



PUBLIC TRANSPORT OPTIMIZATION

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Title name : Proj_224782_Team_3

Varsha V	(113321104110)
Velavaluru Rajitha Sai	(113321104112)
Veluru Priyadarshini	(113321104113)
Yaddala Harshitha	(113321104117)
Yuva shree S	(113321104120)

PROJECT DEFINITION

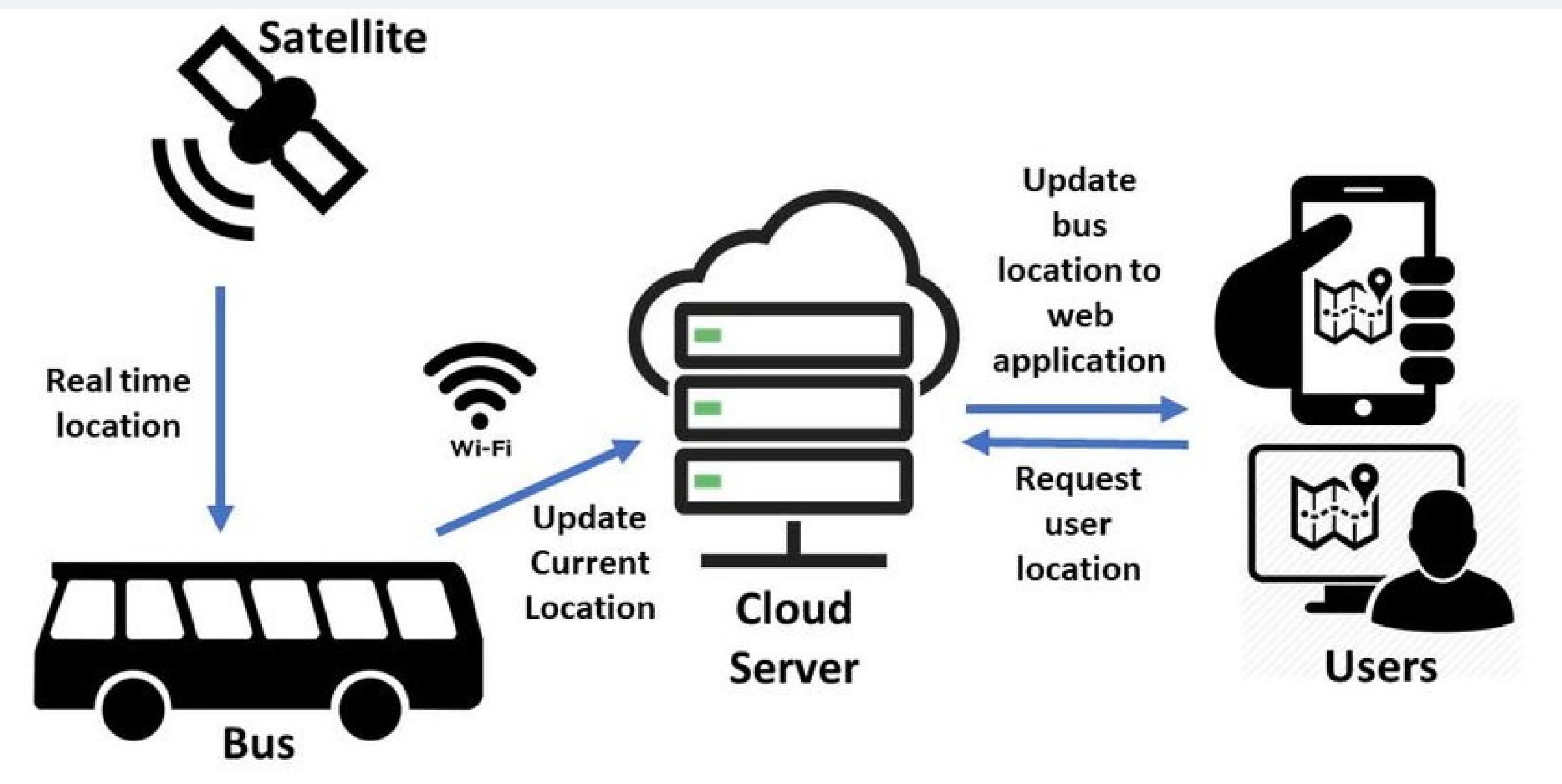
A Public Transport Optimization IoT (Internet of Things) project aims to leverage IoT technologies to enhance the efficiency, safety, and overall performance of public transportation systems. This project involves the deployment of sensors, data analytics, and connectivity solutions to collect and analyze real-time data from various components of the transit system.

OBJECTIVES

- Improve passenger satisfaction: This can be achieved by reducing travel times, increasing frequency of service, providing more reliable and predictable service, and improving the overall quality of the experience.
- Increase ridership: This can be achieved by making public transport more attractive and convenient, and by targeting specific groups of users, such as commuters, students, and seniors.

- **Reduce costs:** This can be achieved by improving operational efficiency, reducing fuel consumption, and negotiating better contracts with suppliers.
- **Reduce environmental impact:** This can be achieved by using cleaner fuels, reducing emissions, and encouraging more people to use public transport instead of private cars.
- **Improve accessibility:** This can be achieved by making public transport more accessible for people with disabilities, older adults, and people with limited mobility.

DESIGN AND IMPLEMENTATION OF IOT SENSORS



IOT SENSORS DESIGN

Designing IoT sensors involves several key steps and considerations to ensure they effectively collect and transmit data for specific applications

GPS sensor

Passenger counting sensor

Fuel or energy level sensor

Environmental sensor

REAL TIME TRANSIT INFORMATION PLATFORM

Real-time transit information platforms (RTTIPs) are software systems that collect and process data about public transport systems in real time. This data can then be used to optimize public transport operations and provide information to passengers. RTTIPs can be used to optimize public transport in a number of ways, such as:

- Adjusting bus schedules
- Redirecting buses
- Improving fuel efficiency
- Reducing emissions
- Providing on-demand ride-hailing services
- Providing multimodal transportation services

INTEGRATION APPROCH

An integrated approach to public transport optimization involves considering all aspects of the system together, including:

- Line planning: The design of the public transport network, including the routes and frequencies of services.
- Timetabling: The scheduling of services to ensure that they operate in a coordinated and efficient manner.
- Vehicle scheduling: The allocation of vehicles to services and the routing of vehicles between depots and stops.

**THANK
you**