

PLAN

Enabling Real Time Traffic Monitoring to Achieve Dynamic Planning

Anshul Abbasi, Hinotoli V Sema, Prajкта Adhikari, Udit Sarkar

Mentor: Dr. Bimal Patel

Introduction

The current urban planning regime in India is rooted in the Town and Country Planning Act of the United Kingdom of 1947, and is primarily focused on detailed land use zoning. This practice was followed by many developed as well as developing countries, but for some years now, there has been a move away from rigid Master Plans in many countries, including the United Kingdom. The earlier approaches treating urban transportation as the consequence of land use planning are being given up in favour of simultaneous determination of policy, recognizing the two way relationship between land use planning and transportation. These changes are especially important for India in its current phase of structural transformation. Cities in India have different urban forms resulting in different and specific traffic layout.

There is a need to identify the various characteristics of transportation system and identifying different reasons for traffic congestion in different cities. Traffic is a major cause of various problems like air pollution, noise pollution, urban heat island, poor health, economic loss, hampering movement, lack of walkability etc. Traffic congestion is a confluence of many factors, especially lack of comprehensive urban and regional planning, among others. Traffic congestion cannot be solved only by traffic engineering and management, or by adding more roads, traffic lights, and traffic enforcers. It can be solved only through holistic and integrated planning. We should look at the demand side of traffic and transportation, which involves the land-use type, density, and location.

Idea

Team Plan aims to identify a tool that would help to reduce traffic congestion and would also enable to intervene at planning level to solve the related problems. Traffic congestion will be measured by calculating the traffic flow rate of the street and free flow rate. For determining peak hour traffic volume will be calculated through counting of vehicles and also the speed of the vehicle. Availability of parking spaces will be considered so as to monitor the congestion caused due to unauthorized parking. Also the topography, elevations and alignments of the road would be studied. A traffic action plan would be prepared to incorporate planning and design level interventions for the issue areas which would be a comprehensive i.e considering the land use, density etc. The plan prepared through the process would be implemented across different areas in the city. These implemented solutions will be monitored over a period of time to further analyze the critical issues faced due to traffic congestion and would be duly updated depending on the real time monitoring.

Bibliography

Bull, A., (2004), Traffic congestion – The problem and how to deal with it, United Nations, Santiago, Chile.