BIKE FACTORY 4.0

YISHAN DU
AMS MID-CITY

MOBILITY

SOCIAL REFORM

AMENETIES

SEMINAR - CITY OF INNOVATION
1. URBAN SCALE: AMSTERDAM
   WHERE: ARGUMENTATION OF SITE CHOICE

2. NEIGHBORHOOD SCALE: RAI COMPLEX

3. BUILDING SCALE
   TYPOLOGY AND DESIGN PROPOSAL
1. URBAN SCALE: AMSTERDAM
WHERE: ARGUMENTATION OF SITE CHOICE

2. NEIGHBORHOOD SCALE: RAI COMPLEX

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TYPOLOGY AND DESIGN PROPOSAL
The Zuidas will not only have sufficient influence on the Dutch economy but also be a crucial part of the ever-strong growing economy of Europe. With the close proximity with Schiphol, Zuidas will become a Global district located in Europe. Air travel has become much less expensive between major European hubs. The Dutch government and Europe has improved the connectivity of high-speed trains. Making mobility between Global district more possible. The European Union is experimenting with Hyperloop technology to make travel faster in some parts of Europe. The Schiphol, Zuidas and Lelystad airport connection seems very promising.

On a national scale the Zuidas will become much more of a Centre point within the ns-train service. High-speed train are implement in some situations, such as The Hague, Zuidas (Schiphol) and Groningen. The Thalys' next-generation high-speed train name the "velocity" departures from Rotterdam Central and goes via Zuidas (and not Amsterdam Central Station) towards Brussel and Paris. Train connection between Schiphol, Zuidas and Lelystad airport has increased. These three locations are part of an interlocking system moving commuters, tourists, and business-related passengers.

BROADER SCALE: AIRLINES, HIGH-SPEED TRAINS
LOCAL SCALE: PUBLIC TRANSPORT, BICYCLE

Evolution of cycle accidents.

Graph: Department of Infrastructure, Transport

Length of infrastructure per mode of transport.

Graph: Department of Infrastructure, Transport

Journeys per usertype. Each symbol represents 1,000 journeys.

Graph: Department of Infrastructure, Transport

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<tr>
<th>Residens</th>
<th>Visitors</th>
<th>Tourists</th>
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<td>2,9 journeys per day</td>
<td>2.2 journeys per day</td>
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Length of infrastructure per mode of transport.
HUBS: TRANSFER FROM “FAST” TO “SLOW”
Residents: 790,000 journeys per day

Visitors: 315,000 journeys per day

Tourists: 27,000 journeys per day

EXPERIENTIAL KNOWLEDGE FOR AMSTERDAMERS VS COMMON SENSE FOR EVERYONE
“HUBS FOR TRAM/BUS/METRO USERS”
EXPERIENTIAL KNOWLEDGE FOR AMSTERDAMERS VS COMMON SENSE FOR EVERYONE

1/3 OF THE POPULATION

Residents 790 000
2.9 journeys per day

Visitors 315 000
2.2 journeys per day

Tourists 27 000
4.0 journeys per day
(PROMOTION) HUB FOR CYCLISTS SITE CHOICE
STARTING POINT: SUPER-BLOCK MODEL
“SUPER-BLOCK”

Legend
- Current network
- Basic network
- Secondary network
- Residents, emergency
- Private cars & public transport
- Pedestrian & cyclists
- Motorised transport road
INTERPRETATIONS

1. P+R SYSTEM

2. BICYCLE PRIOR NETWORK

3. WATER STRUCTURE
1. P+R (PARKEREN + REIZEN) SYSTEM
3. WATER STRUCTURE
1910s
WATERWAYS: THE BACKBONES OF CITY EXPANSION TOWARDS SOUTH
BRIEF HISTORY: R.I. TO R.A.I.
DE RIJWIJEL-INDUSTRIE + THE ‘A’ FOR AUTO [CAR]
THEIR OWN BICYCLE EXHIBITION: A NATIONAL EVENT ONCE A YEAR
Upcoming events

17 Apr thru 19 Apr 2018
In-cosmetics 2018

17 Apr thru 19 Apr 2018
Building Holland 2018

19 Apr thru 19 Apr 2018
Modern Business Experience 2018

23 Apr thru 25 Apr 2018
BioProcess International - BPI 2018
ONCE A YEAR
MIX-USED EXHIBITION HALL

PERMANENT BIKE EXHIBITION
PROMOTION HUB
3 GATEWAYS FROM SOUTH
BOULEVARD: PEDESTRIAN CONNECTION
PUSH THE TUNNEL FURTHER
BICYCLE NETWORK EXTENSION
BICYCLE WONDERLAND 1KM
GROUP VISION
1. URBAN SCALE: AMSTERDAM
WHERE: ARGUMENTATION OF SITE CHOICE

2. NEIGHBORHOOD SCALE: RAI COMPLEX
WHAT KIND OF BUILDING DOES RAI NEED?

3. BUILDING SCALE
TYPOLOGY AND DESIGN PROPOSAL
**HOW TO REACH RAI AMSTERDAM?**

**By train**
Railway station Amsterdam RAI is 300 metres from the RAI and has direct connection with Delfthencentrum, Amsterdam Amstel, Amsterdam Zuid and Schiphol railway stations, which are linked to the international InterCity network. Follow the signs RAI Amsterdam when you leave the station.

**By tram, metro and bus**
Tram route 4 between the centre of Amsterdam, Amsterdam Centraal and the RAI (stop at Europaplein). From the Amstel railway station you can reach the RAI via metro 51 or bus route 65. Metro 51 also runs to Amsterdam Central Station.

**By car**
From the motorway A1, A2 or A4 you go to the ring road (A10) Amsterdam. Take exit 9, Amsterdam Rivierenbuurt. From this exit the route to the RAI car parks (P1, P2, P3, P4) is indicated.
P+Bike

Park your car at RAI Amsterdam and explore the city by bike? That is possible!
The RAI is a Hello-Bike parking spot.

The cost of using a Hello-Bike is not included in the car’s parking costs.

The Hello-Bike parking spot is located around the corner of Entrance F. The P4 garage is closest to the Hello-Bike parking spot.

Hello-Bike information »

Bicycles & motorcycles

There are bicycle stands near every entrance around the RAI grounds. In the case of events where many visitors are expected to come by bicycle, additional bicycle stands will be placed near the entrance to the event. Motorcycles can be parked free of charge next to the bicycle stands. There are no charging points for electric bikes or scooters.
hello-bike.
GOOD ANNUAL RESULTS FOR RAI AMSTERDAM ARE FOUNDATION FOR SUSTAINABLE GROWTH

More turnover and higher profits in 2017

With a turnover of 133.3 million euros in 2017 and an operating result of 6.6 million, RAI Amsterdam surpassed its turnover and profit of 2016. This was a particularly impressive performance as the cancellation of the AutoRAI and BedrijfsmessenRAI events had meant that the prospects for 2017 were only moderately positive. In addition to the good results, the RAI worked hard during 2017 on renewing its organisation and the RAI 2030 spatial development plan.

Read the annual report 2017

The 2017 operating result of RAI Amsterdam was €6.6 million, or 7.8% of turnover (2016: €6.4 million; 7.9%). The EBITDA in 2017 was at 24.0% and the net result totaled €5.3 million (2016: €5.0 million).

Focus on acquisition and growth of events

Over 1.5 million people visited the 443 events organized and/or facilitated by RAI Amsterdam in Amsterdam or abroad. In addition to the 71 international and 29 national exhibitions and conferences, we accommodated 118 stage shows and 293 other events,” says RAI CEO Paul Riemers. “Our strong focus on acquisition enabled us to attract various new events, which – combined with the growth of existing events – allowed us to fully make up for the lost turnover from the AutoRAI and BedrijfsmessenRAI. This is a fine achievement.”

Innovating to maintain competitive position

The RAI’s strategy will remain focused on increasing the ‘value of meetings’, with a special focus on innovation. “Besides our commercial efforts, we invested lots of time and energy in renewing the structure and culture of the RAI,” continues Riemers. “All in all, these programmes should help further increase customer satisfaction and strengthen our innovative strength. The latter is crucial to maintaining our competitive position in the future.”

Stimulating sustainable innovation

The RAI’s strategy and business model are aimed at finding a healthy balance between social (pseudo), ecological (green) and economic (profit) value creation. In addition to stimulating sustainability and corporate social responsibility in its own operations, the RAI mapped out the ways in which the various RAI events contributed to the UPA’s Sustainable Development Goals 2015. RAI Amsterdam aims to target the shaping of sustainable content and stimulate sustainable innovation within the programming of events.

Meeting place for everyone

The RAI is also seeking an even greater connection to the city and residents of Amsterdam. The RAI 2030 spatial development plan features initiatives to improve the ambience on and around the Europaplein, reduce the number of logistics movements and increase the links with the city.
“FRONT DOOR”
“OPEN THE DOOR”: BIKE THROUGH
WHAT KIND OF EXHIBITION SPACE?
1. URBAN SCALE: AMSTERDAM
WHERE: ARGUMENTATION OF SITE CHOICE

2. NEIGHBORHOOD SCALE: RAI COMPLEX

3. BUILDING SCALE
TYPOLOGY AND DESIGN PROPOSAL
CITY: BICYCLE PROMOTER  ---  PERMANENT BIKE EXHIBITION

RAI NEIGHBOR: BICYCLE BACK DOOR  ---  BIKE THROUGH

RAI SHAREHOLDERS  ---  ?
RAI Amsterdam B.V.’s activities take place under the responsibility of RAI Holding B.V. The Holding’s shareholders are: the RAI Vereniging (75%), a sector organisation for manufacturers and importers of means of road transport, and the Municipality of Amsterdam, which has a 25% stake.

The RAI Vereniging’s involvement in RAI Amsterdam B.V. is anchored in this organisation’s origins and the desire it still has to provide adequate accommodation for trade fairs organised for the sectors it encompasses. The Municipality of Amsterdam’s involvement is economic in nature. International trade fairs in particular were and are important drivers for the regional economy.

Extensive information on the RAI Vereniging and the Municipality of Amsterdam can be found on: www.raivereniging.nl and www.amsterdam.nl.
EXHIBITION: MEANS INSTEAD OF FINAL PURPOSE

HOW MANUFACTURERS ARE INVOLVED

1. MANUFACTURE
2. EXHIBITION
3. MARKET
ACEA regularly updates its interactive map of production plants. These plants operate across Europe, producing engines, passenger cars, light commercial vehicles, and trucks and buses.
INDUSTRY 3.0 - INDUSTRY 4.0

1st: Mechanization, water power, steam power
2nd: Mass production, assembly line, electricity
3rd: Computer and automation
4th: Cyber Physical Systems
EXHIBIT 2 | Industry 4.0 Is Changing Traditions

From isolated, optimized cells...

The Connected Factory in Action

INNOVATION

INCREASED INNOVATION AND PRODUCTION

TAP INTO INDUSTRIAL INNOVATION TO ENHANCE PRODUCTIVITY AND QUALITY.

AGILITY

CONNECT AND COLLABORATE EXTERNALLY

Connect to collaborate externally to share data, streamline processes, and optimize supply chain.

EFFICIENCY

LINK INFORMATION & OPERATIONAL TECHNOLOGY

Link information and operational technology to optimize processes and reduce waste.

OPTIMIZE ASSETS

OPTIMIZE ASSETS TO ENHANCE PERFORMANCE

Identify and optimize resources in real-time, reduce downtime, and ensure optimal performance.

RISK

MANAGE SECURITY 

Manage security and data protection to ensure the integrity and confidentiality of data.

INDUSTRY 4.0
INDUSTRY 4.0: LOCAL SCALE
MEETS URBAN NEED

MANUFACTURERS BENEFIT

MANUFACTURE

EXHIBITION

MARKET
FACTORY 4.0 =

SHOP + EXHIBITION + OWN MANUFACTURE

FACTORY 4.0 TYPOLOGY: FUTURE-ORIENTED “BIKE IKEA”?
DESIGN PROPOSAL
"BIKE GATEWAY" FOR RAI COMPLEX
MASTER PLAN: ‘NEW FRONT DOOR’
TWO-WAY NEIGHBORHOOD BRIDGING
(FOREIGN) PEDESTRIANS FROM RAI
(LOCAL) CYCLISTS
FIRST FLOOR PLAN
WORK FLOW BRANCH: CUSTOMIZE STUDIOS
ACCESSORY SHOPS & RENTALS
SECOND FLOOR: BIKE TEST FIELD
Pedestrian
Cyclist
Main work flow
Customize branch
Solar control louver with integrated photovoltaic module

Fine Wire Heat Exchanger (FiWiHex) summer behavior

Operable window
Natural ventilation

Rainwater collection to the canal

Heat is stored in the ground in summer time
Solar control louver with integrated photovoltaic module

Fine Wire Heat Exchanger (FiWiHex) winter behavior

Operable window natural ventilation

Mini heat exchangers

Raiwater collection to the canal

Stored heat is used to drive heat exchangers and radiant floor in winter time
THANK YOU!
ENJOY YOUR ONE-DAY CYCLE TRIP IN FACTORY 4.0!