

DEVELOPMENT OF ACCESSIBILITY INDICATORS INCORPORATING PHYSICAL AND ICT RELATED COMPONENTS

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Summary: The concept of accessibility developed by Hansen (1959) has since then been extensively used in transport and land use analysis. Spatial accessibility conditions allow for the understanding of the opportunities provided by different land uses interacted with the transportation system operating conditions. For this purpose, infrastructure network characteristics and operating speeds are considered. To this day accessibility indicators have been efficient tools to measure transportation and land use impacts supporting the formulation of public policies around transportation and quality of life. Recently, the widespread of information and communications technology (ICT) offered the possibility to complement physical accessibility with a digital accessibility component, based on the evolution and significant increase in digital services. Examples of potential electronic substitutes for travel include, among others telework, telemedicine and online shopping. This means a change in the conception of understanding opportunities because they would stop depending solely on access by moving towards that point and would also begin to be measured depending on the access and connectivity of the user. The purpose of this work is to develop a conceptual model of accessibility incorporating both physical and ICT related components of accessibility. The conceptual model will be validated using a survey applied in the Lisbon Metropolitan Area, incorporating a 7-day travel, telework, and shopping diary. The results obtained will be discussed regarding the methodological implications for the development of accessibility indicators.