

IMMERSIVE SPACES IN A NUTSHELL

*Klimaforum located on former Moabit Heizkraftwerksite along the spree.
Commissioned & Financed by The German Ministry of Culture and Media,
exploited by TUBerlin and several NGO's and private companies.*

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REFLECTION

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Project Description

Climate change poses a substantial threat towards the survival of vast amounts of plants, animals, insects and ultimately to human life (WMO, 2022). Though, a solution to this problem is not so easily constructed and often multifaceted. However, according to Taylor (2022) citizens of developed, western countries could play a big role in averting the climate breakdown by making a few easy lifestyle changes, from taking the plane a little less often (no more than once per three years) to buying a maximum of three new clothing items a year.

WBGU (cited in Keller et al., 2019) states that it is very much necessary to raise the overall 'climate change awareness level' of humanity, for it is exactly this awareness which shapes people's engagement in the creation of a climate-friendly society. Teenagers and students should thereby be treated with special care (Moser, 2010), as they are the generation whose lives will be more affected than any other generation today (Ojala, 2012). As they grow older, they will become the decision makers of tomorrow, deciding over environmental and societal consequences of climate change (Corner et al., 2015; Ojala & Lakew, 2017). Carmi et al. (2015) says that in order to equip this generation with what they need to analyze and address climate change properly, the aims of current environmental education should be focused on the enhancement of teenagers' knowledge, attitudes, and behavior towards climate change.

Within the context of Complex Studio: Bodies & Building Berlin and the realm of architecture it is interesting to look at how architecture can take part in the search of a sustainable solution to this problem. In aforementioned writings it became clear that the German state is doing too little to meet the 2050 climate goals. Despite the sometimes indifferent reactions, the general public can make a substantial difference by making easy lifestyle changes. Also, Carmi et al. (2015) argues to tackle the problem at it's roots by focussing on the enhancement of teenagers' knowledge, attitudes, and behavior towards climate change.

Maybe against expectations, the answer to this problem could lie beyond the classroom and school, but within museums and museum-like environments such as art galleries, archaeological sites, heritage sites, biodiversity parks or botanical gardens (Insaf, 2021). And where conventional museums struggle to get young peoples' attention, they do visit interactive science & technology museums at a greater rate (+11%) than the national average (Ubimo, 2019).

The main objective of this research is to synthesize a design brief for an interactive art, science and technology museum specifically aimed at educating the younger generations about climate change in order to provoke action. The interactive component of such a museum could be the immersive experience as described by Mark Wigley (2016): '*The immersive experience is an opportunity to give visitors a sense of being detached enough from the world to reflect upon the world*'. A relevant research question could therefore be:

In which ways can immersive experiences in musea contribute to a greater awareness about climate change?

Klimaforum is Berlins new interactive art, science and technology forum, located on a soon to be vacant heizkraftwerk site along the Spree river. Commissioned by The German Ministry of Culture & Media, The City of Berlin and exploited by the Staatliche Museen zu Berlin, the TU Berlin, several NGOs & private companies. The Klimaforum will be at the forefront of the radical shift to a climate neutral society by shortening the road to a much needed debate about climate change.



Fig 0. Olufar Eliasson: The Weather Project in Turbine Hall, Tate Modern (Eliasson, 2004)

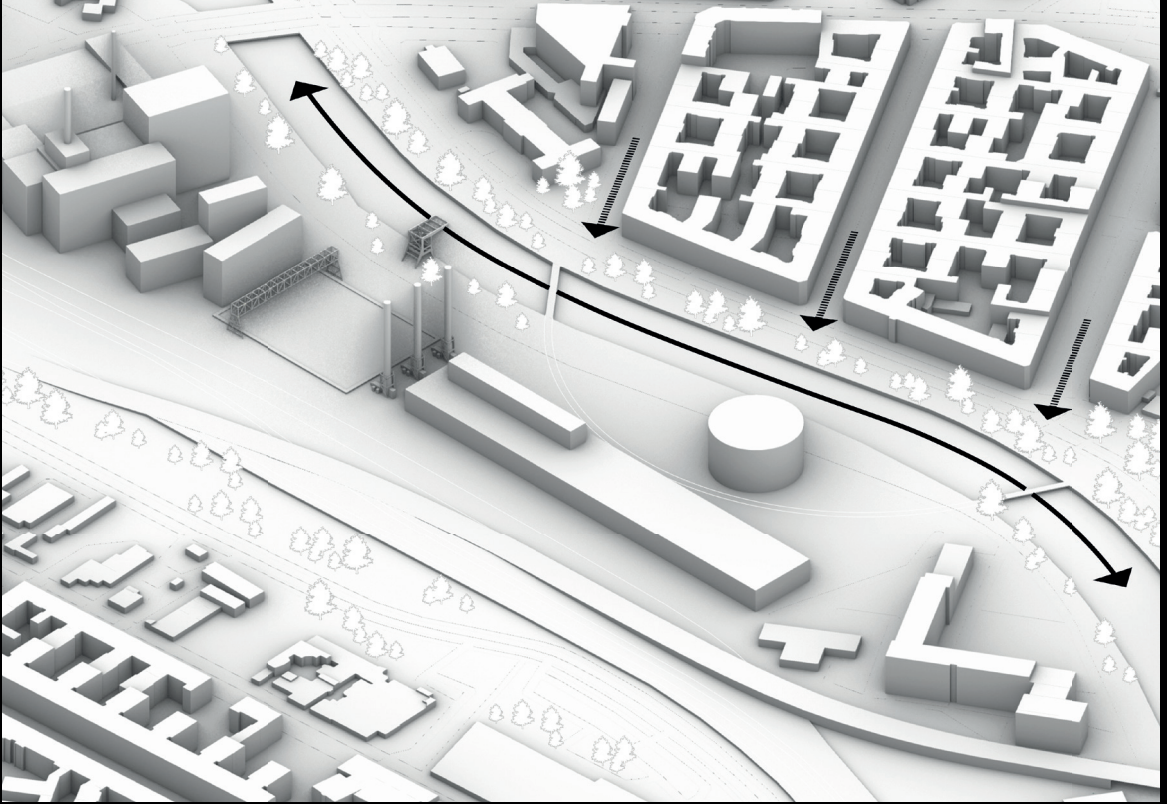


Fig 1. Berlin's 'Grüne Hauptwegen' along the Spree river, boosting pedestrianized movement throughout the city

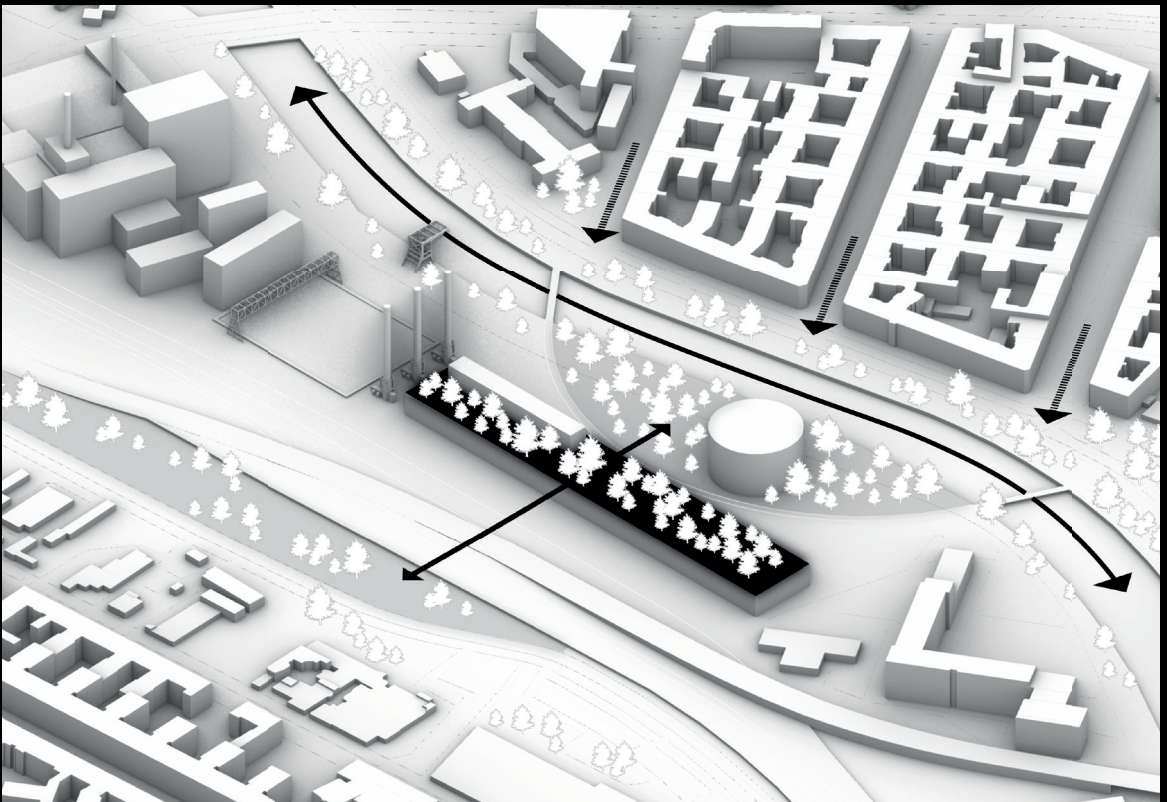


Fig 2. Emphasizing the 'Grüne Hauptwegen' by implementing Spree Park and the Roof Garden

Reflection

Introduction

This paper aims to reflect on the design process of the Complex Projects Graduation Studio: Bodies, Buildings, Berlin as a whole in order to provide valuable insights into if and to what extent the main research question has been answered. Therefore, various themes within this design process will be assessed, including the relation between research and design, the relation between the graduation and studio topic, the project's relevance to the architectural realm as well as the society in general and the chosen research methods and approaches.

01 Relationship between Graduation topic and Studio topic

The MSc3 Complex Projects Graduation Studio proposed a large scale investigation into the urban- and architectural fabric of Berlin through a fourfold of lenses including: environment, mobility, future and culture. These themes have structured the collaborative body of work done by all students and helped by prioritizing certain topics over others during the individual design processes and thereby narrowing down the research done through individual projects.

The theme of 'culture' has been the starting point in which the design process of Klimaforum has taken shape. At first the term culture doesn't really seem to refer to one certain specificity and could potentially mean anything. According to Edward (1871) the term culture can be explained as the umbrella which encompasses all the social behaviors, institutions, and norms found in human societies, as well as the knowledge, beliefs, arts, laws, customs, capabilities, and habits of the individuals in these groups.

Practically, within the design process Berlin's building traditions, architectural landmarks, urban plans and specific neighborhoods have been taken into account. But it's all the more interesting to also look outside the realm of architecture, into human culture. Where does the city flourish, in which places do new developments happen or which places would have to potential to be developed, where are all the night clubs, is there a central urban axes etc. etc.?

Along this line research has shown that the Spree river, which essentially splits the city in half and reaches far beyond the actual boundaries of the capital, can serve as a strong narrative to a cultural development of Berlin. Historically the Spree river has been essential to the industrialization of Germany. Therefore a lot of (previous) industrial sites are to be found along this river. The municipality of Berlin uses the Spree to develop the so-called 'Grüne Hauptwegen', green arteries which prioritize cyclists and pedestrians to go from A to B in a fluent, quick and comfortable manner. This has shown to be in stark contrast with the historical use of the Spree and therefore the ultimate location for a new forum on climate change, very much addressing the metaphorical contradiction of the industrial past and the innovative, green future.

02 Relationship between Research & Design

I personally believe that the disciplines of research and design are considerably intertwined and to a larger extent even inseparable. Since the very beginning the research and the chosen methodologies have been at the center of the project's development, starting by the initial topic up until the final architectural expression. To put this into perspective, results from conducted research during Klimaforum's design process have found themselves almost always immediately elaborated within the actual design. This led to a strong ongoing interaction between research and design, and corresponding reflections, adjustments and further explorations. Practically, the need for a social change on the matter of climate led to the analysis of Berlin's biggest polluters, categorization of protagonists within climate change advocacy as potential clients and users which were likely to deal with climate change most in the near future.

The research question: In which ways can Immersive Experiences in Klimaforum Berlin contribute to a greater awareness about climate change? has been the leading narrative within the design process. By means of large scale analysis and mapping of the urban

been made insightful and led to the choice of a vacant 'heizkraftwerk site' (energyplant site) along the Spree river as the final project's location. Accordingly, this also applied to the many other layers of the design, including the (arrangement of) program, positioning of volumes, expression, materiality, as well as desired architectural atmosphere, detailing and interiors to name a few.

In retrospect, an important question whether it would be valuable for the message on the urgency of climate change communication, could be: does the end justifies the means and is building a new building really needed? for the sake of the message, would't it be way more convincing to inhabit a vacant energyplant instead? This question is very helpful to again assess all the taken steps within the design process and to critically reflect upon them once again.

03 Relationship between research methods and approach in relation to the Graduation Studio

In order to obtain a better understanding of the city of Berlin, the program brief, development of plans, sections and elevations and eventually details, an extensive set of methodologies and approaches have been applied during the design process.

In the very beginning, the collaborative excursion with peer students to the city of Berlin has shown to be of great importance to the choice of site. Before departure, the site had been determined to be at the centre of Berlin, in the heart of the museum district (Museumsinsel). Mapping and analysis of that very place had already started and were showing some very interesting results already. However upon arrival in Berlin, these findings stood in stark contrast to the actual physical situation of the place. Museumsinsel was totally cramped by tourists, diligently searching for the best spot for a selfie with the Berliner dom or Humboldt Forum, coaches were driving on and off while noise and pollution from Unter der Linden street was omnipresent. Not such a perfect setting for a new Klimaforum, advocating climate change awareness.

This example indicates that only relying on one methodology or approach only can result in a abstracted or wrong image of the reality and

it is therefore very much needed that one also takes into account other forms of analysis.

Thereafter different means of research have been conducted, including analysis of precedents in the form of references, (non-participant) observations, previously published research, literature, mapping, photographing, drawing etc etc. In retrospect abovementioned means of conducting research, especially references and sketching could have used more often in the final phases of the designprocess, particularly during detailing. This could have delivered a better and more elaborate understanding of the facade and it's final expression.

04 Relationship between the Project and the wider societal, professional and scientific relevance

Up until now, the museum typology has been very much influenced by the idea that the art should be at the center of the space and that all the rest, including interior, architecture, outside views, materiality, installations etc. should be kept to a bare minimum and totally out of sight of the visitor. This has resulted in a vast collection or monoculture of the 'white box' museum, spaces in which only the art is visible. However I am very much in favor of the thought that art should be experienced in it's totality. Especially when the art becomes the medium which tries to convey a story of progress, towards a green future, as is the case of the immersive spaces in Klimaforum. Interesting enough, especially when one is taking a closer look into this specific type of exhibiting (immersive spaces), one may notice the intrinsic contradiction, between the climate awareness narrative of Klimaforum and the energyconsumption needed to maintain the biomes within the immersive spaces. Everything has been done to counter the need of energy and the use of convectional mechanical installations, however fighting fire with fire is barely ever the solution.



Fig 3. São Paulo Museum of Art (MASP) / Lina Bo Bardi



Fig 4. São Paulo Museum of Art (MASP) / Lina Bo Bardi - interior, also showing the backside of art

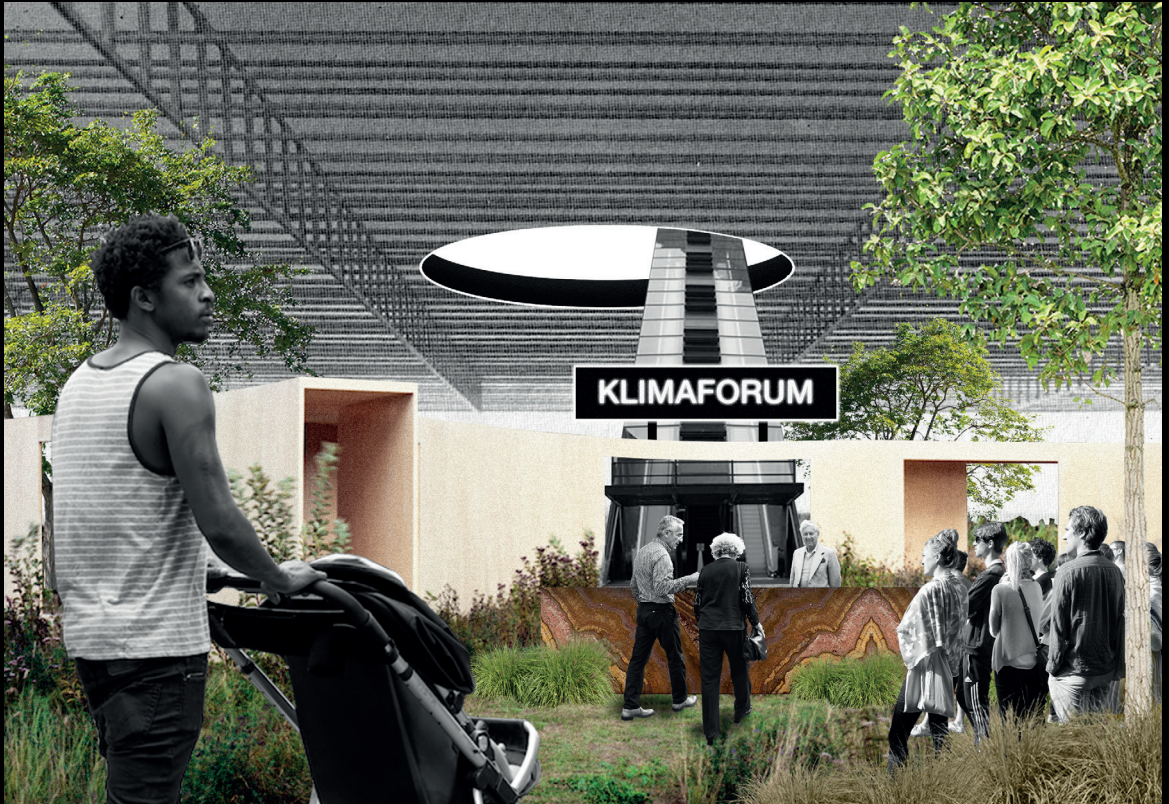


Fig 5. Image of Foyer of Klimaforum, as portayed during early stages in the design



Fig 6. Image of Immersive spaces of Klimaforum, as portayed during early stages in the design

Looking back, the choice of immersive spaces as a medium to convey a climate change awareness narrative could have been studied closer in order to either come up with a different means of exhibiting or to find other (and maybe more efficient) ways of energy production. Amongst others, further studies into the workings of the rest-energy streams of energyplants, energy generation from the Spree river or the adjacent train-depot could have been taken into account.

05 Relationship between the Project outcomes and transferability

Having conveyed my doubts about the energyconsumption of Klimaforum, it is clear that building a museum like this asks for commitment of clients, users and visitors. Personally I'm convinced that something such as Klimaforum is essential to the ongoing efforts of finding alternative ways of communication, exploring new, innovative and possibly provocative ways of showing art and developing the role of museums within the discourse of societal challenges and dilemma's. Furthermore, Klimaforum's location, the Moabit area, could potentially jeopardize the development of it. More research could have been done into the influences the immediate surroundings might have on the building. Noise disturbances of passing trains, soil pollution or ownership of building grounds are often the cause of delay or cancellation of building projects. During the design process it became clear that the owner of the half of the site, sold the grounds to a private developer, who's plans were to develop a new office district, these plans are being developed as we speak what would mean that the project should downsize considerably or should grow below ground level (which is not realistic due to high ground water levels) or above the maximum building heights. So all in all this sudden change could mean the end of a whole project. Besides, within academic projects in general not much attention is spent on participatory research, which often leads to projects developed along the tunnelvision of the student (or architects). Also, in the desingprocess of Klimaforum not much has been done to involve the views and perceptions of local residents or employees of adjacent industrial locations. These locals

know the place by heart and therefore will have a better understanding of the local challenges and potentials. Including their insights could have been a fruitful addition to the overall research conducted in the designprocess of Klimaforum.

06 Has the main research question been answered accordingly?

Probably the most interesting question would be if the main question: In which ways can immersive experiences in musea contribute to a greater awareness about climate change? has been answered. My personal answer to that question is yes, however the way in which the design answers to that very question is very different from what I expected it to be. The design process has been prioritizing the immersive spaces itself as the most important program of the Klimaforum. Interestingly enough, while looking back, these spaces have shown to be as important as any other aspect of the design, as important as the landscaping, as important as the foyer area, as important as the exhibition spaces etc. In that sence the question is being answered by the way in which the building presents itself towards the visitor, not only through one type of space only, but through the whole experience of the museum. The routing, materiality, use of space, organization, detailling, every aspect of the design has had it's one influence on the answer to this main design question.

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