



# Barcelona – SPAIN

## Trambaix and Trambesòs

### Excellence in Managing Light Rail Projects

#### Contract facts

**TRANSIT AUTHORITY:**  
Autoritat del Transport  
Metropolità de Barcelona (ATM)

**CONCESSION HOLDER:**  
Tramvia Metropolità SA

**OPERATORS:**  
FCC Connex (66%), Sarbus (34%)

**CONTRACT  
(CONCESSION AND OPERATION):**  
BOT  
100% commercial risk  
for the concession holder

**CONTRACT TERM:**  
Start: 2007-2008  
End: 2032-2033  
(25 years)

**ACTIVITIES MANAGED:**  
System operations  
Maintenance of infrastructure/  
rolling stock  
Fare evasion control  
Marketing  
Ticket sales (PTA's agent)

#### Key figures

**SYSTEM:**  
2 light rails, 6 lines (3+3)  
29 km (15+14)  
56 stations (29+27)

**SERVICES:**  
974 departures/weekday

**RIDERSHIP:**  
310,736 trips/year  
23.2 million passengers/year

**KILOMETERS TRAVELED:**  
2.6 million km/year

**VEHICLE FLEET:**  
Alstom Citadis 302  
37 vehicles (19+18)

**EMPLOYEES:**  
187 employees,  
including 119 drivers

#### ➔ Challenge

In 2000, ATM, the Transit Authority of Barcelona decided to launch two light rail projects: one, Tram Diagonal-Baix Llobregat, in the western part of the city; and the other, Tram San Marti-Besòs, in the eastern part of the city. The light rail project issues were as follows:

- for the western project, to develop public transport capacity;
- for the eastern project, the challenge was linked to the urbanization of an industrial area.

Veolia Transport is heavily involved with the concession holder — Tramvia Metropolità — in construction, operation and maintenance. The construction of these two ambitious projects began in 2004 and the service was opened to passengers in 2007.

#### ➔ Veolia Transport's solution

##### Excellence in managing the project

- Veolia Transport influenced constructors to take into account customers' point of view.
- Veolia Transport succeeded in managing and coordinating several operators, providing a unique level of service to passengers

##### A high level of technical expertise

With 120 crossroads in a 15-km area, our expertise in system traffic control allows the light rail to reach the speed of 18 km/h without jeopardizing car traffic.

#### ➔ Objectives

The objective is to attract more customers (100% of the commercial risk and an additional bonus/malus scheme of 5% linked to ridership). The action plan is based on two goals:

- provide a credible and reliable system: 95.3% of the service must be on time;
- provide an integrated service by contributing to a ticketing project.

#### Result

2,400 trees planted,  
250,000 square meters  
of green zones,  
250,000 square meters  
of renovated  
footpath.

##### State of the art quality management system

Barcelona is a fully integrated management system certified ISO 9001, ISO 14001 certification, EN 13816 and OHSAS 18001.

##### Friendly service delivered to customers

- 187 employees with an average age of 35 are dedicated to passengers: lost and found, customer service, fare evasion control and information. In 2008, we had zero voluntary job leaves and 66% of the team was trained.

Considering the ridership growth, the urban regeneration and the environmental benefits, these two light rail projects have been a success. Every year, numerous delegations visit our operations.

#### Result

In 2004,  
32,278 validations;  
in 2008, 76,157 validations.  
35 out of 100 persons  
interviewed said they did  
not use public transportation  
before the light rail  
system became  
available.

#### Result

In the most recent  
survey, the quality of  
our service received  
an average score  
of 8/10.