



**Innovative design and operation of new or upgraded  
efficient urban transport interchanges [Theme: SST.2012.3.1-2.]**

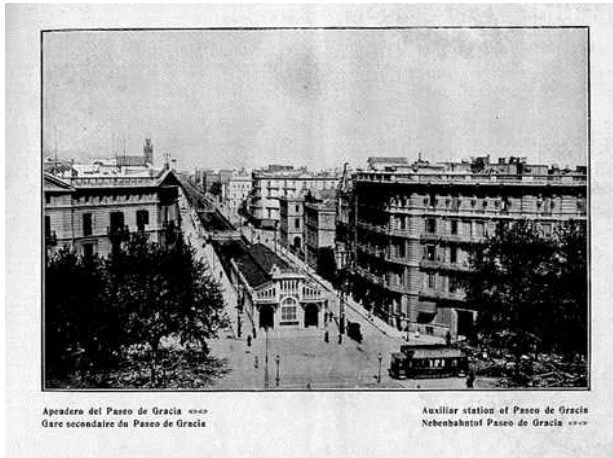
## City-HUB Project



**City-HUB Fact Sheet N° 8.1:  
Paseo de Gracia, Barcelona, Spain**

## Role of interchange

The interchange is one of the most central stations in Barcelona. The trains operate within Catalunya meaning that the train services are only possible for travels within the region and not to other parts of the country. The interchange also has three metro lines which serves the more local travels. The metro lines run throughout the central areas in Barcelona as well as the suburbs. Next to the interchange lies Passeig de Gràcia which is one of the most important shopping and business areas in Barcelona.



**Figure 1:** Passeig de Gràcia railway station in the early 20<sup>th</sup> century, shortly after its opening

## Location

In the early twentieth century, when the railway line was being built, it was located at the most centric point throughout the city, both then and now. The building, as shown in the picture, was opened in 1902 and, despite having only two tracks and two platforms it soon received as many passengers at the central station because of its privileged location.

It keeps, however, the great advantage of being extremely well located as its catchment area concentrates the highest density of jobs and

amenities that, despite its design more than defective, leads to crowded stations.

## Modes of transport

In 1924 *Gran Metro*, the first underground company in the city, built a subway line running under the Passeig de Gràcia and crossed perpendicularly the railway line already in service; it has become L3 in the current underground network. Despite the proximity between metro and railway stations and the fact that both stations were underground, no interchange corridor was foreseen between them. In the 50s the station became underground at the corridor with the metro station was set up.

In the 70s, once the first Metro plan had been written and approved, one of the branches of *Gran Metro* was split up and became a part of the planned new L4. This forced to build a new station on this line which, because of constructive requirements, is located more than 250m away from the existing L3 and, consequently, at a similar distance from the train station. A large neighbouring car parking, with no relationship with the interchange, did not allow the construction of the lobby of the L4 station closest to L3. Consequently, the interchange corridor is unnecessarily long, to the point of becoming deterrent. Moreover, it is the only one in the entire network between L3 and L4, one of the weak points in its functionality and connectivity.

In 1995, line L2 was opened, although its infrastructure had been already built in the 60s. There is a station on this line named Passeig de Gràcia as well, close to its homonymous of L4 which allows an easy change. But for this same reason, the connection with L3 and railway is extremely long and clearly also deterrent.

The result today is the Passeig de Gràcia interchange, consisting of three subway stations of L2, L3 and L4 Metro lines and a railway station on line R2. But the distance from one of its ends to the other exceeds 400m which in practice means some too long trips.