

# GIS–Based Accessibility Assessment for Public Services: Istanbul Case

Ozan Arif Kesik, Deniz Saglam and Arif Cagdas Aydinoglu (Turkey)

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## SUMMARY

The concept of accessibility has importance for accessing to many functions such as works, social facilities and accommodation in developing and improving urban areas. Transportation facilities and land use of a city affects the daily life of all the individuals dwelling in the city. Development of effective accessibility strategies makes the life of people in cities more habitable. The fact that number of vehicle owners increases result in many problems. Some of these main problems are environmental pollution, parking lot problems, traffic jam and accidents, physical inactivity and obesity. Accessibility to urban functions must be analyzed and planned firstly In order to have cities livable. Understanding public transit accessibility is important for encouraging shifts to reduce car and using public transit. There are 14.160.467 people living in Istanbul (Turkey) according to 2013 data. The number of travel is considerably high and private vehicles carry out most of these travels. Access to public transportation will pave the way for the decrease in the number of private vehicles in the traffic. In this study, Geographic Information Systems (GIS) techniques were used to assess transportation accessibility. Network analyst techniques support determining zone-based, isochronal, raster-based accessibility assessment on transportation network. 9 different metro and train lines of Istanbul that 400 million people travelled annually were analyzed as case study. Thus approaches for the effective use and planning of transportation infrastructure were examined to reach urban functions.