

MAR ELIAS CROP MARKET

08 PRODUCTION

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ASPECT 1

the relationship between research and design

The research conducted in the first semester has a direct basis for the design phase in the second semester, but overall the research conducted influenced the design approach, and the design decisions and approach provided further research exploration and elaboration.

Group research regarding the Beirut context and suburban site context in combination with topic research directly influenced the building typology choice and provided a basis for the program. The topic research was a basis for the project ambitions which formed the basis of the design brief. These project ambitions are as follows: strengthening the food chain by improving post-harvest handling, adding public space to the suburb and improving the food security in Beirut and Lebanon.

Reference research into projects containing a (similar) logistic and public program provided a clear set of principles and benchmarks which formed the basis of the design brief. The preliminary research question and sub questions conclusions, provided clear constraints that were put in the design brief.

During the process of designing, new aspects of the topic and research will be encountered which demands a deeper investigation. The advantage of this combination is that research during the design phase can be implemented and tested directly in the current design, allowing for more design options and thorough research.

ASPECT 2

the relationship between your graduation topic and studio topic

The topic of the Complex Projects Beirut Studio is (dealing with) catastrophe in the built environment. In Beirut on August 4 2020, an

explosion in the port area devastated the city, injuring people and completely obliterating the port area and surroundings. One structure demolished by the blast was Lebanon's only grain silo, containing over 80% of the country's grain reserves. These reserves were lost due to the blast and sparked the interest for the research topic production.

Further research into food production and the food chain in Lebanon and Beirut showed that the Lebanese are facing challenges regarding this topic. The group research where the Beirut urban context was analyzed showed challenges that were translated into a group ambition and strategy. The combination of the group ambition and strategy and the topic challenges formed the basis of the narrative.

The design project is a reacting to the challenges in Beirut regarding the studio and graduation topic. The design touches three components:

- a decentralised, smaller food (in this case fruit and vegetable) storage; in case future catastrophe there will be multiple storages and the food chain will not be (completely) paralyzed
- a program containing multiple parts of the food chain, making it more efficient and resulting in less loss of product.
- a project integrated in and responding to the (suburban) city fabric, also providing new public space for Beirut inhabitants.

ASPECT 3

research method and approach chosen by the student in relation to the graduation studio

The complex projects studio has a defined research method and approach which is template based.

The studio research is comprised of two parts: one is the group research. The group research is based on a circle containing the urban fabric of the Beirut suburbs near the Ramlet al Baida beach area. The area is analysed through the lenses of the individual topics, collecting hard and soft data through map analysis and a site excursion. This data is processed in conclusion which form the basis

for the urban strategy and group vision.

Adjacent to the group research individual research is done. The research is done according to the complex projects guidelines, with the exception that in the individual research more time was focussed on reference analysis and reference project benchmarking. The reference analysis was mainly focused on flows and program relation and division, since the proposed program for the design is clashing. From the reference analysis and topic research preliminary conclusions and design constraints were formed that are the basis for the design brief.

The group strategy has had impact on the design decisions in the individual project. In this case the street intersecting the building plot became a public boulevard in the masterplan. The street has a central role in the individual design. The group strategy also decided the zones and districts in the masterplan, with the public boulevard that intersects the plot as a main axis that connects the city centre to the central market district. This causes the project also to act as a gate to the market district.

Upon further elaboration of the urban strategy, the program requirements of the individual project changed. Since the Spinney's square south east of the project location was transformed into a public square with underground parking garage, the public parking program reserved in the individual project could be transformed into more space for program functions of the logistic process.

ASPECT 4

relationship between the graduation project and the wider social, professional and scientific relevance

The project investigates the contrasting combination of public and logistic functions and flows in one design, compacting the process and shortening the food chain. The project is designed on the basis of a grid, making it modular to a certain extent. The main structure (column and canopy) is placed on the grid; together with the connecting

beams and flooring the structure is easily adaptable to changing demand in program.

The project is smaller in comparison to the reference projects, but as it is a protagonist project for a decentralised storage and distribution system it is a node of a system in the city. These decentralised systems are easily scaled up and down according to the urban context. The combination of both logistic and public program in one project allows for central building management and more control and efficiency of the process.

ASPECT 5

ethical issues and dilemmas you may have encountered during graduation

The main issue was to design the project in a way seen through the lens of Beirut and Lebanon and not from the perspective of the Netherlands. This issue brought certain dilemmas, regarding the realism of the project and the Beirut/Lebanese building regulations (which are far less developed than the Dutch bouwbesluit).

The materialisation of the project was a dilemma. At TU Delft we are encouraged to design with sustainability and circularity in mind, which pushes for a certain decision making. The Lebanese and Beirut materialisation is less concerned with circularity and sustainability. The materialisation ambition was to use as much local materials and building ways as possible.

Another dilemma is the ambition to design a semi-open market hall that is accessible day and night. The street intersecting the plot and the building brings the dilemma of closing of the public boulevard going through the building to prevent damaging the interior and having unwanted sleepovers. This resulted in a compromise to set back the market hall from the logistic base, creating a transition space in the project that also acts as a detour of the public boulevard at night.