

# 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:

<b>Personal information</b>	
Name	Chen Zhu
Student number	4791908
Telephone number	
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<b>Studio</b>		
Name / Theme	Herritage / Revitalisting	Herritage
Main mentor	Lidy Meijers	Architecture
Second mentor	Frank Koopmans	Building Technology
Argumentation of choice of the studio	<p>As an architect, for the future, I think there are sufficient buildings existing. In the future, there will be fewer and fewer newly built houses. It will be a huge social issue for the remaining buildings to follow as the times change. In China, many factories have also been abandoned due to the rapidly growing industry. They used to be functional buildings with excellent space, streamlines and structures. Almost every city faces these abandoned factories. How about giving them a second life? What new role should they play in the city? What can they do for cities and residents? Thinking about factories today, maybe fifty years later, we need to think similarly about other types of buildings, such as skyscrapers or shopping malls.</p> <p>I hope that in this studio, I can develop my deep thinking about heritage architecture. How to connect the past with the future, respect the value of context, retain the precious value of legacy, and meet the functional needs of the present or future society.</p>	

<b>Graduation project</b>	
Title of the graduation project	OPEN- Winterwsijk industrial area renovation

<b>Goal</b>	
Location:	Winterswijk- Morsestraat
The posed problem,	The textile industry has been in Winterswijk since the 18th century. It is part of the city's cultural legacy. Due to the decline of industry and the expansion and development of city center, the old industrial area, which is now located near the city center, is no longer suitable in the perspective of urban planning. The textile culture slowly starts to fade. Within the context of the industrial area in Winterswijk, while it is searching for a new position in the society, it's lack of open space for public, disordered site leads to vacancy and lack of activity. Located in the middle of the dwelling area, enclosed, self-defend appearance, make citizens difficult to utilize this area.
research questions and	<p>What's the significance of public space sequence in the context of industrial heritage site?</p> <ul style="list-style-type: none"> <li>-What's the definition of public space?</li> <li>-What's the significance of sequence of public space?</li> <li>-What's the significance of nature factor in public architecture?</li> <li>-How to connect the museum with the urban texture through public space?</li> <li>-What's the necessary element for public architecture?</li> <li>-What could industrial heritage be after they end up their functional industrial life?</li> <li>-How to make industrial site as a transformation area?</li> <li>-How to make use of the preserved service/stuff?</li> </ul>
design assignment in which these result.	<p>In order to solve the multiple existing problems, museumization has become one of the solutions based on respecting the urban context, the value of flax textile culture and architecture.</p> <p>The enclosed built environment must be opened. In order to connect the roaming road system within the site, several lower value buildings designated will be demolished. A high-value stream - whemerbeek within the site will be reappeared.</p> <p>The focus of the design will be on the shed roof that interacts with the river and the square in front of it.</p> <p>The wide interior space is suitable for the diverse needs of museum exhibition halls. The museum itself is connected with the square as one of the public spaces, forming a sequence of public spaces, guiding people to explore the site and understand the textile culture. One of the architectural features of this factory area is the feeling of a maze. Repetitive facade language and roadblocks from time to time make people confused and difficult to orientate themselves. In my design, how to organize the route and guide people to explore through space (indoor and outdoor), roaming the</p>

site is very important.

## Process

### Method description

My process was simplified into three steps: statement, problem, and solution based on the theory of environmental psychology. Since on the site scale, my focus is on the environment of the site, I divided the research into building factor, geo-psychological factor, and psycho-social factor.

In statements, I strive to be objective, only state the facts, and do not make value judgments:

building factor	<ol style="list-style-type: none"><li>1.High building density</li><li>2.Simpler function</li><li>3.A high degree of enclosure</li><li>4.Most buildings were built in the 1900s</li><li>5.Most building structures are still well preserved</li></ol>
geo-psychological factor	<ol style="list-style-type: none"><li>1.There are no green plants, water bodies or animals in the site</li><li>2.There is a large area of green space and water around the site</li><li>3.Weather is rainy, windy, most wind come from north-east</li></ol>
psycho-social factor	<ol style="list-style-type: none"><li>1.Openness, depression, shady, isolation</li><li>2. The pedestrians have an instinctive repulsion to the venue</li></ol>

Through the statement of facts, we found the problem:

building factor	<ol style="list-style-type: none"><li>1.Lack of activity and people</li><li>2.Not adapted to the texture of the surrounding city</li></ol>
geo-psychological factor	<ol style="list-style-type: none"><li>1.Low site greening rate</li><li>2.There is no connection between inside and outside</li><li>3.The waterbody is deserted</li></ol>
psycho-social factor	<ol style="list-style-type: none"><li>1.People don't use the site</li><li>2.Security issues</li></ol>

Problems and statements are linked, and because of their intersection, the problems and statements themselves can be negative or positive, and we have multiple solutions:

building factor	<ol style="list-style-type: none"><li>1.Open up</li><li>2.Create public space for activity and people</li><li>3.Make connection with surrounding</li><li>4.Utilize the existing building</li></ol>
geo-psychological factor	<ol style="list-style-type: none"><li>1.Utilize the existing green</li><li>2.Pull green inside of the area</li><li>3.Reshow the river</li></ol>

psycho-social factor	<ol style="list-style-type: none"> <li>1. Make site welcome and friendly to pedestrian</li> <li>2. Create soft border and Viscosity space</li> <li>3. Create a surveillance space</li> </ol>
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These solution proposal is the first step for design. More meticulous actions will be determined through a large number of reference.

In the building scale is the same. For the chosen part. Statement is

building factor	<ol style="list-style-type: none"> <li>1. Most building structures are still well preserved</li> <li>2. The repetitive facade language along the corridor is strong.</li> <li>3. It has the oldest building in site from 1891.</li> <li>4. It use a lot of brick.</li> <li>5. Height difference</li> </ol>
geo-psychological factor	<ol style="list-style-type: none"> <li>1. There are no green plants, water bodies or animals in the site</li> <li>2. The part is built on 1931 has connection with green.</li> <li>3. Weather is rainy, windy, most wind come from north-east</li> </ol>
psycho-social factor	Quite and inactive

The problem in general is:

building factor	<ol style="list-style-type: none"> <li>1. Lack of activity and people</li> <li>2. Not interaction with the surrounding</li> <li>3. The facade language is too strong and too protective.</li> </ol>
geo-psychological factor	<ol style="list-style-type: none"> <li>1. Low greening rate</li> <li>2. The waterbody is deserted</li> </ol>
psycho-social factor	<ol style="list-style-type: none"> <li>1. People don't use the building.</li> <li>2. Security issues</li> <li>3. The textile culture seems faded.</li> </ol>

And the solutions in proposal:

building factor	<ol style="list-style-type: none"> <li>1. Make relationship with site and other building.</li> <li>2. Create viscous space</li> <li>3. Divided building based on the existing structure and utilize them</li> <li>4. Make the connection from inside to outside through facade</li> </ol>
geo-psychological factor	<ol style="list-style-type: none"> <li>1. Utilize the existing green</li> <li>2. Put more green</li> <li>3. interact with the river</li> </ol>
psycho-social factor	<ol style="list-style-type: none"> <li>1. Make space more interesting and liveable environment</li> <li>2. Create soft border and surveillance space</li> <li>3. museumlization</li> </ol>

### **Literature and general practical preference**

1. Prihatmanti Rani, Cantika Putri & Adeline Devina (2017), *Transforming Heritage Building For Commercialisation*. Surabaya, Indonesia. Ciputra University.
2. Gordon Cullen (2007). *The Concise Townscape*. Van Nostrand Reinhold Co.
3. Jan Gehl (2011), *Life Between Buildings—using public space*. Island Press, Suite 300, 1718 Connecticut Ave., NW, Washington, DC 20009
4. Enrique Peñalosa. *Blueprints for a History of Environmental Psychology* (2006) 95-113: *From First Birth to American Transition*. Medio Ambiente y Comportamiento Humano.
5. de J. C. Moughtin (2003). *Urban Design: Street and Square*. Linacre House, Jordan Hill, Oxford, England.

### **Reflection**

The theme of my project is OPEN, and my focus is on how to organize the public space order within the industrial heritage plant, so that it becomes a better environment, more liveable for citizen. The theme of my studio is revitalising the heritage of the 20th century. As an architect, my graduate career made me think about the meaning of architecture better. Today's architecture will be the legacy of tomorrow. How to make them well used in today's society, while respecting their inherited culture, I think this is also something we will do research in the future.