IOT ENABLED COFFEE VENDING MACHINES

A Case Study

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Executive Summary

Coffee business is undergoing a sea change with companies offering coffee as a service. India coffee machine sales is expected to grow at 16% CAGR till 2023. However, a majority of these machines are traditional models without any mechanism to capture consumption data. On the other hand, coffee manufactures are exploring new avenues for revenue expansion including supplying coffee as a service. Spectrum7 aims to resolve this conundrum by implementing a state of the art IoT device that not only captures coffee consumption details but also identify patterns allowing businesses to predict seasonal usages.

Spectrum7's SpecVenti devices come with a 10" touchscreen that can be retrofitted into most of the older vending machines. Further, the devices are equipped with a Raspberry Pi to allow the coffee machines to make intelligent decision as well as to report various parameters back.

The solution integrates with a service cloud software (Currently Oracle Service Cloud is supported with flexibility to integrate with other service clouds in the future).

Each machine is also equipped with a SIM module for data transmission purposes.

The architecture is modular in nature to retrofit into more than 95% of the commercially available vending machines in the market today.
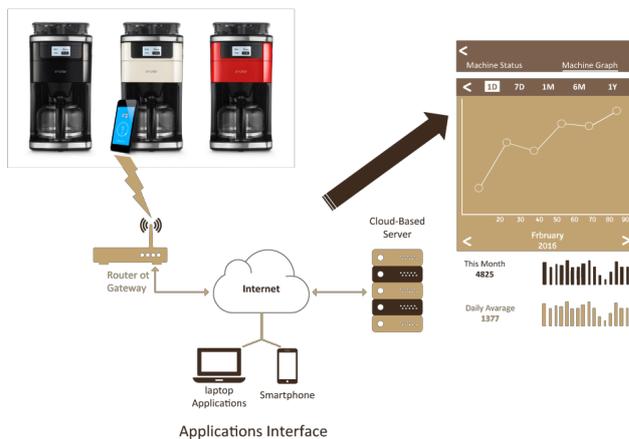
Architecture

The coffee vending machines are equipped with a 10" touchscreen with a programmable interface for menu selection. The menu can be programmed remotely.

The selected beverage is dispensed and the nozzle open and close is monitored. Based on a pre-programmed beverage size and the time elapsed, alongwith the beverage chosen is communicated back to the server.

Customers of SpecVenti have an option to also use Spectrum7's mobile application. The mobile application helps end users choose the beverage on their mobile and through a secure payment gateway enable transfer of funds. Upon successful completion of a transaction, the chosen beverage is dispensed.

The end user can also manage his loyalty points through the application.

The unique nature of the architecture allows various integrations possible. For eg. A customer currently pre-loads points for his employees and allows employees to consume beverage with their points balance.

Yet another customer, has the coffee vending machines setup in various public places. The end user scans a QR code for machine identification and then proceeds to pay for the beverage of his choice.

Advantages

1. Unique offering in the market that brings intelligence to older coffee vending machines.
2. Modular architecture helps infinite extensibility – From water dispensers to snacks vending machines.
3. Tailored IoT devices for vending machines instead of a one size fits all approach.
4. Pre-integrated with service cloud to automate reporting as well as service tickets raising and issue resolution.
5. Comes with a mobile application that allows faster go to market.