



IoT enabled Attendants Management System



Our Client

A leading healthcare service provider in India.

Why they needed us

There were different tasks like carrying medicines, moving beds, shifting medical equipment, moving patients on wheelchairs/stretchers, carrying patient's clothes, changing bed linen etc. to be performed by the attendants. Different attendants were skilled at different tasks. They had issues in finding the right attendant for any given task. Issues such as who is skilled at what? Are they free? Can they get to the assigned location in time? etc.

What we did

We provided them with an end-to-end solution of IoT enabled Attendants Management System.

Each attendant was given a hand held device, where the attendant can view the task assigned to him/her and can either accept or deny the task and also mark as complete the task that has been completed.

These devices also used Bluetooth Low Energy (BLE 5.0) beacons to send real-time location to BLE 5.0 readers which are present in multiple locations. These readers in-turn used LoRa to communicate this location to the gateways which are present in every floor.

The hand held devices also included a LoRa module to receive tasks from the gateway and to send the task accepted or denied signal to the gateway.

All communications from the gateway to the cloud and from the supervisor to the gateway happened over secure tunnels which were established by an IoT platform.

The cloud contained a database that held the details of all attendants (name, employee ID etc.) and their skill level corresponding to each type of task that there are. The cloud also stored the task history, i.e. what are the tasks that have arisen in the past, who have they been assigned to and by whom, if the attendant accepted/denied the task, in how much time was the task completed etc.

The cloud also hosted KOMPASS our data analytics engine, which constantly learns from the contents of the cloud to predict the types of the tasks that are likely to arise and the attenders who would be needed for those tasks. This information was used to come up with attendant suggestions for any new task. In simple words, our analytics engine took into consideration the possible future needs while providing attendant suggestions for the present tasks.

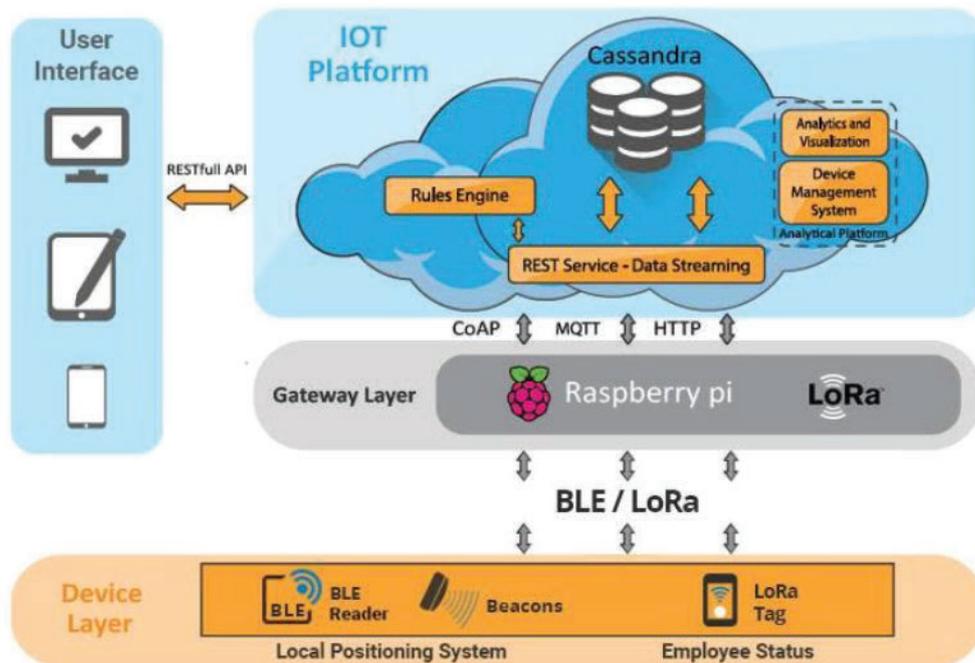
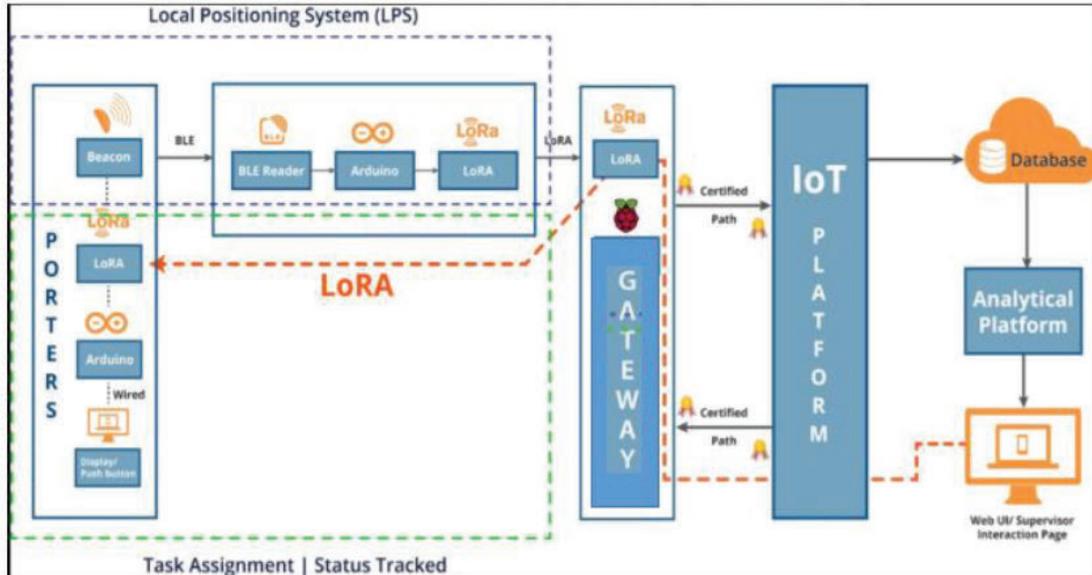
We built a dashboard through which the supervisor would be able to assign tasks, view the current location of every attendant, status of attendant, status of tasks, receive notification about any anomalous movement of the attendants, download reports etc.

How they benefited

They now had access to the real-time location of every attendant, their status (idle or occupied).

They were now able to better utilize the attendants to get the tasks completed quickly,

Both of the above points helped improve the quality of patient care tremendously.



About Redeem Systems

Redeem Systems is a pure-play Engineering and Digital Services Company with focus on mission critical highly engineered + high availability systems. Our global presence spans Asia-Pacific, Middle-east, Europe and North-America.

Our focus verticals include – Tele-communications, Medical Electronics and Aerospace & Strategic Electronics.

Our Product Engineering competencies include Product Design and Development, Verification & Validation, Emerging Markets Strategy and Product Life-Cycle Extension through Value Analysis and Value Engineering

Our Digital competencies are focused on Industrial Internet-of-Things (IIoT), Engineering Big Data Analytics and Software Defined Networking (SDN)/ Network Functions Virtualization (NFV).