

CRITERIS I METODOLOGIA PER A REDEFINIR LA XARXA D'AUTOBUSOS DE BARCELONA AMB MOTIU DE LA INTEGRACIÓ TARIFÀRIA I ELS CANVIS EN LES PAUTES DE MOBILITAT

The main objective of the present job is to lay the foundations that will let redefine the Barcelona's bus network, due to the characteristics of its actual situation and the changes that will take place in Barcelona's mobility caused by the new transport infrastructures and the new centers of generation and attraction of displacements that will appear in the capital.

Firstly, evolution of the bus network is studied and, as a result, we conclude that bus lines were created to satisfy economical reasons, rather than satisfying the need of making accessible public transport to all population. The network always has had too much radial direction, superposition of lines have been excessive and the network has suffered very little changes since the removal of tramways in 1971. Also the latest improving measures of the network are described, pointing up the creation of "Bus de Barri" lines and a very important increase of the total number of buses in 2002.

After that, a description of all bus lines of the different bus companies that exist in the city are described. The main company is Transports Metropolitans de Barcelona, with 81 conventional lines, 18 Bus de Barri lines, 3 turistic lines, 8 special lines and 2 night lines, but bus lines of other companies (Transports Ciutat Comtal, Authosa, Mohn...), and service on weekends and summer are also studied. Night bus network is studied separately.

An analysis of the network is done, and it studies and analyses quantitative and qualitative aspects that characterize the network (network formed by a sum of lines separately and not globally, actual unbalances in the network, analysis of the time between consecutive buses, bus lanes, commercial speed, occupation of buses rate, accessibility, quality, characteristics of passengers, etc.).

Known the actual state of the network, characteristics of mobility of the city are studied, its tendencies and impact caused by all the next actors that will cause, or are causing yet, important changes in demand of the bus network: integrated system of fares, new public transport networks and appearance of new centers of generation and attraction of displacements in the city.

Integrated system of fares, that since 2001 supposed the end of economical punishment of interchanges between different companies and public transport systems, has benefit specially buses, and has produced a very important increase of the number of passengers. The increase of passengers between 2001 and 2003 has reached the 17,9 %.

The 9th metro line will suppose a deep change in mobility of the city and many displacements actually made in the city will stop being radials, something that always characterised the Barcelona's public transport network, many actual bus passengers will take this line in the future. Apart from this, new tramway lines will also affect the bus, although locally, and nowadays coincidence of services made by both public transport systems exists. New creators of displacements centers will be: 22@ area in Poblenou, where services and residential activities will be importantly developed, the area of the new Sagrera station, that will become the main intermodal Barcelona's station, and the area placed in Litoral Besòs. Barcelona's bus network will not can be foreign to all these town planning changes that will be made in the city and that will have to satisfy the new needs of mobility created.

Characteristics of mobility in Barcelona and its Metropolitan Region are also studied, Quotidian Mobility inquiry made in 2001 is used.

As a result, a change of the Barcelona's bus network is proposed. The new network should have a global character, it has to favour transfers (as fares do not penalise them, it is necessary to reduce physical transfer problems), the network has to be simple and accessible (we propose a network based on orthogonal axes with which make just one transfer by bus it is possible to arrive to any point of the city, helped by Bus de Barri in areas where it is difficult to arrive with public transport), complementary of other public transport systems (refusing coincidences between buses and metro lines, and making easy transfers with them), effective (low intervals between buses, higher commercial speed with more quilometres of bus lanes, green wave in traffic lights that favours buses), and offering an information of the network and waiting time in bus stops with quality, making sure that passengers easily understand the network and aprofitate it as most as possible.