Nantawat (Palm) Siritip

The Live-Work Factory project aims to explore new possibility of combining a live-work typology within the context of a historical building, in this case, the industrial heritage of Hell's Kitchen, the IRT Powerhouse, which has been privatized for decades. As New York progresses towards a 21st century city, initiatives such as New York Works and OneNYC 2050 were issued to ensure the city's livability in both aspects of economy and sustainability. The project is designed with the idea that it could provide and support the growth of businesses from the start of individual freelancers – to small enterprises – to a mid-size corporate. This is reinforced through the provision of co-working spaces, ateliers, makerspace, exhibition hall and the available retails for product launching.

The project based its concept from these initiatives, through the emphasis of providing more affordable workplaces and the adaptive re-use of an industrial heritage. The main research questions focus on both, the urban scale and the architecture scale; 'How can a mix-used project engages with the public domain in order to reactivate the urban quality of an industrialized waterfront' and 'How to create a live-work typology that responds to the changing landscape of work within an existing industrial heritage'.

Aspect1: Relationship between research and design

In the case of this project, the concept of a live-work typology is derived from the study of office morphology in accordance to the changing landscape of work. The rapid technological development of the past decades means that the notion of a workplace has become more ambiguous and flexible. The workplaces of today now emphasize on the idea of collaboration, connectivity, and flexibility. The results from the collected data guided the design towards a mixed-use project, accommodating different users from freelancers to enterprises. A large contribution in terms of the research in office morphology is also the literature "Tower and Office" by Inaki Abalos, which highlighted the relationship between the architecture of workspaces and technological / societal changes. This in turns, guided me towards a more ambiguous and mixed-used design as in today's technological advancement allows work to occur beyond the border of offices.

Research also shown the predicted grown in freelancing, the available technology means that workers became less-reliance on the physicality of a traditional offices and workspace. Hence the mode of work has become less "separated" from the mode of "living" (the "work from home" scenario). This data influenced the decision to develop New York 21st century workplace to a live-work typology in respond to this prediction. Moreover the research from other fields outside of architecture also plays an important part of the derivation of the live-work concept; New York Works initiative by Bill De Blasio emphasized on supporting better-paying jobs for New Yorkers to cope with the city's high living cost, while OneNYC 2050 policy proposes long term sustainable goals for the city which justify the shift of the current activity of a steam plant of the IRT Powerhouse, which reduce the process of burning natural gases for steam energy.

In my view, the design of the Live-Work Factory reflects the combined research, from the architectural (based from Inaki Abalos's Tower and Office) to the governmental initiatives of New York city. I believe that the project responds well to the changing landscape of work and the projecting trend of working, which emphasizes on the increase of remote workers and freelancers. Therefore, The Live-Work Factory highlighted the blurred boundary between work in life in the formation of a mixed-use project, emphasizing on the housing as well as the workspaces.



Fig.1. Study of office floorplans in accordance to technological interventions (Source: Own)



Fig.2. Conceptual collage of a mixed-use typology of a future workplace. (Source: Own)

Aspect2: The relationship between graduation topic to the studio topic

The relationship between the graduation topic and the studio topic is probably one of the clearest relationship, since New York Midtown studio is quite context-led, the initial stage of the project emphasized on the contextual research of the site, which in this case is midtown Manhattan. It also helps that The New York Midtown studio is a part of the Chair of Complex Projects which emphasizes on the understanding of multiple forces that influence the architectural outcome of a certain project. Thus, the formation of the project is inevitably linked to many influential factors such as the predicted work trend and New York governmental policies.

During the early phase of the studio, the group is divided to study a selected area of midtown, ours being the north-western quarter of midtown, characterized by the residential neighborhood, Hell's Kitchen and the industrial waterfront of Clinton piers, where one of the few operating cruise terminals in New York is located. This group research is beneficial to our individua project since it enables a large quality of data to be collected and shared. This leads to the formation of the 'Group's Strategy' which in our case, focuses on the revitalization of the industrial waterfront in the study area through densification and the diversification of activities. The Live-Work Factory, locating in the former IRT Powerhouse, is location-wised situated at the fringe of this group vision. The project integrated the urban aspect through the inclusion of the group's proposal, the flood protection berm as a part of the group's urban strategy.

Aspect3: Research Method + Approach chosen by the student in relation to the graduation studio

As mentioned, the Chairs of Complex Projects research method is strongly context-led. The approach is a research-by-design approach which encompass on a continuous loop of design developments and readjustments. In my opinion, the working method from the research phase to the design development of Complex Projects is quite intensive but it reflects the working method of a practicing architect, whose understanding of the context, in terms of site, clients and current situations, is absolutely crucial in achieving a satisfying project. The continuous, non-linear working process is also presented in professional practices.

The context-led methodology of Complex Projects is based from a realist ontology, investigating the site through an etic approach – which resulted in the gathering of hard data which are objective. This can be seen in the creation of site model (1:1000) of midtown Manhattan to familiarize the students with the physical condition of the study area. Mass modelling is also another method that is used, the experimental quality of mass modeling leads to the discovery of architectural expressions.

In addition to the hard data collection, the emic approach is also obtained through a week-long site visit to New York and on-site interviews. This method is beneficial to my project as it confirms the group's strategy of densifying the industrial waterfront as well as allowing for a better understanding from the potential users' perspectives. However, this approach is still, in my opinion, significantly less influential in the development of my graduation thesis in comparison to the etic approach, which fosters more relations to the commonly practiced research method of the New York Midtown Studio.

In my view, the advantages of the etic research method used in this project is the strong foundation of scientific / objective starting point which ensures data integrity. – this forms a strong base for the formation of the project's concept; the live-work concept was derived from research which investigated the expected growth of freelancers and remote workers in the US. In contrast, the possible disadvantages of this approach could be the potential to overlook sensitive subjects and the lack of creativity when it comes to the analysis. In some cases, the hard data collected through the etic approach could be easily obtained from established research papers, which may not current or relevant to the actual goal of research.



Fig.3. Mass model 1:1000 - initial prelim design (Source: Own)







Fig.4. Series of photographs of mass study (Source: Own)

Aspect4: Relationship between the graduation project and the wider social, professional, and scientific relevance

One of the strongest relationships of the graduation project with the wider professional practice is the concept of adaptive re-use. Often seen as less ambitious, I believe that the practice of adaptive re-use possesses high potential for the profession, especially in the densely urbanized setting. The ongoing worldwide issue of depleting resources for construction urges architects to look at new possibilities of re-using existing structures. The Live-Work Typology challenges the concept of adaptive re-using by exploring new possibilities of infilling the existing industrial heritage with programs that extends beyond the typical museums or cultural spaces. It focuses in reviving the powerhouse into a "workplace" of the 21st century. The goal is to experiment with a new possibility for an industrial heritage building which will hopefully contribute to the utilization of other adaptive re-use architecture to accommodate the growing needs of the city such as housing.

In terms of the relationship to the wider social context, the project aims to connect to include some public domains into the rather a typically privatized concept of a workplace. The notion of a collective workspace such as co-working space was designed to promote collaboration and increases the chance of networking for the users (in this case, freelancers of New York). The IRT building itself, is also modified to be more public-friendly through the incorporation of POPS, arcade, and retails. While the "workspace" area is more collective rather than 100% public. In my view the public spaces around and within the building is crucial for the appreciation of the heritage; since the proposed programs of a live-work typology is mainly collective, the inclusion of public functions such as retail and POPS encourages visitors to experience the possibilities of adaptive re-use projects and how it could be transformed to benefit the city. This is vital to perception of the wider society, increasing the awareness of adaptive-re-use through user-experiences.

Aspect5: Ethical issues & dilemmas you encountered during graduation

Firstly, the Group's Vision of the Flood Protection Berm faces ethical issues if the intervention is too intrusive to the neighborhood. The berm is a super structure that would affect the view to the waterfront. The question lies in its necessity as the water line continues to rise. Despite its downfalls, the berm provides public spaces and of course, flood protection; a thread that is relevant to many waterfront urban areas worldwide. since the berm can be seen as quite a radical proposal. Though we've decided to push it forward due to the inevitable rising sea level in the coming years, the size and presence of a 9m. high berm presented a design challenge from multiple perspectives, namely, how to integrate it as part of the project. The berm is also argued to be disruptive to the commuting of cars (since, the lanes of the existing highways will be reduced) – The berm proposal would only work if the trend of private car ownership in New York would continue to decrease. Other efforts of trying to provide more accessibility in the area such as metro stations need to be considered to ensure desired mobility for the residents. (this issue has been discussed among group members and hence, the proposal of a transportation hub in the area).

The dilemma of using a landmarked heritage is arguably the largest dilemma of the project, since the IRT Powerhouse gained landmark status in 2015. The regulation that has been put upon the building does not possess a definite guideline, stating that modification is possible, yet it needed to be approved by the committee. Generally, from research, it is obvious that the main feature that would need preservation is the façade with the decorative terracotta elements. The last remaining smokestack is also another feature that would be preserved, while the added 1950s addition at the western end could be removed. The unclear regulations were upon research, there were no written documentation stating the modification limit (as each building is treating case-by-case). Hence, the lack of actual guideline from the Commission is another challenge of this project.

New VS Old:

Since the external façade of the powerhouse is preserved, the decision to also preserve the original steel structure on the interior was a logical decision as the they are also in contact with the façade. The dilemma occurs when there is an introduction of the new "substructure" which are the load-bearers of the added floor and workspaces. Since the documentation of the original structure and access to the actual building is limited, the structural strategy was to make the new substructure load bearing and avoid putting any load on the old structure to ensure strength and stability.

Following the decision of introducing the new structure, the project is constantly challenged with the notion of how to find the right balance between the new and old. Material-wise, the project aims that the introduced material would be distinguishable from the old, which in this case, is highlighted with the use of Crossed Laminated Timber as the new substructure in contrast to the existing steel frame. Apart from materialization, this dilemma extends to the spatial quality of the project of how to maintain the "essence" of the original building, despite the introduction of new programs and structure.

The dilemma of new vs old continues to the external expression of the project, where the new masses which house the apartments have an inevitably different façade expression than the powerhouse. This contrast is highlighted and, in a way, a unique quality that enhance the project, however, there is a dilemma of the project appearing discontinuous and fragmented.

In summary, I believe that when working in an adaptive re-use project, that deals with an existing built structure; this dilemma between new vs old will always be presented. While the attempt to reach a "balance" between the new and old is often seen as a goal, in my opinion, the notion of aesthetical "balance", which deals with the "essence" of adaptive re-use projects cannot be measured and thus, is "subjective" to each observer.





Fig.5, 6: Draft renders of facade study and building mass