PROJECT DESIGN PHASE-II

FUNCTIONAL REQUIREMENTS

Team ID: PNT2022TMID05128

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No	*Functional Requirement (Epic)*	*Sub Requirement (Story / Sub-Task)*
1	Detailed bin inventory.	▪ All monitored bins and stands can be seen on the map, and you can visit them at any time via the Street View feature from Google. ▪ Bins or stands are visible on the map as green, orange or red circles. ▪ You can see bin details in the Dashboard – capacity, waste type, last measurement, GPS location and collection schedule or pick recognition.
2	Real time bin monitoring.	▪ The Dashboard displays real-time data on fill-levels of bins monitored by smart sensors. ▪ In addition to the % of fill-level, based on the historical data, the tool predicts when the bin will become full, one of the functionalities that are not included even in the best waste management software. ▪ Sensors recognize picks as well; so you can check when the bin was last collected. ▪ With real-time data and predictions, you can eliminate the overflowing bins and stop collecting half-empty ones.

3	Expensive bins.	▪ We help you identify bins that drive up your collection costs. The tool calculates a rating for each bin in terms of collection costs. ▪ The tool considers the average distance depo-bin discharge in the area. The tool assigns bin a rating (1-10) and calculates distance from depo-bin discharge
4	Adjust bin distribution	▪ Ensure the most optimal distribution of bins. Identify areas with either dense or sparse bin distribution. ▪ Make sure all trash types are represented within a stand. ▪ Based on the historical data, you can adjust bin capacity or location where necessary.
5	Eliminate inefficient picks.	▪ Eliminate the collection of half-empty bins. The sensors recognize picks. ▪ By using real-time data on fill-levels and pick recognition, we can show you how full the bins you collect are. ▪ The report shows how full the bin was when picked. You immediately see any inefficient picks below 80% full.
6	Plan waste collection routes.	▪ The tool semi-automates waste collection route planning. Based on current bin fill-levels and predictions of reaching full capacity, you are ready to respond and schedule waste collection. ▪ You can compare planned vs. executed routes to identify any inconsistencies.