Solutions applicable by local administrations for urban logistics improvement

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This paper aims to establish a compilation of the solutions or initiatives that can be implemented by local administrations in order to improve freight deliveries in urban environments. These improvements are not defined from the point of view of logistic companies, but from the point of view of urban communities and the relation between freight transport and general urban traffic. All the solutions considered here are generic, that is, suitable a priori for any given urban area, although their degree of appropriateness and expected results will depend on the specific characteristics of the city. Solutions are classified into those related to public infrastructure, land use management, access conditions, traffic management, enforcement and promotion.

Keywords: City logistics; freight transport; urban areas; local administration

Introduction

Despite the relevance of freight movements in the support of economic life in urban areas, it is often found that urban logistic operations play a secondary role in city planning priorities. Much more attention is paid to freight transport on an interurban level, due to the evolution of supply chain analysis, but this attention is basically devoted to cost factors, which are to be minimized in order to improve the efficiency of the system. However, within the city there are other intangible factors which constrain freight transport and deliveries. Urban logistics has been defined as those movements of goods that are affected by particularities associated to urban traffic and morphology (Sustainable distribution, 1999). These factors are basically caused by the clash of interests between urban freight carriers and other stakeholders involved in urban traffic (Robusté, 1999), like passenger car drivers, buses, residents, pedestrians, etc. The conflicting needs for fluid displacements, parking spaces, environmental conditions, etc. (Kitada, 1992), and the usual coincidence of peak hours (Thoma, 1995), constitute a permanent source for inefficiencies and the need for short, medium and long-term planning. Besides, the increasing demand for all types of mobility in medium–large cities aggravates this clash, especially in the case of European cities, where historical city centers are usually not able to absorb the high levels of demand for passenger and freight transport. The solutions outlined here are tools available for local administrations for better planning and performance of city logistics systems. City logistics is the term used to denote the specific logistic concepts and practices involved in deliveries in congested urban areas, the “last mile” transport, with specific problems such as delays caused by congestion, lack of parking spaces, close interaction with other road users, etc. It is defined as “the process for totally optimizing the logistics and transport activities by private companies in urban areas while considering the traffic environment, the traffic congestion and energy consumption within the framework of a market economy.” (Taniguchi et al., 2001). It concentrates mainly on goods transport, although Allen states that urban logistics analyses should also