



## **Antwerp Central Station, all made up for the next century The motor of renewed urban development**

**Antwerp, 17 September. SNCB Holding, Infrabel, Euro-Liege-TGV and Eurostation are this week inaugurating two architectural gems: the Liège Guillemins Station and the Antwerp Central Station. "They undoubtedly differ extremely", says Vincent Bourlard, Stations general manager at SNCB Holding. "But they are in line with the same philosophy: to use the most advanced technologies and the highest standards in engineering so as to put high speed at the service of our domestic network and our daily customers, the train passengers." The inauguration of these two stations constitutes the final piece of high speed in Belgium, making it the first European country with a HST infrastructure from border to border.**

In recent years, Antwerp Central Station has received an impressive facelift. With this prestigious project, Eurostation and SNCB-Holding have fully prepared the eclectic structure for the arrival of the high-speed train and Antwerp Central has been restored to its former glory. This restoration is an outstanding example of how historical heritage can be successfully integrated in a future-oriented project. The design has obviously made an impression because earlier this year the American Newsweek magazine named Antwerp Central the world's fourth most beautiful station.

### **Listed building**

At the end of the 19th century, King Leopold II decided that Antwerp needed to have a station that would project Antwerp's image as a metropolis. Leopold's impact on the design is remarkable: his initials appear in many places as a decorative ornament and the stone lions bear witness to his fascination with Africa. The station consists of two structures:

1. An imposing concourse made of steel and glass (1895-1898):  
The roof covering the platforms is 66 metres wide, 186 metres long and 43 metres high. Designed by state engineer Clement Van Bogaert and inaugurated on 15 July 1898.
2. A station hall with classical stone façades (1899-1905):  
The hall was designed by the Bruges architect Louis Delacenserie. At Leopold II's request, he sought inspiration from the station of Lucerne (Switzerland) and the Pantheon in Rome. The result was a building with rich architecture in various types of marble and an imposing dome of 75 metres high.

In the sixties the station lost its leading role because of the advent of the motor car. It fell into decline and some even suggested that it should be closed down. Fortunately, the building was listed on 12 March 1975, saving it from the threat of demolition.

### **A contemporary destination for historical heritage**

At the end of the 1980s, the Belgian National Railway Company (SNCB) decided that Antwerp Central should become a major stop on the future high-speed rail link. However, Antwerp Central was a terminal station where all incoming trains had to reverse. In order to translate its new role as an HST station into practice, the terminal station had to become a through station, in other words, trains had to be able to travel north directly. Eurostation, a subsidiary of SNVB Holding, was commissioned to study this project and implement it and restore the monumental splendour of the edifice. Eurostation's design was not only a solution for high-speed trains, it also engendered urban renewal in the area surrounding the station.



### **Technological tour de force reaches 20 metres underground**

A 3.8 km rail tunnel was built underneath the city for the north-south rail link which runs below the underground railway and the foundations of the Central Station. The tunnel runs underground between Antwerp-Berchem and Antwerp-Dam stations. The station will have 14 platform tracks on three levels {one overground and two underground levels). The lowest level is 20 metres underground. This is where the trains running below the station building stop. The platforms of the other levels are located along the two sides of a large atrium, completely opening up these levels with daylight reaching down to the station's deepest point

Drilling the tunnel below the station building was a major feat of engineering using state-of-the-art technology as any risk of damage to the historical station building had to be avoided.

*"When Eurostation came up with the idea to lay a tunnel underneath the station building, there was at first considerable opposition. There was great concern that (unintentional) damage would be caused to the 19<sup>th</sup>-century listed monument. Eventually, however, we managed to convince the competent authorities of our proposal. The fact is that the monumental appearance was retained and indeed enhanced. By lowering the subsoil and constructing a central atrium, the steel platform roof gains in allure. " (Herwig Persoons, managing director of Eurostation)*

Eurostation was the first in Belgium to apply computer-controlled compensation grouting which involved injecting a network of pipes underneath the station building in preparation of specialised digging. This method made it possible to carry out the work without subsidence or cracks to the building. Another advantage was that the station remained operational while work was in progress.

### **Magical lighting**

Project architect Jacques Voncke soon understood that the new station must not become a "metro station". Previously the station only had a single level with ten tracks (+1) borne by a full-ground slope and brick vaults. A majestic atrium was created by moving the original overground tracks underground. This open infrastructure ensures that the sunlight reaches down to the lowest point (20 metres underground) through the platform roof. Moreover, the new lower levels acquired a direct view of the old railway cathedral, greatly enhancing the station's transparency. Even at the lowest level one intuitively finds one's way to the city.

*"Bringing new architecture into harmony with the railway cathedral was certainly no sinecure. My solution was to design a minimalist station, devoid of any embellishment. Explicitly no spectacular high-tech architecture in order to avoid a clash with the existing ornamentation. I did not want to work on details but highlight the grandeur of the (existing) station. " (Jacques Voncke, Eurostation project architect)*

The new atrium was erected in red brick, a reference to the material of the old vaults. Deeper in the station, the style becomes rougher and the red brick is replaced by concrete. Blue oblique lighting is used to conceal the imperfections of the rough concrete. At the various levels, Voncke designed lighting that accentuates the architecture and makes the traveller forget that he is walking 20 metres beneath the ground.



## **A proper second station entrance**

Originally the station was oriented exclusively towards the old city centre of Antwerp via Koningin Astridplein and Keyzerlei. Because of the second station entrance at Kievitplein, the quarter "behind" the station has been reconnected to the city centre.

It was Voncke's conscious decision not to turn this new entrance into a "back door". On the contrary, it became a station building in its own right with its own atrium, constituting a contemporary solution for the 100-year-old monumental hall at Astridplein. Accordingly, here Voncke again opted for a fully transparent and permeable design. Travellers are in direct contact with everything that is going on at the station (tracks, bike depot, car park and station forecourt). Also, the arches of the railway bridge separating Kievitplein from Pelikaanstraat have been opened up.

*"For the design of the new station entrance, I have worked with two axial systems, both of which are reflected in the structure of the glass building. One system corresponds to the city's grid, the other lines are parallel with or perpendicular to the tracks. I have also regarded the roof as a facade. In a way, the construction is one vast plane that is folded so that it becomes partly facade and partly roof. This correlation creates a dynamism which in its own way counterbalances the verticality of the new high structures erected right next to the station entrance." (Jacques Voncke, Eurostation project architect)*

It is clear that this second station entrance has generated substantial urban renewal in this district. For instance, right next to the entrance, a number of building projects with offices and hotel and residential accommodation are in the final stages of completion. There are also plans for new parks and living/working opportunities in the immediate vicinity of the station.

## **Station districts constitute a cohesive urban ensemble**

In the past, the ground-level areas below the platforms consisted of closed solid brickwork. Voncke has completely opened up these areas which are now used as a new, covered shopping/strolling area with many openings to Pelikaanstraat. It has turned Antwerp Central into the hub of an extensive urban open space. The city is as it were sucked into the station. The new strolling area links the old station building at Astridplein with the new station entrance at Kievitplein.

## **The station is more than just a transport interchange facility**

In the design of the renewed station, optimum account has of course been taken of the need to ensure that travellers can easily transfer from one mode of transport to the other. For instance, Koningin Astridplein, in front of the old station building, has been given a completely new layout. Vulnerable road users now benefit from a station forecourt free of traffic. Underneath the square, there is a car park whose first level is reserved for kiss-and-ride and bike depot facilities. The car park has a direct connection with the underground platforms. Under Kievitplein, there is now also a spacious car park and bike depot. The Astrid car park offers space for 400 cars. The parking lot near the second entrance now adds an extra 600. Moreover, the station has underground links with the Astrid and Diamant metro stations. Overground there are various local bus and regional coach stops at Pelikaanstraat and Astridplein. Franklin Rooseveltplaats, the regional transport coach station, is within walking distance from the station.



Jannie Haek, CEO of SNCB Holding, states: *"This is a perfect rendition of our station philosophy. As a result of all these changes and adjustments, the station has become much more than a focus for travellers. It is now a meeting place where something is always going on somewhere. Travellers, passersby and locals can now shop in the ground-level shopping mall with a clear view of the underground and overground levels. Popular cultural and family sites such as the Zoo and Elisabeth Hall are close by. But the district also attracts new initiatives and has in this way become a central meeting point".*

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## RESUME

Jacques Voncke      Engineer - Architect

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Education:              State University of Ghent 1971 - specialised in urban design  
Member of the Association of Architects

### Employment:

- 1971 - 1972              Ministry of Public Works - Department of Town and Regional Planning,  
Brussels
- 1972 - 1975              Project manager-architect at the SARTU architectural consultancy in  
Algiers in collaboration with Schindelholz and Deneriaz engineering  
consultancy of Geneva.  
Design of bridges and public buildings
- 1975 - 1979              Designer-architect at McKee, an American consultancy in Brussels.  
Design of industrial plants for international companies such as Shell,  
Hercules, Union Carbide, etc.
- 1981 - 1995              Project manager-architect at Tractebel Engineering Flanders in  
Ghent, then managing director and architect at the Varendonck group  
in Ghent.  
Design of office buildings, tram stations, distribution centres, micro-  
electronic units for national and multinational companies such as  
Atlas Copco, Alcatel, SKF, Barco, Electrabel, De Lijn, etc.
- 1995 - present              Co-founder and director of Signum, a multidisciplinary architectural  
consultancy in Ghent.  
Design of offices, laboratories, public buildings, etc.
- 1997 - present              Self-employed consultant for Eurostation nv.  
Design of office buildings, logistics buildings, stations and precincts  
(Schaerbeek station, Antwerp Central station, Gent Sint Pieters  
station, etc.)

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