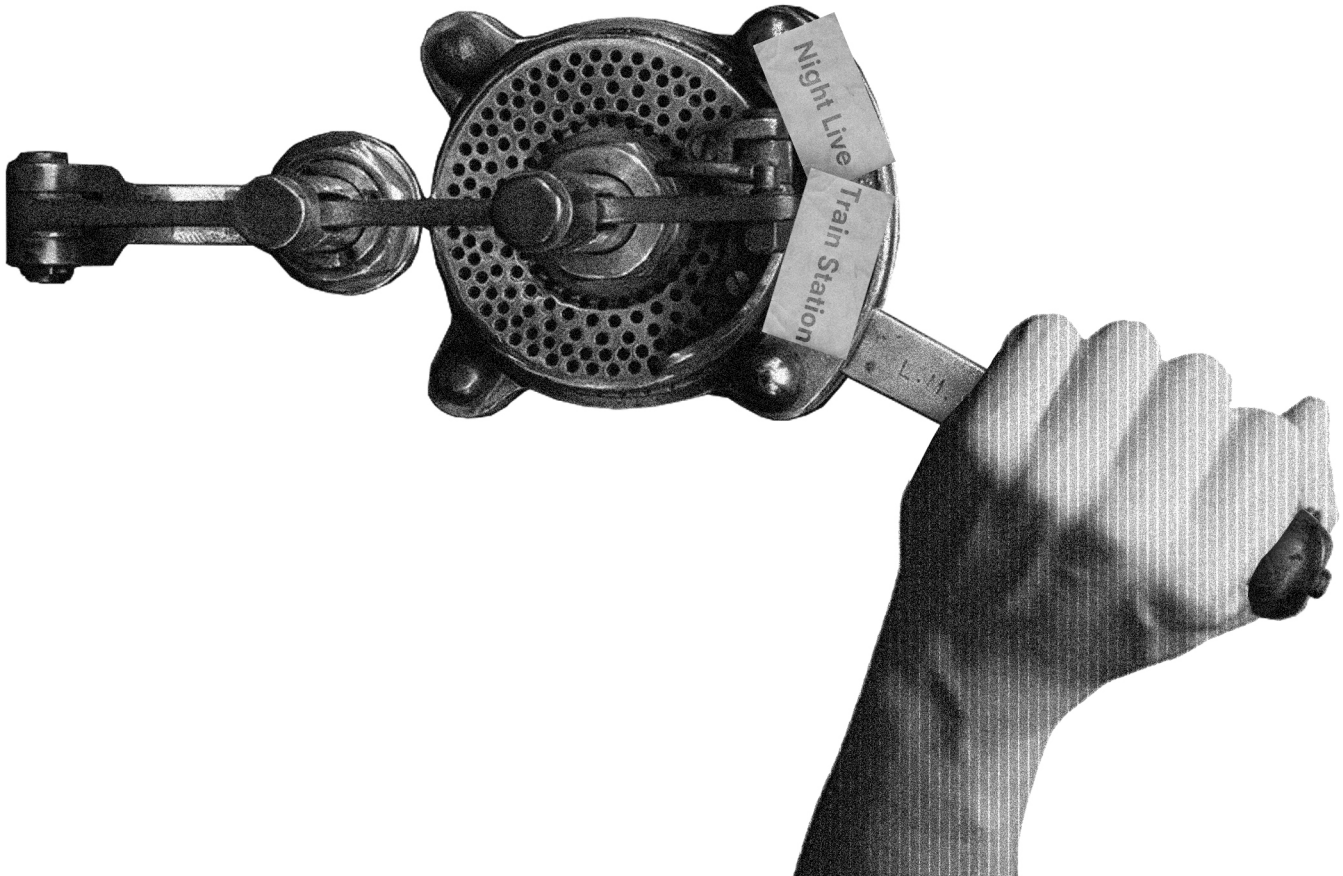
SWITCH STATION

SWITCH BETWEEN A TRAIN STATION AND A NIGHT LIVE VENUE



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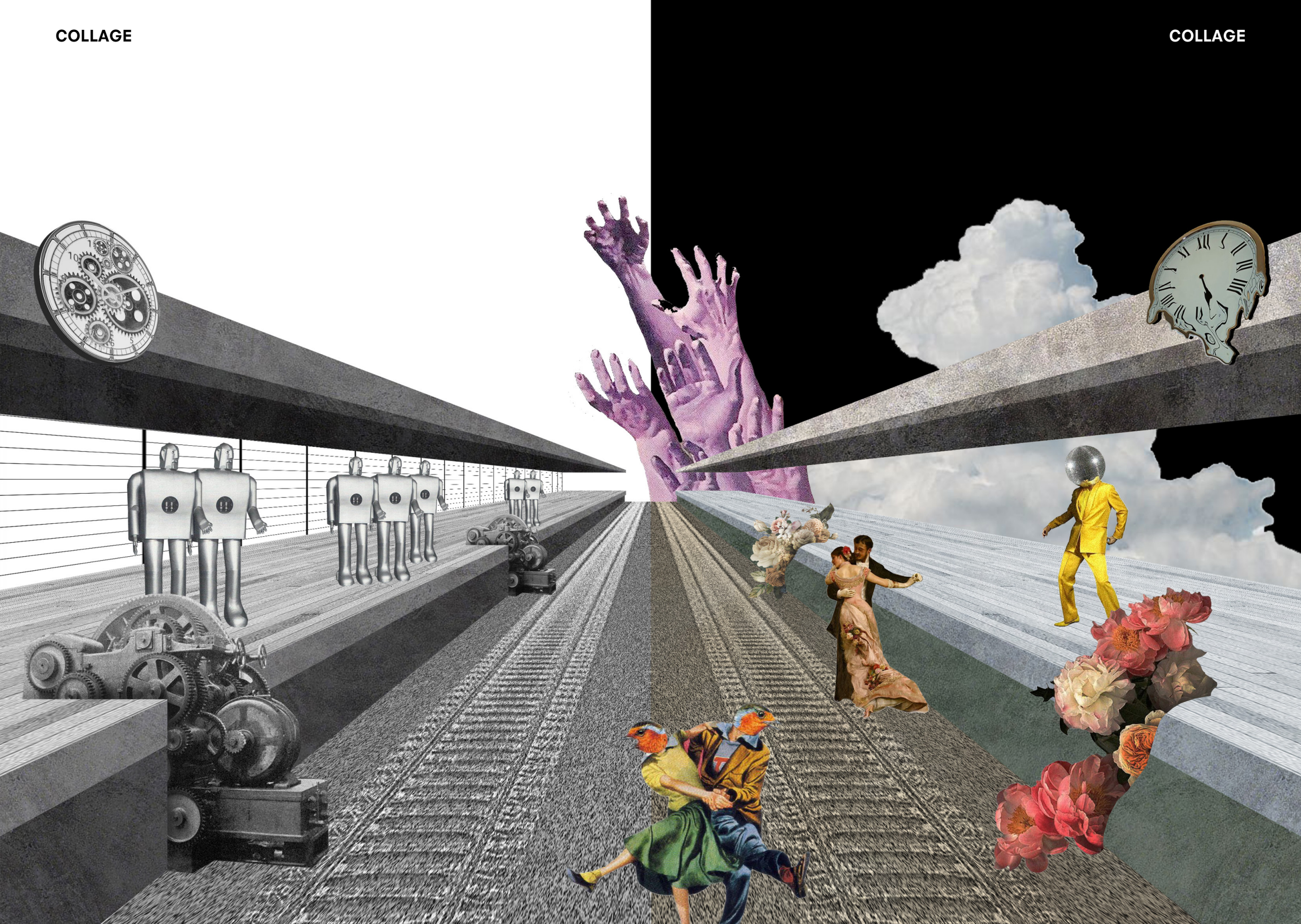
AR3A010 Research Plan

COLLAGE



ABSTRACT

Figure 1: Vulnerable venues such as clubs and flea markets

COEXISTENCE
TYPOLOGY FUSION
METRO STATION
NIGHT LIVE

Due to the limited use of land resources, more and more old venues and spaces that are important to people will be forced to make way for new constructions. These venues include clubs and flea markets which are not protected by policies and investment. Therefore, the possibility of sharing the same venue by different time periods is being studied, exploring how more spaces can coexist in the city.

In order to achieve this design goal, the feasibility of venue sharing is being analyzed, and then use Francis D. K. Ching's research on the form, space, and order of architecture as the basis of the research framework to explore the implementation methods of space coexistence.

After further study, finally decide on the program, client and site through case analysis, field research, internet research, mapping, comparison, etc. to provide an information basis for the design brief.

01 INTRODUCTION

Thesis Topic

Land use has always been a hot topic, and there are many studies on land use trying to optimize utilization methods and predict prospects and difficulties of the future land use. According to the net-zero land consumption strategy proposed by the European Green Deal, no new land will be allowed to be used for transit and residential purposes starting from 2050. Currently, nearly 50% of Berlin's land has been sealed by various buildings and city facilities, the side effects of sealing too much land, such as surface runoff, are also emerging. This is why the net-zero land consumption strategy is particularly important at this current stage. In order to achieve the healthy development of the city in the future, Berlin needs to stop the current way of land use which is encroaching on the already limited land resources.

Problem Statement

But for cities that continue to expand and develop in high speed, this net-zero land consumption proposal further deepens the limited nature of land resources. City constructions that could have been carried out on new land will need to find sites in the city that can be transferred and reformed. The result of changing from consuming new land to reusing existing sites is that the construction of new venues often leads to the demolition of old venues, and the culture and memories that originally thrived in this old venue may be driven away or erased. As such, land and the way it is or will be used should be more rigorously scrutinized and evaluated, but in practice the criteria for doing so are largely dictated by government will and capital transactions. Many venues with special or vital significance and value to the public, such as clubs and flea markets, are not protected by policies and investment. That is to say, they are always at a disadvantage in the process of urban renewal and construction and are among the venues most vulnerable to new land occupations. An example of what is happening right now is the expansion of the A100 motorway in Berlin. This expansion project is threatening the survival of the seven influential clubs which are within the planned construction area, although people who care about the culture and community that prospered in these venues have launched many protests about this land encroachment, the Berlin government still ignored people's genuine petitions and chose to move forward with the expansion project. As land resources shrink further in the future, such site occupation incidents are bound to intensify, and perhaps more venues with great significance to the people will disappear one after another.

Research Question

How to switch a train station to a night live venue during its vacancy period?

Under such a development trend, is it possible for different functions to share the same venue according to different time periods? In this way, multiple places will be able to coexist, which can also reduce the disappearance of important venues and in this process of coexistence to make them benefit from their respective building typologies, achieving optimization of space quality and use. Based on this idea of sharing, the possibility and feasibility of implementing this coexistence method should be examined and evaluated.

The first step is to determine the two parties that are chosen for this coexistence.

For the train station, in order to further respond to the net-zero land consumption strategy, the U-Bahn station which is constructed underground is selected as the design object to reduce the use and sealing of ground land resources. Since

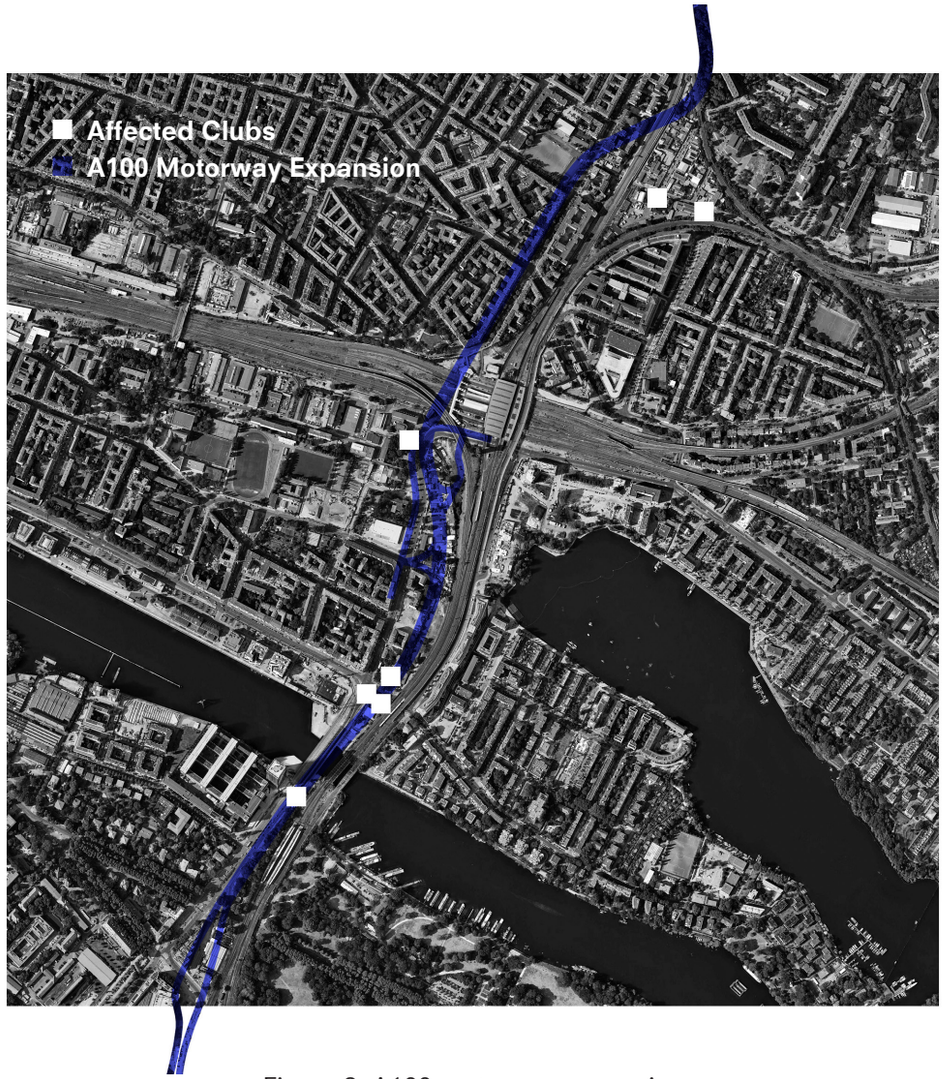


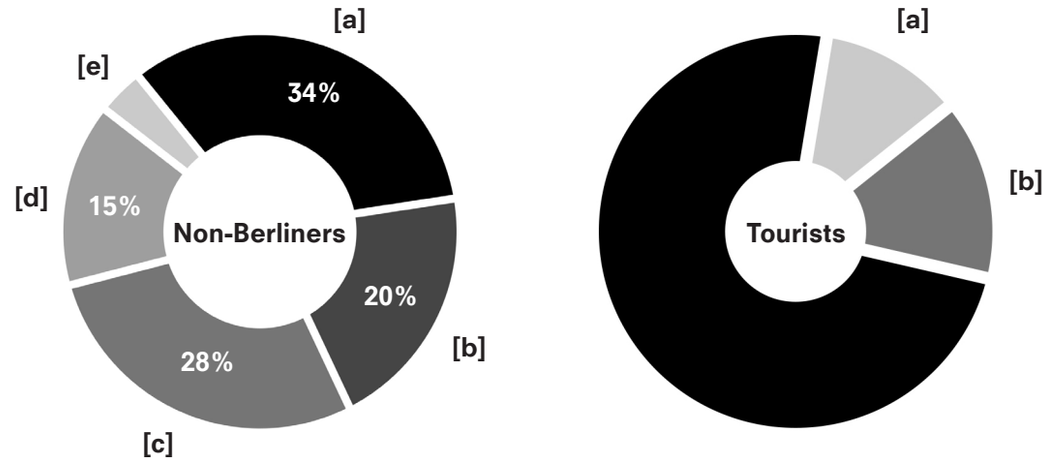
Figure 2: A100 motorway expansion

Figure 3: Coexistence of two venues

U-Bahn stations operate according to the timetable, the stations have a fixed vacancy period from 1am to 4am on weekdays. During this blank time, the space of the train station can be used by another activity which can fit in this schedule. The activities that use the train station space during the vacancy period are called the station's night partner.

For the night partner, the night live is chosen to be the design object and this choice is made based on the timetable, importance to Berlin and the current situation. First, in terms of timetable, although most nightclubs and night live venues last from 10pm to 8am in the next morning, the peak hours of people entering and exiting the venues occur respectively at 1am and 4am, which coincide with the train station's vacancy period, complementing each other in terms of time arrangement. The second aspect is the importance to Berlin. In terms of culture, before Berlin became the current capital of free spirit and culture, it went through a long Cold War period. During this period, people's spirits and longings for self-expression were suppressed by the party in power, but their yearning for an unfettered life never ceased. So after the fall of the Berlin Wall, people quickly occupied various abandoned facilities and factories and launched a nightlife that could release and express their true selves. This culture is still shaping Berlin's nights until now. In terms of tourist economy, more than one-third of the survey respondents said that their primary purpose of coming to Berlin was to experience Berlin's unique and astonishing night culture, and 42% of visitors would consider moving to Berlin in long-term because of Berlin's night culture. As far as local life is concerned, 55% of people who went out in the night said they would go to a nightclub or a night live venue at least once a month to listen to music and hang out with friends. Third, regarding the current situation of night culture, due to the impact of gentrification and urban infrastructure expansion, original owners of the land continue to increase venue rents to force nightclub organizers out, or directly terminate the contract and take back the venues from the nightclub organizers. After this, the venues will be sold or transferred to real estate developers or the government for construction for other purposes and many nightclubs will lose their venues for holding activities. In the past ten years, the number of clubs and night live venues has dropped from 1948 to 1432 and this embarrassing situation urgently needs to be improved by the provision of space.

Then there is the analysis of the gain effects produced by coexistence. In addition to creating more space usage opportunities and reducing the total amount of building construction, the integration of spatial typologies caused by venue coexistence will optimize both parties which participate in the coexistence strategy to better meet the diverse needs of their users. For train stations, the dominant building type is the efficiency-oriented typology of flow, but for the users, this pure high efficiency cannot meet all their needs. Taking daily commuters as an example, although on the way to work, what the people pursue are simpler flows and higher travel efficiency. However, when the commuters are coming home after work, efficiency is no longer their primary need. Instead, a leisure space that can ease people's tiring mind fromwork is more in line with their needs. But such relaxation providing spaces are not covered in the vast majority of train stations. Likewise for nightclubs, the dominant building type is an experience-oriented typology of space, but its chaotic internal circulation is one of the aspects that has been always criticized. When people struggle to cross the dance floor from the bar to the opposite side, The drink in their hands will be knocked to the ground by the shaking crowd for most of the time. If the design of the flow can be optimized, perhaps the experience at the nightclub will be improved to a higher level. In view of these existing problems of the two parties participating

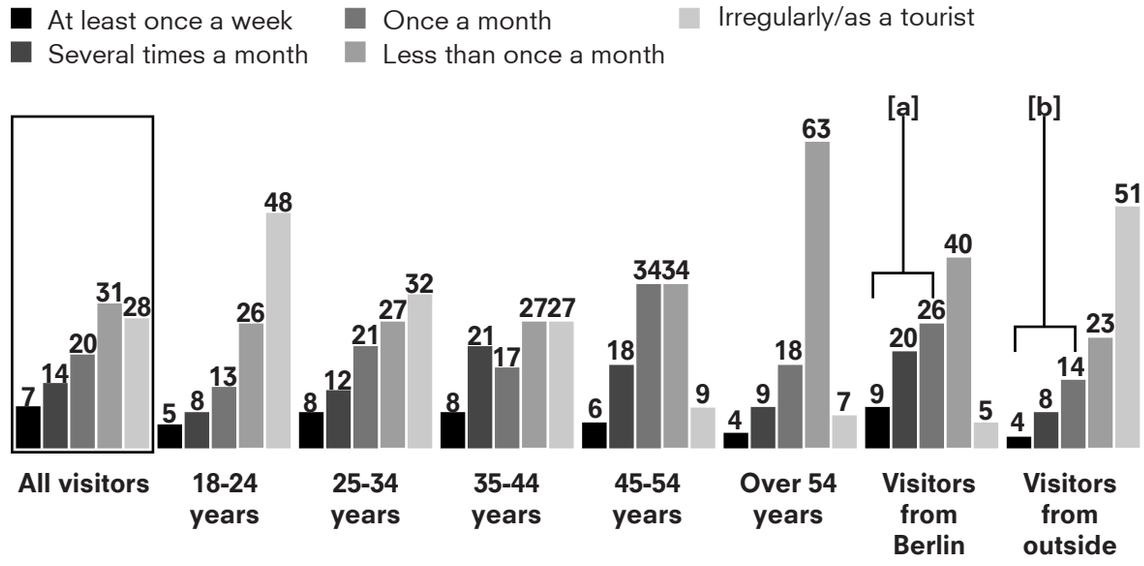


[a] Attending a particular party/event/club
[b] Attending another cultural event/facility
[c] Visiting family/acquaintances/friends
[d] General vacation
[e] Other

[a] Domestic night event tourists
[b] Foreign night event tourists
[23%] Night event tourists
[Basis] 12.97 million Berlin tourists in 2017

Over one third of surveyed visitors to Berlin come here because of the city's night culture

Figure 4: Night live tourism



[a] Berliners once a month is 55%
[b] Non-Berliners once a month is 26%

55% of Berlin night-goers go to a Berlin night event at least once each month for music and friends gathering

Figure 5: Frequency of nights out

in this coexistence, the respective missing aspects are complemented through typological fusion to achieve mutual gain.

Based on the above points, the feasibility of combining a U-Bahn station and a night live venue has been verified.

02 RESEARCH FRAMEWORK

Theoretical Framework

The entire conceptual framework is based on research on the theory of architectural space composition, trying to explore topics about spatial composition, spatial contrast and spatial integration. The main research approach is primarily inspired by Francis D. K. Ching's research on the form, space, and order of architecture, he decomposed the building layer by layer into the most basic architectural elements, and through the morph and combination of these architectural elements, a space with specific purposes and meanings was formed.

Relevance

As far as the study of architectural space composition is concerned, these theories will help define the train station space and night live space. As for the station, in addition to the speeding train, what other architectural elements give this space the characteristics of a train station, why does the train station have such spatial characteristics, and how is the train station space formed to serve the passengers. Similarly for nightclubs, in addition to the performers in the center of the stage, what kind of architectural elements make this space qualified as being a nightclub, and what role do these architectural elements play in the space combination. Once the essence of space formation is understood, the train station and the night live venue can be further disassembled and re-integrated to obtain a space that can serve particular functions of a train station and some other particular functions of a night live. Through the replacement of furnishings and spatial arrangements at different time periods, the functions contained in this space can be altered. The understanding of form, space, and order makes spatial integration and functional transformation more flexible, and the design process is no longer limited to emphasizing the attributes and affiliations of spaces through particular iconic elements.

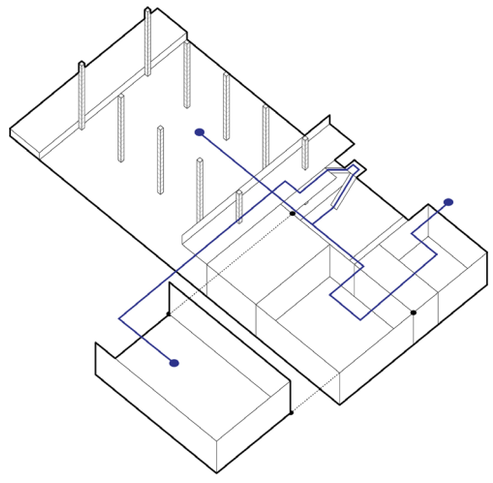


Figure 6: Basic model of night live

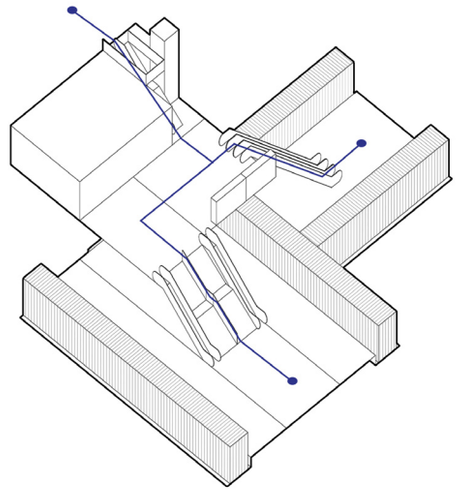


Figure 7: Basic model of U-Bahn station

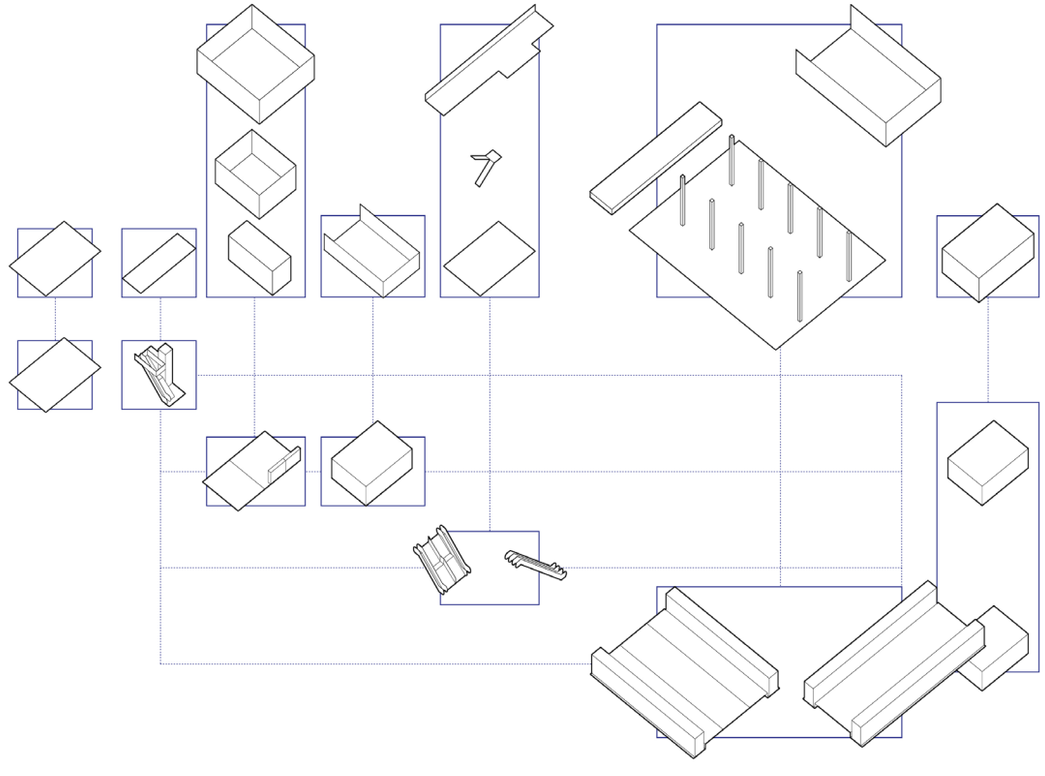


Figure 8: Spatial correspondence

03 RESEARCH METHODS

Case Study (Program)

Through the collection and analysis of metro station and nightclub cases, their respective basic functions are the first to be summarized, including the types of functions, the area ratio of each function and the relationship between functions. In this way, the most basic understanding of the functions of these two kinds of buildings can be achieved. On this basis, the space required for each function in the cases is further analyzed, especially the key spaces, and though this, the three-dimensional connections among functions are clarified.

Comparison (Program)

Because the main purpose of the design is to realize the conversion of two types of activities in different time periods, the function tables obtained from the case analysis will be compared. Summarize the spatial parts that can realize the conversion of spatial functions, make detailed correspondences, mark the spatial functions that cannot correspond to each other, and then think about whether the spaces needed for these functions can be used for some new functions in the other time period and bring benefits to the activities carried out in that time period. Finally, these new function tables created based on similarities and differences between two types of buildings will be compared again to clarify the goals of the design phase.

Internet Research (Client)

Through internet research, the regular train station clients can be identified through the train station's operation methods and railway transportation equity information, and then analyze the new operation strategy of the train station under the idea of coexistence to summarize which other clients are responsible for this design or will get benefit from this new building typology. Internet research for the night live and on policy levels will also be conducted to finally identify the remaining clients.

Mapping (Site)

According to the design goals, site requirements are proposed, including areas where nightclub culture has faded, areas on existing U-Bahn routes and future planned routes, etc. Then corresponding mappings are made based on these requirements, and all completed mappings will be overlapped to gather all the needed information in one drawing. Finally, the areas that meet all requirements will be selected as site candidates for further examination.

Field Research (Site)

By the method of field research, visit the selected site candidates, examine these sites from the perspective of an actual user, and experience the on-site atmosphere and specific minor conditions of these sites. These atmospheres and conditions are difficult to obtain from just internet research and mapping. Through field visiting, the feasibility and potential of these sites can be further verified and explored.

DAYTIME			NIGHTTIME
Tram Platform Bus Platform Taxi Stand Bike Stand	**10%** **1500 m2**		Tram Platform Bus Platform Taxi Stand Bike Stand
City Park	**Not Included** **8000 m2**		Outdoor Performance Outdoor Temporary Outdoor Rest Area
Luggage Storage Grocery Store Food/Drink Store Food/Drink Vending Toliet Information Booth Rest Area Temporary Exhibition Improvising Performance	**32%** **4800 m2**		Clothing Storage Security Check Ticket Booth Semi-private Area Indoor Balcony Quike Route Bar Toilet
U-Bahn Platform Information Board First Aid Facilities Ticket Vending Rest Area Temporary Exhibition Improvising Performance	**40%** **6000 m2**		First Aid Facilities Performance Stage Light System Sound System Night Live Train Dance Floor Rest Area Quike Route Bar
Station Guard Office Admin Office Lost and Found Equipment Room Maintenance	**18%** **2700 m2**		Storage Room
	15000 m2		

Figure 9: Programs sharing the same space in different time periods

04 DESIGN BRIEF

Program

Compare the functions and spaces of the train station and the night live, and determine their similarities and differences. Mark all the functions and spaces that the two buildings cannot correspond to each other, and analyze how these spaces can be used when it is in another time period.

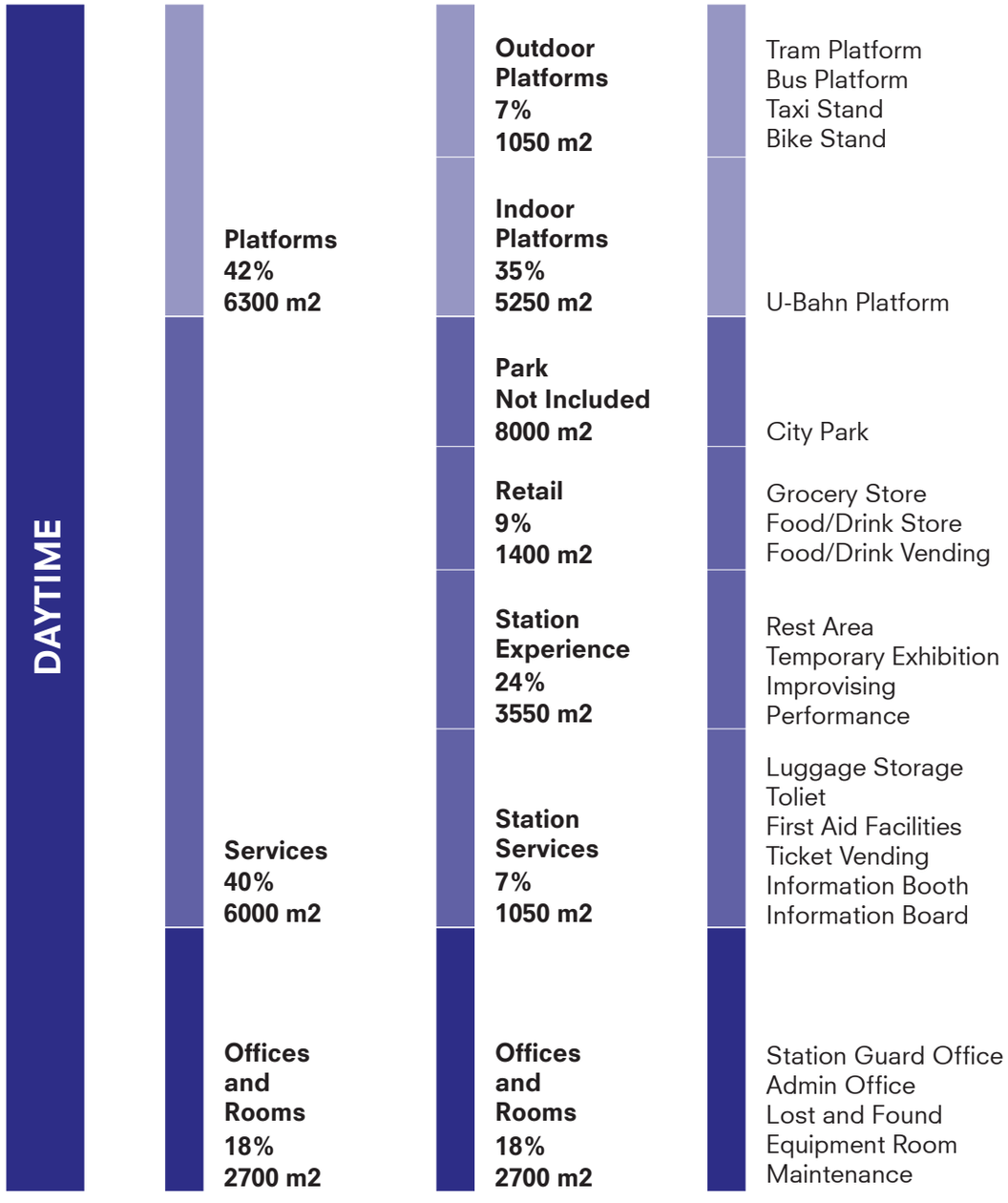


Figure 10: Daytime program

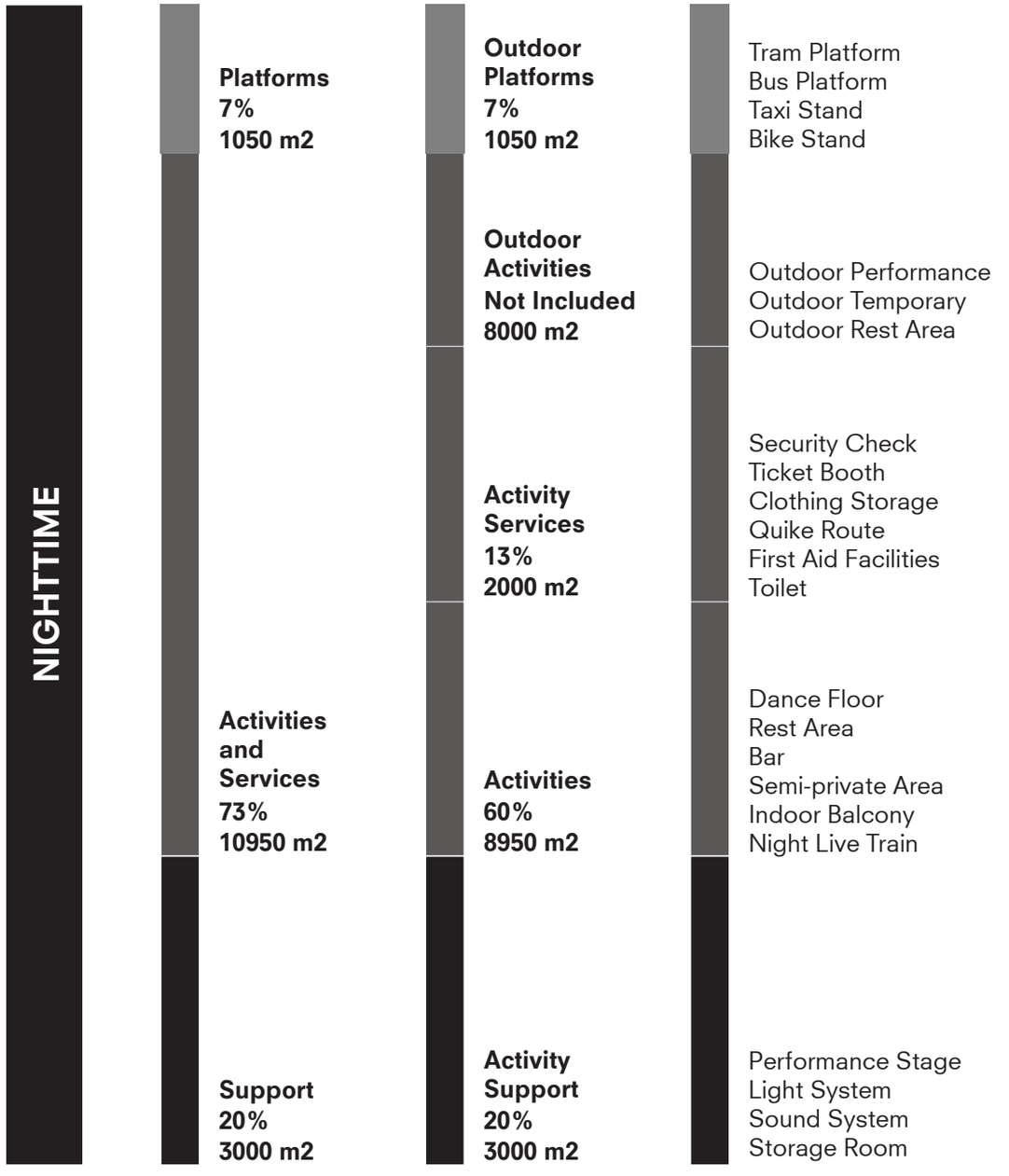


Figure 11: Nighttime program

Client

Customers are divided into three parts, including transportation, night live and senate department. The transportation part includes BVG and Nextbike, which are responsible for providing all-day traffic support. The night live part includes OST and about blank, which are facing the dilemma of losing their venues during the expansion of the A100 motorway. The senate department part includes the department for urban development, building and housing, which is responsible for the implementation of relevant policies and making the station a pilot project.

Figure 12: BVG logo

Figure 13: Nextbike logo

Figure 14: Club about blank logo

Figure 15: Club OST logo

Figure 16: Senate department for urban development, building and housing logo

Site

(1) The site should be on U-Bahn routes.
(2) The site should be near the night live declining area.
(3) The site should be in the community based area.

The current site choice is Frankfurter Tor.

Figure 17: U-Bahn routes

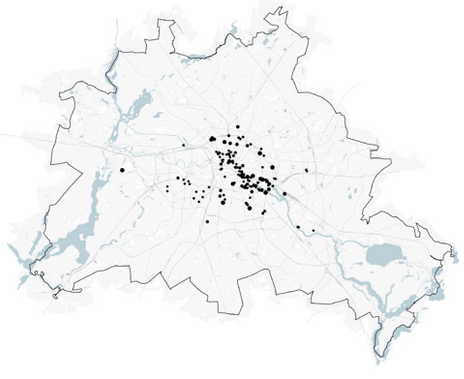


Figure 18: Night live venues

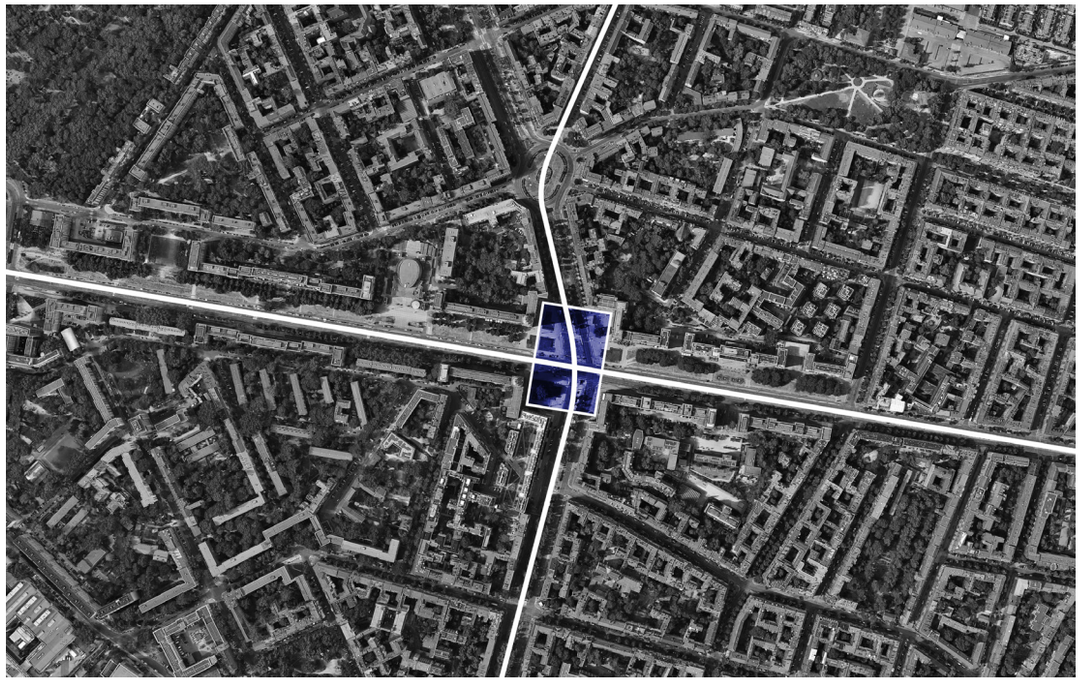


Figure 19: Frankfurter Tor

ARTICLE

05 BIBLIOGRAPHY

Bibliographical References

Ching, Francis D. K. (Francis Du-Kam), 1943-. (1979). Architecture : form, space & order / Francis D. K. Ching. New York : Van Nostrand Reinhold

Hillier, B., & Leaman, A. (2013). How is Design Possible?. Annual Review of Policy Design, 1(1), 1973.

Van Den Driessche, M. (2008). Situational theory of architectural typology. In Politics of Designing: PhD conference and symposium. Danish Doctoral Schools of Architecture & Design (DKAD).

Reingle, J., Thombs, D. L., Weiler, R. M., Dodd, V. J., O'Mara, R., & Pokorny, S. B. (2009). An exploratory study of bar and nightclub expectancies. Journal of American college health : J of ACH, 57(6), 629–637.

Demant J. (2013). Affected in the nightclub. A case study of regular clubbers' conflictual practices in nightclubs. The International journal on drug policy, 24(3), 196–202.

Christina Goulding, Avi Shankar, and Richard Elliott (2001) ,"Dance Clubs, Rave, and the Consumer Experience: an Exploratory Study of a Subcultural Phenomenon", in E - European Advances in Consumer Research Volume 5, eds. Andrea Groeppel-Klien and Frank-Rudolf Esch, Provo, UT : Association for Consumer Research, Pages: 203-208.

Yang, L., Zhu, Y., Chatzimichailidou, M., & Liu, X. (2023). Assessing human emotional responses to the design of public spaces around subway stations: a human factors research. Urban Design International.

Liang, Y., Song, W., & Dong, X. (2021). Evaluating the Space Use of Large Railway Hub Station Areas in Beijing toward Integrated Station-City Development. Land, 10(11), 1267.

Pang, L., Jiang, Y., Wang, J., Qiu, N., Xu, X., Ren, L., & Han, X. (2023). Research of Metro Stations with Varying Patterns of Ridership and Their Relationship with Built Environment, on the Example of Tianjin, China. Sustainability, 15(12), 9533.

Liu, K., Qiu, P., Gao, S., Lu, F., Jiang, J., & Yin, L. (2020). Investigating urban metro stations as cognitive places in cities using points of interest. Cities, 97, 102561.

Azadpeyma, A., & Kashi, E. (2018). Level of Service Analysis for Metro Station with Transit Cooperative Research Program (TCRP) Manual: A Case Study—Shohada Station in Iran. Urban Rail Transit, 5, 39-47.

Ni W, Yu J, Cai H, et al. (2021). Study on Optimization of Passenger Flow at a Metro Station Based on AnyLogic—Case Study of Youfangqiao Station of Nanjing Metro Line 2. Complex System Modeling and Simulation, 1(3), 242-252.

Wen, Yueming & Leng, Jiawei & Yu, Fei & Yu, Chuck. (2020). Integrated design for underground space environment control of subway stations with atriums using piston ventilation. Indoor and Built Environment.

Figures

Figure 1: Created by author
Figure 2: Created by author based on Google map
Figure 3: Created by author
Figure 4: Created by author based on data from Club Culture Berlin
Figure 5: Created by author based on data from Club Culture Berlin
Figure 6: Created by author
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