Abstract

Location of new stations or location changes on already existing stations in lines of railroad

The Catalanian railway network is based on an assembly of infrastructures that have their origin in the middle or final nineteenth-century. At first this assembly of lines had an industrial purpose as much as transportation of passengers, although finally this last use was imposed by commercial interest. In the beginning, the railway stations were placed in the surroundings of the urban zones, so to ensure the maximum facilities for the layout, as well as the reduction of the inconveniences that this service should cause to the inhabitants of the cities.

Even so, as time went by the territorial model suffered a great change. In the second half of the twentieth century the metropolitan region of Barcelona presented a tendency by the population to be relocated in areas of the second metropolitan ring, following a dispersed territorial model. It was on this point where the railroad played an important role. In fact, the railway was the answer to the search of a fast and efficient massive public transport, and that able to connect the city of Barcelona with its periphery. The creation of the service of Rodalies RENFE and the modernization of the Ferrocarrils de la Generalitat de Catalunya in the ends of last century permit to achieve this objective.

Even so, after almost 15 years of service in which neither the territorial expansion nor the dispersed growth stopped, it is needed to do an updating of the needs and the problems that presents the territory, as well as to seek possible solutions or alternatives using the already existing infrastructures. One of the methods to utilize is that of seeking new train station locations without modifying the present layout. With suitable locations we will be able to obtain an increase of the population cover by the railway network with a minimum investment and a low affectation to the service during the constructive period.

In the case of the Vallès Oriental, this method presents special interest, because it is a territory that has grown around some ways of communication such as the freeway AP-7, the road C-17 and the railways that, leaving Barcelona, are directed to Puigcerdà and Girona and France. This last one supposes the infrastructural backup of the present line of Rodalies C2. This line still has the same train stations that it had at the moment of its inauguration, in 1853, except for the station of Granollers Nord – Les Franqueses, opened in 2002.

So, it would be possible to seek new locations or modifications of the already existing train stations in this line based on mobility, population and urban development data, so to improve the service offered to the user.