Parallel Session 1 – Station Design 1

Transit Oriented Development Case Study - Mechelen, Belgium

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Belgium network

3.607 km lines (314 km high speed)
6.515 km tracks
5.851 km electrified
554 stations
Infrastructure as a Motor for Urban Development

BUNDLING OF INFRASTRUCTURE

THE CREATION OF PUBLIC SPACE

URBAN DEVELOPMENT
Infrastructure as a Motor for Urban Development

The compression of 3 traffic infrastructures into a single interwoven ‘organism’.

City Centre

Train Station

Bundling of Infrastructure

Trains

Automobiles

Bicycles + Pedestrians
Infrastructure as a Motor for Urban Development

RECLAIMED URBAN SPACE > A NEW BIOLOGICAL CORRIDOR THROUGH THE CITY VALORIZED AS A BICYCLE ROUTE AND PUBLIC PARK LANDSCAPE.
Infrastructure as a Motor for Urban Development

Opportunity breeds opportunity > the compression of traffic infrastructure and the valorization of reclaimed urban space together stimulate localised urban development.

The train station as both a multi-modal transportation hub + an urban generator > a new ‘Centre’ within the fabric of a new urban district.
Infrastructure as a Motor for Urban Development

MASTERPLANNING > INTEGRATION OF TRAIN STATION + URBAN DEVELOPMENT (FUNCTIONAL SYNERGY & THE STRUCTURING OF PUBLIC OPEN SPACE).

- NEW PARK = 11ha
THE 'STATIONSPLAZA' AS AN EXTENSION OF THE PUBLIC URBAN REALM > THE INTEGRATION OF PUBLIC OPEN SPACE AT THE HEART OF THE TRAIN STATION.

THE 'STATIONSPLAZA' AS BOTH CIVIC SPACE AND POINT OF PASSAGE THROUGH THE TRAIN STATION.

PROGRAMMED ANIMATION AND SPATIAL QUALITY WITHOUT HINDERING STATION FUNCTIONALITY.
The Train Station as a Machine for Mobility

The Importance of a Compact Station: The Stacking of Functions in Order to Limit Transit Times Between Modi and Facilitate Visual Contact Between User Groups.

Spatial Continuum: Services and Shops Located at the Perimeter of the Plan in Order to Avoid Visual Obstructions.

Train Station: Organization, Connectivity, Transparency.
The Train Station as a Machine for Mobility

THE EFFICIENCY OF A COMPACT STATION > A MULTI-MODAL HUB

TRANSPARENCY > A STRONG VISUAL RELATIONSHIP (ORIENTATION AND SAFETY).
The Train Station as a Machine for Mobility

The station as a transparent transferium where circulation flows between pedestrians and cyclists are coordinated.
The Train Station as a Machine for Mobility

The train station as a distribution point for transport modi > the integration of an automobile ‘tangent’ and an underground parking (2,000 auto’s).

Traffic-free station environment

Interconnectivity > to Mechelen City Centre, Ragheno and Guldendal developments and Brussels Airport (in only 8 minutes).
The Train Station as a Machine for Mobility

A CANOPY DESIGNED FOR COMFORT AND SAFETY

- ETFE CUSIONS INSTEAD OF GLASS
- COMPOSITE STEEL AND WOOD CONSTRUCTION
- WIND TUNNEL ANALYSIS FOR WIND EFFECTS
- CFD STUDIES FOR FIRE SAFETY
Thank you for your kind attention