Towards a liveable neighbourhood

Oranjeboom street, Feijenoord, Rotterdam

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The “Social Index” gives an indication of the neighborhood’s social state which is based on statistical data. Feijenoord is in the red (negative) in the social and cultural activities part.
Livability
Strengthen the neighbourhood and community by creating **viable public spaces** and promote the restoration of **compact, walk-able, safe, mixed-use urban area**

Livability is part of sustainability:
Design for a brighter and long-lasting future of this area
- better living conditions
- economic expansion
- social growth

Research question
How can spatial and programmatic interventions stimulate **social cohesion** and thereby lead to **sustainable livability** in the neighbourhood?
From starting points to design

**CONTEXT**

**RESEARCH APPROACH**

**DESIGN GOALS**

**DESIGN**

**CONCLUSION**

### SOCIAL PROBLEMS
- Low social cohesion
- Selective migration

### URBAN
- Left-over spaces
- Isolation of building blocks
- Mono-functional

### BUILT
- Lack of maintenance of common spaces
- Poor quality of building stock: focus on interaction zones, entrances
- Low interior comfort

### STARTING POINTS

### GOALS
- Social responsibility for space
- Social mixing and interaction
- Focus on existing social dynamics

### MIX
- Connection of fragmented space
- Accessibility between private and public layers of space
- Introduce new functions
- Improvement of current courtyard conditions

### CONNECT
- Create vibrant interaction space
- Distinguish entrance zones
- Enhance interior spaces of interaction: entrances and staircases
- Interior conditions and comfort of living spaces: light, air, size
Social sustainability

Social cohesion
- common activities
- AND common facilities e.g. jointly invest in a trampoline for the neighborhood children.
The apartment building has shared facilities, as e.g. covered bicycle parking and separate containers.

Social Security
- Enhance visibility
- Treat borders and define territory to provoke involvement and care

Diversity of district
- work at home, by installing a good workplace,
- daily shopping within the neighborhood
- functions are mixed over the neighborhood
- live, work and play

Life resistance
- Provide accessible Public Places and amenities
- Provide flexible Renovation plan
Social sustainability

- Social cohesion
- Social security
- Social mixing
- Life resistance

Value assessment

- Urban level: visual and physical connection, water
- District level: Diversity
- Building: Identity
- Material: refurbishment, light and air

Design goals

- Interaction, community bonding
- Visibility, Privacy zoning
- Diversity: groups and build.types
- Accessibility, int.liv.conditions

CONTEXT
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DESIGN
CONCLUSION
Urban level ➔ Neighborhood level ➔ Building level ➔ Material level
Urban level

Social Interaction
Accessibility
New Functions

Daycare centre in the start of Rosestraat: new centre of interaction!
New pedestrian accesses

Urban level

CONCLUSION
Urban level
New border; water element
Neighborhood level

Accessibility
Interaction, community bonding
Living conditions
Diversity
Privacy zoning
Breakthroughs and additions

Neighborhood level
Neighborhood level
Diversity

SOCIAL MIXING
Exploit variety in building stock to host variety of groups

How?
1. income
   attract middle class

2. household composition
   large families, (existing + new)
   single household (existing)

for the existing inhabitants
- Upgrade conditions and improve sense of belonging for existing by focusing on communal space-interaction

for the new inhabitants
- Offer public amenities and cheaper, big housing

CONTEXT RESEARCH APPROACH DESIGN GOALS DESIGN CONCLUSION
ACCESSIBILITY-SAFETY
Neighborhood level Access
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Neighborhood level
Access/Safety
Neighborhood level
Access-Safety

PRIVACY ZONING
PUBLIC >>COLLECTIVE>>> PRIVATE

LAYERS IN COLLECTIVE
A. PLAY AND GROW
B. SIT AND WALK

DEFINE BORDERS
PUBLIC-COMMUNAL ,COMMUNAL-PRIVATE SPACE
Neighborhood level
Privacy Zoning

Provide entrance control

Increase meeting points

Provide Private space in front of apartments

CONTEXT  RESEARCH APPROACH  DESIGN GOALS  DESIGN  CONCLUSION
INTERACTION IN STREET SIDE
Street side: change in street profile
Before: "Closed" ground floor, housing

After: Transparent ground floor, shops and cafes
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![Image of a building complex with people walking and bicycling on the sidewalk.](image-url)
INTERACTION
IN COMMUNAL SPACE
Social activities

- Social networking - meeting place
  - Next to water
  - In neighborhood kiosks
  - In sitting places around kid play area
- Common gardening
  - Kids training in growing food
  - Reeds
  - Vegetables
  - Composting food
- Children playgrounds
  - Sandbox
  - Swingset
  - Jump ropes

Individual activities

- Walking
- Relaxing/sitting
- Reading
- Planting flowers

Context

Research Approach

Design Goals

Design

Conclusion
WATER STRATEGY

- rainwater+ grey water
  --collect and reuse
  --collect, purify and reuse (toilet flushing, washing machines)
Building level

Social Interaction
Diversity
Accessibility
Visibility
Liv.conditions
ACCESS/VISIBILITY/INTERACTION
Building level

URBAN RENEWAL BUILDING

STRATEGY
- DEFINE ENTRANCE ZONE
- “VERTICALITY”, LEGIBILITY OF FAÇADE

MATERIALISATION
- CREATE A NEW MONUMENTAL, TRANSPARENT PLINTH ON STREET FAÇADE
- RESTORE FAÇADE COVER WITH WOOD AS DESIGN INITIAL INTENTION
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Building level
Urban renewal
Building level
URBAN RENEWAL
Flexible use of portique space: Playroom or rented office space
DIVERSITY
Apartment types

- New mezonettes
- 4 bedroom apartments with workspace included
- 5 bedroom apartments
- 3 bedroom apartments (3 variations: 75 s.m, 110 s.m, 110s.m mezonette)
- Shop/Commercial spaces

Building level

HOUSING CAREER

- / MOVE IN
- + LIVE TOGETHER
- + CHILDREN
- + ECONOMIC UPGRADE
- + WORK AT HOME
- - DIVORCE
- - DEATH PARTNER
- - CHILD MOVES OUT
- - ECONOMIC DOWNGRADE
- - CLOSE WORKPLACE

CONTEXT RESEARCH APPROACH DESIGN GOALS DESIGN CONCLUSION
variation of typologies> mixing of tenants

New: Offer transversal apartments, light, air!

1 main size: fewer apartments so host existing big families: cheaper renovation
variation of typologies > social mixing
Increase variety by merging!

2 main sizes: one person household and family 3 children
Host: existing poor and existing ones that want to housing career
-3rd floor changed bigger interventions, to sell!

EXISTING 19TH CENTURY
New features/types

19th century

Urban Renewal

New additions

Building level
Material level

Visibility
Liv. Conditions
EVALUATION OF CONSTRUCTION AND MATERIALS

2 different ages + construction systems: 19th Vs Urban renewal

Refurbishment principles

- Maintenance of historic characteristics (street façade) in balance with envelope upgrade measures
- Restoration of building identity lost by renovations (upper layer)
- Minimum destruction of original material and load bearing walls
Material level
Urban renewal

CONTEXT
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Floor plan scheme; wooden facade parts
Ventilation of the wooden facade parts
### Material level

**CONTEXT**

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EXISTING 19TH CENTURY FAÇADE TO THE STREET

Material level

Insulation strategy;
UPGRADE INTERIOR

CONTEXT   RESEARCH APPROACH   DESIGN GOALS   DESIGN   CONCLUSION
Material level

19TH CENTURY
FAÇADE TO THE PARK

TRANSPARENCY
Building level

19TH CENTURY

Materialisation of new upper floor
Design goals

_Interaction in communal space

_Diversity (visually and typologically)

_Visibility

_Accessibility, safety

_Daylight and interior liv. Conditions
ADDING VALUE WITH SUSTAINABLE INVESTMENT

• lower vacancy rates, higher rents but increased property values

COST AND COMPENSATION MEASURES

Cost
• Higher initial cost for new constructions
• Lenotec etc. more expensive
• Private parking under the houses
• Possible refurbishment instead of demolition of the façade can save money

Compensation measures
• Faster construction time (pre-fab system for roofs)
• Additional dwellings "higher density"
• Use of sustainable materials, larch can possibly be maintenance free
• Rainwater collection and saving in bills
Applicability of project principles

CONTEXT RELATED PARAMETERS
- Existing various housing typologies
- Existing multicultural mix of inhabitants
- Identity and historic character of street
- Connectivity and accessibility problems; previous infrastructural sites

_Strategy in neighborhood level_
Bottom up approach, small interventions for affordability of project

**Applicability**
- Areas with problems of social coherence
  - Areas with existing variant housing typologies, social housing
  - Design focus on communal space instead of huge costs for individual space improvement

Factors that add to success of project
- Participation of residents in project
- Process similar to creativ beheer projects: coordinator or initiators needed

_Strategy in building level_

**Applicability**
- 19th century housing with historic facades
- Late Urban renewal housing stock
Questions?