Design for a Congress-centre for the Vrije Universiteit of Amsterdam, in combination with a Hotel, HiSpeed-Lounge and Train-station Amsterdam Zuid-As.
1. Location
2. Analysis
3. Strategy
4. Urban Planning
5. Architecture
6. Construction
7. Installations
8. Technical detail
Amsterdam:
**Poly-centric City**

#01: Zuid-as
#02: Historic centre
#03: Schiphol Airport
#04: Amsterdamse Bos
#05: ‘Amstel Schegge’
Amsterdam;

**Node and Place**

- located in the network of public transport in Amsterdam

- located on the typical ‘section of Amsterdam’, connection of all aspects of the city.
Findings:

- Split in Central Business District due to traintracks and A10
Zuid-As

Findings:

- Green in the area is ‘Buffer-green’: lack of leisure-green
- Lack of connection to Beatrix-park
Findings:

- Mono-functional CBD; only offices, public space deserted after office hours.
Zuid-As

**One Central business District : “Dok-model”**

Tunneling the traintracks and the lanes of the A10 creates new opportunities for the development of a
- new urban structure, with a core CBD and better connections
- new green leisure functions
- new buildings with more mixed functions

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**Solutions for the station**

Above: Station building
+ Potential landmark / point of recognition
+ Defines scale
- Obstructs continuity

Under: Station square
+ Open space = open connection
- space too large = lack of human scale

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**Dok-model:**
tunneling both the speedway, traintracks, and the station
+ new space to develop
+ connection North-South would be better: 1 Zuid-as;
+ better orientation
+ 1 square to dominate the public space
+ big investments necessary for realisation
+ orientation of facades changes
+ more problems with sun-light (environmental issues)
Zuid-As

**Approach**

- Landscaped roof of traintrack.
- Emphasis on Axis
- Mixture of functions.

**red: “hard”-axis:**
- road = straight, functional,
- mainly transport area; quick transport
- functions on axis: offices, facilities.
  (buildings 80% work, 20% living)

**green: “soft”-axis:**
- road = fluent, green, comfortable
- mainly recreational area; very slow traffic
- functions on axis: dwelling, leisure, catering.
  (buildings 30% work, 70% dwelling)
- plint of supporting functions; appartments on top

**square: intersection axes:**
- main orientation point
- high-urban environment
- stay and flow in one place.
- functions: hotspot as theater, hotels, restaurants

**design-section:** connect north-south + “Park Avenue” on traintrack

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**Strategy**

P5-presentation

**student:** Erwin Ruitenburg
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**date:** 06 April 2011

**tutors:**
Olindo Caso
Henk Mihl
Zuid-As

"Onderdokking" in urban plan
Zuid-As

**Structure of roads:** Ring.
Station

Concept

Roof landscape = place for staying
Under the roof = place for transportation
Openings to create connection from platforms and concours to Zuid-As
Situation

Plan Station
Roof; Section; Plan BG+Concours+Platforms
Architecture

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Station

Render

VU + station
Urban plan

place in urban layout defines the program for this plot;
Congress center for Vrije Universiteit is the landmark for the axis of
the new campus area, located on the end of Green Axis.
Building

Program

The parts work together and supplement each other with customers, users, means of transportation and leisure.

total program = 30,000m² ex. station
Building

**Program to building:**
program = congress, hotel and lounge, combined with station and park-functions.
theme = connection.
Building

**Concept-layout**

- Hi-Speed Lounge situated in core of the building
- VU Congress dominant occupant
- Hotel connected and at the same time on its own

- All three directly linked to Atrium-zone in building
Building
Connection Station-HSLounge//VU
cross section
Building

Connection Station-HSLounge/VU

render of interieur; building continues onto the concours-level; is situated in the station, and has at the same time its own characteristics.
Building

**Concept-layout; 3rd floor**
plot 50x110 meter trapezium; all functions linked to the zone in the middle; the atria.
hotel tower plot 30x20m.
Building

**Connection Green Roof-VU//Hotel**

plan 2nd floor.
Building

Connection Green Roof- VU//Hotel

Render
Building

**Interior and exterior**

crosssection

facade = horizontality = movement = analogy with environment

interior atrium = verticality = aimed for the higher = ambition in science.

atrium = connector of total building.
Building

**Atrium**

section

Atrium is the connector of the building; congress is about interaction between people, as is this building is about the atrium.

Visibility = encounter = awareness of others = awareness of place.
Architecture

P5-presentation

Building Atrium render
Building

Facades; North
Horizontality represents the movement that is happening around the building; but also provides shading from the sun.
Building

**Facades: South**
render; without green roof
Building

Lay-out

4 rows, with 2 tapering, and 23 columns, with distance 5,0 or 7,5 metres. Constructional beams all around to construct the facade-elements. Dilitations at the edge of congress part and around hotel.
Building

**Overall construction**

Steel truss to construct the cantilevered part of the main auditorium.
Building

**Stability**

plan 3rd floor

1 solid concrete slab connected to cores provides stability.
Building

Technical Rooms
- main auditorium has own LBK’s on the side, which also partly serve the atrium-space.
- the normal auditoria also have own LBK’s, placed next to them.

The intake of fresh air takes place in the cantilevered facade constructions, where also a WTW is placed nearby; the intake will be centred near the LBK’s, to reduce ducting.

-The cooling tower for the whole building is placed on top of the hotel; because it is a waterbased system with piping, larger distances are possible.
Installations

**Facades: lamellae**
render; view from auditorium on roof.

Too much shading, too little light entry into the building

Optimum shading

Too little shading, light passes through the louver blades
Building

Gevelopbouw 1:50
Details

Element t.p.v. vakwerk
Details

Element tussen vakwerkken

Doorsnede BB'
Details

Bevestiging element en vliesgevel
Technical Detail

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Materialization