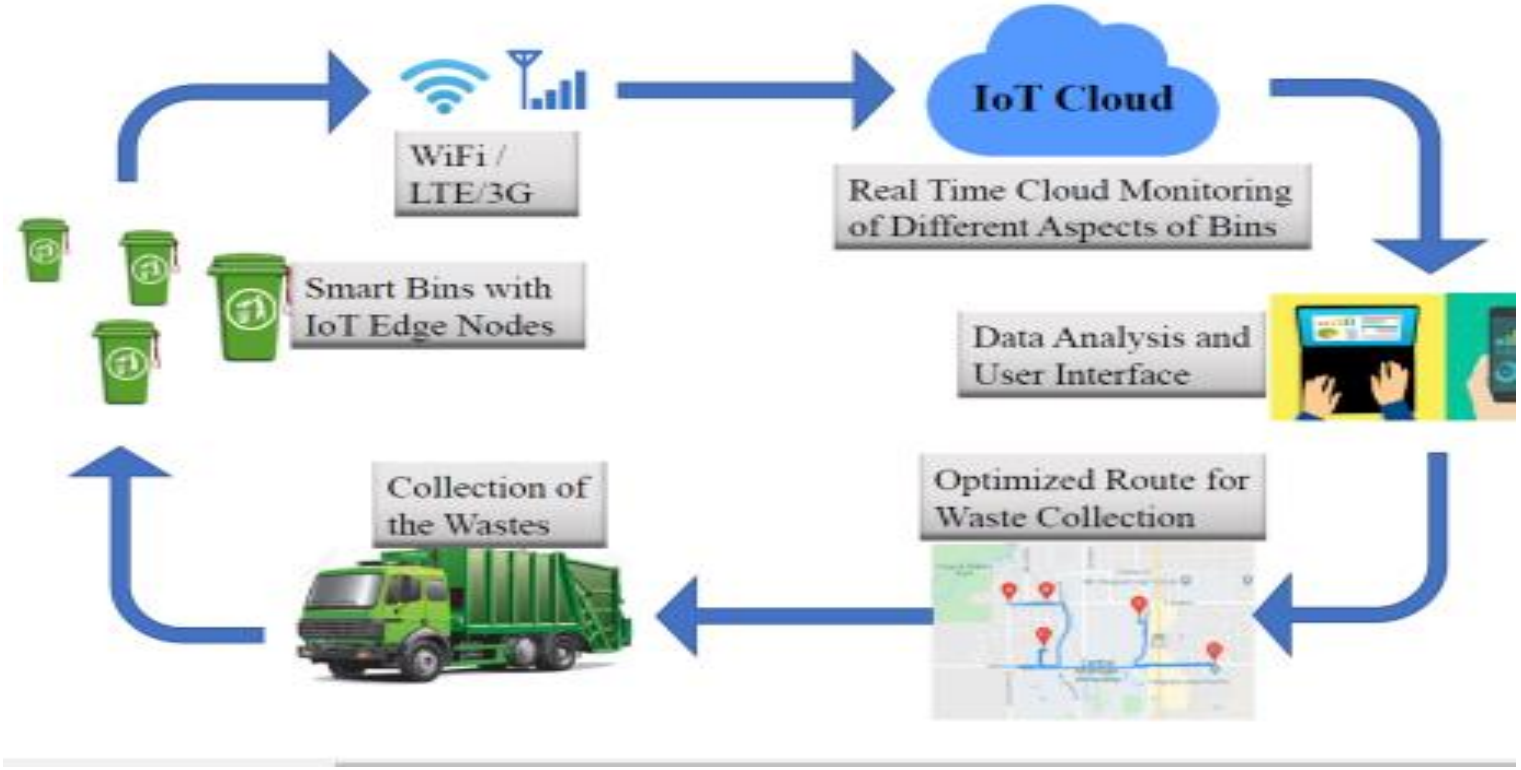
PROJECT DESIGN PHASE-1- SOLUTION ARCHITECTURE

DATE	1 NOV 2022
TEAM ID	PNT2022TMID26856
PROJECT NAME	IOT Based Smart waste Management System for Metropolitan Cities



ABSTRACT:

Waste collection and management is an integrated part of both city and village life. Lack of optimized and efficient waste collection system vastly affect public health and costs more. The prevailing traditional waste collection system is neither optimized nor efficient. Internet of Things (IoT) has been playing a great role in making human life easier by making systems smart, adequate and self-sufficient. Thus, this paper proposes an IoT based efficient waste collection system with smart bins. It does real-time monitoring of the waste bins and determines which bins are to emptied in every cycle of waste collection. The system also presents an enhanced navigation system that shows the best route to collect wastes from the selected bins. Four waste bins are assumed in the city of Mount Pleasant, Michigan at random location. The proposed system decreases the travel distance by 30.76% on an average in the assumed scenario, compared to the traditional waste collection system. Thus it reduces the fuel cost and human labor making the system optimized and efficient by enabling real-time monitoring and enhanced navigation.