P5 PRESENTATION

MATTHIJS LA ROI

PHEROMONE NETWORKS

Hyperbody graduation studio p5 presentation  29 - 06 - 2012  www.matthijslaroi.com

Advanced Non-Standard & Interactive Architecture - Formations & Embodiments
00 URBAN STRATEGY
01 FORM & FUNCTION
02 LANDSCAPE
03 STEEL STRUCTURE
05 ENCLOSURES
06 FABRICATION

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Advanced non-standard & interactive architecture - research & experiments
URBAN STRATEGY

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Advanced Non-Standard & Interactive Architecture - Formations & Embodiments
Almere pampus

Assignment?
Almere central

Assignment!
The amount of travelers from and to Almere for every day will grow from 40,000 in 2009 to 100,000 in 2030. MVRDV Concept Structuurvisie Almere 2.0
age 14-25  (student population)
age 25-65  (working population)
age 65+    (pensioned population)
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by Matthijs la Roi
Hyperbody graduation studio p4 presentation 25 - 05 - 2012 www.matthijslaroi.com
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Main road to centre

Main shopping street

Business quatre

Secondary school
Proposed instruments

- Short-stay hotel
- Supermarket
- Art-house cinema
## Activity pattern

<table>
<thead>
<tr>
<th>Time</th>
<th>Short-stay hotel</th>
<th>Supermarket</th>
<th>Art-house cinema</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30</td>
<td><img src="image1" alt="People" /></td>
<td><img src="image2" alt="People" /></td>
<td><img src="image3" alt="People" /></td>
</tr>
<tr>
<td>12:30</td>
<td><img src="image4" alt="People" /></td>
<td><img src="image5" alt="People" /></td>
<td><img src="image6" alt="People" /></td>
</tr>
<tr>
<td>17:00</td>
<td><img src="image7" alt="People" /></td>
<td><img src="image8" alt="People" /></td>
<td><img src="image9" alt="People" /></td>
</tr>
<tr>
<td>21:00</td>
<td><img src="image10" alt="People" /></td>
<td><img src="image11" alt="People" /></td>
<td><img src="image12" alt="People" /></td>
</tr>
</tbody>
</table>

### Age Groups
- **Age 14-25** (student population)
- **Age 25-65** (working population)
- **Age 65+** (pensioned population)
## Transferhub program

### Transport

<table>
<thead>
<tr>
<th>Platform</th>
<th>m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metro platform 1</td>
<td>210</td>
</tr>
<tr>
<td>Metro platform 2</td>
<td>210</td>
</tr>
<tr>
<td>Intercity platform 3</td>
<td>340</td>
</tr>
<tr>
<td>Intercity platform 4</td>
<td>340</td>
</tr>
<tr>
<td>Intercity platform 5</td>
<td>340</td>
</tr>
<tr>
<td>Intercity platform 6</td>
<td>340</td>
</tr>
<tr>
<td>Stoptrain platform 7</td>
<td>340m</td>
</tr>
<tr>
<td>Stoptrain platform 8</td>
<td>340m</td>
</tr>
</tbody>
</table>

### Food

<table>
<thead>
<tr>
<th>Location</th>
<th>m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burgerking</td>
<td>300</td>
</tr>
<tr>
<td>Kiosk/coffeecorner</td>
<td>50 x 3</td>
</tr>
<tr>
<td>AH to Go</td>
<td>150</td>
</tr>
<tr>
<td>Starbucks</td>
<td>200</td>
</tr>
<tr>
<td>Foodcourt ‘la Place’</td>
<td>300</td>
</tr>
</tbody>
</table>

### Non-Food

<table>
<thead>
<tr>
<th>Function</th>
<th>m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media for games</td>
<td>75</td>
</tr>
<tr>
<td>Electronic, fun&amp;media</td>
<td>75</td>
</tr>
<tr>
<td>Bookshop</td>
<td>75</td>
</tr>
<tr>
<td>Flower store</td>
<td>75</td>
</tr>
<tr>
<td>Health &amp; Beauty</td>
<td>75</td>
</tr>
<tr>
<td>Bicycle store/reparation</td>
<td>150</td>
</tr>
</tbody>
</table>

### Station service

<table>
<thead>
<tr>
<th>Service</th>
<th>m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tickets &amp; service</td>
<td>250</td>
</tr>
<tr>
<td>GWK</td>
<td>75</td>
</tr>
<tr>
<td>Toilets</td>
<td>75</td>
</tr>
<tr>
<td>Luggage lockers</td>
<td>50</td>
</tr>
<tr>
<td>KLPD/ Train police</td>
<td>50</td>
</tr>
</tbody>
</table>

### Station supporting functions

<table>
<thead>
<tr>
<th>Function</th>
<th>m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleaning</td>
<td>50</td>
</tr>
<tr>
<td>Garbage storage</td>
<td>100</td>
</tr>
<tr>
<td>Expedition</td>
<td>100</td>
</tr>
<tr>
<td>Facility management office</td>
<td>50</td>
</tr>
<tr>
<td>Storage</td>
<td>50 x 12</td>
</tr>
</tbody>
</table>

### Arthouse cinema

<table>
<thead>
<tr>
<th>Space</th>
<th>m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foyer</td>
<td>200</td>
</tr>
<tr>
<td>Tickets &amp; snacks</td>
<td>75</td>
</tr>
<tr>
<td>Restrooms</td>
<td>75</td>
</tr>
<tr>
<td>Cultural cafe/restaurant</td>
<td>180</td>
</tr>
<tr>
<td>Kitchen</td>
<td>40</td>
</tr>
<tr>
<td>Cool storage</td>
<td>15</td>
</tr>
<tr>
<td>Dry storage</td>
<td>15</td>
</tr>
<tr>
<td>Large projector space</td>
<td>225</td>
</tr>
<tr>
<td>(250 seatings)</td>
<td></td>
</tr>
<tr>
<td>Medium projector space</td>
<td>100</td>
</tr>
<tr>
<td>(100 seatings)</td>
<td></td>
</tr>
<tr>
<td>Small projector space</td>
<td>50</td>
</tr>
<tr>
<td>(50 seatings)</td>
<td></td>
</tr>
<tr>
<td>Technical projector room</td>
<td>30</td>
</tr>
</tbody>
</table>

### Fitness centre

<table>
<thead>
<tr>
<th>Room</th>
<th>m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lobby</td>
<td>30</td>
</tr>
<tr>
<td>Service desk</td>
<td>10</td>
</tr>
<tr>
<td>Back office</td>
<td>50</td>
</tr>
<tr>
<td>Restrooms</td>
<td>20</td>
</tr>
<tr>
<td>Dressing rooms</td>
<td>60</td>
</tr>
<tr>
<td>Fitness room</td>
<td>200</td>
</tr>
<tr>
<td>Small Fitness room</td>
<td>100</td>
</tr>
</tbody>
</table>

### Total m² (excluding platforms)

- **Transport**: 210 + 210 + 340 + 340 + 340 + 340 + 340m + 340m = 2,060 m²
- **Food**: 300 + 50 x 3 + 150 + 200 + 300 = 1,450 m²
- **Non-Food**: 75 + 75 + 75 + 75 + 150 = 450 m²
- **Station service**: 250 + 75 + 75 + 50 + 50 = 400 m²
- **Station supporting functions**: 50 + 100 + 100 + 50 x 12 = 590 m²
- **Arthouse cinema**: 200 + 75 + 75 + 180 + 40 + 15 + 15 + 225 = 870 m²
- **Fitness centre**: 30 + 10 + 50 + 20 + 60 + 200 + 100 = 400 m²

**Total m²**: 2,060 + 1,450 + 450 + 400 + 870 + 400 = 4,720 m²

---

### Additional functions

**Supermarket**: 40 + 70 + 400 + 100 = 550 m²

**Short stay hotel**: 30 x 20 + 10 + 80 + 50 + 100 + 40 + 50 = 530 m²

**Total m²**: 4,720 + 550 + 530 = 5,800 m²
## Infrastructure

<table>
<thead>
<tr>
<th>Functions according hierarchy</th>
<th>Speed priority</th>
<th>Max angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1 Transferhub users</td>
<td>&gt;&gt;&gt;</td>
<td>5</td>
</tr>
<tr>
<td>0.2 North-south fast pedestrian connection</td>
<td>&gt;&gt;</td>
<td>10</td>
</tr>
<tr>
<td>0.3 Cycle + overall fast pedestrian network</td>
<td>&gt;</td>
<td>15</td>
</tr>
<tr>
<td>0.4 Hotel - Supermarket - Fitness - Cinema - community centre visitors</td>
<td>0</td>
<td>30</td>
</tr>
</tbody>
</table>
alignment separation cohesion
04.01 Starting conditions
cohesion = 1
vision = 80;

04.01 Starting conditions
cohesion = 1.5
vision = 80;

04.01 Starting conditions
cohesion = 2
vision = 80;

04.01 Starting conditions
cohesion = 2.5
vision = 80;

04.01 Starting conditions
cohesion = 3
vision = 80;

04.01 Starting conditions
cohesion = 5
vision = 80;
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2m

4m

8m
Dijkstra algorithm (shortest walk)
<table>
<thead>
<tr>
<th>Activity pattern</th>
<th>8:30</th>
<th>12:30</th>
<th>17:00</th>
<th>21:00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-stay hotel</td>
<td>![People]</td>
<td>![People]</td>
<td>![People]</td>
<td>![People]</td>
</tr>
<tr>
<td>Supermarket</td>
<td>![People]</td>
<td>![People]</td>
<td>![People]</td>
<td>![People]</td>
</tr>
<tr>
<td>Art-house cinema</td>
<td>![People]</td>
<td>![People]</td>
<td>![People]</td>
<td>![People]</td>
</tr>
</tbody>
</table>

age 14-25 (student population)
age 25-65 (working population)
age 65+ (pensioned population)
North South pedestrian route
Transferhub route

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Global contextual infrastructure (cycle + pedestrian)
North South pedestrian route
TransfertHub route
delaunay  
voronoï  
designed triangulation  
designed warped surfaces
Warped surface
Transferhub functions:
1. NS service & tickets
2. Kiosk
3. Retail shop
4. Restaurant
5. Coffee house
6. Supermarkt
7. Storage
8. Cleaning facilities
9. Expedition
10. Kiss & Ride + Taxi
11. Bus station
12. Staircase to platform 1
13. Staircase to platform 2 & 3
14. Staircase to platform 4 & 5
15. Staircase to platform 6 & 7
16. Staircase to platform 8

Fitness centre:
17. Centrall hall
18. Desk
19. Office
20. Restrooms
21. Dressing rooms
22. Staircase to the fitness room

Art-house cinema:
23. Foyer
24. Tickets and snacks
25. Restrooms
26. Cultural cafe/restaurant
27. Kitchen
28. Cool storage
29. Dry storage

Groundfloor plan:
30. Large projector space (250 seatings)
31. Medium projector space (200 seatings)
32. Technical projector room

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Transferhub functions

1. NS service & tickets
2. Kiosk
3. Retail shop
4. Restaurant
5. Coffee house
6. Supermarkt
7. Storage
8. Cleaning facilities
9. Expedition
10. Kiss & Ride + Taxi
11. Bus station
12. Staircase to platform 1
13. Staircase to platform 2&3
14. Staircase to platform 4&5
15. Staircase to platform 6&7
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Fitness centre

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Art-house cinema

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27. Kitchen
28. Cool storage
29. Dry storage
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31. Medium projector space (200 seatings)
32. Technical projector room

*Groundfloor plan 1:200*
transferhub service
art-house cinema
fitness
retail
food/drinks
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**Cellarwall (inside outside)**
- Concrete situ wall 400mm
- Insulation 150mm (Rc >3.5M²/k.w)
- Battens 150mm
- Vapour proof membrane
- Multiplex 20mm
- Cavity
- Plasterboard 25mm

**Aluminum door frame (Schuco)**
- Type Royal 410

**Foyer floor (top to bottom)**
- 20 mm woodfloor
- service cavity
- Reinforced concrete composite floor 200mm
- heat curtain

**Wall/roof outside inside**
- Wooden floor 20 mm
- Battens 60 mm
- Ruled surface steel plate bend according to 3D model 8mm
- Lasercut steel beam 20 mm plate
- Plywood cnc cut 18 mm
- insulation 150mm(RC > 3.52/kw)
- Vapour closed membrane
- Steel ceiling 4mm

**Detail 02** 1:10

**Detail 03** 1:10
Structure + insulation
Shelves
Technical spaces
LANDSCAPE SUPPORT
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Cinema floor (inside outside)
- 20 mm wood floor
- Service cavity
- Vapour proof membrane
- Insulation 150mm (Rc > 3.5M2/k.w)
- Reinforced concrete composite floor 200mm
- Rubber strips for acoustic insulation 20mm
- Steel strip 8 mm
- Lasercut steel beam 20 mm
- Steel plate 8 mm

Ventilation intake Wooden battens for supporting the wooden floor

Steek concrete connection

Detail 04
1:10

Detail 05
1:10

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ENCLOSURES
Climatized area
(Retail)

Climatized area
(Foyer)

Wind and rain sealed area
(train station)

Outside

- 5000 p+
- 3600 p+
- 1200 p+
- 1500 p-
- 500 p-
- 1200 p-
- 1500 p-

Section B-B'
1:50

Detail 01

Detail 02

Detail 03

Climatized area
(Storage)

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Wall/roof outside inside
- Wooden floor 20 mm
- Battens 60 mm
- Ruled surface steel plate bend according to 3D model 8mm
- Lasercut steel beam 20 mm plate
- plywood cnc cut 18 mm
- insulation 150mm(RC > 3.52/kw)
- Vapour closed membrane
- Steel ceiling 4mm

L-profile bolted on steel plate

Aluminum door frame (Schuco) type Royal s50

Heat curtain

Steel prope for connection

Detail 02 1:10
Cellarwall (inside outside)
- Concrete situ wall 400mm
- Insulation 150mm (Rc > 3.5M2/k.w)
- Battens 150mm
- Vapour proof membrane
- Multiplex 20mm
- Cavity
- Plasterboard 25mm

Vapour proof membrane

Aluminum door frame (Schuco)
type Royal s50

L-profile bolted on the floor on top of a neoprene Rubber 5mm

Reinforced concrete composite floor 200mm

Foyer floor (top to bottom)
- 20 mm woodfloor
- service cavity
- Reinforced concrete composite floor 200mm
- Vapour proof membrane

1500 - P

Reinforced concrete composite floor 200mm

Isokorf 80mm

Detail 03
1:10
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THE END
THANK YOU