This thesis provides a preliminary public transportation (PuT) proposal to improve the current service performance in the state of Xalapa in Mexico.

The aim is to provide an upgraded scenario based on the development of the following features; level of service, mobility, accessibility and connectivity.

Three different indicators were generated: PuT average commuting time (M1), PuT network density (AC1) and Coverage of access to the PuT system (AC2).

These parameters were the basis for estimating the general costs of the required infrastructure according to the PuT level of service standard definition developed through the assessment framework of this study.

It was found that both the PuT service proposal and the cost estimate are feasible in terms of robustness of the system and financial investment. Infrastructure improvement is reflected in social and economic gains such as job creation, investment in real estate and land value appreciation.

Master Thesis of Javier Eduardo Barragán Chaya
Examiners: Prof. Dr.-Ing. Ullrich Martin
Prof. Dr.-Ing. Markus Friedrich
Supervisor: M. Sc. David Camacho Alcocer