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Speed vs locations: accessibility level evaluations The case of the Ring of Sciences in Lyon

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## Speed vs locations: accessibility level evaluations The case of the Ring of Sciences in Lyon

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### Abstract

For a long time, the cost-benefits evaluation of new road infrastructure, built in order to improve accessibility, has mainly been based on the time saving involved. This time is “monetized” and enables a decision as to whether the infrastructure is cost effective or not for a given time span. This method often promotes the building of high speed infrastructures to reduce travel time with, in the medium term, automobile dependency as a consequence. In today’s context of lower funding and the search for greater sustainability, the goal of this work was to evaluate if it is possible to reach good levels of accessibility by efficiently relocating facilities (in this study jobs) rather than by building new road infrastructure. We want to illustrate to what extent it is possible to make accessibility less dependent on travel speed, by changing job locations to reduce travel time. We have developed a simulation platform coupling a geographical information system and an algorithm for optimal relocations, and illustrate its use through the case of the Ring of Science road project in Lyon (France).

*Keywords:* Accessibility planning; Relocation; Optimization; Speed; Infrastructure evaluation

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