Content of Presentation

Urban Analysis

Short description of the location and the results of the analysis done on Heijplaat and the RDM.

Urban Design

Explanation of the masterplan of Heijplaat made after the analysis. Explanation of the concept and functioning of the masterplan.

Building Analysis

Description on the building analysis of the former main office of the RDM.

Building Design

Explanation of the transformation of the former main office of the RDM. Explanation of the concept, the program and the technical solutions of the transformation.
Location of Heijplaat

- Heijplaat in Rotterdam
- Rotterdam in West of the Netherlands
- Rotterdam harbour portal of the Netherlands
Location of Heijplaat

- Heijplaat in Harbour Area of Rotterdam
- Heijplaat on south bank of the river Maas
- Rotterdam City Center on north bank of the river Maas
Location of Heijplaat

- Heijplaat in the middle of ‘Ring Rotterdam’
- Bad connection because of isolated location
RDM and Village of Heijplaat

- Former RDM Company
- Village of Heijplaat
- Surrounded by harbour activity till 2040
History of RDM

- 'Rotterdamse Droogdok Maatschappij'
- Started in 1903
- First activity reparation of ships
- Later ship and submarine building
- RDM closed in 1983
History of RDM

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History of Village of Heijplaat

- Build for the workers of the RDM
- Designed by 'Garden City' principle
- Started in 1913
- Build in steps, depending on the growth of the RDM
Relation between RDM and Village

- Big difference in scale
- No relationship anymore between RDM and Village
- Physical wall of buildings between RDM and Village
Main problems of Area

- RDM Area empty since closing the RDM
- Decrease of inhabitants of village
- Therefore decrease of facilities in village
- Poor social conditions in village

Tabel 1 - Population of Heijplaat

Tabel 2 - Comparing social conditions between Rotterdam and Heijplaat
Buildings in Area

- Old village important, because of history RDM
- Old village important, because of Garden City principle
- Dok ensemble around harbour, main buildings of RDM
- Strip of buildings as a wall
- Big scale of the RDM buildings in combination with small scale of village
Public space in Area

- Green structure as a buffer for village
- Green zone between old and new village
- Big open spaces of the RDM area in combination of the small scale of the village
Concept of Masterplan

- Heijplaat as knowledge center in ‘CleanTech Delta’
- Connection with TU Delft
- Attract Innovative companies
Connection of Masterplan

- Improve Connection with City Center
- Adding Tram Stop Heijplaat
- Intensify and improve Ferry
Concept of Connecting

- Park as connector of Campus, and Village
- Primary bicycle route of Heijplaat
- Connecting by functions in park
Functions in Masterplan

- RDM Area as Campus
- Supporting functions located in Old Village and Park
- Extra function: Festival Area and Container Camping
- Former Office Building as Hotel
Infrastructure of Masterplan

- Heavy traffic around RDM and Village
- Bicycle as primary transport
- Village and RDM area - Car Free
- Car-parking at entrance square
- Bicycle-parking at entrance square
Public Transport in Masterplan

- Improve Connection with City Center
- Adding Tram Stop Heijplaat
- Intensify and improve Ferry
- Tram Stop at entrance square
Overview of Masterplan

- RDM Area Revived
- Connecting RDM and Heijplaat with City
- Improvement of internal relation
Transformation of the Building

- Former Second Main Office of the RDM
Building History
- Build by the RDM, when RDM was growing rapidly
- Designed by E.F. Groosman
- Build in 1968
Location of Building

- Corner of Village
- Border between Village and Industry
- Building on former Village
Building Volume

- Floating volume on small ground floor
- Building higher than surroundings
- Building end of Village
- Views over RDM Area and Village
Value Assessment of Building

- Typical Post war Architectural Expression
- Typical office building
- Solid structure
- Facade not to modern building performances
- Interior consists of asbestos - remove interior inevitable

- Why transforming this building?
  - Building marks a period of the history of the RDM
  - Organisation of an office building relatively easy to transform
  - Lowering of the building costs - no new construction
  - Sustainability - no environmental pollution from demolishing
  - Sustainability - no environmental pollution from building new construction
Surroundings of Building

- Building on Entrance Square of RDM
- Scale of Building in conflict with surrounding housing
- Building will contribute Village and Entrance Square
Giving back to the Village

- Original situation to start

- Step 1: Remove emergency staircase
  - creating physical space
  - building mass smaller

- Step 2: Rotate ground floor
  - creating physical space
  - creating endpoint of village

- Step 3: Open building
  - soften building mass
  - show construction of the building
Giving back to the Village

- Connect ground floor with village
- Create end of Village
Giving back to the Village

- Connect ground floor with village
- Create end of Village
- Basement 1 meter high
Program of the Building

- Hotel as new function for the Building
Extra program of the Building

- Hotel for RDM Area
- No relation with Hotel and Village
Extra program of the Building

- Wellness and Fitness as extra function
- Wellness and Fitness for Hotel and Village
Organisation of the Building

- Hotel at upper floors
- Hotel situated at the facade, overlooking the harbour
- Upper floor for long stay rooms, first three floors for short stay rooms
Organisation of the Building

- Fitness/Wellness at upper floors
- Fitness/Wellness situated in the middle of the building
- Entrance at the third floor - Down for exercise - Up for relaxation
Organisation of the Building

- Service at the ground floor
- Two main entrances for the building
Ground Floor

- Entrance Area
- Service floor
First Floor / Second Floor

- Fitness
- Short stay rooms for hotel
Third Floor / Fourth Floor

- Entrance of Fitness/Wellness
- Changing rooms
- Locker room
- Wellness Area
- Short stay and long stay rooms for hotel
Fifth Floor

- Lounge for Wellness
- Installation space
Materialisation of the Building

- Difference between materials per program
  - Fitness/Wellness in wood
    - texture
  - Hotel in smooth finish
    - no texture
  - Facade of metal
    - texture to soften building mass
    - referencing to shipbuilding
North and West Facade

- Opening to the Entrance Square
- Emphasizing the entrance of the building
- Show original construction
North and East Facade

- Opening to the Entrance Square
- Emphasizing the entrance of the building
- Show original construction
South and West Facade

- Opening in facade to soften the building mass
- Show the Fitness/Wellness to the Village
- End Village by brick wall
South and West Facade

- Opening in facade to soften the building mass
- Show the Fitness/Wellness to the Village
- End Village by brick wall
Stair in Atrium

- Wellness/Fitness from first to fifth floor
Stair in Atrium

- Wellness/Fitness from first to fifth floor
- Entrance of village
- Entrance of Wellness/Fitness
Stair in Atrium

- Wellness/Fitness from first to fifth floor
- Entrance of village
- Entrance of Wellness/Fitness
- Stair vertical element of building
- Stair connecting entrance of village and entrance of Wellness/Fitness
Stair in Atrium

- Adapt to the original construction
- Stair of wood - relation with Fitness/Wellness
- Vertical element to connect the Village to the Fitness/Wellness
- Start in entrance area of the building
Stair in Atrium

- Adapt to the original construction
- Stair of wood - relation with Fitness/Wellness
- Vertical element to connect the Village to the Fitness/Wellness
- Stair not connected with the floors
- Balustrade of floors made of glass - stair stands on its own
Stair in Atrium

- Adapt to the original construction
- Stair of wood - relation with Fitness/Wellness
- Vertical element to connect the Village to the Fitness/Wellness
- Trough atrium till the top (third floor)
- Stair connected with third floor - third floor entrance of Fitness/Wellness
Stair in Atrium

- Stair as freestanding object in original concrete construction
- Stair will give experience of entering the Fitness/Wellness
- Views over the harbour improve when climbing the stairs
Short Stay Rooms

- Two types of short stay rooms
- Typical room
  - Standard hotel room
- Room ‘View’
  - Take advantage of the view
  - Sleeping most important activity
  - Framing the view
  - Sleeping in the view
Long Stay Rooms

- Long stay rooms situated at fourth floor
- Two types of long stay rooms
- Typical room
  - Standard hotel room
- Room 'View'
  - Take advantage of the view
  - Sleeping most important activity
  - Framing the view
  - Sleeping in the view
Corridor of Hotel

- Between hotelrooms and Fitness/Wellness
- Materialisation of Hotel - smooth finish
- Materialisation of Fitness/Wellness - texture by wood
- Wall of Fitness/Wellness in corridor - wooden finish
- Openings in wall by closets
- Showroom for Fitness/Wellness
Corridor of Hotel

- Closets to break the length of the wall and corridor
- Clear separation between Hotel and Fitness/Wellness
- Story of the Building
Building Technology of Facade

- Regular grid of the building
- Opportunity to use a modular system
Building Technology of Facade

- System of the facade
- Framework of wood
- Installation by use of brackets
- Facade cladding of stainless steel profiles
Building Technology of Facade

- System of the facade
- Framework of wood
- Installation by use of brackets
- Facade cladding of stainless steel profiles
- Box in frame of facade
Building Technology of Facade

- Two types of rooms
- Different wooden framework for the two types
- Facade of typical room with normal window frame
- Facade of special room with box
Building Technology of Facade

- Framework attached to original construction by Z-profile bracket
- Waterproof membrane on outside, vapour-proof layer on inside
- Sound Proof insulation on top of original floor
- Stainless Steel profiles as cladding of the facade
Building Technology of Facade

- Window frame on wooden facade frame
- Window on inside in line with facade
Building Technology of Facade

- Box frame connected to facade frame
- Build up in facade frame
- Box covered with steel profile

Detail 1

Detail 2

Detail 3

Detail 4

Detail 5

Detail 6

Detail 7

Detail 8
Building Technology of Facade

- Glas facade of the Atrium
- Facade System between the original construction
- No thermal break or wrapping of the original facade
  - > 0,008% of facade thermal break - negligible
Building Technology of Facade

- Old construction stripped
- New finish to smoothen surface
- Construction coated to protect from discolouring
- Adjustment of window frames by adjustment blocks
Ventilation of the Building

- Ventilation of the Atrium and service floor
- Input and output of ventilation
- Cooling and Heating by air
- Input of ventilation on every floor
- Output on top of the atrium
Ventilation of the Building

- Ventilation of the Fitness/Wellness
- Input and output of ventilation
- Cooling and Heating by air
- Horizontal transport on fourth floor (only floor with adequate height)
- Vertical transport by two shafts
Ventilation of the Building

- Ventilation of the Hotel Rooms
- Horizontal transport on fourth floor (only floor with adequate height)
- Vertical transport by shafts in Rooms
Ventilation of the Building

- Ventilation of the Hotel Rooms
- Horizontal transport on fourth floor (only floor with adequate height)
- Vertical transport by shafts in Rooms
- Input and output by one unit
- Every Room uses one unit
Conclusion

- Opportunity for transformation of buildings with solid buildings
- Building type suitable for transformation
- Adapting to context possible
- Generic intervention for building type