Designing for Integration

...with Infrastructure as a tool for Urban re-newal: in the case of Feijenoord

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Structure for the presentation

1. Introduction- to location and topic
2. Dis-connection Feijenoord- Public Space to Infrastructure
3. Municipal+new development scenarios for the area
4. Masterplan- Highlighting Infrastructure
5. Design Strategies
6. Localized Intervention
7. Reflection
Location_Rotterdam_Shift of Harbors westwards

Development based on 2 events: bombing of the city + Shift of harbors Westwards
History Industry in Rotterdam Shift Westwards

Why? Distance to the sea, depth and size of ships
Post world war 2 - new industry petrol - new harbors
Living areas where abandoned harbors and industry
History_Built Environment

The patch pattern shows a division in different centres of growth - new neighbors and harbors grow in between and around these areas.
Position in the Randstad Context

Amsterdam

Utrecht

Schiphol

Den Haag
Central

New A4
connection

Rotterdam
Central

Kop Van Zuid

Rotterdam
Central
Scope of site

South of Rotterdam_ Feijenoord
DISCONNECT between public places and their Infrastructure in Feijenoord: thematization of segments
Waterfront as barrier due to spatial elements

Elements guiding waterfront activity.. or lack thereof

Breakwater- wooden posts - anchors
Parking - main road - industry
Natural insert - break water - quiet housing
Tram line - Parking - Anchors - public promenade
Break water - Wooden posts - open landscape - 'pier'
Parks - Public Green

Why? Demarcate degree of potentials in different public spaces typologies - here parks

Public space x road Hierarchy
Built Environment typology at the HEF

Scattered Development + Transition zone
Disconnect between public places in Feijenoord and Infrastructure

Public Space as barrier due to inland connections (functions), character, morphology

Based on Supporting Infrastructure
Comparision of Social data - NPRZ

Entrepot

Feijenoord

Kop Van Zuid

Stadsdriehoek

<table>
<thead>
<tr>
<th>Category</th>
<th>Entrepot</th>
<th>Feijenoord</th>
<th>Kop Van Zuid</th>
<th>Stadsdriehoek</th>
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<tbody>
<tr>
<td>Work unemployment 19 to 64 years in%</td>
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<td>Education completed HBO / WO 15 to 75 years in%</td>
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<td>WOZ average woz value per m2 in euros</td>
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<td>Housing environment ample 19+ in%</td>
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<td>Loneliness moderate to very serious lonely, 19+ in%</td>
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<td>Health experienced health good / very good, 65+ in%</td>
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New Development Scenarios for Feijenoord
Network Overload - Car and public transport

Urban Traffic Plan Rotterdam - Bottlenecks with growing impact
Future development as per municipal discussions
Municipal Scenarios

Metropole on the Maas

Streets as vibrant/green centres

Autonomous neighborhoods
With new developments like Feijenoord city, slated to come up actively over the next decade, this will require 2 things:

1. Infrastructure to support **new traffic and movement intake- and plug-in to the larger network of Rotterdam**

2. **To integrate this infrastructure** in the diverse urban fabric and everyday life of Feijenoord-preserving its identity, while still responding to the grand architectural gestures, that initiate innotivation and economic growth of Rotterdam.
Masterplan - Highlighting Infrastructure
Design Strategies based on projects derived from Municipal Scenarios

1. The new bridge
   why? Travelling to the South a concern as the other 3 bridges are at maximum capacity

2. Entrepot as a metro station
   New line for regional metro

3. HEF Quartier
The Willems Axis- North Connections

The HEF bridge
New connection
Pedestrian bridge
Stations
Intervention: New bridge connection

Impact: Elevated to generate porosity. Stretch of waterfront pedestrianized.
Interventions: Loop into Feijenoord, changing the existing hierarchy of street + roundabout for smooth traffic flow.

Impact: Orangeboomstraat now a shared street with pedestrian and cyclist priority. Loop acts as a catalyst for generating mixed usage of space—by grouping residential, water and park functions—and connecting them to a larger network.
Intervention: Pedestrianization for road outside school + to continue to Erasmus University - as a bridge

Impact:
Mixed use.
Continuity over the river.
Orangeboomstraat also pedestrianized and strengthened in character due to exit.
Interventions - Spatial Impact
Larger opportunities arising within Feijenoord from masterplan:

1. More integrated and fluent - smooth traffic flow - transit node along the HEF and Entrepot
2. Opportunity for new functions in existing public space - due to new connections
Design Strategies
Movement + the in-between
Most importantly, the design works as a plugin to the larger infrastructure and public space network of Feijenoord-connected to Rotterdam. CONTINUOUS NETWORK

- Landscape
- Main vehicular road
- Shared space
- Secondary road network
- Pavilions
INTEGRATION of the Willems Axis as a public place, within the everyday life of Feijenoord to address physical and social connections

1. Resolve vehicular movement considering old and new developments in Feijenoord
   - Main vehicular road

2. Organize secondary road network to link East/West Feijenoord and also the main infrastructure
   - Shared space
   - Secondary road network

3. Introduction of program to initiate interaction through the built environment
   - The HEF bridge extension
   - Pavillions

4. Landscape strategy for the in-between spaces - to bind the infrastructure and the built
   - Landscape
1. Vehicular movement

Activators

The quality of spaces was determined firstly based on criteria for organizing traffic and circulation.

1. Elevating the Bridge

2. Integrating the roundabout into Entrepot and consequential developments - drop off points, bus stop, entrance square,
2. Secondary Movement Network

Activators

Support network to create better connections in Feijenoord. The main intervention being extension of the HEF to give this smaller network of streets an identity.
2. Secondary Movement Network

Street hierarchy + safety elements

Paperclip Junction
Integration of major junctions into the life of the city + details to ensure maximum safety

For Rosestraat, outside the metro station
Integration of major vehicular road - 5 lanes, with bus service exits + details to ensure maximum safety

Orangeboomstraat
Shared Street

Passeig De St Joan Boulevard

Shibuya Crossing

Brighton and Cove, England
2. Secondary Movement Network

Lighting Strategies

Eyes on the street- safety

Street lights that light up the carriageway
Street lights that give a warm light at the footway
Lights at entrances to improve feeling of safety

Scenario for night- withdraw activities into the buildings and then light them up

Shops, displays and cafe seats
Efficient walking width- kept free from all kinds of obstacles
Zone for street furniture

Billboards
Ground lighting in green areas
3. In-Between

Program Pavillons- Listed from North to South

Placement of pavillons and programming, based on what is happening in its immediate context in Feijenoord.
4. Landscape

Activators

Section showing water retention - filtration and storage for rain water and grey water from neighborhood.
4. Landscape

Overview - Plugin

Immediate connections

New Road

Waterfront route

Hef route

Bike

Shared

Existing

Existing

New green proposed
Detail design
Ground level composition plan

Zone 1_The approach
Programmes and infrastructure caters to locals and tourists

Zone 2_Transit Hub
Program starts to transition towards more community involvement

Zone 3_Community
Program primarily caters to the community
Zone 2

Entrepot square - exit
Bus Stop
Event Space + Orangeboomstraat connection
Overview 1

Overview showing a cohesive interpretation of the design strategy, movement patterns, vehicular + pedestrian and design of in-between spaces.

EXTENTION OF THE HEF
Overview showing a cohesive interpretation of the design strategy, movement patterns, vehicular + pedestrian and design of in-between spaces.

EXTENTION OF THE HEF
Approach to Site - through the New Bridge

View from the new bridge
Event area + Continuity of Orangeboomstraat

View from Roundabout into Orangeboomstraat
Entrepot_ as viewed from the HEF
Overview - Continuity
Overview - Continuity
Everyday public space - multi-level - leading to different readings of Feijenoord

- Reconnect pedestrian connectivity in the core via secondary road network and in-between spaces
- Improve pedestrian accessibility of urban dwellers along the project

New connections to activate core and East-West Feijenoord
The HEF and its support structure—program pavillons

• Pavillons and other programmatic developments like the Entrepot to generate developer interest + improve lack of resources and hence jobs and also informal activity

• Connect with existing open space assets and further serve as guide to them

• Alleviating stress of front station by introducing different urban experiences + connecting with other commercial districts

Program Pavillons and the immediate context they activate—are a consequence.
The HEF and its support structure - program pavillions

HEF as home
HEF as home - Lending Identity to Infrastructure

Exits from the HEF

The Highline, New York
The HEF

Reference

Lijnbaan, Rotterdam
Scope of site

Different qualities of spaces zoned post design intervention - Actions and Interactions
Scope of site

Actions and Interactions- Informal Activity in the area

- Orangeboomstraat when activated by market
- Waiting zones- shared cab stand
- Using the curb for gathering
- Market street
- Thresholds extention
Overview - Continuity
Overview- Continuity
Stakeholders

Actors + Approach

PUBLIC:
- Municipality of Rotterdam- Defining planning principles
- Pact of Zuid

RESIDENTS:
- Local residents, neighborhood groups, civic groups, involved in the decision making regarding the transformation of the current urban fabric.
- New Residents- New participants involved in the transformations.

PRIVATE:
- Developers- Through activating the Entrepot station, new program, and a bridge, developer interest is generated in the area- by new initiating mixed functions.
- Existing Entrepreneurs- Agencies with an already invested interest in the area

Private:
- Vestia- Main owner of the rental housing
- Parking companies involved in the construction of guest parking lots inside the blocks- P+R
- NGO’s + Crowdfunding
  Social organizations, youth groups, citizen action groups

Top- Down

Constructing Top-Down transportatoin infrastructure projects as activators of urban regeneration and growth

Opportunity to implement innovation- and contain all actors

Bottom-Up

Using Bottom-up strategies to mitigate impacts of these developments- integration

Engagement of Actors in the design process
THANK YOU!