



11/11/2022

THE PHYSICAL IN THE AGE OF THE DIGITAL: POSITIONING THE PARLIAMENT IN THE 21st CENTURY

NEW EUROPEAN PARLIAMENT

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AR3A160 Research Plan
AR3CP010 Complex Projects Graduation Studio (2022/23)



2022

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INDEX

RESEARCH PLAN	06
01 INTRODUCTION	08
1.1 Thesis Topic	
1.2 Problem Statement	
1.3 Research Question	
02 RESEARCH FRAMEWORK	10
2.1 Theoretical Framework	
2.2 Relevance	
03 RESEARCH METHODS	14
3.1 Program	
3.2 Client	
3.3 Site	
04 DESIGN BRIEF	18
4.1 Program	
4.2 Client	
4.3 Site	
05 CONCLUSION	20
SOURCES	22
References	
Bibliography	

RESEARCH PLAN

01 INTRODUCTION

1.1 THESIS TOPIC

For the 2022/23 academic year, the Complex Projects graduation studio "Bodies & Building Berlin" focuses on the study and design of buildings through the medium of data.

The reason behind this method is the inherent complexities that accompany large scale public buildings nowadays. The complexity of architecture that arises from the intermingling of its numerous elements, from spatial layouts to façade proportions to user experience is what drives the research and design process of this studio.

The encouraged working method is predominantly based on hard data, critical thinking, analysis and synthesis based on facts. By undertaking a research process that strives to be as objective as possible in the field of architecture, the intention is to provide a framework that covers as many scenarios as possible, in the hopes of ultimately generating the most optimal proposal. In other words, the studio encourages rational thinking, simulating a research and design process that is similar to that needed in the professional environment.

The "Bodies & Building Berlin" studio offers nine choices in terms of buildings: airport, train station, hospital, courthouse, parliament, university, library, museum, and opera.

What I found to be the most engaging type of building, not only to study but also to generate a design proposal for, is that of the **parliament**. The choice has been motivated by two factors. First of all, it is a very difficult building to design in terms of aesthetics as its choice of materials, massing, layout and, most importantly, façade have the responsibility of communicating the essence of the institution that they represent to the public. Parliaments and government buildings

as a whole are an expression of a country's way of governing and, by extension, national identity. Hence, the socio-political and cultural stakes are quite high, something which demands a thorough understanding of concepts such as power and politics in the context of architecture. Second of all, by virtue of housing a governmental institution, the complexity of the building as a sort of machine is noticeably high in comparison to other types of buildings, making it necessary to juggle with the many elements that make up the functional spatial layout of the parliament.

To conclude the thesis topic introduction, the building shall house the **New European Parliament**. This decision was made due to the interesting problems that situating and designing a EU institution would pose in the context of Berlin.

1.2 PROBLEM STATEMENT

Before delving into the problem statement, the following extract (2005: 2) from Lisa Findley's book *Building Change: Architecture, Politics and Cultural Agency*, shall mark the starting point of how it was formulated:

While the Tower of Babel story is meant to instruct about the dangers of human arrogance in the face of God's power, it also illustrates the ancient association of buildings and power. Indeed, in most of the world one of the most enduring activities of power - political, cultural and economic - is building. Not only building, but building well - extensively, extravagantly, durably. It takes tremendous wealth, time, cooperation and labor to secure, organize and deploy resources in such a way as to make a significant work of architecture. The Tower of Babel is the perfect example of such power. It was perhaps because of this that Hegel claimed this was the first recorded act of architecture. In this way, architecture gets bundled up with power and building from the very foundation of our imagination about human culture.

I believe the quoted statement underlines the political, social and cultural importance that is inherent in buildings associated with power, in the case of this thesis, the parliament. The matters of architecture signifying power and power creating architecture can be considered timeless, as they have persisted from the ancient Egyptian Pyramids to the Roman Pantheon to the 1999 Strasbourg European Parliament.

Concerning the studio indicated theme architecture and the digital, there is also the matter of how our society is no longer bound exclusively to the physical, existing and tangent, but also manifests itself in the digital: we can access seemingly endless collections of informations through the mere use of our smartphones, meetings and interactions can take place on screens etc. Thus comes the question of how one deals with the immaterial.

On the one hand, at this point, the trend indicates that society is becoming less reliant on the physical. On the other hand, parliaments are still housed in buildings and it is reasonable to assume that for the foreseeable future, they will continue to do so. Regarding the current state of politics, to quickly summarize, public dissatisfaction with democracy, as well as skepticism of the governing elite (Pew Research Center, 2019) are rising, while a majority of westerners are of the opinion that their political systems need change (Pew Research Center, 2021). While indeed architecture cannot be held solely accountable for the solving of such a problem, due to its well established capacity to communicate to the public through its built form, perhaps it could to a certain extent prove to be a positive factor in this matter.

All in all, the problem statement consists of the following idea:

With an ever growing political dissent, as well as an increasing reliance on the immaterial world provided by the digital, the parliament as a building typology is in need of a re-evaluation.

1.3 RESEARCH QUESTION

The previously stated problem naturally leads to the following research question:

How can the physical architectural manifestation of a parliament respond to a digital society that is becoming increasingly less dependent on the physical?

In turn, the research questions is complemented by the following subset of questions that tackle different aspects of it:

- How can the role of a parliament be updated to modern society's needs?
- What is the exact impact of the digital era on the spatial requirements of a parliament? What are the core aspects of a parliament that transcend the digital?
- Is there even a need for a physical parliament building? After all, the plenary sessions are mostly experienced by people through broadcasts.
- How can security for both the MPs and public function?
- How does the building perform in the urban fabric? What does it give back to the city?
- Where could a European Parliament be sensitively placed in the urban context of Berlin?

02 RESEARCH FRAMEWORK

2.1 THEORETICAL FRAMEWORK

Considering the problem statement, the theoretical framework could be divided into two parts: one that deals with the relationship between architecture and politics and one that deals with the digital methods and applications in architecture.

While the majority of research shall lean on a more pragmatic approach based on case studies and site analysis, it is also important to familiarize oneself with relevant theoretical aspects. By virtue of what they represent, parliaments are imbued with a great deal of symbolism and monumentality: designing such a building brings up questions about its aesthetic aspect as its image is crucial to establishing a connection to the public it is supposed to represent. Pierre-François Mourier (1999: 185-186), when writing about Architecture-Studio's 1999 European Parliament building in Strasbourg, notes that "Modern power is not that of a single figure, or of an oligarchy or a sovereign nation. It is a power that is shared and that has nothing to hide, since it accepts the surveillance exercised by the hundreds of millions of citizens to whom it bound by a contract". As such, the theoretical research shall entail reading books such as:

- *Architecture and Ritual: How Buildings Shape Society* (Blundell Jones, 2016)
- *The Globalisation of Modern Architecture: The Impact of Politics, Economics and Social Change on Architecture and Urban Design since 1990* (Adam, 2012)
- *Building Change: Architecture, Politics and Cultural Agency* (Findley, 2005)
- *Reflections on Architecture, Society and Politics: Social and Cultural Tectonics in the 21st Century* (Cairns, 2016)

In addition, further research shall be made into the subject of digitalization in architecture, with the following books providing a starting point:

- *The Architecture Machine: The Role of Computers in Architecture* (Fankhänel et al., 2020)
- *Atlas of Digital Architecture: Terminology, Concepts, Methods, Tools, Examples, Phenomena* (Hirschberg et al., 2020)
- *Formulations: Architecture, Mathematics, Culture* (Witt, 2021)

2.2 RELEVANCE

I believe the relevance of this intended thesis research owed to two factors.

First of all, the research aims to tackle the problem of how architectural design can be undertaken with the tools provided by the digital age. The topic of how data can generate designs is highly relevant in the contemporary academic and professional landscape as our own dependency on digital means is arguably inescapable. This method challenges the more traditionally subjective approach to architectural design where one relies more on overarching ambitious concepts, rather than starting from a fact based foundation and building up on it with the help of rationally curated sets of data.

Second of all, the subject of politics and how its institutions are materialized in the architectural form is a matter of utmost importance today. To quote XML's *Parliament* book (2016: 8):

parliaments have remained virtually the same, while societies have changed significantly and the political process has become increasingly complex. The architecture of political spaces has not explored innovations that accommodate important social, economic, and technological transformations.

The architecture of parliaments is in need of a

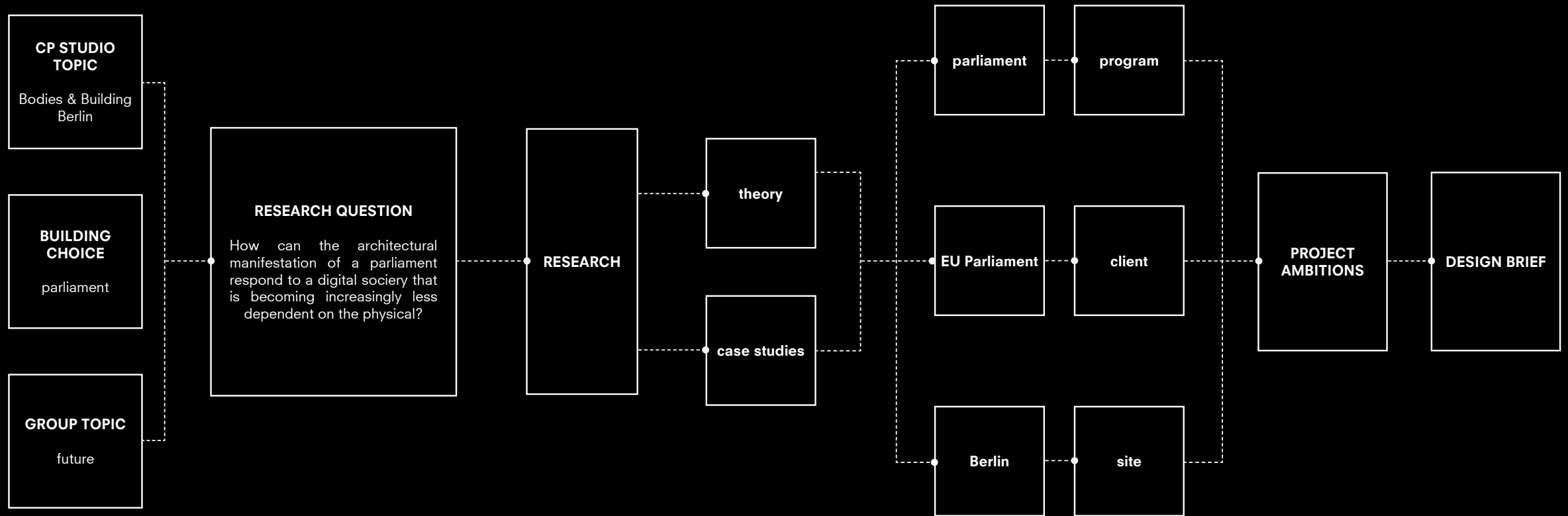
re-evaluation, from how it operates internally to how it relates to its exterior environment. This thesis aims to explore how a parliament would look like in the information society of the 21st Century.

figure 1 (top): The Tower of Babel

figure 2 (bottom): European Parliament in Strasbourg



RESEARCH STRUCTURE



03 RESEARCH METHODS

In order to formulate the design brief for P2, one needs to have a solid understanding of three factors: program, site, and client. With regards to the program, an analysis of the established parliament typology shall offer a view into what are its specific architectural traits that allow it to function as its respective building type. Once the typology is understood, comes the opportunity to speculate its future by mutating the program according to the project ambition in the hopes of providing an answer to the research question. The second step consists of understanding the client's identity and needs. Finally, the third step takes all that has been studied in the context of the building as an object and applies it in the context of the city, thus trying to accommodate the parliament in a properly chosen area of Berlin. As such, this marks a step from the abstract study of typology to the more tangible aspect of urban analysis.

3.1 PROGRAM

Benchmarking was the key driving force of this part of research. While focusing on the subject of building program, the idea was to first understand what traditionally makes a parliament be a parliament, with the intention of further building on this typology by way of putting into practice the project ambitions dictated by the research question.

The method of studying program is divided into three parts:

1. typology: Questions such as "What is the defining architectural feature of a parliament?" and "What are its typical spaces?" set out the first steps into understanding the properties of such a

building.

2. case studies: By first framing an overarching timeline of how the parliament evolved throughout the agrarian, industrial, and information ages, the image of a parliament's essence shall become clearer, with the final step being that of selecting building precedents based on their size for a detailed program breakdown. As such, this exercise is intended to be the most crucial one as understanding the properties of a parliament building dictates the subsequent client and site analysis, as well as the framing of the design questions and ambitions.

3. data: This part consists of putting together all the accumulated data and providing a benchmark results based on it that would ultimately lead to the generation of more precise program requirements.

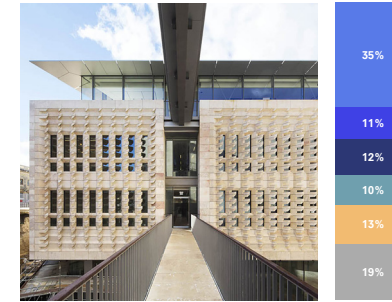
The chosen case studies are based on four scales:

- **small:** Valletta City Gate (RPBW, 2015) & Senedd Cymru (Richard Rogers Partnership, 2006)
- **medium:** National Assembly of Kuwait (Jørn Utzon, 1982) & New Second Chamber of Dutch Parliament (de Architecten Cie., 1992)
- **large:** New German Parliament (Foster + Partners, 1999) & New Ba Dinh Hall (gmp Architects, 2014)
- **extra-large:** Louise Weiss Building (Architecture-Studio, 1999) & Jatiya Sangsad Bhaban (Louis Kahn, 1982)

In addition to the aforementioned eight program case studies, the intent is to also analyse three precedents (Jatiya Sangsad Bhaban, New German Parliament, and Louise Weiss Building) with regards to debate chamber design, seeing as how it is the most important space of the building and its dimensions and floorplan positioning dictates the subsequent development of the rest of the required spaces.

RESEARCH PLAN

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VALLETTA CITY GATE
Renzo Piano Building Workshop, 2015
GFA = 7,000 m²

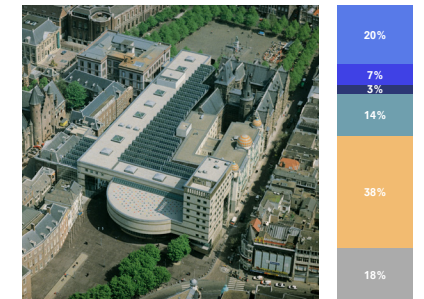


SENEDD CYMRU
Richard Rogers Partnerships, 2005
GFA = 5,300 m²

M

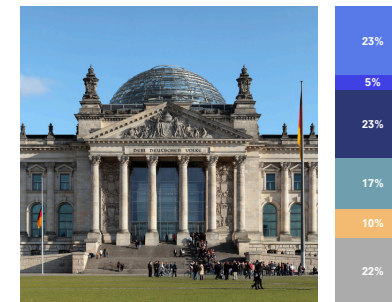


NATIONAL ASSEMBLY OF KUWAIT
Jørn Utzon, 1982
GFA = 38,600 m²



NEW SECOND CHAMBER OF PARLIAMENT
de Architecten Cie., 1992
GFA = 24,000 m²

L

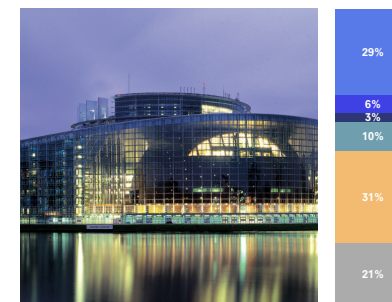


NEW GERMAN PARLIAMENT
Foster + Partners, 1999
GFA = 61,160 m²



NEW BA DINH HALL
gmp Architects, 2014
GFA = 63,240 m²

XL



LOUISE WEISS BUILDING
Architecture-Studio, 1999
GFA = 220,000 m²



JATIYA SANGSAD BHABAN
Louis Kahn, 1982
GFA = 76,500 m²

3.2 CLIENT

Building on the research done in the case of program, the next intended step is to engage into an in-depth study of the client's needs and intentions. Seeing as how the proposed tenant for the building would be the European Parliament, one of the legislative bodies of the European Union, the research study would entail the study of how the institution is organized. That would mean establishing what are its departments and how they relate to each other internally. Therefore, this part of research would entail a rather methodic way of working that consists in finding out the necessary amount of floor space for elements such as offices, meeting rooms, restaurants, sanitary bodies etc. In addition to collecting this sort of data, researching the client also means trying to identify any weak spots in their existing headquarters (the Brussels and Strasbourg parliament buildings for instance) as well as understanding how the building operates on a day-to-day basis. For that, establishing a daily schedule for the members of parliaments, as well as how the building operates on a logistical level shall be the driving force for this particular research stage.

Once this is done, the collected data can be applied to the program, thus increasing the specificity of it, as well as the overall strength of the design brief.

3.3 SITE

The site choice was in particularly motivated by the topic assigned to my studio group, that of "future". With that in mind, my teammates and I tried to view the city of Berlin through the lense of it by trying to single out certain factors that would indicate which areas are most likely to play a key role in the future urban development of Berlin. As part of this speculation game, the three site requirements were the following:

1. urban developments: by placing the projects in areas adjacent to planned urban development, the buildings

are likely to feed off its surroundings, benefiting by way of association with the urban growth stimulated by them;

- 2. building age:** areas with buildings predominantly constructed after 1990, areas that are considered relatively young in the historical context of Berlin, offer the most potential for growth, seeing as how their "youth" equates underdevelopment;
- 3. density:** in order to preserve as much as possible the existing amount of open spaces in the city, the idea would be to target low density (in regards to population and built-up space) neighborhoods, thus raising their density by adding public buildings.

With the three requirements applied, a map of Berlin was generated which indicated young, low urban density, development areas with potential for future growth.

One also needs to take into account more building typology related site constraints. Therefore, the purpose is to formulate another series of requirements which take into account tangible factors such as plot size, allowed FSI and FAR, infrastructure connections etc. To do so, the method would be to analyse existing city maps in order to determine their suitability. While the majority of the workload shall be focused on the act of mapping, there is however a need to balance this objective method with a sensory-oriented way of verifying a site's potential. That is where the planned November Berlin field trip comes into factor as visiting the potential sites shall offer a perspective that cannot be extracted through the act of line drawing examination.

To sum up the research plan with regards to site, the following phases shall structure its analysis (once a plot is decided on)

- 1. satellite image:** offers a real, detailed view of the site with information about the environment such as colours, shadows, type of trees etc.
- 2. line drawing:** offers an abstract view

that provides the precise geometrical traits of the plot

- 3. diagrams:** analysis of the geometrical and urban properties that ultimately lead to the articulation of site opportunities and restraints
- 4. conclusion:** providing a synthesis of the gathered information, leading to a series of design site parameters that shall dictate the development of the building's massing, program, access points etc.

figure 11: potential Berlin sites



04 DESIGN BRIEF

As previously mentioned, the program, client, and site analysis are meant to provide the necessary framework for the formulation of a design brief. With that in mind, it is worth harking back to the research question in order to define clear project ambitions that would dictate would the collected data will materialize in the form of a design brief. As such, the project ambitions are the following:

- **transparency & function:** to design an effective spatial layout that not only aids the internal function of the parliament as institution, but also clearly and honestly communicates to the visiting public how the institution itself works;
- **active urban role:** to add programmatic features related to public space such as a publicly accessible archive, thus making the parliament's role in the urban tissue of Berlin more active;
- **protest platform:** to design a building (and its affiliated landscape masterplan) which allows the opportunity for the people to exercise their democratic rights through gatherings and protests.

4.1 PROGRAM

As illustrated in the opposite page diagram, the program is broken down into specific rooms based on the needs of each of the identified key spaces. It should be noted, however, that the generated program is predominantly a result of the case study benchmarking. As such, it is merely a recreation of the observed spatial layout trends from the case studies. The design brief will offer a more detailed program as it will also take more into account the research question. Thus, the P2 delivered program is expected to strain away from the typology.

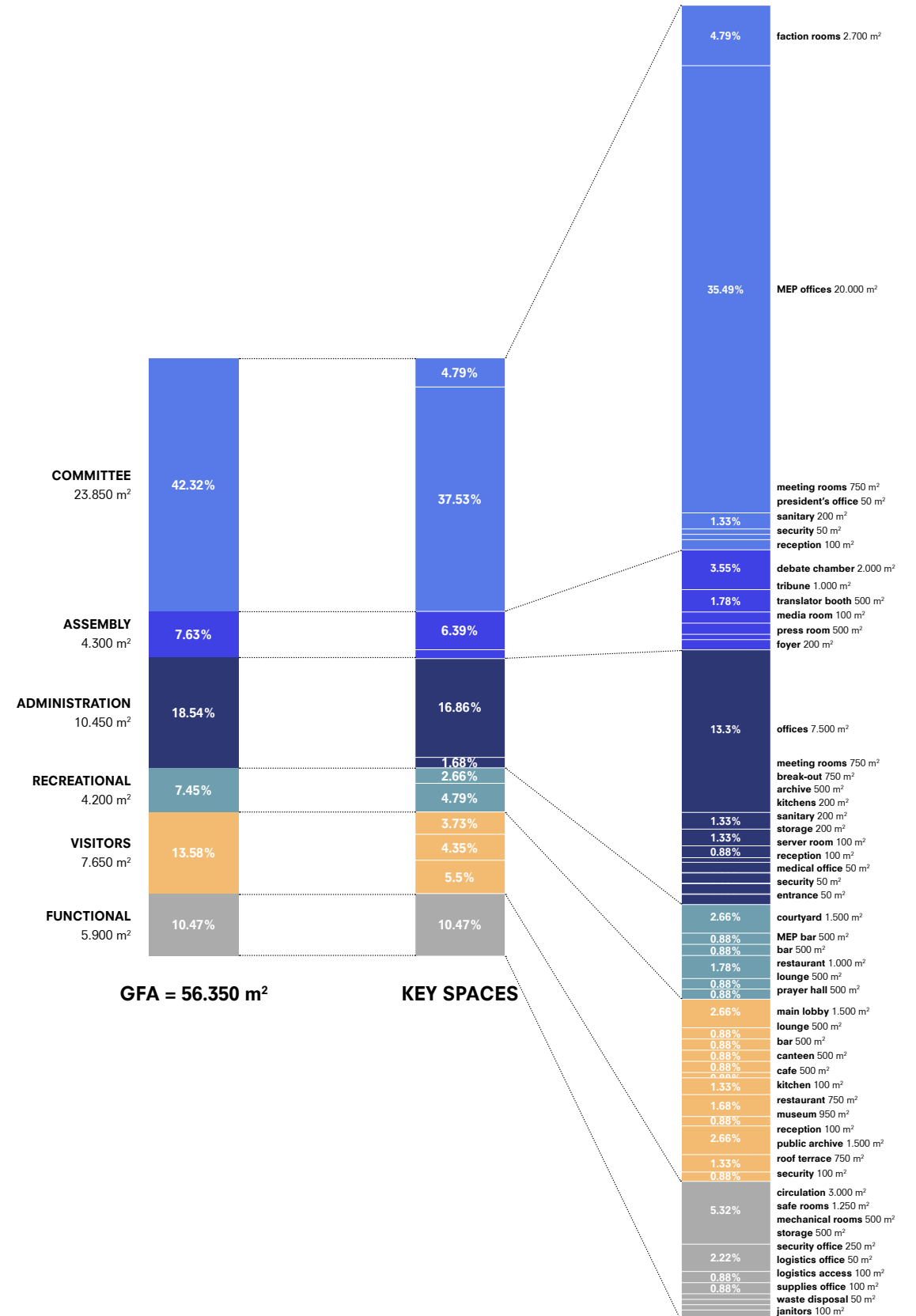
One of the key design aspects is the debate chamber. As indicated by Blundell Jones (2016: 39-40), "A key precedent for the centre and periphery layout is the antique Greek theatre, bringing the whole of society to contemplate the play. Many modern parliaments follow a circular layout to stress the equality of members (...)". The upcoming research phase will particularly focus on this key space, attempting to re-evaluate it in the context of the digital age, questioning its layout, size and overall composition.

4.2 CLIENT

The client section for the design brief requires an investigation into how the institution operates internally in the parliament building, as well as how it relates to the administrative departments that serve it. For instance, the 705 seats of the parliament are divided into 8 different groups which, besides meeting altogether in the debate chamber for the plenary sessions, need their own separate faction rooms where they can engage in private, internal discussions about their political strategies.

4.3 SITE

On page 20 of this research plan, one of the potential sites is illustrated. Located in Faule Spree, a nature preserve in Berlin, the site features a large area of greenery and is flanked on the Southern side by the river, providing the opportunity for scenery and a key position of the parliament in the city. Due to the magnitude of a parliament building project, one also needs to take into account practical matters such as entrance points, connection to infrastructure, urban role etc.



05 CONCLUSION

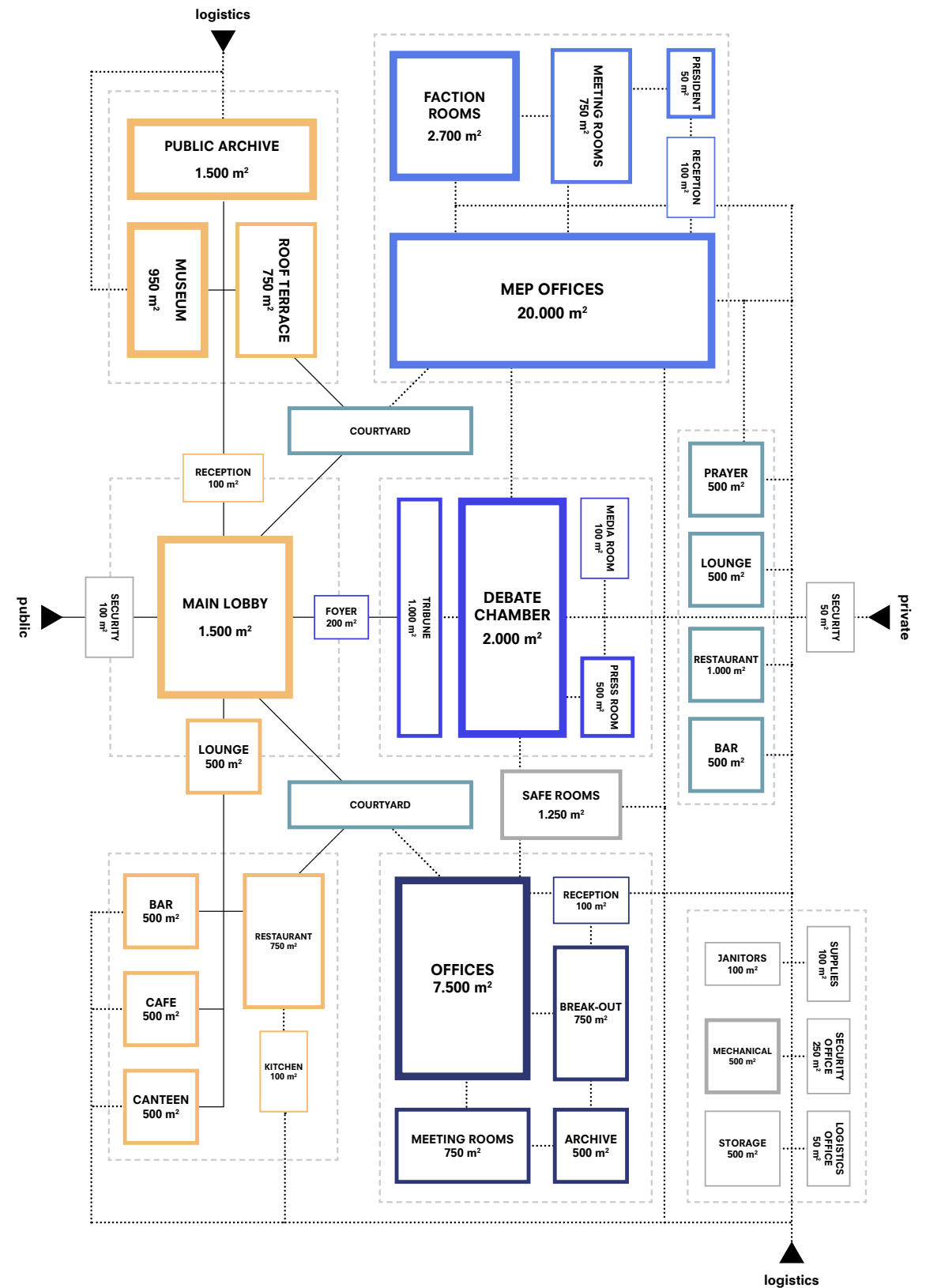
political past, is a difficult task. With that in mind, the coming weeks leading to P2, aside from focusing on the aforementioned program, client and site analysis, shall also consist of delving deeper into the historical context of the EU, the way it functions as an organization, as well as trying to understanding the power dynamics that arise from government architecture.

To summarize, the research plan offers a view into the investigation process behind the study of parliaments and how where upcoming P2 proposal is headed.

The research done so far has been tremendously helpful as it has provided me with a clear image of how a parliament operates. By continuing with the client and site analysis, as well as delving deeper into the aforementioned literature, the design brief shall become more defined and its illustrated proposal shall provide an answer in the built form to the posed research question.

Designing a parliament building, especially in the context of Berlin, a city with a certain

figure 12: Faule Spree



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- figure 12 - Faule Spree (Berlin) satellite map: QGIS

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