

## **A method to identify mobility environments in metropolitan transport corridors. A case study in Granada (Spain)**

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### **Abstract**

The challenge of developing methods to promote the urban integration of metropolitan transport corridors is the central objective of this paper. In this respect, the paper presents a method to identify mobility environments as mobility planning concepts for the urban integration of metropolitan transport corridors.

The influence of urban structure on mobility patterns has induced the development of different mobility planning policies across the world, among others: ABC location policy, in the early 90s, in The Netherlands, TOD policies (Transit Oriented Development) or TDA policies (Transport Development Areas), in the US, more recently. The ABC location policy sets the conditions on where businesses and other activities can locate in order to control mobility. TOD policies aim to create development densities around stations to raise patronage levels. Finally, TDA policies work at the interface between density, design, accessibility and integration to attract development to key locations where good quality public transport is available.

Although in the previous examples the objectives and instruments can be different, all of them have in common two aspects which are relevant in the promotion of sustainable mobility patterns: firstly, the recognition of urban structure as a factor to model access in urban spaces and, secondly, the promotion of the sustainable performance of transport infrastructures. Therefore, with this conceptual context in mind, it will be proposed a method to identify mobility environments as an integration concept of metropolitan transport corridors.

The method analyses different variables based on three relevant aspects for the metropolitan mobility: (i) the local dimension of urban space; (ii) the metropolitan specialization of urban space; (iii) the motorized transit in the corridor. The variables analyzed are: density, diversity, daily urban activities, motorized transit in corridor and influence of the corridors' crossing streets. To demonstrate these relationships, the method is applied to an important transport corridor in the metropolitan area of Granada (Spain) where a light rail system is being developed by the regional government.

The results obtained permit to identify five mobility environments in the case study which are most relevant to get a better urban integration of this transport corridor. The mobility environments identified are: (i) proximity and local dimension environment; (ii) proximity and transit distribution environment; (iii) intermodal stations environment; (iv) motorized transit environment; (v) metropolitan centrality environment.

**Keywords:** urban corridors, mobility environments, LRT