



Source: TUC RAIL

Diabolo Airport Rail Link in Brussel, Belgium

DESCRIPTION

Sector Transport Infrastructure – Conventional Rail

Location Brussel National Airport

Procuring authority Infrabel (the Belgian rail network infrastructure manager)
NMBS (the Belgian rail operator)

Concessionaire Northern Diabolo NV

Background The **Diabolo project** is a complex project connecting the Brussels National Airport station at Zaventem (the **Airport station**) directly with the major axes of the Belgian network and also with several European cities, via the international axes Frankfurt–Liège–Brussels–Paris and Amsterdam–Brussels–Paris by allowing access to high speed trains service.

The **Northern Diabolo** Rail Link forms only a part of the larger Diabolo project and it delivers an underground rail link between the Airport station and the new dual-track railway line Schaerbeek–Mechelen (L.25N) along the E19 motorway.

Total length of the Northern Diabolo rail connection is approx. **3 km**.

The total investment of the Diabolo project amounted to **€ 678 mil.** and it included works delivered by:

- **Private investment by Northern Diabolo NV** into construction of the underground rail connection for a fixed amount of € 290 mil. It was the first PPP project in Belgium, and also,
- **Public investments by Infrabel and Flemish regions** into additional road and rail works delivered in the Diabolo project.

Description The project integrated road and rail works which were provided by one contractor, THV DIALINK consortium, which required for delicate project coordination and complex risk management. The project comprised of:

- **The Rail part** involving the extension of the 3 existing railway platforms at the Airport station to 425 m length to allow for Intercity trains, a new 300 m fly-over junctions to both directions and 2 single-track bored tunnels 1 070 m long with a 7,3 m internal diameter beneath the airport take-off runway and almost 3 km of tracks.
- **The Road part** involving upgrade of Machelen/Vilvoorde motorway exit on E19, viaduct and bicycle bridge. The road part of the Northern Diabolo project is financed by Via-Zaventem SPV.

The Concessionaire bears the construction risk and demand/traffic risk on the rail part.

Scope

Construction
The construction of the both road and rail parts was delivered by THV DIALINK consortium, which consists of CEI-De Meyer and Wayss & Freytag (both BAM Group), MBG, VINCI Construction Grands Projets and Smet Tunnelling.
The most spectacular element of the Diabolo project undoubtedly was the computer and laser-operated boring of two tunnel shafts. Both tunnels were bored separately using a 66 m long boring machine 16,5 m below ground, the main taxi and runways at Brussels Airport, so that the actual flight operations were never hampered during the construction works.

Maintenance
The maintenance is subcontracted to Infrabel.

PROJECT

Type **DBFM**

CAPEX **€ 678 million (CZK 17,5 billion)** was the total CAPEX of the Project, of which CAPEX of **€ 290 million (CZK 7,5 billion)** was financed through the Northern Diabolo NV private investment.

Current status Fully operational since 2012.

Concession contract The Contract duration is **35 years**, including 5 years for design & construction and 30 years for maintenance period. In 2047, the Concessionaire will transfer the Project to Infrabel for € 1.

FINANCE

Payment mechanism The project receives a combination of a **fixed availability income**, paid by Infrabel and a non-fixed **demand-traffic related income** paid by passengers via NMBS. The Concessionaire bears the demand/traffic risk. The sources of income are:

- An annual fixed availability payment from Infrabel indexed by inflation.
- Supplement charged to passengers for every trip to/from the Airport station.
- Annual contribution from the rail operators.

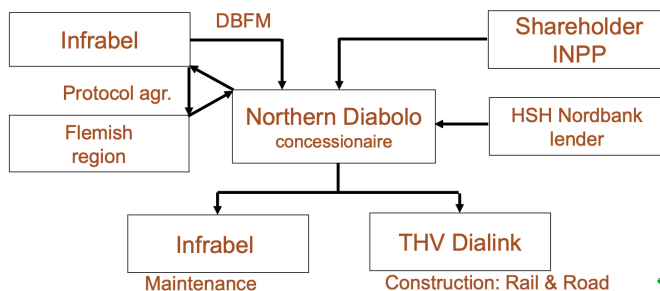
The surcharge (initially € 5,50 per passenger) is charged on most train tickets to and from the Airport station. Ticket gates at the station require a 2D barcode to be scanned to permit entrance or exit. The surcharge fee is collected by NMBS.

Investors Amber Infrastructure via INPP (100 %)

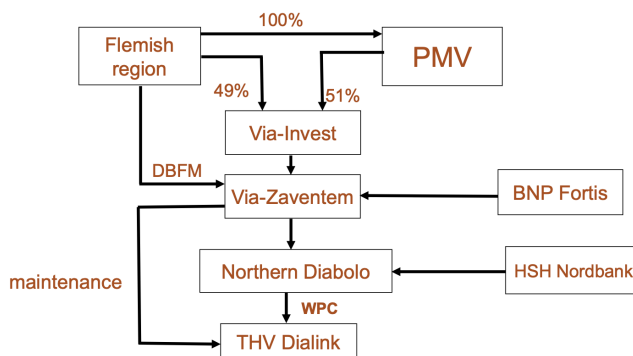
Financing € 370 million of total capital provided by the project finance:

- **10 % Equity: € 36 mil.** by shareholders.
- **75 % Senior Debt: € 279 mil.** by commercial banks.
- **15 % Revenues: € 55 mil.** gained from operations during the construction phase.

SCHEME The Rail part delivery structure:



The Road part delivery structure:



Source: Amber

MILESTONES

- 2005: Tender launched
- 2006: Preferred Bidder selected
- 2007: Contract sign & Financial close (September 2007) and Construction start
- 2010: Construction completed, and the equipment works start
- 2012: Testing phase start (January 2012)
- 2012: Operations start
- 2047: End of the Contract

CONTACTS

Investor	Amber Infrastructure
Concessionaire	Northern Diabolo NV: Bert Hofstee, Managing Director, t: +32 4750 7203, e: Bert.hofstee@amberinfrastructure.com
Public authority	Infrabel

LINKS

Sources *Notice: Based on publicly available information only. The description was not reviewed or confirmed by the Concessionaire or any of the project parties.*

- www.amberinfrastructure.com/our-sectors/case-studies/diabolo-rail/
- www.globalrailwayreview.com/article/12488/infrabel-is-putting-the-finishing-touches-to-its-diabolo-project/
- en.wikipedia.org/wiki/Diabolo_project

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