



50% Less Operation Cost with  
IoT-Based Vehicle-Mounted Sign Boards

## Summarizing Situation

A next-generation Sign board Manufacturing Company was using a traditional signaling system to update the messages on the signboards installed at multiple sites. Their existing system had limited functionalities.

## Business Challenges

The signboard operators had to manually visit every site to update the signboard messages using a level-based controller box. This manual process was very time-consuming, expensive, and required a significant amount of labor, posing efficiency challenges.

Our client wanted to overcome these challenges with the smartest vehicle-mounted message signboard that fits any vehicle and application. However, replacing the existing bulky and complicated hardware with an IoT-based system (Dragon Board 410C) was challenging for the client.



# Solution

Softude developed an IoT-based system to meet the fundamental goal of the client, helping them operate signboards effectively and intelligently. Our system is a "Digital Advertisement" platform with cloud-based software and controller software.

Both components are connected to the Azure cloud, where the Azure IoT hub controls all the communications and signals. The controller software of the system is an IoT-based microcomputer and linked to signboards. It gracefully handles the flow of data between the cloud-based software and the physical signboards.

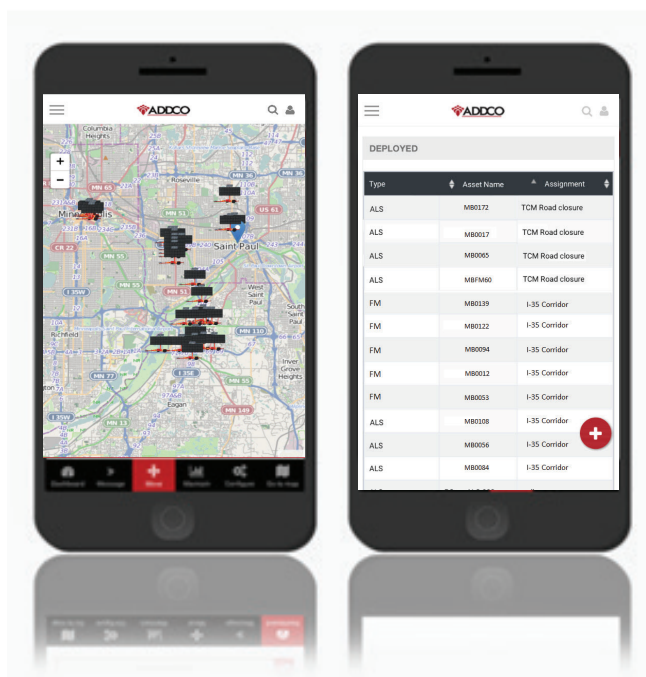
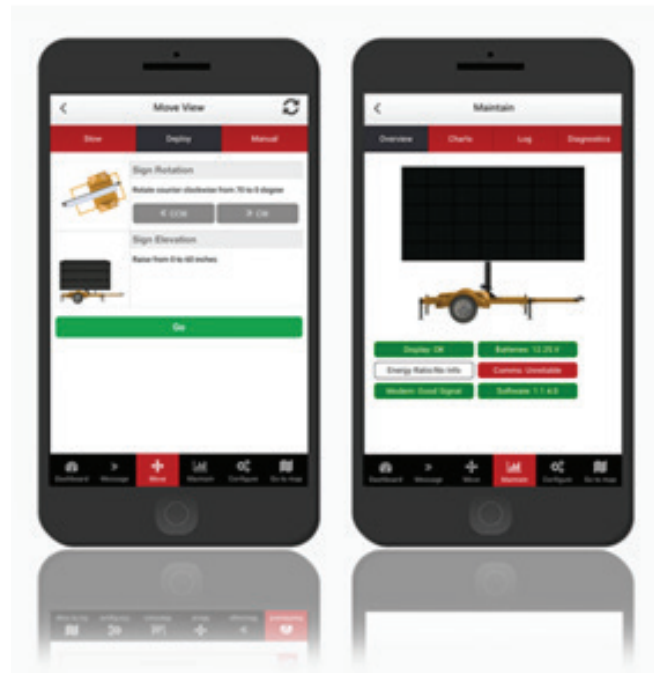
The IoT-based system is password protected and enables dynamic and real-time updates to the signboards' content.

## Key Features

- Remotely control the signboard operations from any smart device
- Create, edit, and display signboard messages from anywhere
- Management, deployment, or placement of signboard messages
- Smart messaging section for defining the type of messages
- Identify issues or damages on the signboard and send notifications for timely maintenance



- Alter signboard messages based on traffic signals using a radar sensor
- Detect sensor conditions and display messages accordingly
- Display weather temperature on the signboards
- Check and notify the battery voltage status
- Shows the real-time location of the signboards



- Manage projects which will be indicated further on the map
- Manage asset information that is assigned to the project
- Track the service engineer's login time
- Provide offline support
- Regularly sync signboard data with the cloud



# Device Intelligence



Sends SMS upon detecting an unexpected sign motion



Geo-fencing feature to protect the signboards



Trail lights for extra attention to motorists



Radar standard to know traffic movement in your work zones



Automatically update the equipment



Measures electric current passing through each pixel



# Impact

- 50% reduction in operation cost and time to maintain the signboards
- Update signboard messages from hours to minutes
- Easy tracking of the signboards' state and position
- The safety of employees enhanced with the automatic shutdown of operations during harsh weather conditions

## About Us

Incorporated in 2005, Softude is a global IT consulting and services company with expertise in architecting digital transformation solutions and providing software product engineering services. We are dedicated to creating innovative and interactive digital experiences that connect people to the brand. These software solutions that are used across 32+ countries are engaging audiences in-venue, on the web, and personal mobile devices. Our highly competent and trusted team delivers digital brilliance that accelerates our client's digital-first journey.

Softude is a CMMI Level 5 appraised, ISO 27001:2013, ISO 9000:2015, and a Great Place to Work For certified company.

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