The Urban Silo
Redevelopment of the Maassilo

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  What? (Heritage & Architecture)
  Problem statement (studio Rotterdam Harbor)
  The Maassilo

Analyse
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Design
  City > Context > Building > Building part > Fragment > Details

Reflection
Questions
Heritage & Architecture

What?

Globalization
Industrial heritage
Vacant offices
Problem Statement

Studio Harbor Rotterdam
Maassilo

Rijnhaven  1895
Maashaven  1905
“Op stroom” transshipment for bulk

Apple Maps (2010)
Transshipment Maashaven ca. 1905-1910

Transshipment Maashaven ca. 1935
Meneba
Quaker
Maassilo
Maassilo | Quaker (Michel de la Vieter)

Fliouer factory | Meneba (Michel de la Vieter)

Codrico (Michel de la Vieter)
Maassilo as a Machine **Personal**

Fascination, what are the characteristics of the building?

**Typology Technical**

What can you do with this type of typology?

**Different Approaches on Heritage Buildings and sites Theoretical**

How can you embed the project in their surrounding, especially socially?
1898-1905
Maashaven constructed

1905-1910
Maashaven set up as a bulk transshipment harbor

1910
First silo made by architect J.P. Stok

1930
Second silo made by architect Brinkman & van der Vlucht

1940
Rotterdam bombed by the Germans (start WWII)

1945
WWII is over

1951
Last extension by Architect J.D. Postma

1983
Maassilo company moves to the Botlek

2003
Maassilo stops functioning as grain storage

2008
Attic and factory get transformed into offices for start-ups

2017
Ground floor gets redeveloped into a event hall
Layers of time (Leunissen G.)
What's this Machine about? (Leunissen G.)
New York  Churchill
New Jersey  Quebec
Savannah
Virginia
Houston
Tacoma
Charleston
Montreal

Antwerp
Bremen
Hamburg
Amsterdam
Rotterdam
Lisbon
Le Havre
Genoa

Maassilo on world scale (Leunissen G.)
"Tarwebuurt"

Community

Employees

Train

Ship

Maassilo and infrastructure (Leunissen G.)
Maassilo as a machine (Leunissen G.)
Distribution floor

Work floor

Installation (shaft/basement)

Distribution floor

Work Floor

Installation (shaft/basement)
Section of the Maassilo (Maaslandse Courant 1930)

The roof landscape of the Maassilo (Apple Maps. 2016)

The roof landscape of the Maassilo with the different building parts (Leunissen, G.)
Typology

29% Store

71% Shaft

Maassilo as a machine (Leunissen G.)
Maassilo as a machine (Leunissen G.)
Maassilo as a machine (Leunissen G.)
Maassilo as a machine (Leunissen G.)
Rotterdam Never as popular as now!
NRC, January 8th 2017

The Poor Rotterdammer will be scared away!
Leo de Kleijn, town councilor SP, 2016

Residential vision 2030!
Demolition of 10,000 low-cost housing!
36,000 new houses with high income
NOS, November 28th 2016

Make neighborhoods in the south strong and diverse!
High educated young people leave the south
Ronald Buijt, town councilor Leefbaar Rotterdam, 2016
Shifting Income

The maassilo is positioned between two different social groups.
Value conditions

The shaft is the crucial link of the “Machine” between the different floors

Module system

The maassilo consist 71% out of silos (not accessible) with different dimensions

Social program

The maassilo is positioned between two different social groups
Valuation

Layers of time
Strict (vertical) silo organization

Introvert character
Silo structure
Rhythm in the facade

Scale
Patina of the materials
Machinery
Relation with the harbor (water)
How can the Maassilo complex be reused to accommodate new functions and at the same time keep its identity/character?

How can the remaining 71% of empty space (silos) in the building be redeveloped?
Starting points

1. Accessibility and circulation
   Connection with the infrastructure around, public transport

2. Public space
   Create a gathering area and distribution point to connect all facilities in the building complex

3. Identity
   Create a strong identity that will attract people and then become an important node for Rotterdam south

4. Cultural Value
   Retain as much as possible of the character of the building, experience the building as a machine from the inside!
Geometric Cityblock

The Urban Silo

Escher
Program

Cityblock

Work

Live

Recreation

Maashavencity

Apple Maps (2010)
Public Addition!
Parking
Storage spaces
Maashaven
Market
Workshops
Private workshops/Ateliers
SiloEXPO
Heat collector
Silopark
Restaurant
Lecture hall
Offices
Dwellings
Roofgarden
Studios
Studios
Parking
Storage spaces
**Existing**

<table>
<thead>
<tr>
<th>Space</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basement</td>
<td>1,000</td>
</tr>
<tr>
<td>Ground floor</td>
<td>5,500</td>
</tr>
<tr>
<td>Office space</td>
<td>2,000</td>
</tr>
<tr>
<td>Shaft</td>
<td>800</td>
</tr>
<tr>
<td>Attics</td>
<td>5,000</td>
</tr>
<tr>
<td>Total</td>
<td>14,300</td>
</tr>
</tbody>
</table>

**New**

<table>
<thead>
<tr>
<th>Space</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking</td>
<td>75 cars</td>
</tr>
<tr>
<td>Bicycle storage</td>
<td>100 bikes</td>
</tr>
<tr>
<td>Storage spaces</td>
<td></td>
</tr>
<tr>
<td>Market</td>
<td></td>
</tr>
<tr>
<td>Workshops</td>
<td></td>
</tr>
<tr>
<td>Private workshops/ateliers</td>
<td>20 x 25 m²</td>
</tr>
<tr>
<td>SiloEXPO</td>
<td></td>
</tr>
<tr>
<td>Heat collector</td>
<td></td>
</tr>
<tr>
<td>Silopark</td>
<td></td>
</tr>
<tr>
<td>Studios</td>
<td></td>
</tr>
<tr>
<td>Atelier dwelling</td>
<td></td>
</tr>
<tr>
<td>Lecture hall</td>
<td></td>
</tr>
<tr>
<td>Offices</td>
<td></td>
</tr>
<tr>
<td>Dwellings (casco)</td>
<td></td>
</tr>
<tr>
<td>Roof garden</td>
<td></td>
</tr>
<tr>
<td>Bar</td>
<td></td>
</tr>
<tr>
<td>Restaurant</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>
Visitors
- Parking
- Bicycle storage
- Market
- Workshops

SiloEXPO
- Silopark
- Ateliers

Lecture hall
- Bar
- Restaurant

Employees
- Parking
- Bicycle storage
- Workshops

SiloEXPO
- Silopark
- Lecture hall
- Offices

Bar
- Restaurant

Residents
- Parking
- Bicycle storage
- Storage spaces
- Market

SiloEXPO
- Silopark
- Ateliers

Dwellings
- Roofgarden
- Bar
- Restaurant
Routing
Rotterdam
Maassilo
Community
Private
Rooftop garden
Garden
Kitchen
City balcony
Gallery
Conclusion

To transform this Maassilo complex into a urban silo I found the logic system of the grain storage Machine

Use the shaft as an transportation node

Use the silo as measurement from the ground floor till the attic

The Maassilo can improve the social sphere in the direct context
Reflection
Questions?