Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences

Daniele Tanzi
**Personal information**

<table>
<thead>
<tr>
<th>Name</th>
<th>Daniele Tanzi</th>
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<tbody>
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<td>Student number</td>
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**Studio**

<table>
<thead>
<tr>
<th>Name / Theme</th>
<th>Architectural Engineering</th>
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<tr>
<td>Teachers / tutors</td>
<td>M. Smit, J. Jongert, P. Tomesen</td>
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<tr>
<td>Argumentation of choice of the studio</td>
<td>AE offers the possibility to develop a design that involves social and technological aspects.</td>
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**Graduation project**

<table>
<thead>
<tr>
<th>Title of the graduation project</th>
<th>CROP CHAIN MARKET</th>
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<td>Reassemble the “Food Supply Chain” in an experimental space dedicated to food.</td>
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**Goal**

| Location:                     | Marineterrein, Amsterdam NL |

**Problem statement**

An important part of our life and a fundamental aspect of the human being existences is represented by food as edible product and all the activities related to it.

In the economic climate we are living today the prevalent attention is focused on what we use, consume and waste during our daily life. In particular the theme of food consumption is nowadays placed at the center of this topic, given by the high excesses of the western countries. The intricate society hierarchy and the detachment of people from rural activities, leads individuals to have not anymore the possibility to discover the origins of food by themselves. We have completely delegated the role of providing food to a chain of sellers and distributors, and, for this reason, individuals became uninformed on how food is produced and brought to ours plates.

**Objective**

I strongly believe that, with the nowadays technological changes, a new building typology should be developed, where all the phases of the “Food Supply Chain” should be elaborated as one: production, process and retail.

The objective is to develop a building typology that could host a space entirely dedicated to food, where all the unnecessary phases are removed, saving on time, resources and costs, and avoiding all the possible wastes related to transportation and processes. In addition to the evident economic benefits, within this new space the consumer could achieve a stronger awareness on how massive quantities of edible products are produced. The project aims indeed to create a space build up from innovations and technology, where fresh local food, respect and knowledge about health are cultivated and taught.
With this new building typology production, processes, retail and culinary experiences are combined together in order to be part of the same atmosphere and let the visitors walking by all the phases and be informed on the products life span. The efficiency of reassembling the production phases in the unique design strategy results in a project that investigates on the strong connection between food products and the architectural disciplines. The thesis aims to develop a critical project, and as such it tries to propose an alternative scenario to an existing situation.

**Research question**

In order to understand the architecture and the technical systems behind the food products; what are most efficient technical systems involve in the “Food Supply Chain” today, the architectural spaces that host these activities and the network of resources that are flowing between this spaces?

**Design question**

Having the knowledge of these most advanced food process techniques and their modular elements that are necessary to constitute the “Food Supply Chain”, how should they be combine in order to generate a building typology that contributes to a stronger connection between the food processes and the costumer?

**Process**

**Method description**

Starting form the idea of a “Food Supply Chain” based on a complex network, the research was firstly developed by disassembling this network in single phases, and by analyzing the ones where architecture has a significant impact: production, process and retail, and the spaces related to them.

For this purpose an analysis was made on the most efficient technical systems involve in the food field today, the architectural spaces that host these activities and the network of resources that are flowing between this spaces. The survey has been delineated as an investigation on the possibilities to combine different food stages under the same architectural envelop. It results in a reassembling of the this element in a more compact “Food Supply Chain”, in order to lower the time spent between the production and the consumption, reducing the use of space thanks to the innovative production techniques (as hydroponic and aquaponics systems), and up-cycling the waste produced in order to generate other valuable resources.

Therefore, the used methodology consists in Disassemble – Analyze – Reassemble, and the design takes care of the third part: the Reassemble

Moreover, the research pointed out the importance of the products movement in the existing situation, mainly achieved throughout transportation and systems. For this reason a new type
of movement is also introduced as a key element for the unique space designated for the new reassembled “Food Supply Chain”.

**Literature and general practical preference**

Since the beginning of the investigation, it has been considered literatures from various disciplines that has guided this survey through different prospective. Due to the nature of the research into innovations and technologies, in the representation of the case studies proposed has been necessary to get an opinion from scientific and technology digital newspaper that are involved in publishing the nowadays developments.

The choice the specific case studies, as shown in the next chapter, are driven by the technical systems employed by different actors that lead to efficiency of the process. They embody the most avant-garde systems today available. In fact, the following examples stand for their advanced process techniques that are compact as well as efficient in the use of resources.

The case studies analyzed are also fragment-able in single programs modules. These minimal modular elements are repeated several times based on the scale of the actors’ activities.
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<td>48 49 50 51 52 1 2 3 4 5 6 7</td>
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**RESEARCH**

- Literature

**DESIGN**

- Sketch design
- Materialization and detailing
- Visualization
- Preparation
- Model

**PRESENTATION**

- Preparation
- Model

Legend:
- P3
- P4
- P5