RISHABH SOFTWARE

Case Study

# Field Commissioning App for Automated Beverage Line Cleaning Systems

Developed a cross-platform mobile solution for device installation, BLE-based validation, outlet onboarding, and service record management.


## PROJECT OVERVIEW

An Ireland-based automated beverage and draught-dispensing technology company partnered with Rishabh Software to overcome manual, disconnected commissioning workflows for its IoT-enabled automatic beverage line cleaning systems used across pubs, bars, and hospitality venues. We developed a mobile commissioning app that unified the end-to-end field commissioning process.

| Capability | Industry | Country |
|---|---|---|
| Mobile App Development | Food and Beverage Sanitation | Ireland |

## KEY FEATURES

The commissioning application was designed to support device setup, testing, onboarding, and service activities performed by field engineers. Key capabilities included:

### Secure Access for Field Operations

Access to commissioning, testing, and service workflows is controlled through role-based permissions and multi-level authentication. This ensures that only authorized service personnel can perform field activities and update device records.

### Outlet & Device Commissioning

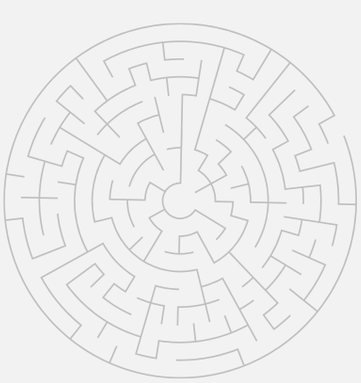
The app supports outlet onboarding, asset configuration, cleaning schedule setup, and device mapping as part of a guided commissioning process. Once commissioning is completed, configuration controls help prevent unauthorized modifications.

### Integrated User Onboarding

Outlet users and administrators can be added and assigned during the commissioning process itself. Automated notifications through email, SMS, and WhatsApp reduce manual follow-ups and help outlets get operational faster.

### BLE-Based Device Validation

Bluetooth Low Energy (BLE) integration allows service engineers to perform functional testing and validate device behavior during installation, maintenance, and repair visits before systems are handed over for use.



## CHALLENGES

- Commissioning activities relied heavily on paper-based documentation, making it difficult to maintain consistent records and track field activities in real time.
- Outlet user and administrator onboarding was largely managed through manual processes, creating delays in outlet activation and increasing dependence on back-office teams.
- Device testing during installation and maintenance lacked an integrated mobile workflow, making hardware validation inconsistent and difficult to document for future reference.
- Service records were not consistently linked to GPS locations, photo evidence, or device-specific history, limiting visibility into maintenance activities and asset performance.
- Hospitality venues often experienced unreliable internet connectivity, preventing engineers from accessing digital systems and increasing reliance on manual fallback processes.

## SOLUTION

Rishabh Software developed a Flutter-based mobile commissioning application for field service engineers. The app was designed to support outlet setup, device configuration, BLE-based testing, user onboarding, and service record management from a single interface. It was integrated with the client's existing administration platform and included offline capabilities to support commissioning activities in locations with limited internet connectivity.

### Built a Dedicated Cross-Platform Commissioning App

We developed a Flutter-based mobile application for Android and iOS to support field service engineers during commissioning and service activities. The app brought outlet search, device setup, user onboarding, functional testing, and service record submission into a single workflow.

### Digitized and Standardized Commissioning Workflows

The team replaced paper-based commissioning processes with a structured workflow covering outlet selection, asset configuration, cleaning schedule setup, device mapping, and user assignment.

### Integrated BLE-Based Device Validation

We enabled Bluetooth Low Energy connectivity between the mobile app and the installed hardware, allowing engineers to run Service Mode tests on-site. The mimic interface displayed real-time component status for valves, sensors, LEDs, pump activity, flowmeters, and temperature, helping engineers validate device performance before handover.

### Enabled Offline Service Record Capture

This field commissioning app development took place with the purpose of capturing service data in locations with limited internet connectivity. Engineers could record GPS locations, notes, parts used, test results, and photo evidence offline, with records automatically synchronized to the backend once connectivity became available.

## TECHNOLOGIES & TOOLS

Flutter .NET Angular

## Outcomes

**80%**
Reduction in Commissioning Documentation Time

**100%**
Geo-Tagged & Photo-Verified Service Records

**60%**
Faster Outlet Go-Live Time

## ABOUT RISHABH SOFTWARE

As a Digital Engineering and Enterprise Transformation leader, we empower businesses to scale, innovate, and thrive in today's digital-first world through technology rooted in trust and transparency. We leverage emerging capabilities such as Cloud, Data Engineering & Analytics, AI, Automation and Application Engineering to drive digital transformation and unlock new opportunities. We have successfully served across 25+ countries, and we work towards customer delight as "WE CARE."

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