

# **Sustainable Framework for Smart Transportation System: A Case Study of Karachi**

**Muhammad Aamir**

**Abstract:** In this talk, a framework of smart transportation system is proposed, aiming to address the transportation problem in Karachi city. In modern day world, the mega cities and urban areas are on the edge of transformation into smart cities. With the advancement of engineering and technology, smart cities are designed to integrate and utilize these scientific innovations to provide smart solutions and social innovations for sustainable infrastructure, thus they are able to provide its resident highest quality of life by utilizing its resources effectively. One of the major application of smart cities is the Smart Transportation System, which provides safer, quick, environment friendly service to the residents. Thus, this study highlights the current traffic situation of Karachi and propose a framework to transform it into a smart transportation system. In order to have a smart transportation system, it is necessary to have in-depth knowledge and information about the city dynamics and its traffic related issues. Therefore, this study also highlights current traffic situation of Karachi, its road conditions and capacity, vehicles condition, alternate mean of transport (other than road-based system) and its present condition, and finally proposes a framework to develop a smart transportation system while keeping in mind the aforesaid traffic problems.

**Keywords:** Smart Cities, Smart Transportation, Smart Solution, Smart Technologies, Sustainable Transport Infrastructure