CHAPTER 1

1.1 Introduction

Transportation projects are essential to urban development as they are a major factor in determining the efficiency and effectiveness of urban transportation. Traffic management and control systems play a crucial role in the efficient functioning of urban transportation systems. These systems are designed to manage traffic flow, reduce congestion, and improve the overall transportation experience for both drivers and passengers. They are composed of various components, including traffic sensors, traffic signals, and traffic management software, that work together to optimize traffic flow.

1.2 External Costs

The installation of traffic management and control systems can have both positive and negative effects on the environment. While they can reduce traffic congestion and improve transportation efficiency, they can also result in increased emissions and fuel usage. These effects must be considered when evaluating the overall impact of traffic management systems.

1.3 Investment

The cost of installing and maintaining traffic management and control systems can be significant. However, the long-term benefits of these systems, such as reduced congestion and improved transportation efficiency, can outweigh the initial costs. All calculations have to be based on the same currency in order to ensure accurate comparisons.

1.4 Summary

Traffic management and control systems are essential to the efficient functioning of urban transportation systems. They are composed of various components, including traffic sensors, traffic signals, and traffic management software, that work together to optimize traffic flow. While these systems can result in increased emissions and fuel usage, the long-term benefits of reduced congestion and improved transportation efficiency can outweigh the initial costs.