

SUSTAINABLE PARLIAMENT FOR GERMANY DESIGN BRIEF

INDEX



2023

COMPLEX PROJECTS
Bodies & Building in Berlin

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INTRODUCTION

1.1 ABSTRACT

Since the dawn of civilization, the architecture of power has been a means to symbolize societies' beliefs. The parliament building is itself a great example. It has been used to project to nations images, associations, messages, ideals. These buildings often embody a sense of oppression, intimidation, security, and protection. The Reichstag building in Berlin symbolized the German Unification in 1871; the National Congress in Brasilia symbolized the country's economic progress in the 1950s; the European Parliament in Strasbourg symbolized the openness and democracy of the newly created European Union in the 1990s. If we believe that our buildings shape us, as Winston Churchill once said, what parliament are we seeking for? What comes next? The ambition of this project is to reflect on the powerful symbolism of the parliament as a tool for an emergent and extremely relevant global challenge: climate crisis.



Figure 02: The Parliament building in Bucharest, Romania.

1.2 THESIS TOPIC

The Sustainable Parliament for Germany is a building with a gross area about 15.000m². Located in Berlin, on a square between the Chancellery building and the Paul-Löbe-Haus - on the Federal Ribbon. The client is the Bundesrat, the Upper House of Germany's legislative system. Bundesrat represents the sixteen Federal States of Germany, with a number of 69 members. The new building aims to enhance the representativeness of the institution by addressing Germany's positioning towards climate crisis. Bundesrat can be seen as a symbol to represent the goal of achieving greenhouse gas neutrality by 2045 - made by the Federal Climate Act of 2021. The building must be a physical materialization of environmental awareness and activism. Circularity, embodied energy, urban ecology, energy efficiency, and climate design are core topics that will guide the design decisions.

1.3 PROBLEM STATEMENT

The climate crisis has been one of the main challenges that we face today as a global community. Perhaps the basilar moment for the inclusion of this topic in the global agenda was Thatcher's speech in 1989 at the United Nations Assembly in New York City. After that, a series of discussions and agreements on a global level were made. The most urgent issue is greenhouse gases and their impact on global warming. In 2021 Germany signed the Climate Act that describes the ambition of becoming greenhouse gas neutral by 2045.

As global warming is massively influenced by the emissions of Carbon dioxide, the built environment has a great contribution to it. From material extraction to product fabrication, transportation, building usage, and occupancy, to demolition.

What is the role of a parliament building regarding the such issue and global ambition?

Architecture since the very beginning is used

as a tool to symbolize power. From pyramids to castles, churches, industries, or high-rises, these buildings act as a representation of our society and they shape time, behavior, and ideals. The parliament building is itself a great example. It has been used to project nations' images, associations, messages, and ideals. These buildings often embody a sense of oppression, intimidation, security, and protection. The Reichstag building in Berlin symbolized German Unification in 1871; the National Congress in Brasilia symbolized the country's economic progress in the 1950s; the European Parliament in Strasbourg symbolized the openness and democracy of the newly created European Union in the 1990s.

What comes next? Sustainability? Climate change?

The parliament building in this perspective acquires two responsibilities concerning sustainability: the one as every building has, of being built with a low environmental footprint; to use its embedded power and symbolism to represent sustainability to the city and to the people.

In addition, there are also challenges to the future of the debating chamber, whether its because the debating chamber became a mere space for formality and no longer the space for decision-making, XML (2016, p. 8), or because of the huge potential of digital platforms that might compete unfairly against the debating chamber whilst including citizens participation in even more productive ways, (Esteve and Pohl, 2021).

If not only the future but the present of the debating chamber is already being questioned, how should one face the architectural demand for such space? How to architecturally anticipate the disuse or the complete repositioning of the debating chamber within the parliamentary functions?



Figure 03: The Reichstag Building in 1929.



Figure 04: Postcard of the opening of the National Congress in Brasilia, Brazil.



Figure 05: European Parliament in Strasbourg.

1.4 RESEARCH QUESTION

In his book *Edifice Complex* (2005) Deyan Sudjic reflects on the power of urban projects and public buildings on their projection to a nation. Buildings are carefully thought of to anticipate and predict what message they will set, and what perception will society have. These decisions, however, are made usually by small groups of politicians rather than people. Thus these messages are often used as a demonstration of power, control, order, intimidation, and fear.

Architecture in its role as a nation builder can be understood as a species of military uniform, a powerful way of signalling allegiances and aspirations, of rallying your side, and intimidating the perceived enemy. Uniforms, like buildings, are ostensibly shaped by practical, functional considerations, but are actually designed to convey some extremely specific emotional messages. (Sudjic, 2005, p.130)

The very relevant part is in the actual capacity of transformation. As Winston Churchill said once, "We shape our buildings; thereafter they shape us", buildings have a reciprocal relation to their citizens, being first a representation of a society or entity, to thus shape our behavior, ambitions, and ideals.

Is it possible to use this power for good? Is it possible to send a message that aims to have an impact that will benefit a noble issue rather than a nation's - or politician's - ego? Are there any more powerful buildings than public buildings, in this case, a parliament building to, achieve that?

What if we create the proper environment for these ambitious, and inspiring agreements and speeches for the future of our environment, but that today takes place in a space and building that does not reflect the same ideal? How does sustainability affect the architecture of power? How to express sustainability physically and symbolically in the parliament building?

HOW DOES SUSTAINABILITY AFFECT THE ARCHITECTURE OF POWER?

RESEARCH FRAMEWORK

2.1 THEORETICAL FRAMEWORK

The theoretical framework consists of four main sources. The first is the book *Cities for a small planet* by Richard Rogers (2005). Rogers addresses the urban role of climate change and natural resources. In terms of building, he tackles the importance of flexible spaces in order to achieve future-proof buildings able to keep up with societal changes and a sustainable relationship between cities and natural resources.

The second is the *Edifice Complex* (2005) by Deyan Sudjic. The book helps to shed a light on the hidden - or sometimes not so-discussed - symbolism behind buildings. He gives an insight into how our minds and perceptions work according to archetypes, and phenomenology, materials, and proportions. Sharing rich examples of actual events that were translated into buildings that managed to modify the sense of a city through the embedded symbolism in the architectural quality.

The third is *Integrated Sustainable Design*, Kristinsson (2012). Kristinsson gives an overview of the impact of the Anthropocene in a wide manner and demonstrates in depth how to answer technically to convey to an integrated architecture.

The fourth is the book *Building Revolutions: applying the circular economy to the built environment*, Cheshire (2016), which will serve as a key guide concerning the technical strategies to ensure the building's measures for a sustainable future and circular economy.

Cities for a small planet addresses the urgent importance of buildings to behave responsively and actively to the problems that culminated from the Anthropocene. The Author Richard Rogers is known as one

of the main representatives of the high-tech movement, introducing the fundamental role of building installations and infrastructure. The Center Pompidou, designed by Rogers and Renzo Piano, is a real-life example of such ideals of how the building's capacity of changing according to users' needs, providing a technical framework to make a building open and flexible rather than closed and fixed.

2.2 RELEVANCE

The project addresses the climate crisis as the bigger picture and reflects on the importance of architecture as a contributor to the built environment, and as a symbol of representation and influence – that goes beyond construction but also human behavior. This ambition puts sustainability on the front seat regarding the way we build and perceive architecture. The parliament as a building itself will not only answer sustainability through technical solutions but through the understanding of the bodies and the program of the parliament. The result is a narrative and research that coherently connects studio, master track, and master programme, whilst making each one fundamentally important as a part of the whole.

RESEARCH METHODS

3.1 OVERVIEW

Research is divided into two groups: program research and design brief research. Research on the program aims to investigate the evolution of the specific building throughout history, thus developing an investigation theme, research question and project ambition. A framework provided by the studio is the analysis of the transformation of parliament building through three key historical periods: agrarian, industrial, and information. This research is carried out by analyzing drawings, mainly plans, and by comparing and identifying patterns and changes that are associated with the given time of society in relation to technology. The design brief research is based on three categories: client, program, and site. In the case of program, Each of these three categories of the design brief will have defined ambitions resulted from the research – these ambitions are connected to the main project ambition and research question, which ensures the connection of the two researches. A matrix of research conclusions and ambitions will serve as guideline for the design scenarios and following design process.

3.2 PROGRAM

The research on the program is based on the selection of fifteen parliament buildings - five buildings per period (agrarian, industrial, and information). Besides the three periods, the selection tries to include buildings from different regions across the globe. The research on these projects will be based on six topics:

1. Sizing/capacity; 2. Program breakdown;
3. Flows; 4. General scheme; 5. Experience/emotion; 6. Site.

Concerning sizing/capacity and program breakdown, the goal is to create a benchmark

of information to enable crossing the results and to identify patterns, create conclusions and design questions. In the case of sizing/capacity, for instance, it is expected to collect the area of all debating chambers from these buildings and find the ratio of the number of seats. A similar exercise regarding this same topic can be applied to find the ratio of the gross floor area of the buildings in relation to the number of members. For the program breakdown, the method for program finding is divided by main clusters, distributed by subclusters (Figure 16). The approach through clusters and scales facilitates comparison while during research, and works as a design tool for the further steps.

3.3 SITE

The site research will be initially conducted through the main topic that each of the four groups of the studio were given. The topic that applies to the project of this research is Mobility. This research is responsible to guide the site selection through three requirements. The requirements are the result of the research conducted by the group. After the site selection, specific site analysis will be taken, organized into six topics: in the case of site, the research is carried out at four different scales, investigating topics involving morphology, natural systems, transportation, historical evolution, and ecology.

3.4 CLIENT

In the case of client, the research will investigate the client's reputation, tasks, and structure. The research for the client will be conducted in principle through an internet search. The website from both clients, Bundestag and Bundesrat, provide significant information for constructing the client's organizational structure (Figure 17), ambitions, and demands. Additionally, the book *The Länder and German Federalism* (Gunlicks, 2003) also provides more detailed information on the complete administrative system which lies under the responsibility of the second legislative chamber of Germany: the Bundesrat.

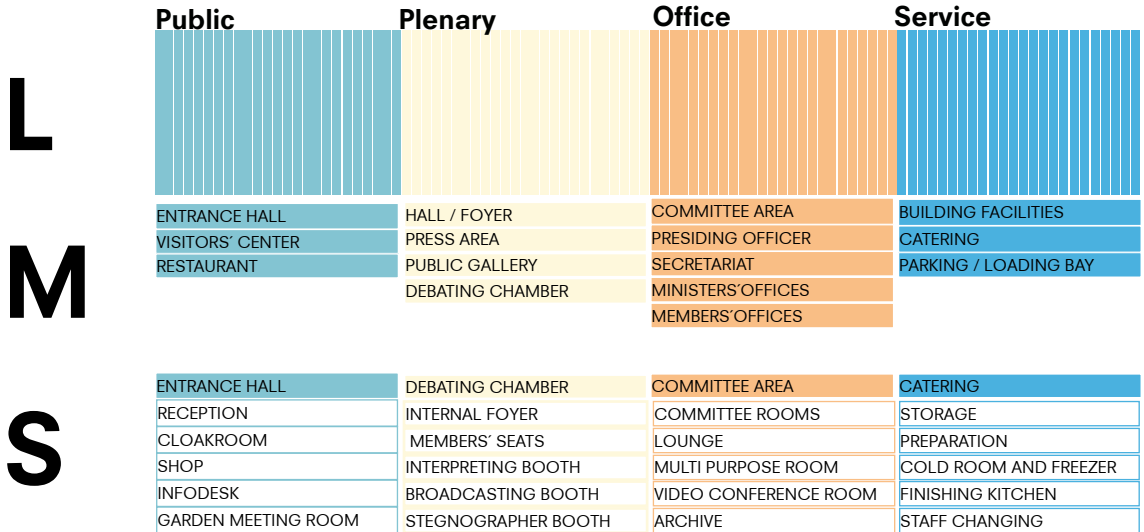


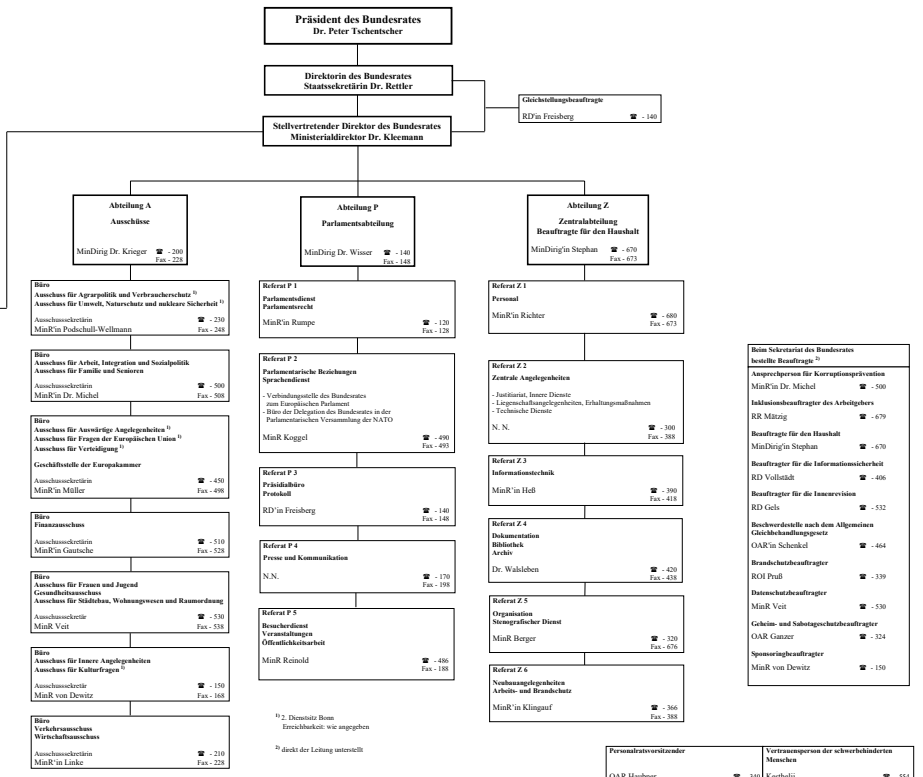
Figure 06: Method for program breakdown with division of program through clusters and scales

Organisationsplan des Sekretariats des Bundesrates

Stand: 1. November 2022
 Postanschrift: 11055 Berlin
 • Telefon: 030 18 9100 - 0
 • Telefax: 030 18 9100 - 400
 • Internet: www.bundesrat.de
 • E-mail: bundesrat@bundesrat.de

Geschäftliche Vermittlungsausschuss des Deutschen Bundestages und des Bundesrates
 Geschäftsführer ☎ - 250 Fax - 208
 Leiter des Büros
 MinRin Rodenberg ☎ - 252

Büro Rechtsausschuss
 Ausschussleiter ☎ - 250 Fax - 208
 Leiter des Büros
 MinRin Rodenberg ☎ - 252



¹⁾ 2. Dienstort Bonn
 Erreichbarkeit: wie angegeben

²⁾ direkt der Leitung unterstellt

Personalratsvorsitzender
 OAR Haubner ☎ - 340

Vertrauensperson der schwerbehinderten
 Menschen
 Kestelje ☎ - 554

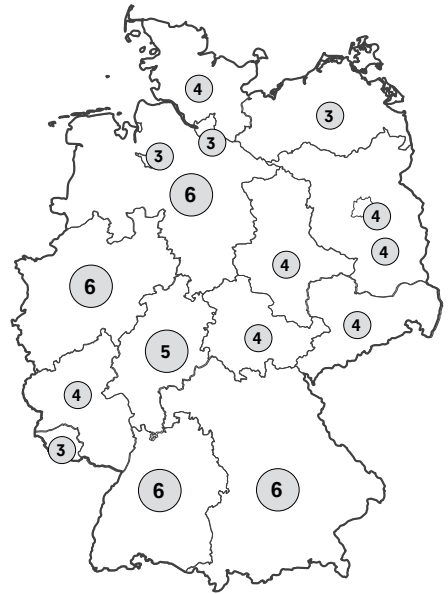
Figure 07: Organization of Bundestag's Secretariat

DESIGN BRIEF

4.1 KICK-OFF

CLIENT INTRODUCTION

Bundesrat is the Upper house chamber of Germany's legislative system. It was founded in 1871 - when the German Kingdoms were unified. Bundesrat plays an important role on law making and supervision of Germany. Its members are elected by the the Federated States. Today the seat of Bundesrat in Berlin, in the former building of the Prussian House of Lords, on Leipziger street. Bundesrat is located there since 1990s after a renovation was take amidst the German reunification and nomination of Berlin as the capital once again.



Germany and its 16 states

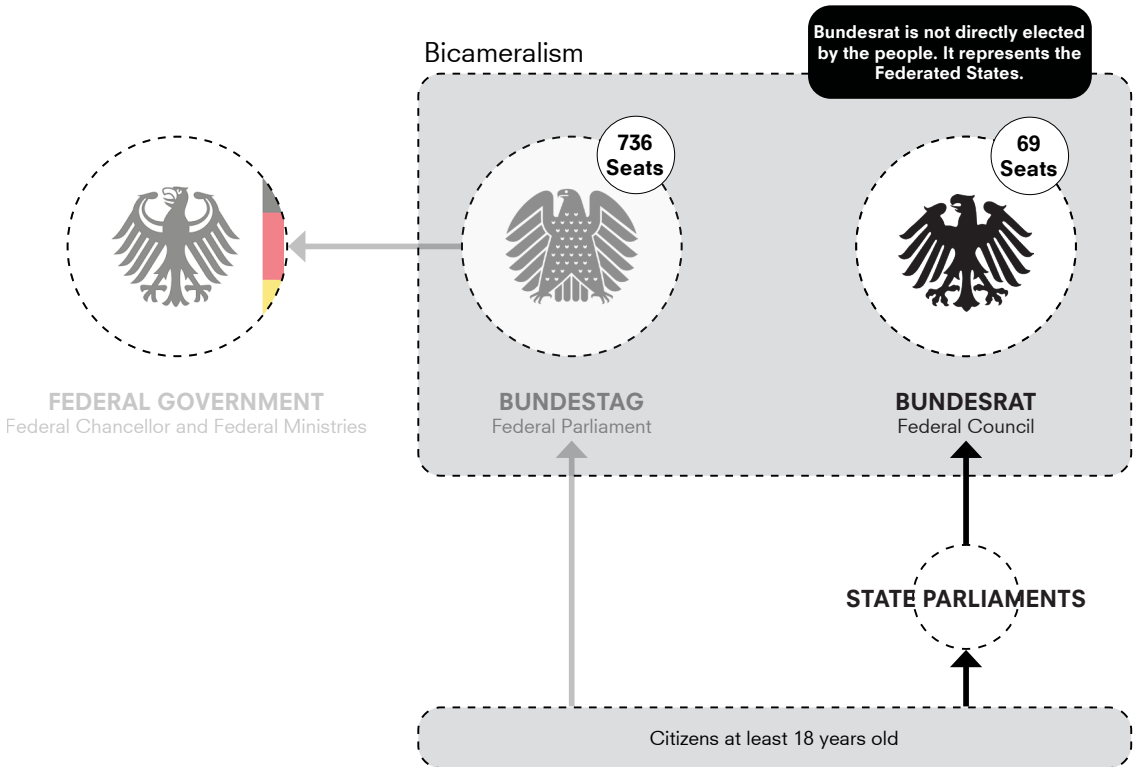
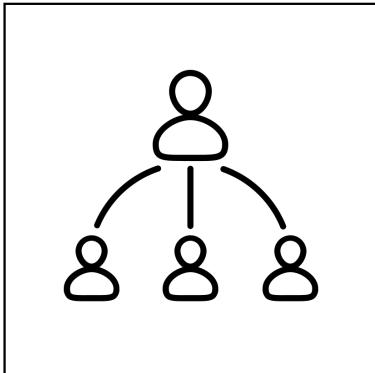


Figure 08: Scheme of Germany's legislative system.

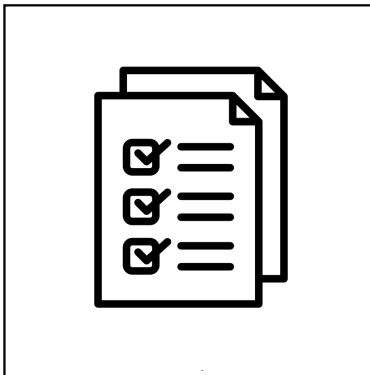
CLIENT OVERVIEW

Bundesrat is divided in four departments. The Secretariat is the most representative one in terms of scale, with around 200 people. The main activity in Bundesrat are the committees, which is the crucial part of Bundesrat's participation on law making. The secretariat plays an important role in the support of the committes work, as well as for the plenary sessions, and housekeeping.

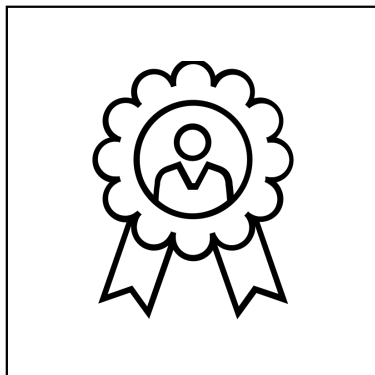
CLIENT ORGANIZATION



CLIENT TASKS



CLIENT REPUTATION



RECENT PROJETS

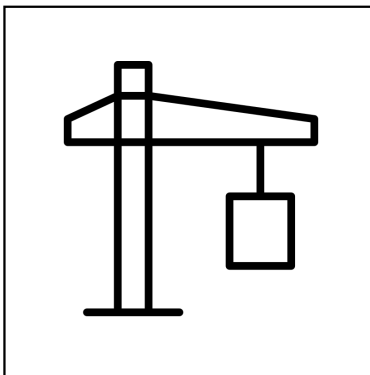




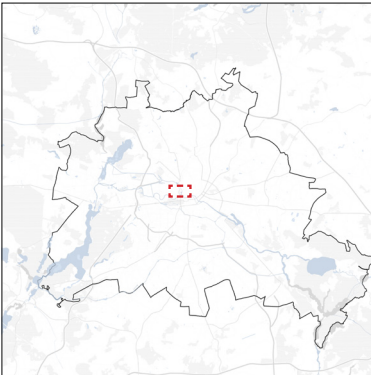
Figure 09: Seat of Bundesrat, Berlin.



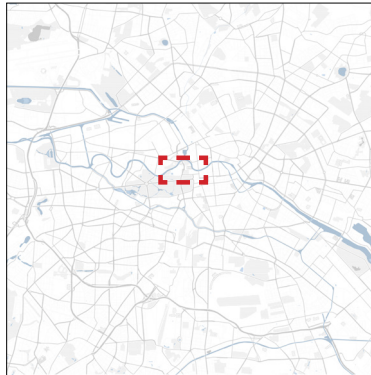
SITE OVERVIEW

The site has approximately 12.000m², and is located between the Chancellery building and the Paul-Löbe-Haus (part of the Bundestag parliament). Although a large square, the design, and positioning of the buildings towards the site cause a sense of intimidation and hostility. There is a very monumental and symbolic meaning to its place in regard to the anticipation and distance that the pedestrian has as it experiences the city. As the new site for the Bundesrat, the challenge is to maintain - or increase - the connection between the Spreebogenpark (north) and the Platz der Republik (south), besides creating a coherent yet recognizable relation to both buildings.

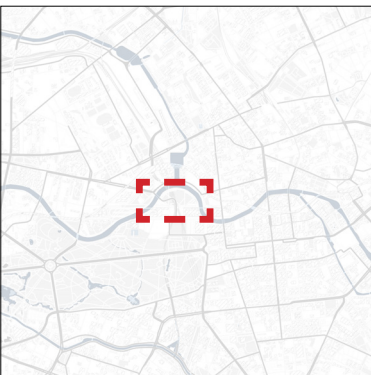
XL - THE BERLIN STATE



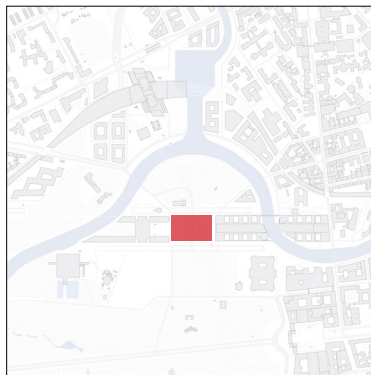
L - THE S-BAHN RING



M - THE GOVERNMENT DISTRICT



S - THE FEDERAL RIBBON



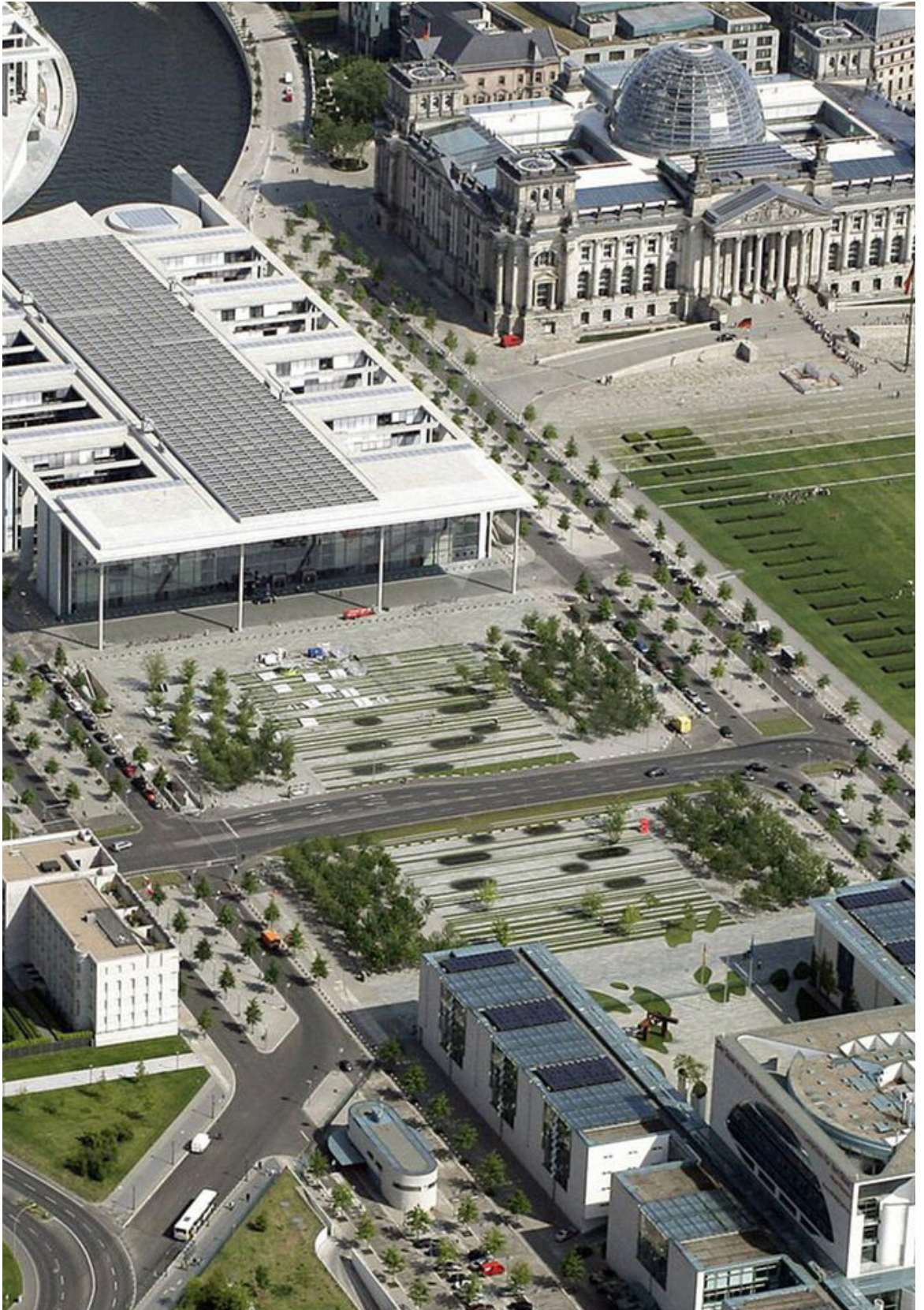
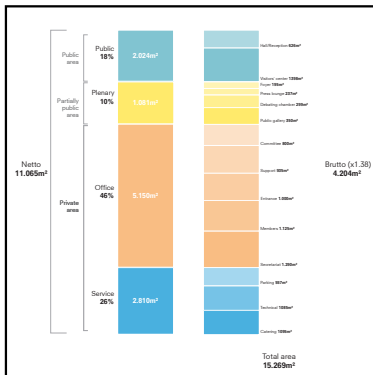


Figure 10: The Federal Ribbon in the foreground and Reichstag in the background, Berlin.

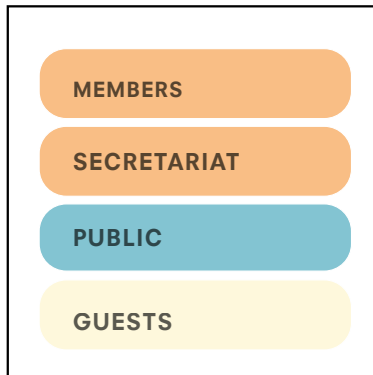
PROGRAM OVERVIEW

As a full parliament (consisting of all the offices of members and secretariat) the building will inevitably host in its majority spaces for offices and for the parliamentarians' activities. There is however the task of creating a warm and receptive public area that reflects the ambition of the project. The public area also includes a visitors' center, which will be part of the educational area dedicated to the 2021 Climate Act.

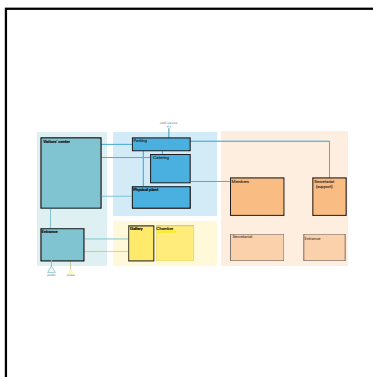
NETTO + BRUTTO



USERS



RELATION SCHEME



KEY SPACES

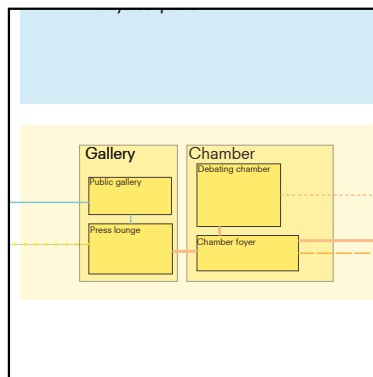




Figure 11: Entrance of the Senedd Parliament, Cardiff.



SUSTAINABLE BUILDING

A building that becomes a pioneer of the construction culture of environmental responsibility. Addressing topics as embodied energy, circularity, future-proofness, urban ecology, climate-responsive, and working with its natural context.



SUSTAINABLE FUNCTIONALITY

A project that anticipates the transformations of parliamentary activities and the functional needs of the main users - parliamentarians - and their main role.



SUSTAINABLE SYMBOLISM

A building that becomes the symbol of the new agenda, of climate action. Challenging the common parliamentary convention of intimidation and isolation, creating a space where citizens feel safe, invited and heeded.

PROJECT STATEMENT



Figure 12: Collage created by author



VISIBILITY

Make the institution visible and awake to the city and citizens. Increase the awareness and symbolical representation of the institution in comparison to the Reichstag/ Bundestag. Make the institution more accessible and public. Think about tools to attract people's attention (e.g. Reichstag dome).



SUSTAINABILITY

Enhance the image of the institution, aiming it to be even more respected. A building that connects to the interest of the future generations and breathes the concerns of the present-day and the future. A state-of-the-art building in terms of sustainability, architecture, and urban quality.

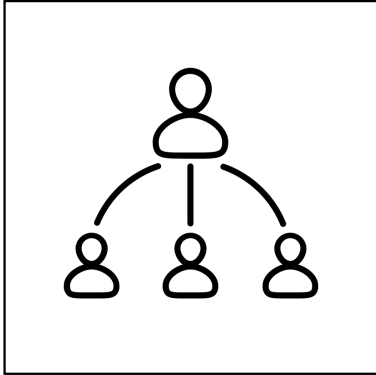


WORKING QUALITY

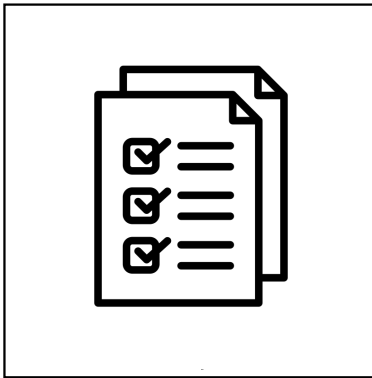
The new building needs to ensure the best working condition possible, foremost to parliamentarians and staff. This quality is aimed on both functional and well-being levels. A building that makes its users wanting to go and stay there, and that enable them to perform their tasks and activities efficiently and frictionlessly.

CLIENT OVERVIEW

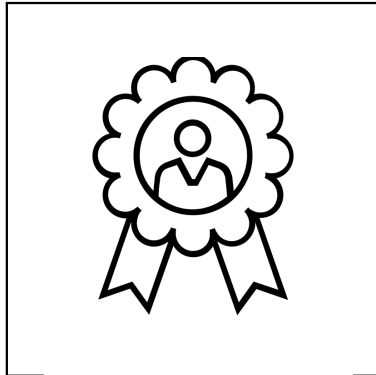
CLIENT ORGANIZATION



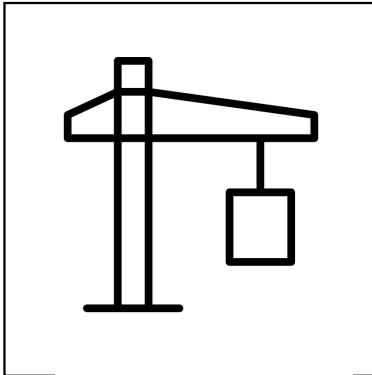
CLIENT TASKS



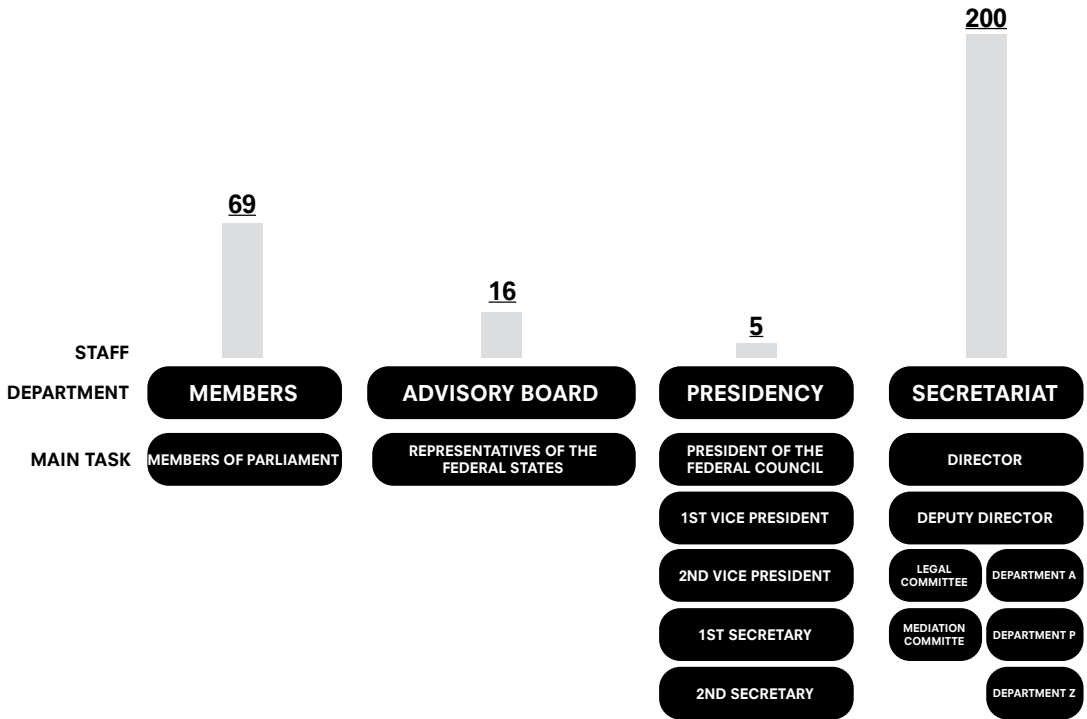
CLIENT REPUTATION



RECENT PROJETS



ORGANIZATION OVERVIEW



ORGANIZATION CONCLUSIONS

DEPARTMENT'S CONTRAST

Secretariat and Members are the two departments with the largest number of staff. Both are also the most contrasting in terms of occupation, whilst the Secretariat is the most permanent, Members is the most fluctuant.

DEPARTMENT'S INTERCONNECTION

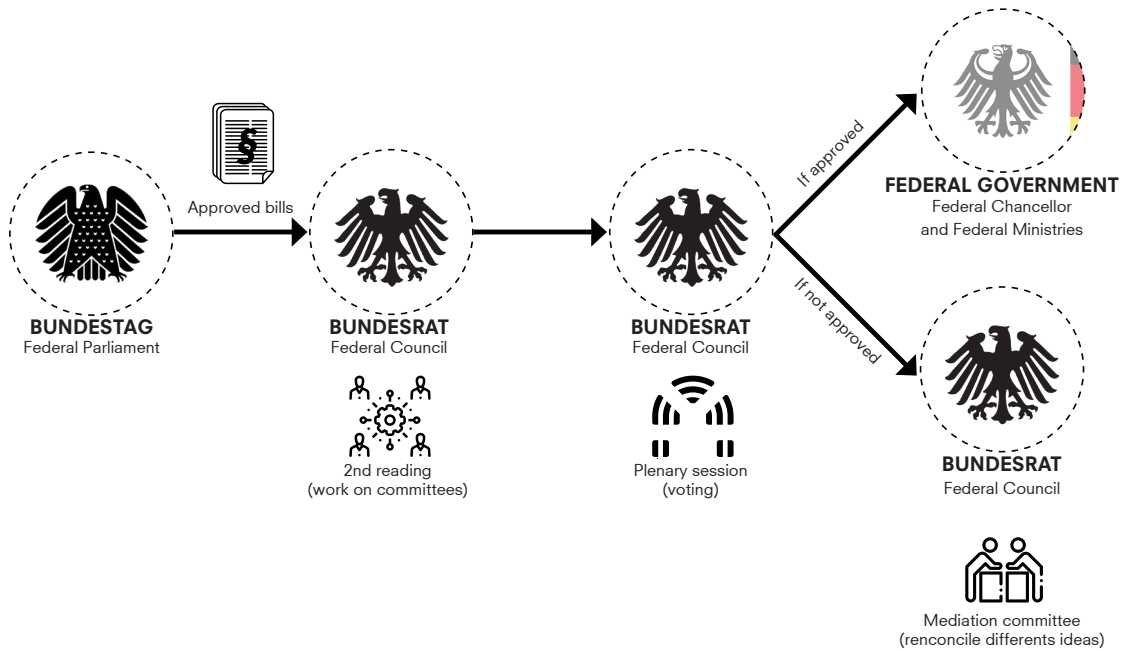
All departments are interconnected, each based on its function. The Presidency is the one that shares the interconnectivity in large complexity - it deals with the Plenary sessions and the Secretariat.

DEPARTMENT'S SCOPE

The three departments of the Secretariat are divided by their category, thus it is possible to identify a preference for building allocation dependency:

1. Department A easy access to members and committee rooms.
2. Department P close to public access.
3. Department Z access to exterior, and special attention to its technical areas.

TASKS OVERVIEW



TASKS CONCLUSIONS

COMMITTEE FORCE

Committees are the central role of the institution's activity, taking the most substantial effort and time. While plenary sessions happen every three weeks, there can be up to seven committee meetings in just a single day.

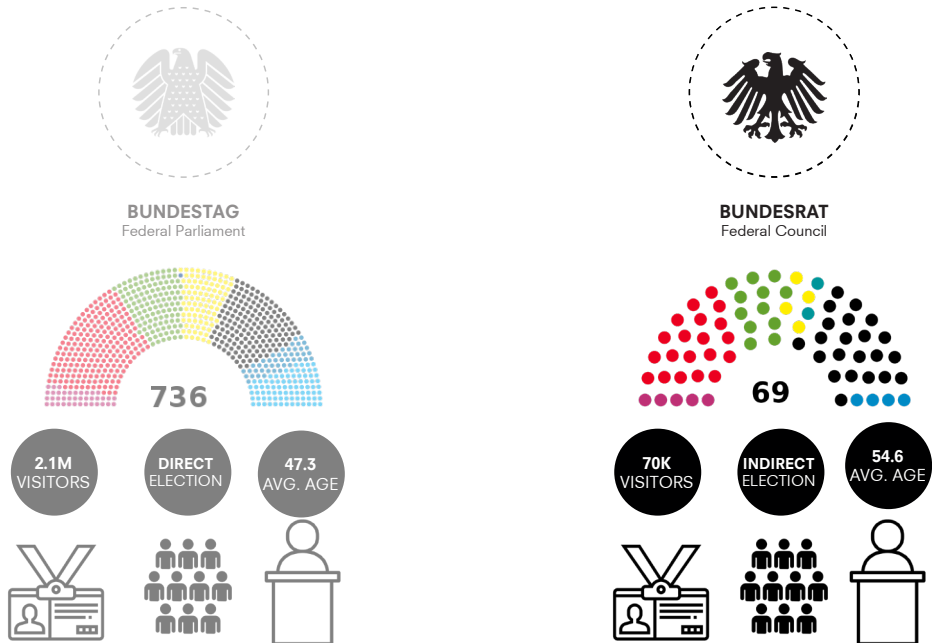
FEDERAL INTERACTION

Since the Bundesrat works as a balance mediator of the federal laws and administration. It is in constant interaction with the Federal Government and the Bundestag. Thus, it does not have a significant interaction with the citizens itself - contrary to Bundestag for instance.

INDIVIDUALITY OF THE STATES

In the debating chamber is really evident the organization of the seating arrangement according to the states. This ensures that each state is heard and somehow have their own individuality, performing almost as political parties. This also represents symbolically that each state is represented, the only issue with this format is that states with less votes might feel in disadvantage.

REPUTATION OVERVIEW



REPUTATION CONCLUSIONS

BLURRED ASSOCIATION

The institution is subject to misinterpretation. Its building was built to house the Prussian Parliament in the end of the 19th century, and today is adjacent to Berlin's House of representative, Berlin's state parliament - which in theory should not have such close association with the Bundesrat since the Bundesrat represents all German states.

NOT POPULAR

It is reasonable to conclude that, since Bundesrat is not directly elected, citizens do not have such personal relation towards the institution. The large difference of visitors is also an indicator of the less popular reputation that the institutions has in comparison to the other chamber - Bundestag.

MATURE AND RESTRAINED

With only 69 members, with an age average of 54,6 years old - seven years more than Bundestag - of its members, Bundesrat has a character of mature, serious, and ordered. Such characteristics are also possible to notice in the way the building is protected and by the sobriety of the debating chamber.

RECENT PROJECTS CONCLUSIONS

LACK OF REPRESENTATIVENESS




The move to Berlin as the Capital City in the 1990s and early 2000s generated a climate of reconstruction, experimentation and reshape of Berlin's identity. Governmental institutions took that opportunity to create distinctive buildings that enabled this climate to be visible and recognizable. The case of the Bundesrat does not address the same clarity and visibility.

UNCOMPETITIVE STATEMENT



Whereas Bundestag created a building that became the most visited parliament in the world, tackling matters of great significance as the publicness of such institutions, and the environmental awareness in the building strategy, thus becoming a pioneer and elevating the image of the institution.

INCREASING VISITORS

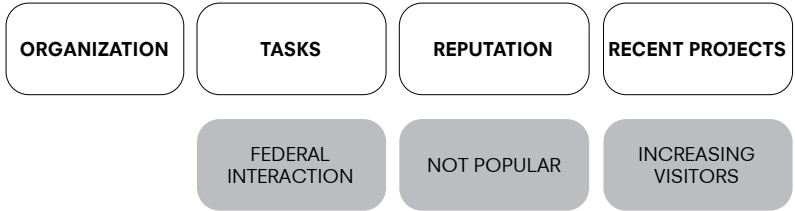


Although is far from comparable the amount of visitors that Bundestag has to Bundestag, in the last 20 years the institution saw an increase of 350% in the number of visitors. In addition, the latest project of the institution indicates that the same is interested in the capacity of becoming more visible and close to the public.

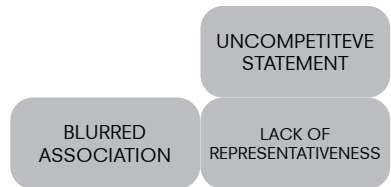
CLIENT MATRIX



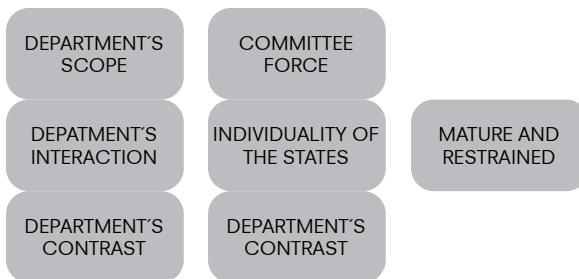
VISIBILITY



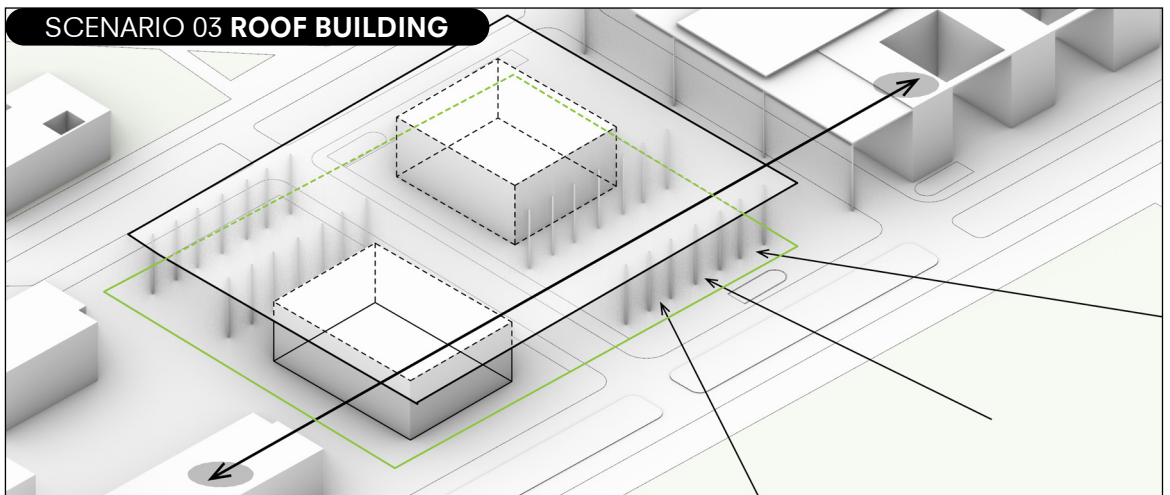
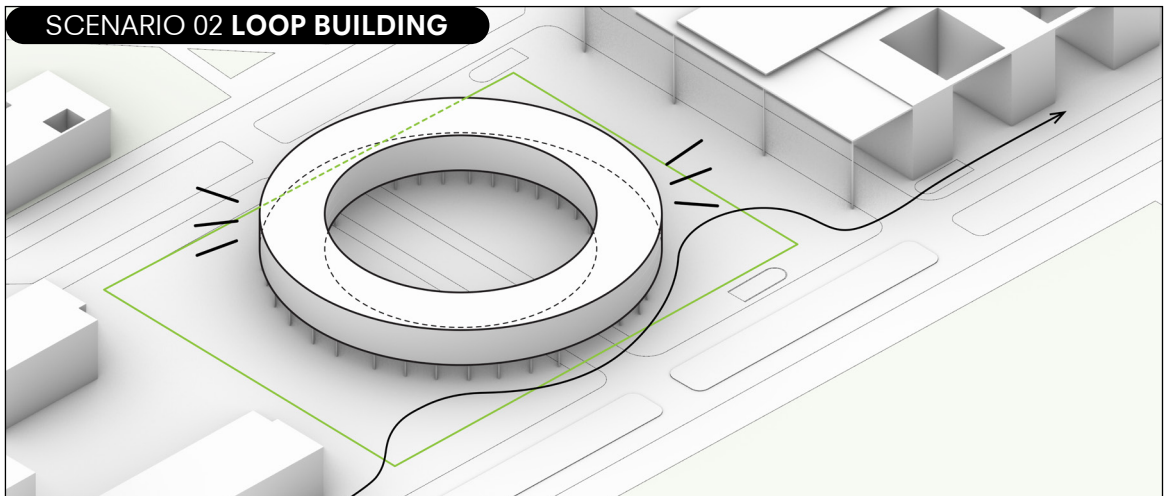
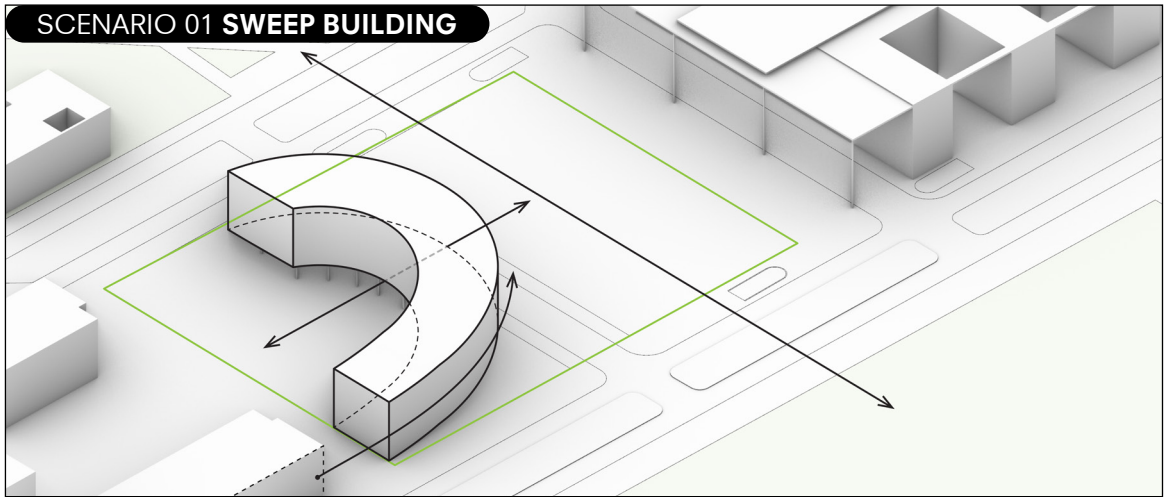
SUSTAINABILITY



WORKING QUALITY



CLIENT SCENARIOS



4.3 SITE

SITE AMBITIONS



WELCOMING SITE

Creates a warm and receptive atmosphere, inviting people to take part on the function of the building and breaking the hostility, intimidation, isolation, and distance of the its existing context.



ICONIC SITE

Responsive to the local morphology, views, and architectural quality of the built enviroment, creating a seamless and integral atmosphere.



SUSTAINABLE SITE

Enhances the quality of the urban and natural environment by being climate responsive to its surrounding conditions.



CONTEXTUAL SITE

Integration and connection to existing public areas and pathways, enhancing the visual and functional qualities of the surrounding public spaces

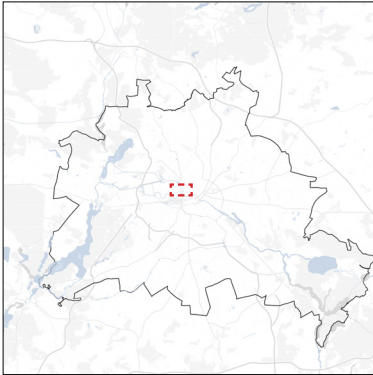


SECURE SITE

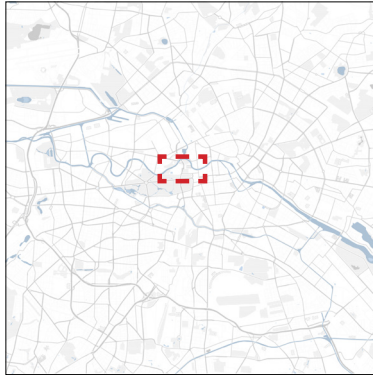
The site needs to provide after all security to parliamentarians, staff, citizens, and visitors.

SITE OVERVIEW

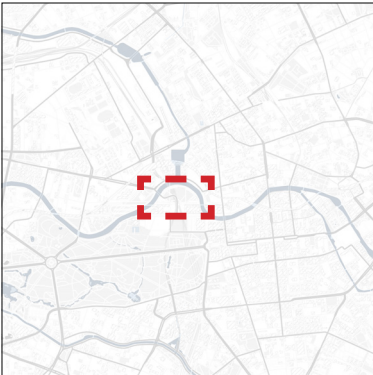
XL - THE BERLIN STATE



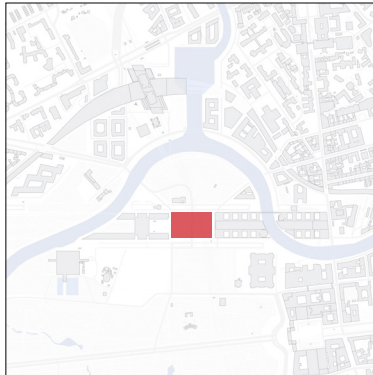
L - THE S-BAHN RING



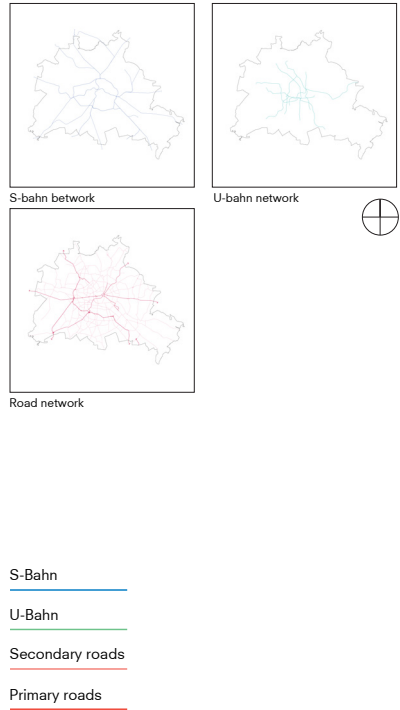
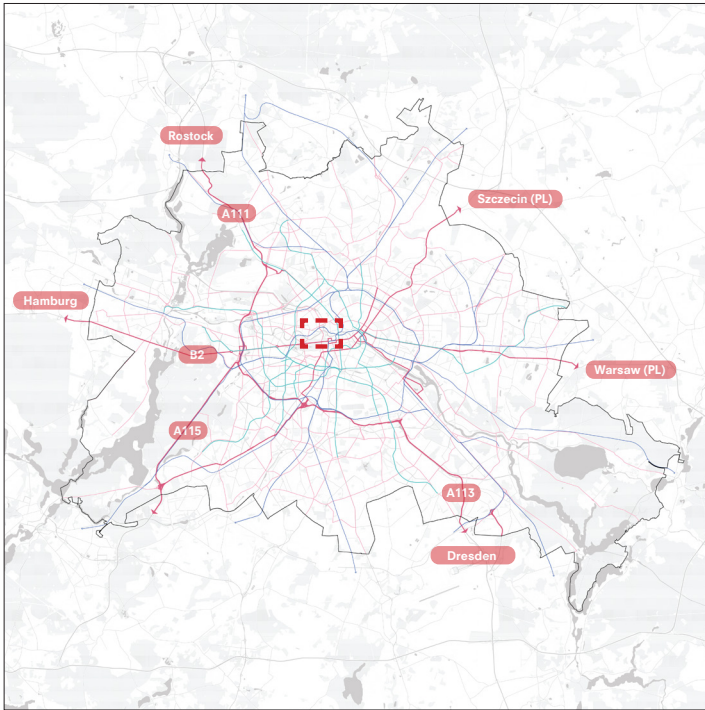
M - THE GOVERNMENT DISTRICT



S - THE FEDERAL RIBBON



XL OVERVIEW



XL CONCLUSIONS

LOW DENSITY ISLAND

Located in the Tiergarten borough, one of the less densier boroughs of Berlin, However, surrounded by the vibrant boroughs as Mitte, Kreuzberg, and Charlottenburg, and upcoming urban development known as Europacity.

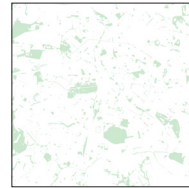
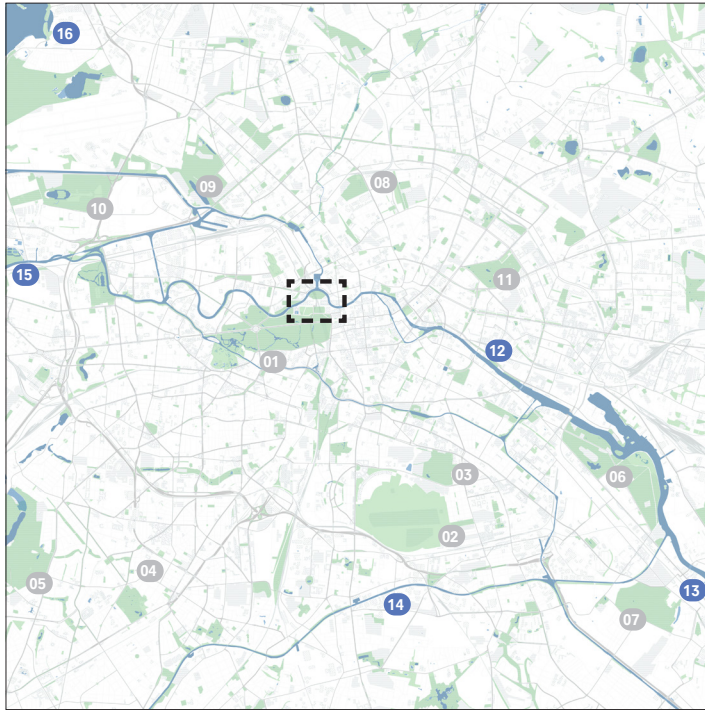
NO MAN'S ISLAND

A place that has not such strong association with west or east...a democratic place for Berliners?

WEST-EAST ROAD AXIS

Located by the B2/Unter Der Linden, one of the most historical streets of Berlin, and main west gateway of Berlin.

L OVERVIEW



Green structure

Water structure

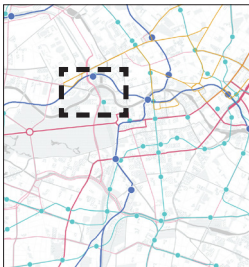
River Spree with 400km, main feeding of the River Havel



- 01 Tiergarten park
- 02 Tempelhof
- 03 Hasenheide Park
- 04 Cemetery Friedhof Steglitz
- 05 Forest Grunewald
- 06 Treptower park
- 07 Ecological park Königsheide
- 08 Humboldtthain Park
- 09 Große Spiel - und Liegewiese Park
- 10 Jungfernheide Park
- 11 Friedrichshain Park
- 12 River Spree
- 13 upstream access to Lake Müggelsee
- 14 Teltow Canal
- 15 downstream to River Havel (then to river Elbe)
- 16 Tegeler See

L CONCLUSIONS

MULTIMODAL ACCESS



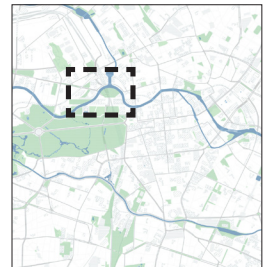
Adjacent to the underground station of U-bahn Bundestag. The site is on top of the Tiergarten Tunnel, a road of secondary level, opened in 2006. Access by Tram is provided on the north part of the site, main primary road access is by Unter der Linden.

HEART OF THE NETWORK



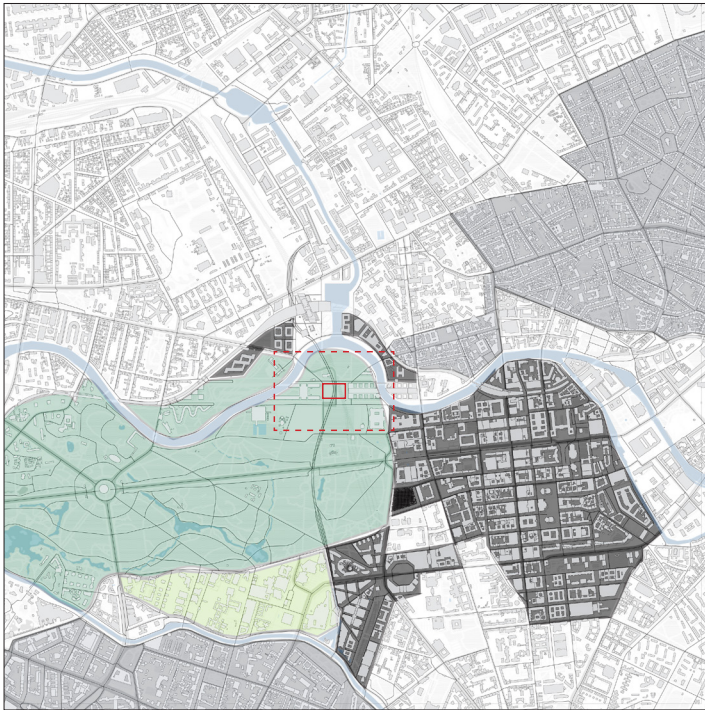
5 minutes walk from the main train station of Berlin - the Hauptbahnhof - with national and international connections.

GREEN LUNGS



Located adjacent to one of the largest parklands of Berlin, the Tiergarten Park.

M OVERVIEW



Urban fabric



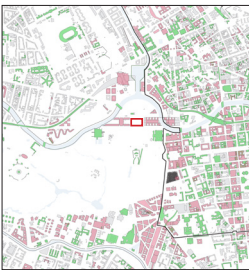
Morphological groups



- Landscape city, buildings as pavilions, park buildings
low density
- Weak legibility, suburban blocks
- High legibility, dense, cartesian urban blocks
- High legibility, large blocks with grainy building footprint

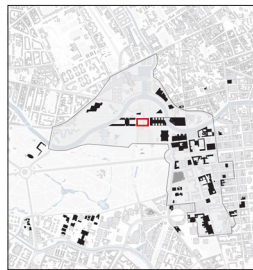
M CONCLUSIONS

GREAT CONTRAST OF OLD AND NEW



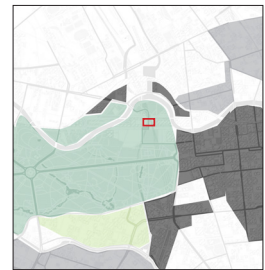
The sharp contrast of before and post war buildings is a strong character of Berlin. Here history is not seen in a full cluster but fragmented and spread pieces of the old city, making the dialogue of old and new intense. In the site itself there 4 monument buildings: the Reichstag; the Moltkebrücke; the House of World Cultures; the Swizz Embassy.

GOVERNMENTAL VISION



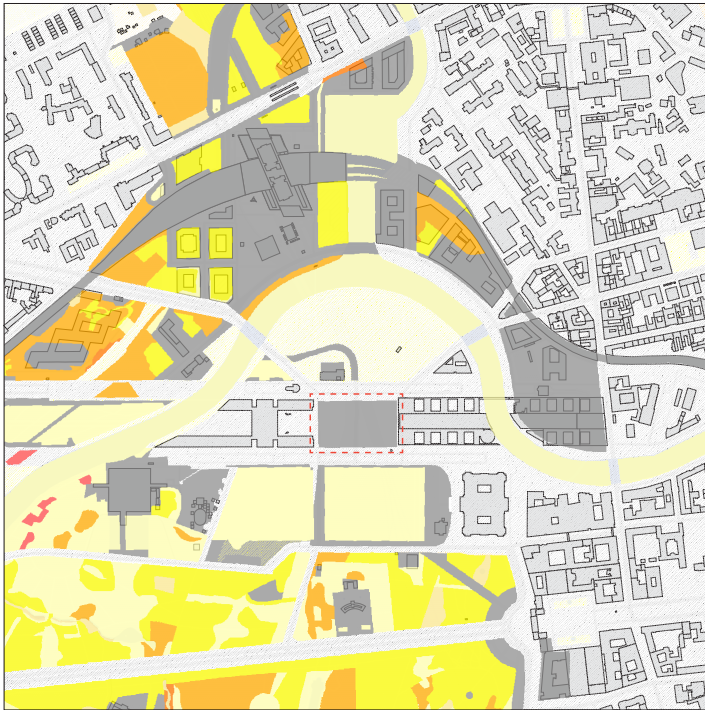
The site belongs to the government district, more especially the Band des Bunde complex, which is the basilar point of the capital vision for Berlin.

HETEROGENEOUS MORPHOLOGY



The landscape identity of the area sets a completely different and particular mood from the rest of Berlin. A sense of vastness and monumentality. Buildings are placed as sculptures and their character are nothing city like and enhances the heterogeneous urban identity through the city.

S OVERVIEW



Biotopes



Buildings and water



biotope class value	biotope value or potential to conflict
1	small
2	very low
3	small amount
4	medium
5	medium high
6	high
7	very high
8	extremely high

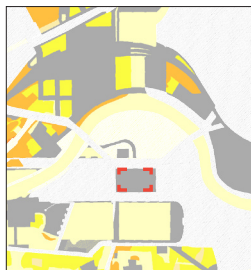
S CONCLUSIONS

MONUMENTALITY OF PUBLIC SPACES



The site is surrounded by large public spaces characterized by a mood of isolation and vastness. Nevertheless the site should stimulate the south-north connection of the public spaces and the axis to the Hauptbahnhof.

ECOLOGICAL LOW VALUE



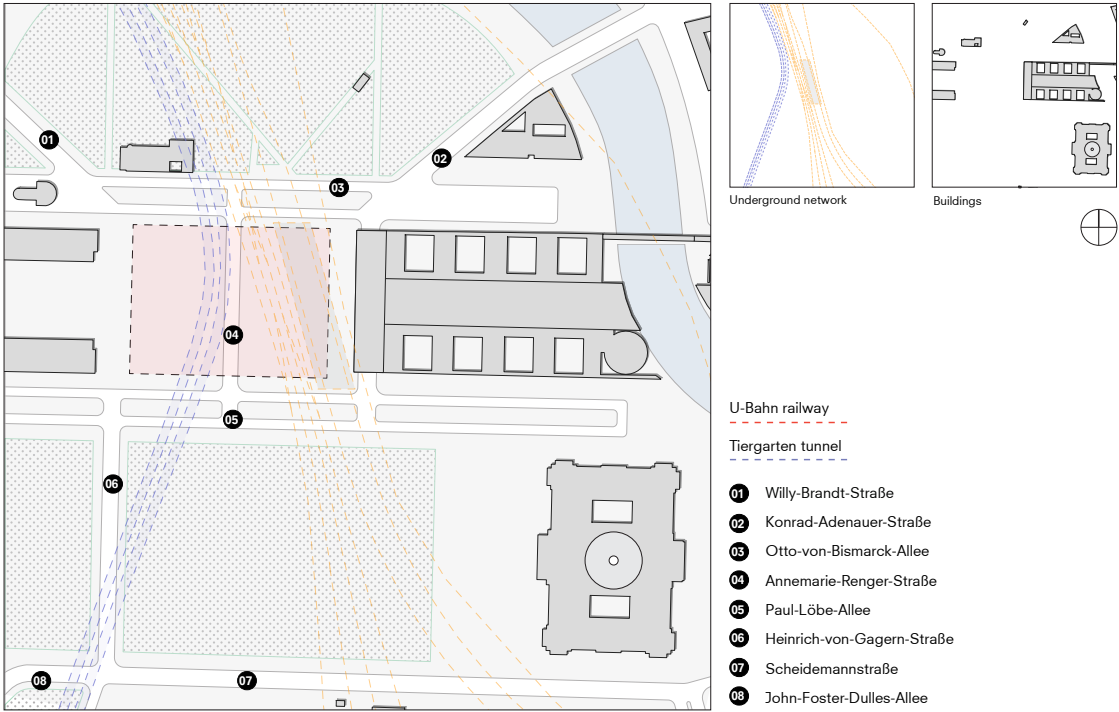
Increase the potential of ecology and biodiversity of the area and surroundings.

REDEFINED IMAGE



The site faced tremendous changes since the WWII bombing. Contrary to most parts of Berlin where rebuilding the city took a traditional approach, the area around the Reichstag became place close to tabula rasa, introducing a new image to both Berlin city and German national identity.

XS OVERVIEW



XS CONCLUSIONS

UNDERGROUND INFRASTRUCTURE

Both Tunnel and U-Bahn station are at the same time opportunities and constraints. Building on top of these structures will demand careful analysis of existing situation as well as the impact on security and functionality of the building adjacent to the urban structures.

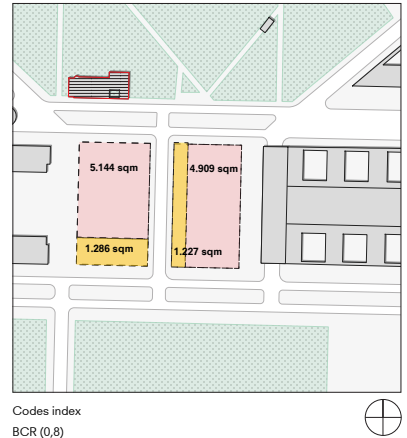
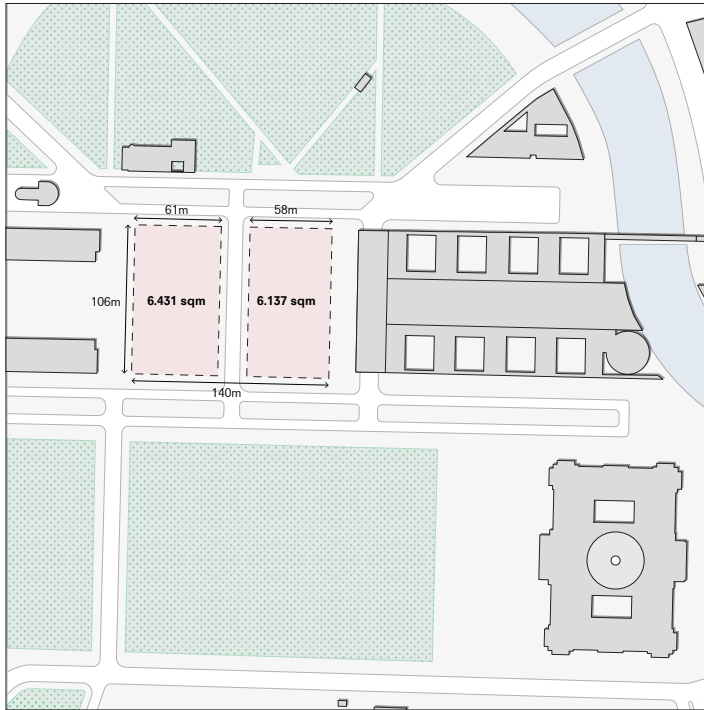
REICHSTAG EXPERIENCE

The site plays fundamental role in the discovery and experience of the government district, more importantly of the Reichstag building. Attention must be given to how to orchestrate the site with these punctual buildings.

LOCAL TREES

Although the site has not significant performance concerning ecology and biodiversity, the existing trees should be included in a strategy to accommodate them in a sustainable way.

BUILDING REGULATIONS OVERVIEW



Codes index
BCR (0,8)
FAR (2,0)

Total plot area

12.568m²

Total plot area x 0,8 (BCR)

10.553m² (2.015m² non-buildable surface)

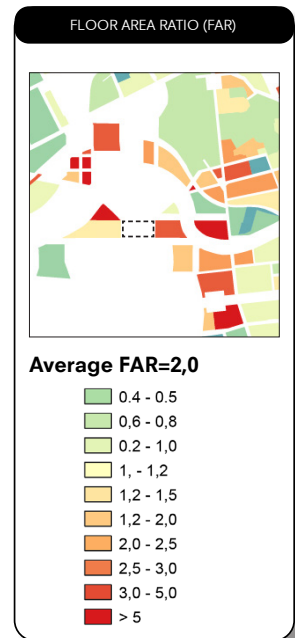
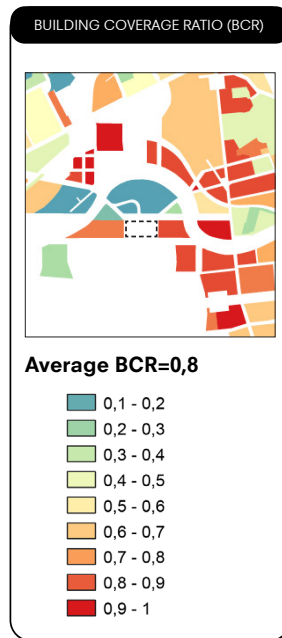
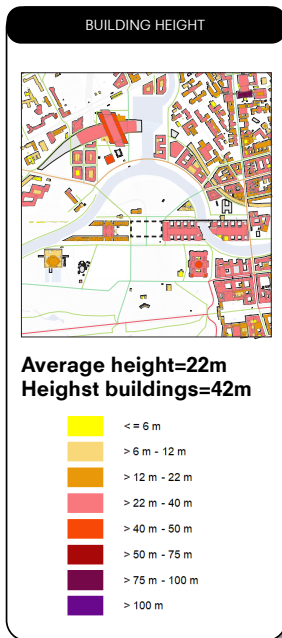
GFA (15.000m²) / plot area (12.568m²)

1.19 (FAR)

GFA (15.000m²) / buildable area (10.553m²)

1.4 (floors)

BUILDING REGULATIONS CONCLUSIONS



SITE MATRIX



WELCOMING SITE

XL SCALE	LARGE SCALE	MEDIUM SCALE	SMALL SCALE
WEST-EAST GATEWAY	MULTIMODAL ACCESS		MONUMENTALITY OF PUBLIC SPACES



ICONIC SITE

HETEREONEOUS MORPHOLOGY



SUSTAINABLE SITE

GREEN LUNGS

LOW ECOLOGICAL VALUE



CONTEXTUAL SITE

NOT CLAIMED

HEART OF THE NETWORK

CONTRAST OLD AND NEW

REDEFINED IMAGE

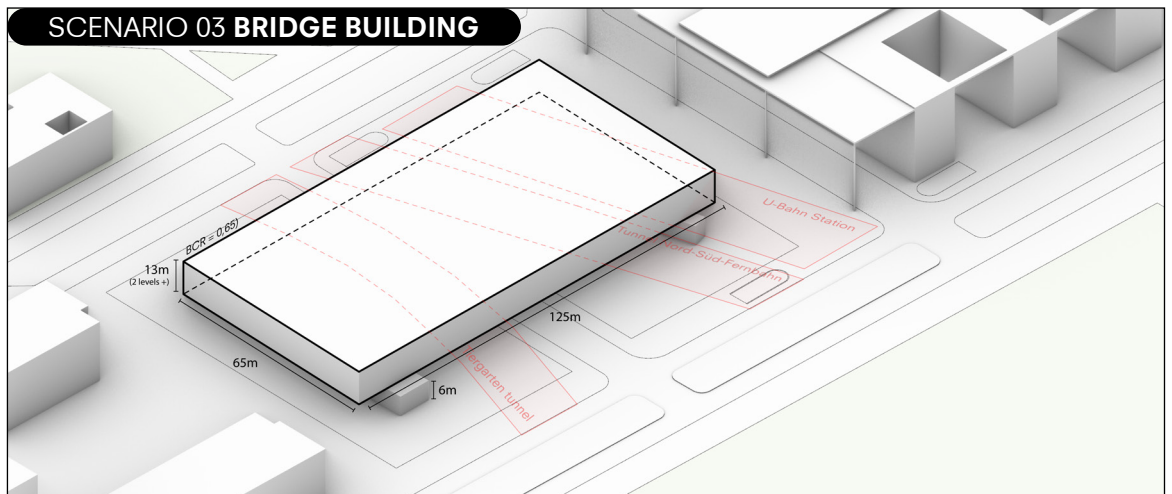
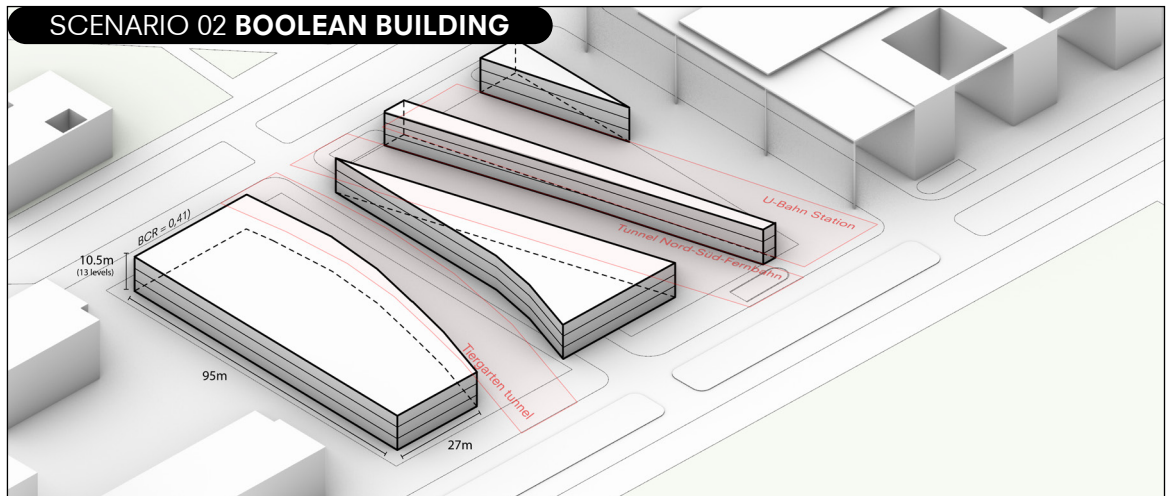
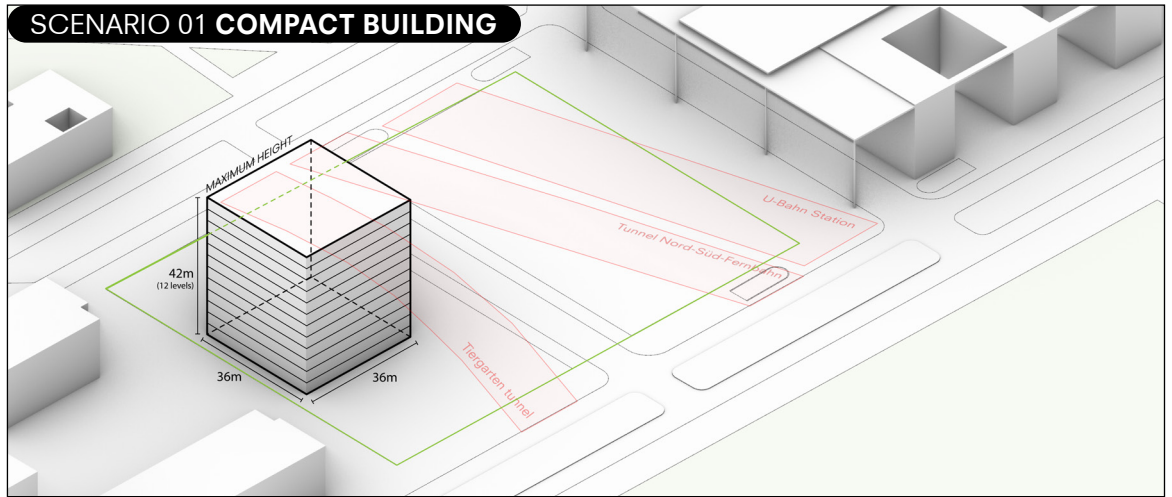


SECURE SITE

LOW DENSITY ISLAND

GOVERNMENTAL VISION

SITE SCENARIOS



4.4 PROGRAM

PROGRAM AMBITIONS



CIRCULARITY

Ensure future-proofness and think about the in terms of structure, space plan flexibility, floor height, assemblage of components, services, façade. think about maitenance.



MODULARITY

Modularity of structure mainly will facilitate manufacturing of the materials and components, resulting and less cost, less waste, and building with celerity. Enable the building to be reinterpreted in the future.



EMBODIED ENERGY

Careful selection of materials that will be used considering their manufacturing and transport emissions and climate effects.



ENERGY EFFICIENT

Energy production, passive elements, active systems, use of heat waste, excelent insulation.

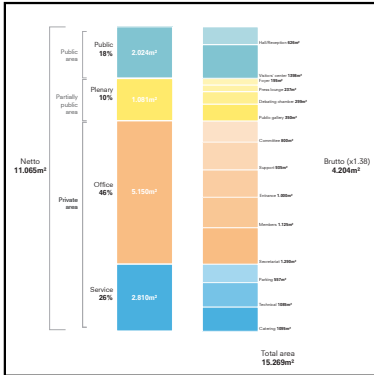


GREEN EXPPERIENCE

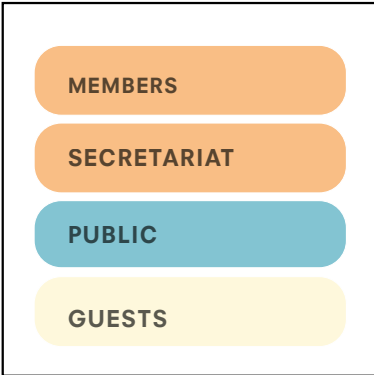
Green experience means an experience of nature, of life on earth. The buildings must evoke warmth, lightness, curiosity, joy.

PROGRAM OVERVIEW

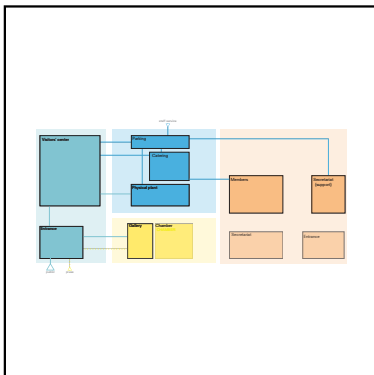
NETTO + BRUTTO



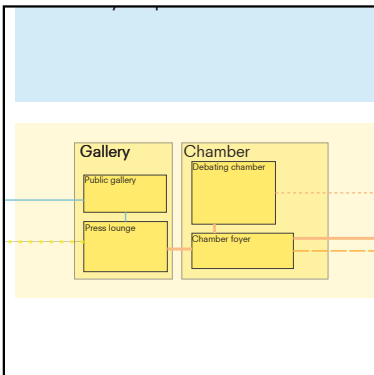
USERS



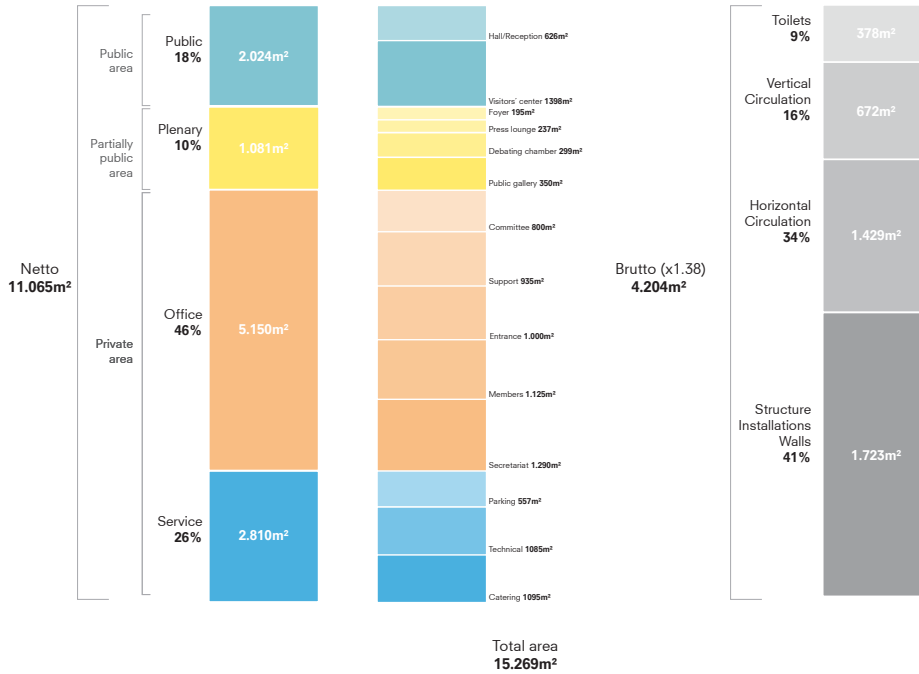
RELATION SCHEME



KEY SPACES



NETTO + BRUTTO OVERVIEW



NETTO + BRUTTO CONCLUSIONS

"OSMOSIS" PLENARY

More 75% of the building is of private access only. This number shows that although there is an aim for opening up the building, the parliament is nevertheless a building of executive function of its own tasks.

OFFICE WORKFORCE

Almost 50% of the program is dedicated to offices. This indicates that more than a half of the building will be used by people on a daily basis. User and working comfort is therefore extremely vital. Services, raised floor, flexibility.

2021 CLIMATE ACT CENTER

Although it is far from comparable the amount of visitors that Bundestag has to Bundestag, in the last 20 years the institution saw an increase of 350% in the number of visitors. In addition, the latest project of the institution indicates that the same is interested in the capacity of becoming more visible and close to the public.

USERS OVERVIEW

	USER	QUANTITY	RELATION TO BUNDES RAT	VISIT
Members	MEMBERS OF PARLIAMENT	69	NOMINATED BY THE STATES	TWICE A WEEK*
	STATE REPRESENTATIVES	16	PERMANENT	ON WORKING DAYS*
	PRESIDENCY*	3*	ELECTED BY THE BUNDES RAT	TWICE A WEEK*
	SECRETARY*	2*	ELECTED BY THE BUNDES RAT	TWICE A WEEK*
Secretariat (staff)	DIRECTORY	2	HIRED	ON WORKING DAYS
	PUBLIC SERVANTS	200	HIRED	ON WORKING DAYS
	EMPLOYEES	--	HIRED	ON WORKING DAYS
Public	PRESS	--	--	TWICE A MONTH
	VISITORS	269/	--	ON WORKING DAYS
Guests	EU/WORLD LEADERS	--	--	TWICE A YEAR
	BUNDESTAG MEMBERS	16	--	TWICE A MONTH
	FED. GOVERNMENT MEMBERS	16	--	ONCE A MONTH


USERS CONCLUSIONS

HIGH OCCUPANCY




The Secretariat of users are the largest group after the Public. The distinction that the Secretariat has in this regard is that the group has a high space usage. In-house activities are the base of the Secretariat. This means that this space is the one that will use a great amount of **energy**. building comfort is also crucial since this group is the one that most stays in the building.

INDOOR-OUTDOOR FLOW



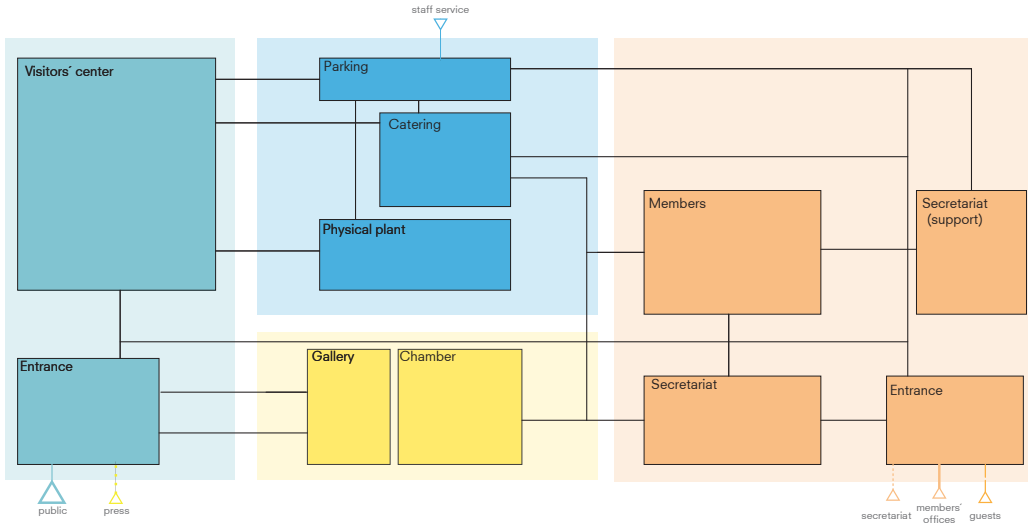
Public areas are the ones with the higher amount of visits/users and the least amount of building space per user. The latter means that this space should have materials that have good and **easy maintenance** and or good **aging quality**. This group of users has also a short duration time inside the building, meaning that **climate control** will be a critical point.

LOW OCCUPANCY



The fact that the ratio of the Members' area is of 41m² means that there are many rooms and spaces in this part of this building that have a specific non-daily use, e.g. committee rooms, meeting rooms. Having **less maintenance**, and **less interaction** of users and the space. This can influence in the design decision when allocating spaces concerning **views and city-building interaction** for instance.

RELATION SCHEME OVERVIEW



RELATION SCHEME CONCLUSIONS

BUFFER SERVICE AND PLENARY

Service and Plenary cluster are in between the both ends of the building's program, having relation and serving both Office and Public cluster. Nevertheless, Office cluster is the one to has the largest influence on these two.

CENTRALIZED OFFICE'S ENTRANCE

The entrance subcluster works as a heart in the way that both secretariat and members have to go through these subcluster to go to important points such as the chamber and the restaurant. Inside the entrance subcluster, the space Lobby is responsible for connecting these spaces, becoming a pivotal point in the building.

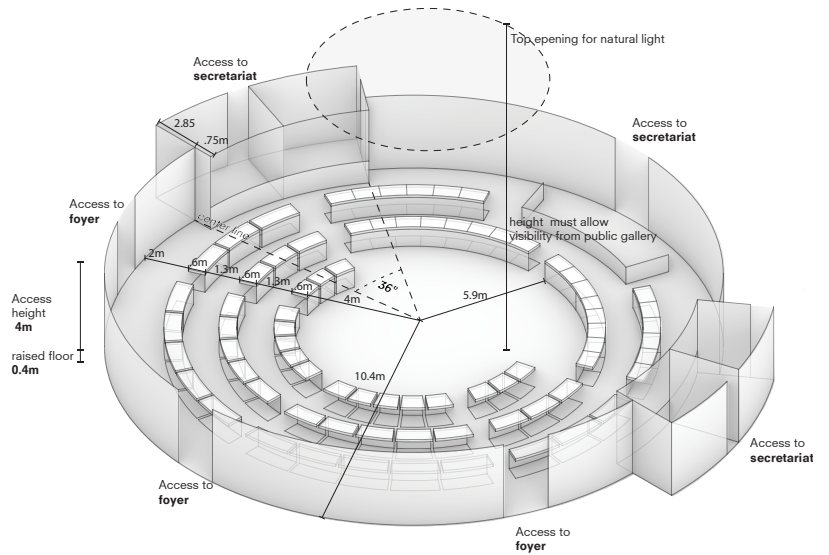
CHAMBER INDEPENDENCY

The building almost works as two independent buildings. Both entrances will have a security point that is of extreme importance for the security of the building. Cloakrooms are located after the security point. The only space provided before the security point is an entrance with reception and information point.

KEY SPACE OVERVIEW

REQUIREMENTS

- 350m² space
- 97 persons max.
- high sensivity acoustics (insulation and absorption).
- Equipment for broadcasting.
- Natural light with aid of dierect light.
- public gallery must have full visibility of the chamber.



KEY SPACE CONCLUSIONS

CIRCULAR SHAPE

More 75% of the building is of private access only. This number shows that although there is an aim for opening up the building, the parliament is nevertheless a building of executive function of itw own tasks.

"OPEN" ROOF

Almost 50% of the program is dedicated to offices. This indicates that more than a half of the building will be used by people on a daikly basis. user and working confort is therefore extremely vital.

MEDIATION COMMITTEE IN THE CHAMBER

Although is far from comparable the amount of visitors that Bundesrat has to Bundestag, in the last 20 years the institution saw an increase of 350% in the number of visitors. In addition, the latest project of the institution indicates that the same is interested in the capacity of becoming more visible and close to the public.

PROGRAM MATRIX



CIRCULARITY

NETTO + BRUTTO

USERS

RELATION SCHEME

KEY SPACE

HIGH OCCUPANCY

MEDIATION
COMMITTEE IN THE
CHAMBER



MODULARITY

BUFFER SERVICE
AND PLENARY

CIRCULAR SHAPE



EMBODIED ENERGY

OSMOSIS
PLENARY

LOW OCCUPANCY



ENERGY EFFICIENT

OFFICE
WORKSPACE

INDOOR-OUTDOOR
FLOW

CENTRALIZED
OFFICE ENTRANCE

"OPEN" ROOF

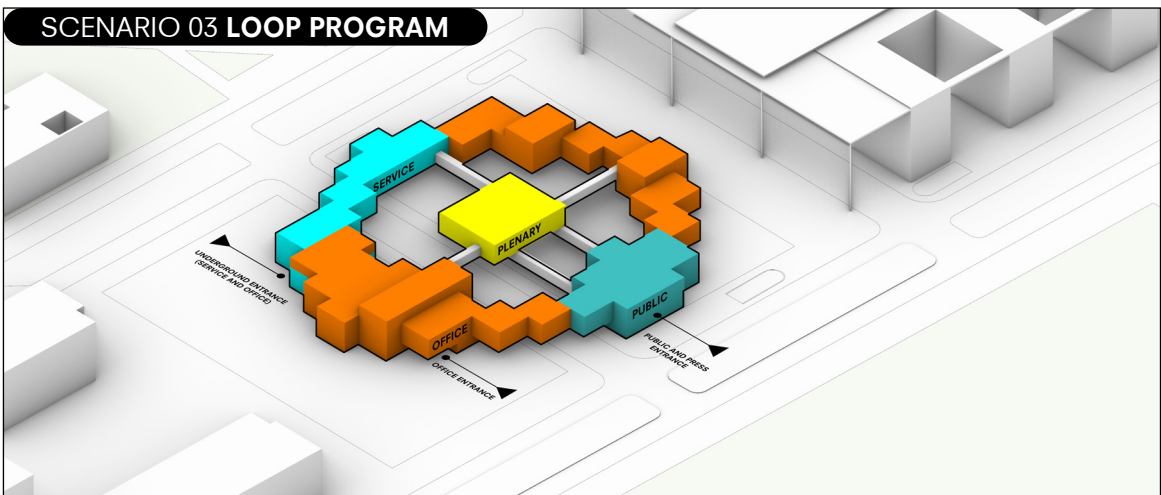
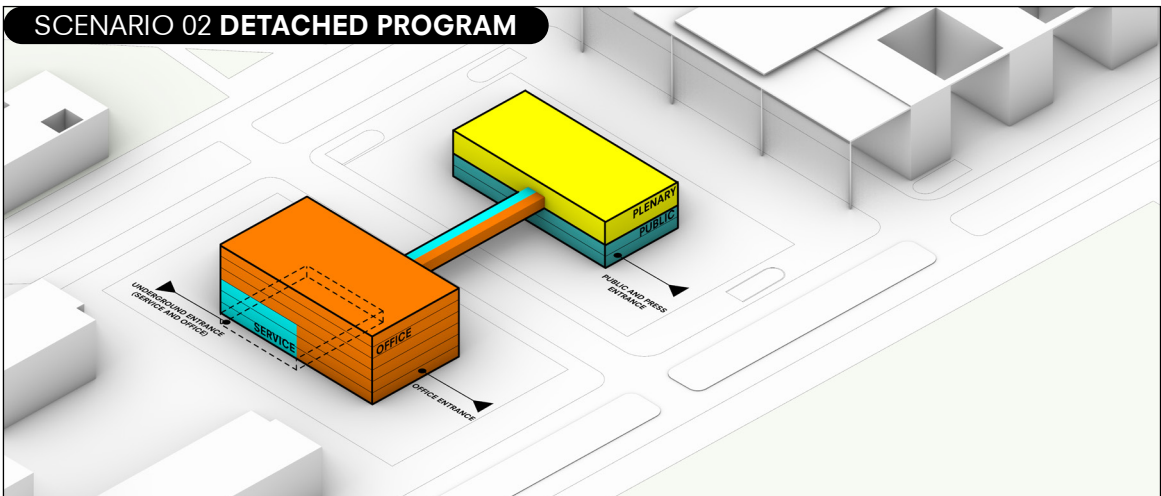
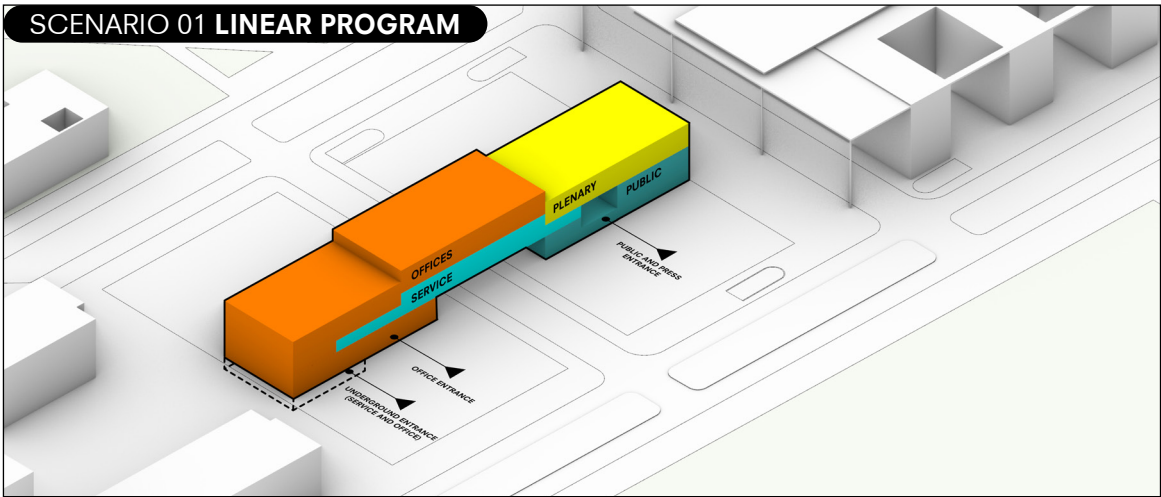


GREEN EXPERIENCE

2021 CLIMATE ACT
CENTER

CHAMBER
INDEPENDENCY

PROGRAM SCENARIOS

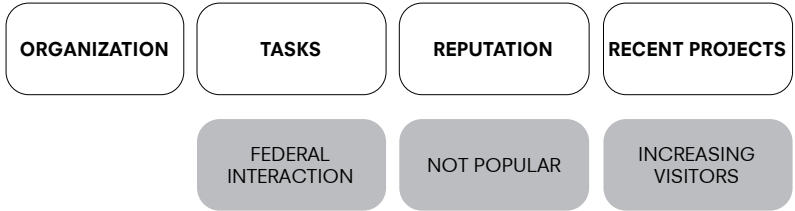


4.5 CONCLUSIONS

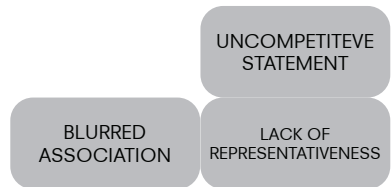
CLIENT MATRIX



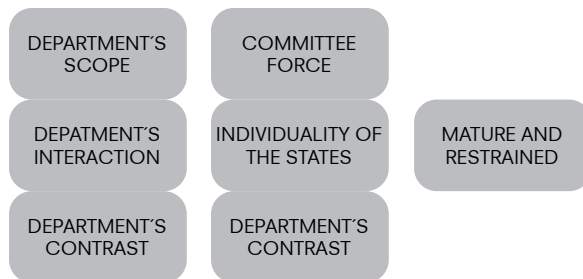
VISIBILITY



SUSTAINABILITY



WORKING QUALITY



SITE MATRIX



WELCOMING SITE

XL SCALE	LARGE SCALE	MEDIUM SCALE	SMALL SCALE
WEST-EAST GATEWAY	MULTIMODAL ACCESS		MONUMENTALITY OF PUBLIC SPACES



ICONIC SITE

HETEREONEOUS MORPHOLOGY



SUSTAINABLE SITE

GREEN LUNGS

LOW ECOLOGICAL VALUE



CONTEXTUAL SITE

NOT CLAIMED

HEART OF THE NETWORK

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MODULARITY

BUFFER SERVICE AND PLENARY

CIRCULAR SHAPE



EMBODIED ENERGY

OSMOSIS PLENARY

LOW OCCUPANCY



ENERGY EFFICIENT

OFFICE WORKSPACE

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CENTRALIZED OFFICE ENTRANCE

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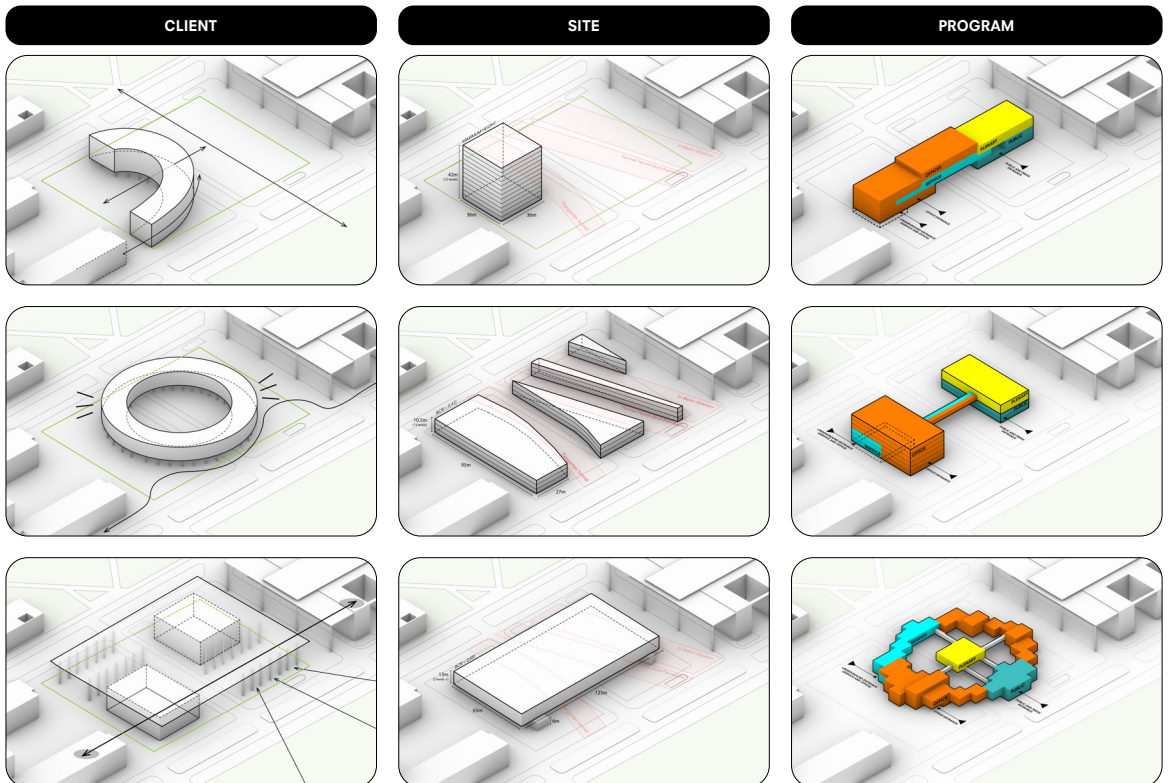


GREEN EXPERIENCE

2021 CLIMATE ACT CENTER

CHAMBER INDEPENDENCY

SCENARIOS MATRIX



DESIGN QUESTIONS

CLIENT	SITE	PROGRAM
<p>CONTEXTUALITY</p> <p>Building that blends or building of its own?</p>	<p>FOOTPRINT</p> <p>How to avoid minimum interference in the existing underground structures?</p>	<p>CIRCULAR CHAMBER</p> <p>How to anticipate uses for the detached debating chamber?</p>
<p>ICONIC</p> <p>Iconic that respects the surrounding or iconic that is out of context?</p>	<p>ORIENTATION</p> <p>How to organize the building to achieve optimal sun for harvesting energy and for use of indoor natural light?</p>	<p>FLOWS</p> <p>Divide program in two sides of the plot or concentrate in one side only?</p>
<p>WELCOMING</p> <p>How to create a receptive building without negatively interfere in the building operation (function/tasks)</p>	<p>CONNECTION</p> <p>How to articulate the connection of the two parks?</p>	<p>SERVICE EXPERIENCE</p> <p>How do we articulate the public experience with the climate center?</p>

REFERENCES

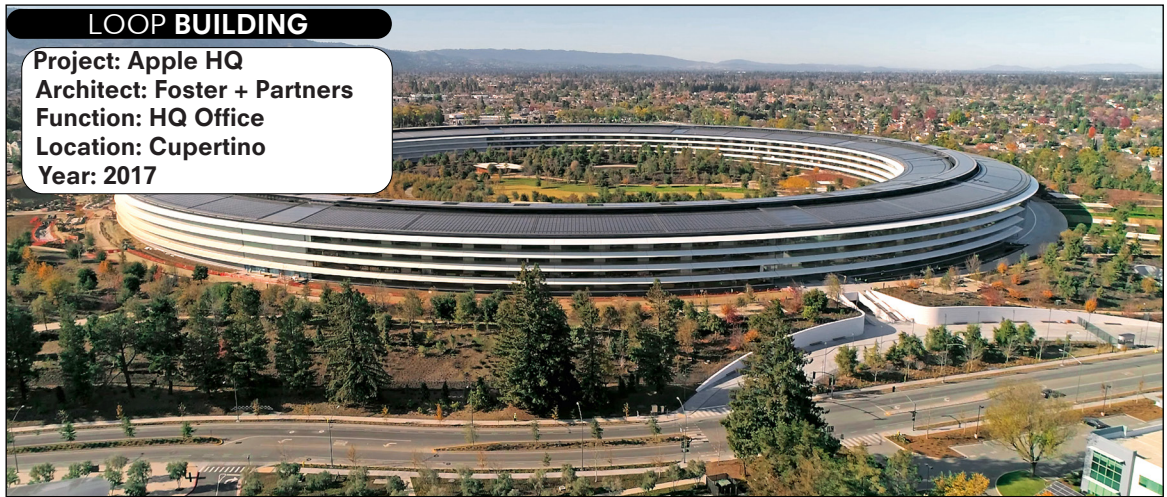


Figure 13: Apple HQ in Cupertino

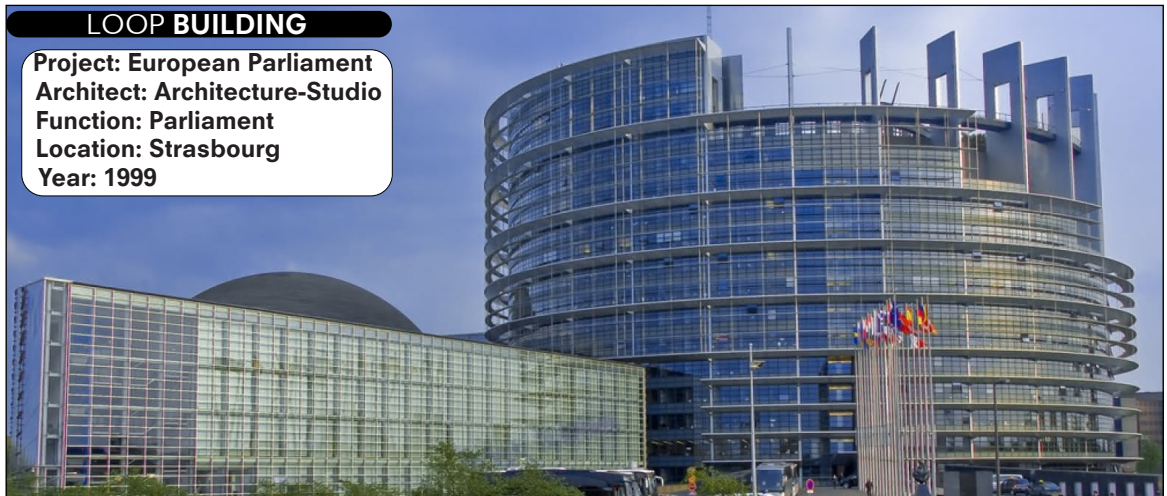


Figure 14: European Parliament in Strasbourg

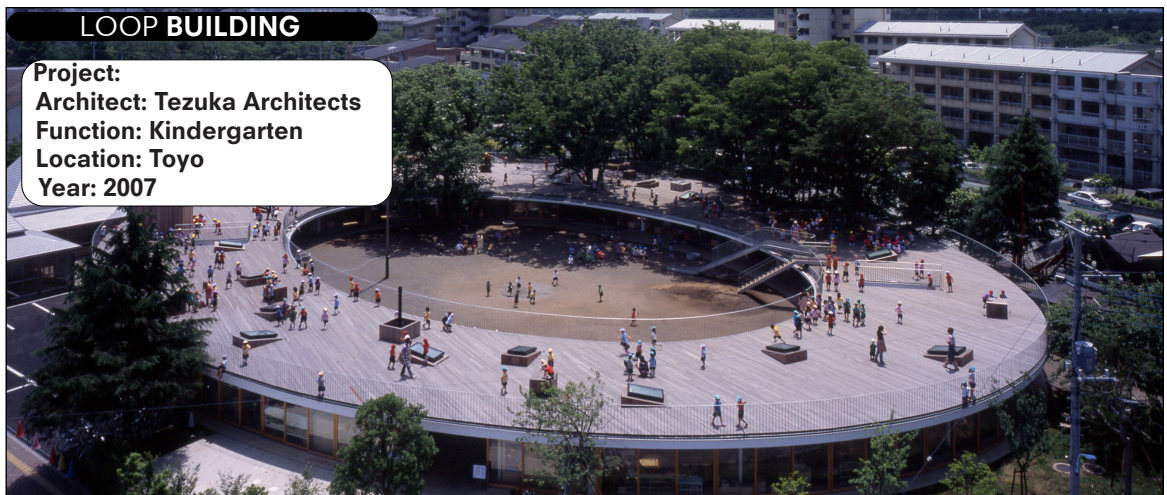


Figure 15: Tokyo Kindergarten.

REFERENCES



Figure 16: Children Village in Araguaiana, Brazil.



Figure 17: Neue Nationalgalerie in Berlin.



Figure 18: Senedd Parliament in Cardiff.

BIBLIOGRAPHY

5.1 BIBLIOGRAPHICAL REFERENCES

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Gunlicks, A. B. (2003). *The Länder and German Federalism*. Manchester University Press.
<https://www.jstor.org/stable/j.ctt155j6k3>

5.2 FIGURES

Figure 1: created by author

Figure 2: from <https://www.bloomberg.com/news/articles/2022-09-16/europe-s-largest-building-from-ceausescu-era-to-cut-energy-costs>

Figure 3: from https://commons.wikimedia.org/wiki/File:Berlin-Reichstag_1929.jpg

Figure 4: <https://imearb.com.br/brasil60anos/galeria-brasil-2/>

Figure 5: <https://divisare.com/projects/315231-architecture-studio-european-parliament>

Figure 6: created by author

Figure 7: created by author

Figure 8: created by author. research collected from <https://www.bundesrat.de/EN/homepage/homepage-node.html>

Figure 9: from https://commons.wikimedia.org/wiki/File:Berlin_-_0040_-_13052015_-_Bundesrat.jpg

Figure 10: from <https://www.deutschlandfunkkultur.de/berliner-regierungsviertel-der-traum-vom-buergerforum-100.html>

Figure 11: from <https://senedd.wales/>

Figure 12: created by author

Figure 13: from <https://www.fosterandpartners.com/projects/apple-park/>

Figure 14: from <https://divisare.com/projects/315231-architecture-studio-european-parliament>

Figure 15: from <https://www.dezeen.com/2017/10/02/fuji-kindergarten-tokyo-tezuka-architects-oval-roof-deck-playground/>

Figure 16: <https://www.archdaily.com/920911/riba-international-awards-2020-open-for-entries>

Figure 17: from <https://www.archdaily.com/960604/neue-nationalgalerie-david-chipperfield-architects/6082b758f91c8133570001a4-neue-nationalgalerie-david-chipperfield-architects-photo>

Figure 18: from <https://senedd.wales/visit/our-estate/senedd-at-15/>

