Graduation
Tijl Uijtenhaak
14th January 2010

Railway station for the Dutch Olympics 2028
Research:
- Elegance
- Rhythm
- Transport
- Olympic Games 2028

Design:
- Location
- Concept
- Station
Using the Elegance of a Structure as it attractiveness in its architectural Design

Candela, 1958, Mexico

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Research

Elegance

Structural

Elegance

Flow of forces
Research

Elegance

Structural Elegance

Flow of forces

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Gaudi, 1890, Spain

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Origin of Elegance:

Latin: *Eligere*; Carefully selected which had a negative connotation.
Origin of Elegance:

Latin: *Eligere*; Carefully selected which had a negative connotation. Marcus Tullius Cicero propagated the *Vir Elegans*, The man who dares to choose...
Research

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Maillart, 1901, Swiss

Sculpting towards Elegance

Elegance economy of means

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Elegance

Sculpting towards Elegance economy of means

Maillart, 1936, Swiss

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Research

Elegance

Architectural

Elegance

sculptural

value

economy

of

means

Maillart, 1929, Swiss

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Architectural Elegance creating space
Research

Architectural Elegance creating space

Nervi, 1960, Italy
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Rhythm leading to Scale
Research

Station

Large spans
many people
transport
efficiency

Calatrava, 1989, France
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Research

Transport

Capacity estimation
rail transport
2020
Transport

Pakistan train on a busy day

Research

Solution

more

people

same

trains

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Research

Transport

Increase speed up to 581 km/h

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Research

Transport

Organisation on the Platform

Rotterdam | Utrecht | Amsterdam
---|---|---
Den Haag | Rotterdam | Utrecht

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Research

Olympic Games

Event needed to make this possible

Olympic buildup (national)

1. ao olympic standard
2. drawing events
3. world cup soccer
4. winning olympic bid
5. full olympic standard

2008
2012
2018
2021
2028

pre-legacy
post-legacy

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Research

Olympic Games

Claiming land as done in Dubai

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Research

Station

Capacity

Amsterdam central

160,000 per day

Cuypers, 1881, Netherlands
Research Station

Capacity
Berlin Hauptbahnhof
300,000 per day
700,000 during WC
von Gerkan, 2006, Germany

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Station

Capacity

Shinjuku station

3,640,000 per day
Design

Location

Schiphol

runways

1 Polderbaan 28,8%
2 Zwanenburgbaan 13,9%
3 Kaagbaan 32,5%
4 Buitenveldertbaan 7,4%
5 Aalsmeerbaan 14,5%
6 Oostbaan 2,4%
Urban plan during Olympic Games 2028
Design

Location

3D Impression of Size
Design

Location

Station in its surrounding

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Design

Concept

Importance of Day-Light
Design

Concept

Space and excitement
Design

Concept

Structure and Rhythm

Calatrava, 2009, Belgium

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Design

Concept

separation and binding of upper and underworld
Two special spatial spaces

Design

Station

Congress centre

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Design

Station

Continuation with space within the canyon
Design

Concept

Folding ground into the canyon

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Design

Development of the Canyon Station Structure Pure
Development of the Canyon with transport station.
Design

Station

Open space
canyon
Design
Station

closed
column
grid
Design

Station

Creating concrete wall
Design Station

Physical model
Design
Station
Development of the Canyon with light
Design
Station

Final layout
canyon

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Design
Station
Arrival from Schiphol to Olympic complex

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Design Station

3D Sight of arrival

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Design

Station

Arrival

At

-3

18m

below

ground

level

From Schiphol at sea

<table>
<thead>
<tr>
<th>Den Haag</th>
<th>Rotterdam</th>
<th>Utrecht</th>
<th>Amsterdam</th>
</tr>
</thead>
</table>

Schiphol at sea

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Design

Station

-2
12m below ground level

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Design Station

-1 6m below ground level

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Design
Station

Birds eye
Design Station

Side view
Front view
Design

Station

Train tracks need to be carried.
Design
Station
Train bearing column
Design

Station

Adding second row of columns
Design
Station

Adding Canyon walls
Design

Station

Adding floors
Design

Adding columns...
Design
Station
Final fase
structure
Design
Station
Roof
detail
Design
Station

Glass roof with spider fixings
Design

Station

Open space

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Design

Station

Column grid 6.5m
Design

Station

Closed column grid

3.25m
Design

Station

Closed column grid 1.875m
Design Station

Standing in the hall

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Design
Station

Organisation of building in the hall
Design
Station

To the trains

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Leaving the station