

# Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



## Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners ([Examencommissie-BK@tudelft.nl](mailto:Examencommissie-BK@tudelft.nl)), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information	
Name	Mohan Yuan
Student number	5008379

Studio		
Name / Theme	Methods and Analysis Graduation Studio	
Main mentor	Jorge Mejía Hernánd	Methods and Analysis
Second mentor	Pierre Jennen	Building Technology
Argumentation of choice of the studio	I would like to study and practice the way to combine architectural theories with the design process. Also the studio have attracting project settlement this year which I'm interested in.	

Graduation project	
Title of the graduation project	<b>Urban Collage Poem—Renovation project of Belgrade Sugar Factory</b>
Goal	
Location:	Belgrade, Serbia
The posed problem,	How to reconnect urban lost space back to its context and become an active area again by carrying out the renovation project of Belgrade Sugar Factory?
research questions and	<ol style="list-style-type: none"> <li>1) What elements can help users recognize the space and take advantage of it.</li> <li>2) How to identify the potential of the space.</li> <li>3) How to implement the potential and transform the space to meet the present requirements.</li> </ol>
design assignment in which these result.	The final purpose of this project is to bring the place back to its environment and reconnect to the urban context both spatially and functionally. The site will

have several corridors that communicate with the riverbank and racecourse, inside the plot space will be reorganized in a more friendly and intimate scale to activate. The project final result will be consisting of detailed renovation design of the main sugar factory building and wine refinery building, and master planning of the site with connection indication with the urban context

I choose the old Sugar Factory in Čukarica as the site. The Sugar Factory was built in 1901, it was the first sugar factory in Serbia back to that time. In the 1980s, it was listed as an important work of industrial architecture and was included in the Topčider Spatial Cultural-Historical Unit of Exceptional Importance. This site is between the Sava riverside and the famous local racecourse Hippodrome but they are isolated by the city highway and tram track. On the east side of the plot there is an old oil refinery site left with train tracks extend into the sugar factory which considered to be used as transport track for materials and fuels back in time. As for the history and culture values besides the factory itself, in the site where in the center part near to the Sava riverside there is a remain Bust of Dimitrije Tucović and a monument to the killed strikers and warriors during the National Liberation War. The main building of the Sugar production and refinery is partially kept as the theater and a botanical garden. Belgrade itself is known for its strong artistic and musical cultural atmosphere. Through researching the location of the venue and the distribution of public facilities in the surrounding area, we found that there are a large number of art and cultural facilities such as stage performances, art galleries, museums, convention centers and churches and other public facilities. Located in such an urban environment, if functionally, the sugar factory can be transformed into an art and culture related use, and as for the spatial layout can form a good landscape corridor with the Sava River and optimize the spatial connection with the race course, then the whole site can form a more closely related and popular urban art and entertainment living room. To be specific, the project is to renovate the plot into an art complex that contains the functions of the gallery, museum, theater, youth hotel, public park, and fair market. Inspired by the collage poem, I consider this project as a process of extracting and reorganizing existing elements in the site and achieve new meaning. Till now, the research study focused on phenomenology and praxeology and try to push the research further to find an answer to the third question about how to implement the potential and transform the space to meet the present requirements.

## **Process**

### **Method description**

During this process, I used scale compare study to understand the size of Sugar Factory and relation with other famous industry renovation projects, precedents study to get ideas of renovation direction for industry building and detail building

techniques, historical documents to help analysis the condition and value of the buildings in the site, google street view to get in present appearance of the plot and relation with surrounding urban context, journal articles to gather more background information about the history and culture background of the Sugar Factory and help to identify the value of different building and elements in the plot, and etc. as methods to research for the project. Those methods help me to have a more detailed and precise understanding of the building condition and interior space. In the following design process, I will extend the research to material culture, memory studies to properly preserve the value of this industry ruins and update the buildings to meet the present function requirements at the same time.

## Literature and general practical preference

Literature list :

Fein, Z. (2009). *The Aesthetic of decay: Space, time, and perception*.

<http://zfein.com/architecture/thesis/thesis.pdf>

Jacobs, J. (1992). *The Death and Life of Great American Cities* (Reissue ed.). Vintage.

Norberg-Schulz, C. (1979). *Genius Loci: Towards a Phenomenology of Architecture*. Rizzoli.

Simmons, G. (1981). People in the Physical Environment: The Urban Ecology of Streets.

*Winterthur Portfolio*, 16(4), 354–356. <https://doi.org/10.1086/496056>

Stratton, M. (2000). *Industrial Buildings: Conservation and Regeneration*. Taylor & Francis.

Trancik, R. (1986). *Finding Lost Space: Theories of Urban Design* (1st ed.). Wiley.

Precedent list :

Kolumba Art Museum of the Cologne Archdiocese / Peter Zumthor Museum

Boiler House Libčice nad Vltavou / Atelier Hoffman

Lochal Library / CIVIC architects + Braaksma & Roos architectenbureau

798 Art District Renovation Beijing China

## Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?

Inspired by the collage poem, I consider this project as a process of extracting and reorganizing existing elements in the site and achieve new meaning. The standard of selecting elements includes having high historical and cultural value, can provide a rich spatial experience, and have the transformation potential suitable for the target function. The previous group research of the market space and the precedent study of the Belgrade Fair Hall 1 gives me the experience to identify the crucial elements and the potential of space.

2. **What is the relevance of your graduation work in the larger social, professional and scientific framework.**

Space is one of the most important elements of architecture. The interaction between users and space attracts me. The behaviors influenced by the physical environment describe the space from other perspective which involves the users and their sensory of space. As Stanford Anderson mentioned in his article *People in the Physical Environment: The Urban Ecology of Streets*, it is important to consider that the use of space not simply follows the intention of the designer but also affected by the perception and understanding of the user. In this way, studying how users react to the built environment can help to understand the essential elements of the space and improve design language to make a clearer expression. The better we understand the target group's need and behavior intention the better strategy we can provide that meets the needs and use with biggest potential. The recognition of the space, however, does not remain constant over time. The demands of space are adapting to the development of society. In Belgrade urban area, there are a lot of abandoned plots that are isolated from their context and fragment the urban texture. Those abandoned areas mostly separated by the rapid development of highways and lack of proper management after the industry factory moved out from the central area which leaves the space to become the lost space and empty function area in the city. Under this condition, urban renewal and building renovation are effective methods to maintain the balance between protecting the urban context and adapting to new needs. Recognizing the spatial potential of those abandoned areas and generate new suitable use and form helps gather the fragments into one whole piece again.