[Muiderpoort Station of Knowledge]
Hybrid building P4 - 28.09.12
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Architecture as catalyst in urban renewal
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Problem statement
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AMSTERDAM - study area in the city

- Potentials: Study area is inside the city wall creating potential to connect to city functions
• historical center

• Amstel

• Oosterpark

• Railway

• Lozingskanaal

• Flevopark

• the Nieuwe Diep

• Ringvaart

• Station

STUDY AREA- Amsterdam Oost - Muiderpoort

• Boundaries area: water
• Railway dictates urban structure: contemporary theme
Defining the problem statement

- Fragmentation of neighbourhood by railway construction
- Problem area: Vogelaar wijk, economical + social problems
Muiderpoort station: lacking to connect the urban fabric
Muiderpoort main passage: 1982 - current date
Muiderpoort main passage: 2012
Muiderpoort main passage: station has no connection to the passage
Mobility

- Neighbourhood scale: **bad** station entrances
- Potential: station visible
1- Entrance Wijtenbachstraat
2- Entrance Insulineweg
Mobility

- Neighbourhood scale: **bad** connection public transport
- Potential: connect stops
Mobility

- City scale: **good connection** public transport
Identity

- City scale: **connect city function knowledge**
Identity

- Neighbourhood scale: educational cultural facilities
**Identity**

- Public libraries
Identity

- City scale: UvA library
Identity

- Social housing
- don’t fit today’s current requirements
- small living spaces
- high percentage unskilled
MUIDERPOORT - urban plan

- Ground floor plan in existing urban plan, **continuity of axes creates spaces**
**MUDERPOORT station of knowledge - urban plan**

- Roof floor plan in existing urban plan, **continuity of axes**
Facade design

- Ground floor: passage cars, tram, bus, bike and pedestrians
- Train on the dike
Building design

- Building made of 2 parts: base and upper part
- East facade as an example
**Base part design**

- Emphasizes the passage
- Marks the functions in this area: **mainly public**
Upper part design

- Mass emphasizes the passage
- Marks the location of the UvA library
- Outer facade creates one entity
Facade design

- Section of railway: train on the dike
- Station hall to the south
- Neighborhood library to the north
Construction design

- Railway = main construction made of concrete
- Library = main construction made of steel
Entrance train platform

Plan design
- Ground floor
Plan design

- First floor plan
Plan design

- First floor plan

open area = heart of building
Plan design
- First floor plan
Plan design

- First floor plan
Plan design

- Second floor plan
Plan design

- Second floor plan
Plan design

- Second floor plan
Cross sections

- Cross section A = North - South
- Cross section B = West - East
Cross sections

- Relation between the functions
Technical installations

- Winter scheme
- Summer sheme

NEN 5077 - Industrie, weg- of spoorweglawaaai
Onderwijs functie: geluidbelasting 35dB
verblijfsgebied

Geluidmeting: 75 dB (bron Ministerie van Infra en Milieu

Dichte gevel + Dubbel glas met twee
gelamineerde spouwbladen: 40dB geluidwerend

Rc-waarde 3,5 m²•K/W,

Zonwering glas:
- zeer lage
- energiedoorkomstheid
- hoge lichtdoorlatendheid
- thermische isolatie Ug-waarde van 1,0 W/m²K.

Introduction Problem statement Research and analysis Urban intervention Architectural intervention
**Fragment section facade**

- Double facade
- Railway construction
- Facade put back = gallery
• vezelcementplaat
• spouw/stijl- regelwerk
• geïsoleerde stalen prefab sandwich panelen
• gipsplaat

• strekmetaal t.b.v. zonwering + doorvalbeveiliging
• spouw 1200mm t.b.v. gevel onderhoud
• vliesgevel geïsoleerd glas
Bedankt voor uw aandacht