**TRAFFIC MANAGEMENT SYSTEM**

**Introduction**

Traffic management systems are designed to manage traffic flow and reduce congestion on roads. It provides permanent control across the network, automatically sets routes for vehicle movements as well as detects and solves potential conflicts.

**Problem Statement**

The traffic in the city areas were unavoidable for all citizens around the World. This directly affect the world growth by increase in travel time, delay of supplies like medicines, daily needs, etc.. Traffic also causes air pollution, accidents, and economical losses in many ways.

**Problem solution**

An IoT-based Traffic management system revolutionizes urban transportation by seamlessly integrating real time data from various sources. By leveraging interconnected sensors, cameras, and smart algorithms, it optimizes traffic flow, enhances safety, and reduces congestion. This innovative system promises to usher in a new era of efficient, adaptive and sustainable urban mobility.

**System Architecture**

1. **Sensors and Cameras**: these devices will be installed at key locations throughout the city to collect data on traffic volume, speed, and congestion.
2. **Data processing**: The data collected by the sensors and cameras will be processed using machine learning algorithms to identify the pattern and predict traffic flow.
3. **Data analytics**: The processed data were stored in the server and it compare and provides the data of the average traffic congestion on that time on every day.
4. **Mobile app**: The main motive of the app is to lead the user away from the high traffic congestion areas.
5. **Message Sign:** The message sign shows the best route for the peoples where the traffic congestion is less and time can be saved.

**Conclusion**

With its potential to adopt and evolve in real time, this system offers a promising vision for future cities, where mobility is seamlessly integrated, efficient, and sustainable. The IoT-based Traffic Management System stands as a beacon of innovation in this endeavor.