

VANTIQ

Case Study

“We're laying the foundation with Vantiq to use newer technologies on faster chips within our ESLs, scaling up, and being able to deliver more information onto tags.”

- Simon Jones, COO | Store Intelligence

Quick Facts

- ▶ 6 week development time to build a scalable prototype
- ▶ Will scale to 1000+ stores supported in real time
- ▶ 95% reduction in time to update item prices
- ▶ Support for 20,000,000+ electronic shelf labels in production

Check out more
Vantiq Case Studies at

www.vantiq.com/case-studies/

Store Intelligence

With Vantiq, Store Intelligence is able to integrate 100,000+ Electronic Shelf Labels (ESLs) per store to update price images in real time and provide a better customer experience for patrons. The initial real-time system was developed in a record time of six months and has enabled Store Intelligence to exponentially scale their business.

THE CHALLENGE

As supply chains have grown in complexity and competition from online retailers forces brick and mortar to evolve, stores and their associates are having to perform more functions than ever before. This includes BOPIS (buy online, pick up in-store), Ship from Store, Third-party delivery, and more. The Coronavirus has put even more strain on associates as shelves were emptied faster than they could be stocked and new systems/technologies were put in place to comply with local regulations. In order for retailers to keep up and continue to thrive in the digital age a smarter, faster, safer, and more secure shopping experience is a must.

Vantiq's partner, Store Intelligence, set out to do just this by implementing real-time Electronic

Shelf Labels (ESLs) into retail stores, allowing for near immediate price changes in response to a multitude of factors. Store Intelligence had an on-premise solution and was looking to reduce cost, rapidly scale, and manage deployment by transforming their solution to run in the cloud. Store Intelligence first set out building their own in-house solution but after more than twelve months developing on Microsoft Azure, they realized an alternative solution was necessary in order to scale effectively.

Implementing ESLs may seem simple in concept, but a lot must happen behind the scenes for everything to run smoothly. With stores using different types of ESLs depending on the product or location in the store, it was very important for Store Intelligence to be able to enable effective communication across the different types of devices. It was also imperative that Store Intelligence shift from an on-premise server to a cloud-based approach to support more than one store at a time.

These factors and more brought Store Intelligence to partner with Vantiq to ensure the successful development and deployment of their real-time smart retail solution.

THE SOLUTION



Integration Across ESLs and Stores

Most stores looking to implement Electronic Shelf Labels (ESLs) have more than one location. Being able to update prices consistently across stores was a big issue for Store Intelligence, as their initial system relied on an on-premise database to push updates

to the ESLs. By switching to a cloud-based system, Store Intelligence's customers are now able to change prices in real-time, updating either a single store or all stores spread across an integrated network in response to changing market conditions.



Edge Enabled Scalability

Implementing edge computing into stores was a major factor Store Intelligence considered when choosing an application platform to develop their solution. Shoppers don't want to be forced to connect to the internet to reap the benefits of smart retail (especially in this age of increased scrutiny over data security and privacy). In addition, internet connectivity can be unreliable in many places, creating more issues for a system that must be always be online. The Vantiq platform addresses this issue by processing stored data locally, directly on the edge device (such as a smart cart or ESL) and distributing the management of those devices within each store. This allows shoppers to have the efficiencies of smart retail while still allowing the store to have top-down orchestration of everything happening inside.



Asynchronous Processing

The order in which data is received is important to the smooth operation of ESLs; with their previous database-centric approach, Store Intelligence was seeing a lot of bottlenecking and latency issues in their system. By switching to an asynchronous messaging protocol, Store Intelligence is able to free up compute power and substantially decrease the time it takes to update ESLs.



“VantIQ brought us a solution that we could build on top of a platform. All the components were there. All the support we needed was there. All the assistance to understand how to build and to build where we needed to was provided to us.”

- Simon Jones, COO | Store Intelligence

THE RESULT

Increase in Customer Spend

By utilizing real-time technology, Store Intelligence equipped stores are now able to drastically increase customer spend and loyalty. ESLs can offer gamification throughout the store such as loyalty programs or flash sales that are displayed and updated in real-time on the labels. These next-generation labels also much more effectively grab shopper's attention using vibrant colors or even moving graphics to draw in eyes.

Easily Integrates with Every Major POS and POSDM Platform

With many different point of sale systems being used in stores across the globe, it was important for Store Intelligence to seamlessly integrate with all of the major systems. Developing on VantIQ ensured that all current and future systems that are created can be connected to their real-time application using MQTT, Kafka, or other standard messaging protocols.

Quickly Scalable and Adaptable Retail Solution

Store Intelligence plans to rapidly expand its solution to serve large chains spanning entire countries or even globally in some cases. This required an application architecture that allows for such scalability. By using VantIQ's development environment, Store Intelligence is able to rapidly build custom solutions tailored to specific customer needs while also having the ability to be first to market with the latest in smart retail technology.



Built on a modern reactive architecture, VantIQ is an agile development platform to build scalable, distributed, real-time applications. Founded in 2015 by Silicon Valley legends, VantIQ provides maximum agility for businesses to drive operational innovation and accelerate real-time business awareness. Learn More at www.vantiq.com