

REFLECTION PAPER

Community based transformation towards a resilient future

Shared Heritage Lab, TU Delft 2018 - 2019

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STUDIO

Heritage & Architecture: Bandung Shared Heritage Lab

TUTORS

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Paddy Tomesen (Building Technology)

TITLE

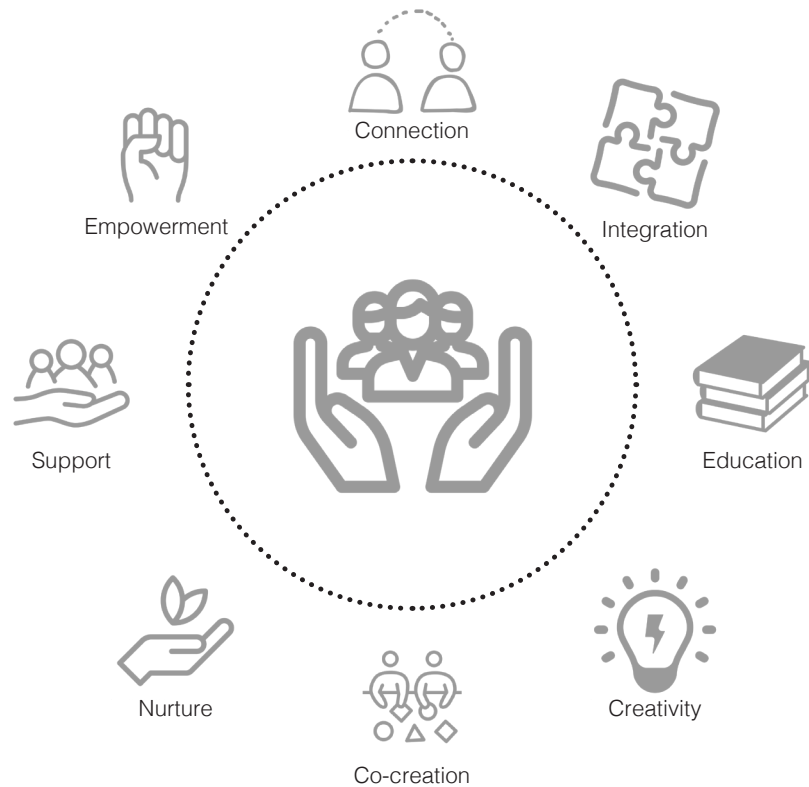
Community based transformation towards a resilient future

LOCATION

Bandung, Indonesia

DATE

May 2019



“A bottom-up project that focuses on the elimination of segregation and on communities development, through leisure, educational & creative activities that engage all different groups of people with the notion of shared heritage, towards a more resilient, healthy and smart future Bandung.”

01

WHAT IS THE RELATIONSHIP BETWEEN THE THEME OF THE GRADUATION LAB AND THE SUBJECT CHOSEN BY THE STUDENT ?

In the context of the H&A Shared Heritage Lab, which I am part of, crucial built heritage issues are investigated in the city of Bandung, Indonesia. Bandung has many Indonesian-Dutch heritage sites and buildings as a result of the long period of colonization by the Dutch. They are part of both Dutch and Indonesian history and have become part of the expanding cities and changing landscapes of modern-day Indonesia. The challenge of this studio is to give new meaning and use to this environment, in order to realize an inclusive, thriving and healthy city, taking past, present and future into account. The whole studio focuses on the three main backbones that shaped the city of Bandung. The Cikapundung river, the Grote Postweg, and the Railroad.

As part of the Heritage & Architecture team in this Shared Heritage Lab, I focused on the development of the Railroad, and its impact on the city. While initially it was on the borders of Bandung, during the years and the expansion of it, the Railway line ended up being a dead zone in the center of the city, splitting it into two, enhancing segregation and obstructing normal every-day activities. As a team, we proposed the conversion of the Railway line into a “green belt”, that includes public and green spaces, cycle path, and a new tram line.

My project is located in a former military complex along the Railroad backbone, and attempts to tackle the existing problems on a neighborhood scale. The site holds both tangible and intangible values of the shared past and is transformed in order to serve current societal needs. Through the merging of traditional and modern activities with education, the aim of this project is to maintain and develop the cultural identity and critical cultural knowledge and practices of the community, and to create the necessary environment to equip locals with skills and motivation towards their future.

The architectural process is used as a tool to empower the local communities. So the whole concept is about two things - the process and the project, centralizing the users in each phase. The design explores the values of honest materiality, craftsmanship, expressive tectonics, and vernacular sensitivity. Through the deliberate selection of materials and construction methods with the potential to be adapted by local workers, the construction process will serve as a mode of capacity building and livelihood training. The transformed complex will provide much needed space for collective activities for the surrounding communities, and at the same time it will get a new life. Involving the users in the process of making the

space will create a total new meaning for them regarding this place. It will become a symbol of change manifested through their effort. Empowering local people to find their own voice, will shape the citizens of a future resilient city, while important sustainability principles integrated in the project will direct the users' behaviors towards a greener living environment for the future. The colonial heritage is both a means and a goal in this project. It provides the necessary space, and it raises awareness at the same time. The project is not only about the building of a community center, but rather, the building of a community.



Source: Streetlight Tagpuro / Eriksson Furunes + Leandro V. Locsin Partners + Boase, Philippines

*“One can through use recode a place,
create a new narrative.”*

02







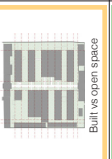
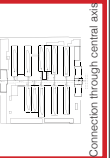

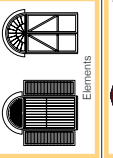
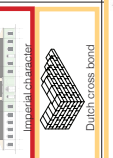
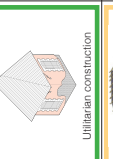

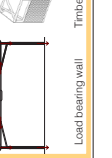

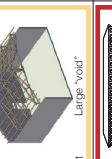

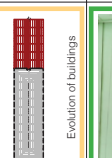
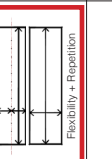

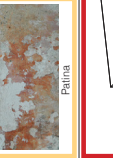



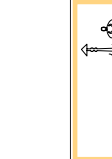
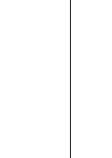
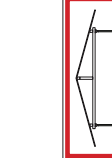
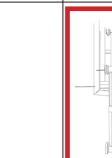

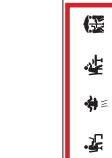
WHAT IS THE RELATIONSHIP BETWEEN THE METHODOLOGICAL LINE OF INQUIRY OF THE GRADUATION LAB AND THE METHOD CHOSEN BY THE STUDENT ?

In the H&A Design Studio, the design-result should be developed in a thorough understanding of the existing spatial, cultural and socio-economical context of the (built) environment. Therefore, an extensive and designed, value-based research that requires deep study of the past, the present and the future of the place is necessary. The site visit, which was conducted during October offered to me a personal experience of the place in its current state and provided me with important information regarding adjacent buildings, urban and landscape environment, current state of the building (damages, additions) as well as information on how people experience the space, and what values they attribute to it. The use of a pre-set questionnaire, and ordinary equipment for recording – a sketchbook, a camera and measuring tools – as well as maps and historical photographs, which were collected prior to the field inspection, directed my observation and helped me collect valuable data on site.

The amount of information which the context provided me with was overwhelming, so the next steps required a clearly structured procedure that helped to identify the most valuable features of the built heritage in its current state. “Chrono-mapping” was used to identify the different layers of construction history of the site and “Value-mapping” was used to classify the specific heritage features distinguished in and around it, the DNA of the place. The collected information gave a qualitative insight into the place in the form of a matrix, as this is defined by the H&A department, and analyzed in the book *Designing from Heritage*¹. This research method helped me identify the obligations for conservation, the opportunities for possible interventions, as well as the emerging dilemmas for the continuation of the heritage buildings. In the end of this research process, I formed a position statement which guided the following design process.

Parallel to this heritage-based research method, though, a more human-related method was used as well during the fieldtrip. The study of human action and conduct, scientifically described as praxeology, was used in order to better understand the actual users of my future proposal. By interviewing people from the local communities, and observing their daily habits, I tried to identify which are these indigenous characteristics that shape their built environment. After all, people and their actions always defined the space and its evolution throughout the history. Developing this appreciation of the story of the place allowed for a more resilient engagement with it.

¹ Marieke Kuipers & Wessel de Jonge, *Designing from Heritage* (Delft: TU Delft - Heritage&Architecture, 2017)

MATRIX	AGE VALUE	HISTORICAL VALUE	USE VALUE	NEW-NESS VALUE	RELATIVE ART VALUE	RARITY VALUE	OTHER VALUES	DILEMMAS
SURROUND SETTING	 Railway as a spatial element	 Layers of military history	 Combination of land uses					 Military dominance
SITE	 Enclosure by a wall	 Industrial character Dutch cross bond	 Utilitarian construction			 Connection through central axis	 New social uses	
SKIN	 Elements	 Timber framing building Wrought iron joint	 Large "void"			 Timber roof structure		
STRUCTURE	 Load bearing wall	 Evolution of buildings	 Flexibility + Repetition			 Cast iron column Tension Rods		
SPACE PLAN		 Military green colour	 Skylight Natural ventilation Glitter system				 Reuse	
SURFACES	 Patina	 Trolley track				 Exterior circulation Trolley track		
SERVICES						 F.W. Braat Iron decoration	 W for Wilhelmina Intentional commemorative value	
STUFF								 Patina
SPIRIT OF THE PLACE	 Trolley track	 Enclosed / Military presence	 Industrial character	 New social uses				

03

WHAT IS THE RELATIONSHIP BETWEEN RESEARCH AND DESIGN ?

It goes without saying that all acceptable approaches in architecture require careful preparatory research, continued throughout all subsequent phases, to provide guidance to decision-making and implementation. After conducting research on site, focusing both on people and their needs, and on the colonial heritage buildings and their attributed values, the question became how I could use the programming and design process to build something appropriate to this specific context.

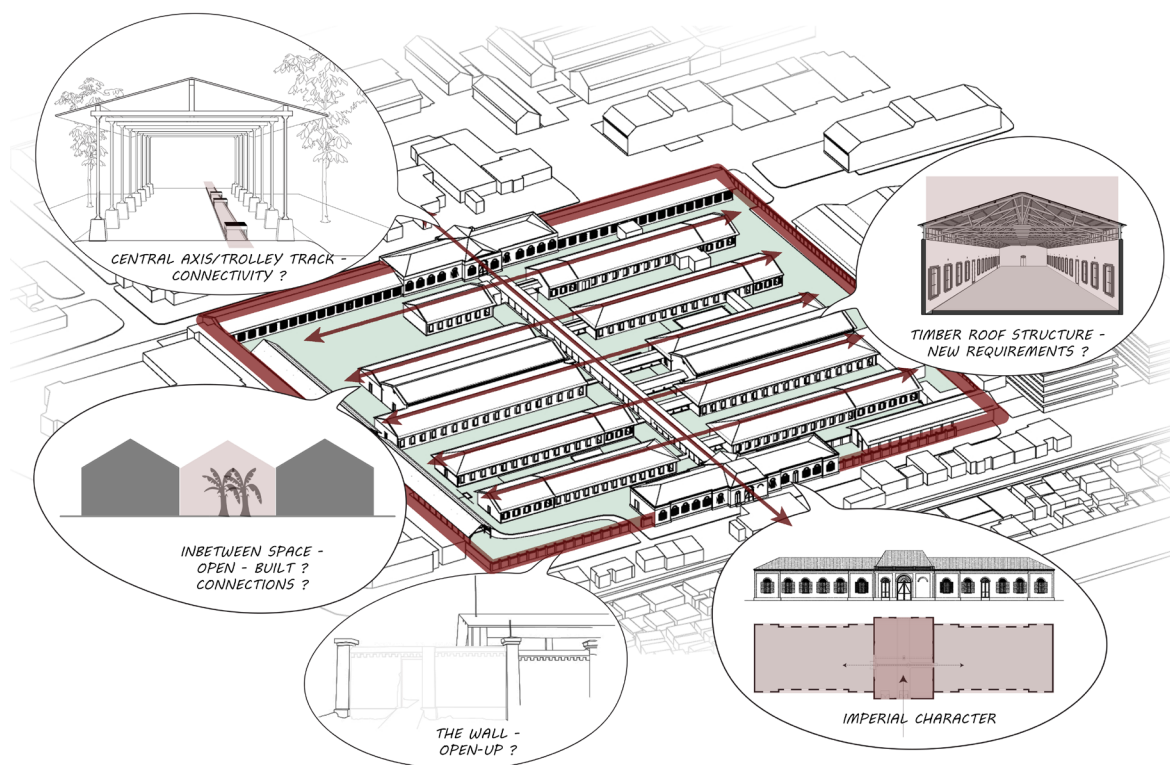
What characterizes this specific context today, though, is the lack of local identity. New developments popping up in Bandung do not reflect the diversity and local characteristics of their settings, but instead reveal the gradual universalization of Indonesian architecture. An architecture like that, disregards the climate and creates architectural homogenization. This fact inspired me to look into the vernacular architecture of Bandung, and the simple bio-climatic principles that were integrated in the design, and created optimal indoor conditions for the inhabitants. This new research, although it sometimes fell into the loop of over-romanticizing the traditional forms, informed back my design, and created a need for locally defined contemporary architecture, that takes into account the contemporary technological innovations, as well as the climatic conditions in this part of the world. Following interventions took into account these valuable information, and an attempt was made to shift the existing system towards social change, economic and sustainable development.

The whole research led to the establishment of five main factors that guided my design process:

- (1) the transformation framework for the existing colonial heritage, as this was defined through the value-based research
- (2) the socio-cultural meaning of Indonesian vernacular architectural style
- (3) the climatic conditions in this part of the world
- (4) the principles of sustainability and circularity
- (5) the involvement of local people in the process of making

The research conducted before and after my visit to Bandung informed my design process and the design process itself, through the experimentation of various different scenarios, informed back my research. This approach led to a strong research by design methodology which helped define my interventions and the materialisation of the project.

“Local community values should be taken into account, along with the tangible and intangible values of the existing built environment, for an informed design approach”



Dilemmas - Starting points for design

04

WHAT ARE THE ISSUES & DILEMMAS THAT MAY HAVE BEEN ENCOUNTERED WHILE DOING THE RESEARCH & ELABORATING THE DESIGN ?

Being an architect in a foreign culture emphasizes social and local awareness in the architectural approach. Thorough investigations and analysis of the surrounding impressions and settings take place, in an effort to understand and get to know the context better. During my trip to Indonesia I tried to develop an eye for the actual users of the buildings, and not the imagined ones. I made an attempt to understand their needs as a community and their way of living and experiencing the space, in order to realise an architectural intervention that addresses these exact issues. However, it is arguable of whether a short stay in the study area, is enough to understand the ways in which people live and use a space for centuries. Throughout the project, this was one of the biggest challenges. To really understand the context, or at least my interpretation of it, and work along with that, proposing solutions that derive directly from it on all scales. Coming from a place far away from the asian culture, and being trained in it throughout all my studies, I constantly questioned my approach and my design decisions of whether they reflect the context or not. I believe that as an architect, it is crucial to let the specific context give shape to your proposal, rather than applying readily made solutions to it. By using locally manufactured materials and regional craft knowledge, I tried to produce a project that could realistically be built in Bandung, and that makes an effort to answer local needs.

Important part of this whole project was of course the sensitivity in which the colonial past was approached. The fact that I am neither Indonesian nor Dutch, enabled me to have a more distant look on the shared past, free from sentimental attachments. However, in order to work towards a resilient future, a good understanding of its notable past was necessary, as it has formed not only the architectural structures in the inner core of Bandung, but it has also shaped its citizens. My approach to this colonial legacy, focused more on what could be learnt from the inherited buildings and architecture, and which significant characteristics of it should be highlighted. Learning from the past is an important lesson for all people around the world. Urban planners now recognize the link to the past and its influence on the sense of a place as an important dimension of sustainable places, strengthening local identity, contributing to investment, and retaining communities.² The space of the former military complex is elaborated more as an incentive for the future, that the people get the chance to shape themselves, and tell their narrative. The city is an outcome of many layers of history, and each one should address its contemporary needs, constantly rewriting the history and not being stuck by it.

2 Noha Nasser, Planning for urban heritage places: reconciling conservation, tourism, and sustainable development. In: Journal of Planning Literature.

*“All heritage is shared heritage.
We can benefit from it. We can learn from it.
It creates communality.
The merging of cultures creates richness.”*

05

WHAT IS THE RELATIONSHIP BETWEEN THE PROJECT AND THE WIDER SOCIAL AND PROFESSIONAL CONTEXT ?

This Shared Heritage Lab's focus on the transformation of cities towards healthy environments that nurture resilient social systems, is an important theme in contemporary architecture and urban development. As an alternative to our ever-increasing throw-away society, adaptive reuse of urban heritage can offer multiple environmental and economic benefits for our cities. The successful management, of the colonial heritage of Bandung, a common, which is local (it takes a vital part in the creation of its identity) and global (it is part of a universal heritage) at the same time, can lead to an inclusive and healthy future city for working, living and leisure.

Through my graduation project, I tried to identify ways in which current problems could be turned into opportunities for the future city. Whether this is a "dead" Railway lin, that is transformed into a new focus point for the whole city, or remnants of colonial legacy that were abandoned, and are now transformed to facilitate a second life. Repurposing old buildings—particularly those that are vacant—reduces the need for construction of new buildings and the consumption of land, energy, materials, and financial resources that they require. In the contemporary context, because of the intense need for sustainable development of cities, the utilization of the existing building stock can provide valuable opportunities.

Integral part of the project, are ways in which sustainable decisions can permeate everyday life, and influence the habits and lifestyle choices of future generations. Within the context of a developing country, the architecture addresses issues of water supply, energy provision, and passive thermal comfort. Traditional building methods, are enhanced through practical and conscious application of technology, creating a "new" local architecture that is climate responsive. Local residents are involved in the construction process of the new community center and are thereby educated through practice, which creates an opportunity to establish their own local enterprise and transfer this construction technology to other building projects. The project promotes a bottom-up approach for a more resilient and sustainable future, with the potential to transfer the approach to many other regions.

Overall, the aim was to emphasize the balance between understanding the significance and accommodating necessary alterations to ensure the continued use and enjoyment of historic buildings, and to use them as the incentive for future development, having good knowledge of the past.

“There is a need to refocus many existing education policies, programmes and practices so that they build the concepts, skills, motivation and commitment needed for sustainable development..”

*UNESCO (2002) Education for Sustainability,
From Rio to Johannesburg:
Lessons learnt from a decade of commitment*