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# Leading U.S. supermarket and grocery chain reimagines shopping experience with in-store analytics

HCLTech's next-gen, IoT-based RII shopper behavior insights platform helped reduce the client's inventory shrinkage and improved store operational efficiency

Today's shoppers enjoy an unlimited array of in-store and digital purchasing options. To attract and retain customers and expand the presence of its physical stores, a leading U.S.-based supermarket and grocery chain sought to embrace an omnichannel retail model and reimagine its fulfillment and replenishment systems. The company's long-term strategic aspiration was firmly footed on investing in innovation and store transformation.

HCLTech's experience had shown that unifying shopper analytics would give the client greater inventory visibility, faster sales turnarounds and more cost efficiencies. The partnership was to define, design and deploy a future-ready solution that fueled growth. Capturing real-time data across all customer touchpoints drew actionable insights for building a comprehensive in-store strategy that transformed the shopping experience for the client's customers.

## The Challenge:
## Scaling organic growth through enhanced in-store buying experiences

Today's in-store shopping experience extends far beyond simply choosing items and checking out at the cashier. As customers navigate seemingly endless aisles, every product they toss into their carts can generate crucial data that retailers could use to improve the shopping experience. Insights extracted from this data could ensure seamless customer interactions in the company's physical stores.

This supermarket and grocery chain struggled with dated delivery processes and lean store planning and operations, which resulted in high inventory shrinkage and increased operational costs. In addition, same-store footfall volumes were not substantial. These factors, coupled with inadequate business insights on in-store consumer behavior, were impacting the company's long-term organic growth strategy.

The company was also very concerned about protecting customer privacy when gathering actionable data.

## The Objective:
## Strengthening the store's digital maturity

The client sought a scalable technological solution to drive a unified, 360° view into real-time in-store customer interactions. The client also needed to enhance customer support via assessment and re-validation of its legacy technology to integrate in-store points of sale with web and mobile interactions.

# The Solution:
## Accelerating the selection of the best enabling platform

To carve out the solution requirements, the HCLTech team first thoroughly assessed the client's existing business landscape. Decision-makers from the C-suite, store professionals and key client stakeholders all contributed to the assessment.

HCLTech then proposed an IoT-based, Real-Time In-Store Insights (RII) solution with a four-week implementation exercise on Microsoft Azure Marketplace. RII's differentiation is advanced laser-beam spectrum technology that monitors customer movement anonymously, without visually identifying the customer, thus meeting the client's mandate to protect customer privacy.

For the proof of concept, HCLTech installed and implemented RII in several sections of one store, including prepared foods and several checkout lanes. Using Microsoft IoT Azure components such as IoT Hub, IoT Edge and Azure VMs, RII leveraged IoT-powered insights to reimagine the physical store and transform the shopping experience by providing never-before-seen and actionable insights. Running independent of end-user devices and utilizing radar-sensing imaging technology, distributed computing and advanced AI models, it visualizes contextual insights on customizable web-based dashboards. It also delivers maps of in-store hotspots and trend reports. These features facilitate quick tactical and strategic decision-making.



Key functions of the RII solution include:

**In-store movement tracking:**
HCLTech chose Texas Instruments' 60 GHz industrial mmWave radar imaging sensors to achieve highly accurate results without jeopardizing customer privacy or incurring line-of-sight limitations.

**Demographics analytics:**
This module estimates age and gender data based on visualization movement extracted from IP cameras.

**Footfall analytics:**
Azure IoT Hub collects data across IoT gateways and VM/storage services to perform analytics operations.

## The Impact:
## Speed, scalability and seamless user experience

HCLTech's RII solution helped the client analyze customer engagement and buying patterns to transform store layout, redefine product lifecycles, create personalized shopping experiences and re-imagine staffing around shopper interactions based on footfall and purchasing trends. These moves equipped the client with a competitive edge by enabling speed, scalability and a seamless user experience, outcomes that can significantly move the needle on the company's growth agenda. RII helped accelerate the store's organic growth by reducing:

Inventory shrinkage
up to **15%**

Labor costs
up to **20%**

Marketing costs
up to **20%**

RII's resounding success established its amazing potential. Possible future initiatives include mapping out its use in all sections of the store and at other locations, as well as using 5G enabled IoT devices to track truck fleet movement on the roads. This move would provide greater supply chain visibility, allowing the company to respond quickly to supply chain issues. Scaling the implementation to the client's entire retail ecosystem promises even more resounding success in the client's progress to digital maturity.

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