focus only on those museum buildings which are dealing with the principles of slow stay as introduced by Ray Oldenburg (1989). In this way the research will be as specific as possible and therefore obtain clarity. Although an interactive museum about nature and climate change isn't entirely new, the amount of examples is unfortunately relatively scarce. Klimahaus in Bremerhaven, Museu do Amanha and Biodome Montreal are amongst the very few examples which come close to this idea. Through analysis of plans, sections and elevations, I will hopefully be able to make statements about the overall size as well as sizes of separate programmatic parts. Since these references do not all contain the programmatic parts I have envisioned for the new museum, it is also necessary to conduct research outside the field of museums. The immersive environments for example ask for a different type of reference, such as biodomes and botanical gardens. Some examples are the Biospehere 2 project in Arizona or The Insectarium in Montreal. Architectural drawings are of value, but not the only source of inspiration. Various books and journals deal with a scientific approach to these themes. One could think of annual reports (stating temperatures, ventilation, humidity etc.) from botanical gardens and hydrangeas, encyclopedia of plants and flowers and even sound design of movies and documentaries could be of high value in recreating these ecosystems. Another way of finding out about these topics is to visit various projects and interview staff about day to day operations at such a facility.

Client

Identifying the right clients from the start can help informing the needs and sizes of program. Van der Linden et al. (2017) argues that the client is often the architects' main reference point when it comes to obtaining important information about (future) users. They even go further by stating that a 'good' client is key to the project's success. Analyzing precedents and relevant architectural references will help inform the search for possible clients. In order to better understand a clients' perspective, it could be helpful to also consult a professional client in either Germany or the Netherlands, one could think of a (real-estate) developer or educational institution. Thereby it is important to review the clients' reputation, (architectural) ambition level, the organizational structure and its history. This creates a clear overview of the client and can prevent unexpected surprises during the design- and construction phase.

Site

The ambition of reaching a million visitors per year, poses high demands upon accessibility, recognizability, historical relevance, flows etc. In order to obtain relevant information about these topics in relation to site I will make photos and sketches and search for historical maps of Berlin. To be able to develop an understanding of demographics and flows, it can be helpful to make use of a geographic information system or GIS. GIS is opensource database which contains geographic data (or more specifically, descriptions of phenomena for which location is relevant), combined with built-in tools to process, manage, analyze and visualize those data (Chang, 2016). Analyzing and identifying public- and private transport possibilities, visualizing population densities and locating important cultural clusters can all be done using such a software package. Another to obtain information about site is to interview neighbors. Asking them how they feel about the neighborhood and site and what their expectations are for the project can be of value. In this way one can also find out about certain 'hidden themes' which aren't always visible for outsiders.

Literature and general practical preference

Reference Projects:

- Biodome: Montréal, Canada (1976) by Roger Taillibert
- Biosphere 2: Oracle, USA (1991) by -
- Insectarium: Montréal, Canada (2022) by Kuehn Malvezzi
- Klimahaus: Bremen, Germany (2008) by Thomas Klumpp
- Mudec: Milan, Italy (2015) by David Chipperfield
- Museo del Clima: Lleida, Spain (2017) by Toni Girones
- Museu do Amanha: Rio de Janeiro, Brazil (2015) by Santiago Calatrava
- Museumplein Limburg: Kerkrade, Netherlands (2015) by Shift Architecture
- Narbo Via: Narbonne, France (2020) by Foster+Partners
- Parrish Art Centre: New York, USA (2012) by Herzog & de Meuron
- Pirelli Hangar Bicocca: Milan, Italy (-) by Unknown
- Ravensburg Art Museum: Ravensburg, Germany (2013) by LRO
- Schaudepot: Basel, Switzerland (2016) by Herzog & de Meuron
- Science Center Lund: Lund, Sweden (unbuilt) by COBE
- Tate Modern: London, UK (2000) by Herzog & de Meuron

Literature & Sources:

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- Valerie Van der Linden, Hua Dong & Ann Heylighen. (2017). The good client: How architect-client dynamics mediate atten tion to users. Professional Practices in the Built Environ., Date: 2017/04/27 -2017/04/28, Location: Reading, 174–183. https://lirias.kuleuven.be/retrieve/448842

Reflection

Klimaforum tries to find the architectural answer to the question: In which ways can Immersive Experiences in Klimaforum Berlin contribute to a greater awareness about climate change? It does this within the framework as set up through the Complex Projects studio: Bodies & Buildings Berlin. From this perspective, the project questions the conventional way of communicating relevant issues within the society, specifically climate change, focusing specifically on museum architecture.

The project Klimaforum positions itself within the larger debate on climate change. Making an effort to contain different climates as immersive experiences within the building raises the question whether this building itself can be truly sustainable. This question, however, doesn't limit itself to this building specifically, but is applicable to a larger architectural debate. Must we make every building mechanically climatized or do we have to work with more natural and therefore more sustainable ways of climatizing (big) building. Another relevant (architectural) question is whether every new museum of institution should be a 'statement'. Knowing the site and environment of the new Klimaforum (Heizkraftwerk Moabit) possibly asks for a more intricate or modest design proposal than one might expect. However, the message of the Klimaforum should heard everywhere. How does one deal with this contradiction?