Mechanical Hive

Artists Community

Utrecht South: From residual to generating

*How to transform the industrial sites in Utrecht South from residual areas to generating areas?*
residual → integrated → generating
MECHANICAL HIVE

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bank view S-W

bank view N-W
FEATURES OF THE ORIGINAL ACTIVITY

GUIDELINES FOR (RE)DESIGN
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Stoop | chemical factory
1917
1925

Neerlandia | wire industry
1937
1938

Prozee | scrap metal trade
1973
2012
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Neerlandia Factory
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strong longitudinal direction
Mecanical Hive
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rythm given by vertical and horizontal repetition of the structural elements
GUIDELINES FOR (RE)DESIGN
CHARACTERISTIC MORPHOLOGICAL FEATURES

strong longitudinal direction

rythm given by vertical and horizontal repetition of the structural elements

dominant central volume
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Use of the bank during Stoop (photo: 1925)

Use of the bank during Neerlandia (photo: 1937)

Outside activity moved after 1971 to the yard on the East side (photo: 2006)

after 1973 the water connection was no longer used. Instead, the land access became important - the loading and unloading that used to be done on the bank moved to the yard on the East side of the building.
GUIDELINES FOR (RE)DESIGN

RELATIONSHIP BANK - BUILDING | REACTIVATION OF THE BANK
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keep the industrial building cluster?

keep only the main hall?
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What program is best suited for Neerlandia?
GOOD CONNECTIONS
CLOSE TO CITY CENTER
MAINLY RESIDENTIAL
LACK OF CULTURAL FACILITIES
residual → integrated → generating
residual → integrated → generating

INSPIRING
SOCIALLY INFLUENT
CONTINUOUS DIVERSITY
NEW
STIMULATE PUBLIC ACTIVITY
TAKE AND GIVE BACK
OUTSIDE CONNECTIONS
DEVELOP AN IDENTITY
residual → integrated → generating

INSPIRING
SOCially INFLUENT
NEW
CONTINUOUS DIVERSITY
OUTSIDE CONNECTIONS
STIMULATE PUBLIC ACTIVITY
TAKE AND GIVE BACK
DEVELOP AN IDENTITY

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FITTING THE PROGRAM INTO THE BUILDING

- living
- working
- exhibition/ performance

functional division
HOW DO WE BUILD
BUILD THE AREA OR LEAVE THE AREA OPEN
MASS OPEN
MECHANICAL HIVE

HOW DO WE BUILD

BUILD THE AREA ↔ BOTH ↔ LEAVE THE AREA OPEN

MASS ↔ OPEN

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- clean water tank
- battery
- roll out solar panels
- waste water tank
- sliding glass doors
- insulated panel | solid wood deck
- sunshade | lid panel
- interior work area 4.5 x 4.5m
- toilet | sink | shower
- access hall
- interior work area 4.5 x 4.5m
MECHANICAL HIVE

SET UP A GRID

MOBILE STUDIO EXITS THE HIVE

LOCATE AVAILABLE SPOT

DEPLOY AND UNFOLD
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Set up a grid

Populate

Mobile studio exits the hive

Locate available spot

Deploy and unfold
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Identity
Activate different areas
Connection to center
Social interaction
Diversity

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How to control the site?

setting up the limits
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PRIMARY FRAME

SECONDARY FRAME

PRIMARY FRAME
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GROUND FLOOR: MOBILE STUDIOS, FLEXIBLE WORK AREAS, CAFE, SHOP, TOILETS, OFFICES
FIRST FLOOR: AMPHITHEATRE, LOUNGE, APARTMENTS, CAFE, TOILETS
SECOND FLOOR: WORKSHOP (MULTIFUNCTIONAL) ROOM, LIBRARY, CAFE
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**Mechanical Hive**

**Production/Year:**
- 1000 m² | APPROX. 60,000 kWh
- 3850 m² | APPROX. 231,000 kWh

**Consumption/Year:**
- 3 bedroom house - 4000 kWh

Energy supply for approx. 60 houses.

**Performance Examples**

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<tr>
<th>Location</th>
<th>Annual Production</th>
<th>kWh per m²</th>
<th>Year</th>
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<tbody>
<tr>
<td>Munich</td>
<td>67,761</td>
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<td>New York, NY</td>
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<td>Valencia</td>
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