Creative Rotterdam
Creative and Design Resource Center

Studio: Msc4 graduation Public Realm
P5 Presentation

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Project Overview

Project location: Building block on St. Lucienstraat inbetween Lijnbaan area and Coosingel street
Research conclusion

Identity?

inbetween two coherence

Lijnbaan

Identity?

Coolsingel
“Metropolitant appeal for Rotterdam”

Coolsingel street
“Public domain inside”

Lijnbaan
“Outdoor public space”

De Bijenkorf 1956
Lijnbaan 1953

Tower 1984
Beurs 1937
City Hall 1920
Post Office 1923

1937
1920
1923
1956
1953

“Metropolitant appeal for Rotterdam”

Coolsingel was transformed into a prestigious urban boulevard, flanked by Monumental Architecture.

De Bijenkorf 1956
Lijnbaan 1953

Tower 1984
Beurs 1937
City Hall 1920
Post Office 1923

1937
1920
1923
1956
1953

“Outdoor public space”
“Public domain inside”
Analyse of building typology

Coherence of Coolsingel

- Cityhall
- Postoffice
- Stockexchange, WTC
- Bijenkorf
- OMA, Forum Rotterdam
- Lijnbaan street
- Lijnbaan courtyards

Coherence of Lijnbaan

Identity and Architecture of Coolsingel

Monument

Almost same height

Transformation

Typology

New Typology nowadays

"Hybrid Building"

- Public domain
- Invite people to come inside
- Hybrid building (combine functions)
- Less border between inside & outside
- Communicate with people

New Typology nowadays -----------> “Hybrid Building”
Urban Scenario

To make routing complete we need to “Develop Stadhuisplein”

Connect Commercial Route  ---------------------->  3 Main entrance to the location
develop Stadhuisplein will make the commercial routing success 
and make better value for the square itself
Master plan and Building Block

Important Design Principle
Principles

1. Keep the preserve facades/building

2. Entrance

Pedestrian

Car/Bike

Lijnbaan
Coolsingel Street
Principles

3. Public core inside Lijnbaan
   - outdoor public space

4. Horizontal - in/fuence of Lijnbaan scale

   - Public Domain is inside both horizontal and vertical

   - Coolsingel
     - public domain inside

our building block
Public Domain flourish in both horizontal and vertical axis
Principles

5. Parking and service path for Lijnbaan's shops are in basement & underground public domain commercial cultural outdoor public space office Coolsingel street Lijnbaan parking commercial cultural outdoor public space
**Step 1:** Filling site with mass
- Keep existing building block
- Use heights of the Lijnbaan area

**Step 2:** Carving space to open up secondary public street
- Keep existing building block
- Use heights of the Lijnbaan area
**Step 3:** Create public domain, interieur core

- Use typology of Coolsingel. Public building with core inside

**Step 4:** Add entrances to public core

- Entrance at Aert van Nesstraat
- One or two entrances at Sint Luciastreet
Step 5: Add mass for functions

Step 6: Create public square at main entrance.
- Create hierarchy in building entrances.
- Entrance at the Aert van Nesstraat as main entrance
Step 7: Add mass on building

Step 8: Add public space into the building.
- Open up the building block.
- Add public space on different levels
Step 9: Functional division of the functions
**Function and Area**

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- Public sphere: 20%
- Dwelling: 20%
- Office: 10%
- Commercial: 17%
- Parking: 15%
- Culture: 20%
Concept

Creative Rotterdam

Challenge and opportunity to develop to be creative city

Abandoned Land → Creative Class

High value Land

"Creative Rotterdam" to attract creative people to stay in city

Diminished some part of building block to build new creative program for creative people
Building Program:

- Forum
- Leisure Commercial
  - shops
  - cafes
  (space for small scale urban economy)
- Creative and Design resource center
  - Library for Art&Design (Material, Art&Design books and dvd)
  - Temporary Exhibition Space
  - Art studio for children (Educate young children)
  - Meeting rooms
  - Flexible experimental space
  - Administration
  - Reading space
- Office
  - Offices for rent for creative business
  - Studio for rent for artists, architects and designers
- Parking

Concept:
"Creative Rotterdam" creative
stimulate activities
diversity
art & design
knowledge
meet people
resources
experience
brainstorm/discussion
learn by doing

creative class = create new idea!
Public Domain as skeleton of the building

3. Public core inside Lijnbaan

4. Horizontl -in/f_lurence of Lijnbaan scale

Public Domain is inside both horizontal and vertical

Dwelling
Creative & Design Resource Center
Creative Office
Commercial

Lijnbaan
Coolsingel

public domain
- Dwellings: 6000 m²
- Creative and Design Resource Center: 7500 m²
- Commercial: 3650 m²
- Office: 3000 m²
Developed mass create architectural spiral routing and develop ramps, stairs and terrace to invite people from ground floor walk through all parts of building and join 3 rooftop gardens
Building plan and circulation

Ground floor plan and hierarchy of space in the block

Ground floor concept: inside and outside people continue activities
Public domain flourish in both horizontal and vertical axis of the building
1st floor plan
- studio art for student, music room and shop
2nd floor plan
- library and office
3rd floor plan
- library and office
Connect architectural routing with stairs, ramps and terraces to let people enter every level.
View from the main entrance
View from the Leo de Jong building
4th floor plan
- Reading space, green space and office
5th floor plan
- green space and office
Landscape
Landscape from main entrance (Aert van Nesstraat)
Landscape view from Lijnbaan side
Structural and Technical study

Structural Concept

- Lightness in structure with steel column and steel beam of HD steel profile
- Concrete Hollow Core floor system 300mm
- Transparency of space inside building with Glass facade and Glass Roof
Column and beam plan
Structural diagram

Main construction
Columns: 300x300, 500x500 steel hollow section
Concrete Core: Lifts

300 HD-beam support floor system
Prestressed hollow core floor planks 300mm.
one way direction
Main truss for Forum area
Double Glazing roof for Forum space
Facade system

- Post and beam construction with facade system

- Transparency glass facade aims to bring lots of light to the library and top hinged sashs window random in the facade to assist natural ventilation for interior space.

- The colour glass panes (yellow, orange) can reduce the effect of heat radiation in the interior space and also give different views of outside.

Pattern of color glass facade goes from Lijnbaan level (horizontal) to Coolsingel (Verticle) which relate to the from of the building block itself.
New facade away from preserved facade
South facade
West facade

West Elevation
1:200
facade diagram

Freely random glass color
attached to floor

West Elevation
1:200
Facade assembly

West facade cover stair hall
Facade and climate control

Corridor penetrate the heat and radiation from sunlight

Outside

Inside

Typical Section 1
scale 1:20
Climate and Thermal control system

-Concrete core activation is the main system for heating and cooling the building

-Air Handling unit will be provide to 3 parts of the building and install in the rooftop, the ventilation duct goes under the ceiling to serve all the level of the building

-Glass roof in forum has the electric window to reduce the heat.
AHU
heat pump
heat exchange
winter

AHU
heat pump
heat exchange
winter
Section B
scale 1:200

summer

AHU

heat pump

heat exchange

hot     cold

heat pump

cold

water

hot

recover

fresh

air in

exhause

air out

summer
Air Duct ventilation in the building
Fire prevention - Sprinkler

Sprinkler install at ceiling level every 4m. all area of building (also corridor)
Fire prevention - Fire compartment
Perspective