

Project Design Phase-I
Solution Architecture

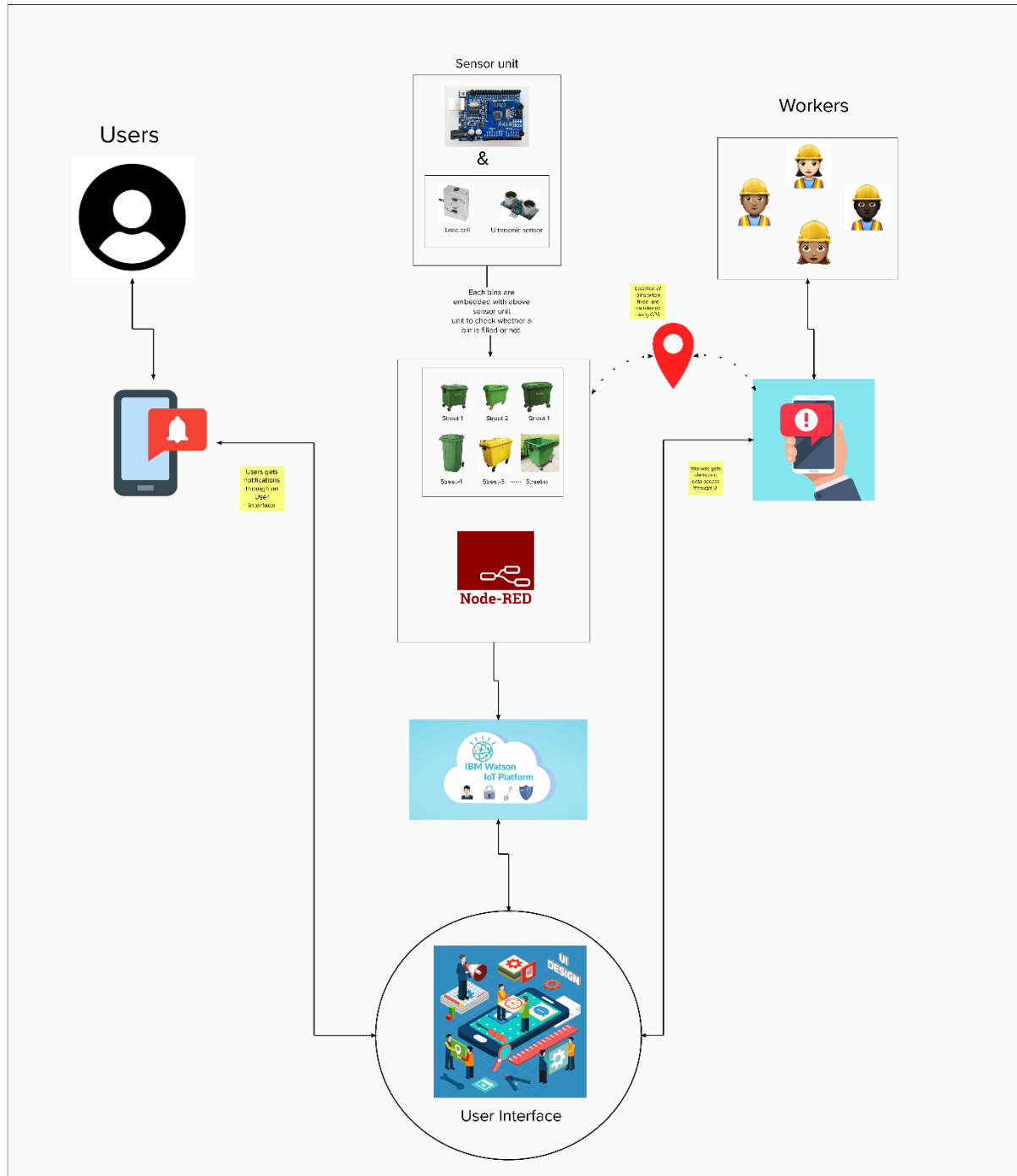
Date	19 September 2022
Team ID	PNT2022TMID22482
Project Name	Project - Smart Waste Management System For Metropolitan Cities
Maximum Marks	4 Marks
Team members	Saravanan G (Team lead) Anand Krishnan N Kishore Kumar J Mohamed Idris M

Solution Architecture:

Solution architecture of smart waste management system for metropolitan cities

- **Street waste bins are embedded with a sensor unit**
 - **The sensor unit has Load sensor and ultrasonic sensor embedded in an Arduino-uno board**
 - **GPS is also attached in each node**
- **Node red cloud service used to process data modulations in each node (waste bins)**
- **Every Waste bin in every street in the cities are connected through IBM Watson IoT platform. Every data is stored in the IBM cloud services.**
- **A user interface is built to give information and alerts to workers such as,**
 - **Sensor data to check whether the bin is filled or not.**
 - **GPS data of bins that are filled**
- **Users get information about local waste bin truck's location and arriving timings.**

Solution Architecture Diagram



Architecture and data flow of Smart waste management system

Reference :

<https://app.mural.co/t/batch75990/m/batch75990/1665055867173/db98332f997aa3bd6b36b53c81ee47640ac2ef75?sender=ufb422529e3523c7e81c85623>