

LAND-USE AND TRANSPORT INTEGRATED PLANNING AND MODELLING IN CLUJ-NAPOCA, ROMANIA

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Abstract. The paper presents an example of successful reconversion of an industrial site located in the built-in area of Cluj-Napoca, Romania. This case study shows that land-use and transport integrated planning can be effectively implemented when a transport-oriented development (TOD) is designed for the redevelopment of an industrial site. Using TOD principles identified in the Romanian law and the technical criteria identified in the scientific literature, Sanex platform is analyzed to demonstrate it is a TOD. This would be the first documented TOD designed in Romania. A model is developed for TOD Sanex to estimate the impact that the redevelopment of the industrial platform into a multifunctional area will have on the local traffic. In this regard, two scenarios are analyzed – present scenario and future scenario after completion of the redevelopment. Two variants of the future scenario are discussed in connection to the Northern Mobility Corridor (CMN), the main project in implementation in the area, which is designed as a complete street. The results demonstrate that the induced traffic wouldn't have a considerable impact on the local traffic now or in the perspective of the redevelopment. It can be integrated by the street network, which could operate in appropriate conditions. Considering the need of revitalization of the urban and rural industrial sites at the national scale in Romania and the benefits of TOD, a methodological framework in four steps is proposed. This framework would be a helpful support in the sustainable urban reconversion process, especially to achieve the reduced impact over the built environment and urban mobility.

Keywords: *Brown field redevelopment, Cluj-Napoca, industrial site revitalization, Romania, Sanex platform, transit-oriented development, urban densification.*