World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:14, No:12, 2020

Urban Transport System Resilience Guidelines

Authors : Evangelia Gaitanidou, Evangelos Bekiaris

Abstract : Considering that resilience implies the ability of a system to adapt continuously in order to respond to its operational goals, a system is considered as more or less resilient depending on the level and time of recovering from disruptive events and/or shocks to its initial state. Regarding transport systems, enhancing resilience is considered imperative for two main reasons: Such systems provide critical support to every socio-economic activity, while being one of the most important economic sectors and, secondly, the paths that convey people, goods and information, are the same through which risks are propagated. RESOLUTE (RESilience management guidelines and Operationalization appLied to Urban Transport Environment) Horizon 2020 research project is answering those needs, by proposing and testing a set of guidelines for resilience management of the urban transport system. The methods and steps towards this goal, through a step-wise methodology, taking into account established models like FRAM (Functional Resonance Analysis Model), and upon gathering existing practices are described in this paper, together with an overview of the produced guidelines. The overall aim is to create a framework which public transport authorities could consult and apply, for rendering their infrastructure resilient against natural disaster and other threats.

Keywords : guidelines, infrastructure, resilience, transport
Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development
Conference Location : Chicago, United States
Conference Dates : December 12-13, 2020