

Deloitte.

THE RIPPLE EFFECT

Stories of purpose and lasting impact

A new day for the night shift

Kroger uses data analytics, AI, and ML tools to modernize its employee experience



A BETTER MORNING AFTER OFTEN BEGINS THE NIGHT BEFORE

THE SITUATION

"Did you find what you need today?" Retailers want the answer to this question to be "yes," and so do customers. Any retailer knows accomplishing this goal is not as simple as it sounds. Having the items customers want when they want them requires a complex, coordinated background system. Kroger continues to invest in technology to create a better customer and associate experience every day.

In retail establishments, much work happens overnight so early-morning shoppers are greeted with a well-stocked store. Deliveries are received, pallets are unloaded, and shelves are stocked. But what if a truck runs late? What products will that delay? And how many associates will be in the store to receive the product to put it on the shelf before the store opens?

Kroger's night associates understand these complexities well and understand just how time-consuming it is to manage them manually and through multiple systems. As part of Kroger's ongoing commitment to creating a seamless associate experience, the retailer sought to simplify these processes. Kroger teams envisioned a large modernization that could make key information about inventory and staffing available to associates on a single platform in a matter of seconds.



THE SOLVE



Kroger engaged a Deloitte team that included product managers, UX designers, developers, cloud architects, data scientists, specialists in retail operations, human capital, and change management. Alongside the Kroger Technology and Digital Team, Deloitte went to the night associates to learn what they wanted from a solution and where technology could deliver a bigger impact instead of needless extra steps. Then, the Deloitte team helped identify potential collaborators and solutions.

The result was a strategic collaboration among Kroger, Deloitte, and Google Cloud: A task management platform built with store associates in mind. It features two apps: My Day, for directing overnight crew tasks like stocking the store, and Store Walk, which helps the manager keep the store running smoothly. The platform uses Google Cloud's ability to process millions of real-time data signals, along with modern Operational Solvers which incorporates advanced algorithms to optimize for the next best action.

Complex Optimization Algorithms and **Operations Research Tools** dynamically optimize Kroger associate task lists based on inbound signals such as product delivery data and staff availability. Operations Research Solvers allow planning, scheduling and assigning tasks in real time.

With **Google Cloud Spanner's** fully-managed relational database, Kroger has built a true event-driven ledger, which enables the company to capture unique events—at different times throughout the day and from different stores—to help make better-informed decisions about how to direct associates to be more productive.

Kroger is using **Google Cloud's Dataflow**, a serverless, fast and cost-effective data-processing service for capturing and analyzing data from different sources, like labor rates, transportation logistics, sales forecasting, and out of stock information.

While developing My Day, the combined team sought real-time feedback from associates and adjusted accordingly.

CAN MORE-SATISFIED STORE ASSOCIATES SERVE MORE-SATISFIED CUSTOMERS?

THE IMPACT

The combined team worked quickly, and the pilot was ready within months. When the strategic collaboration was [announced](#), Jim Clendenen, Vice President of Associate Technology at The Kroger Co., said, “Technology and digital tools are fundamental elements of how Kroger continues to improve the associate experience, which in turn, enhances the in-store experience for our customers. Innovation is a critical component, and execution is even more important.”

The integration of data analytics, AI, and ML tools within the cloud environment is driving operational decisions within Kroger stores.

“Our associates are passionate about creating the best possible shopping experience,” said Clendenen. “My Day automates redundant tasks and gives associates space to focus their attention where they can make the biggest difference.”

Kroger can measure its success by pallets—or rather, the absence of them on store floors. It can also look to the shelves, which are typically fully stocked by the time customers arrive. By creating innovative experiences driven by data and technology, Kroger improves the customer experience and expands access to fresh, affordable food across the country.



LETTING AI DO THE BUSY WORK CAN HELP HUMANS
DO MORE IMPACTFUL WORK

THE PEOPLE

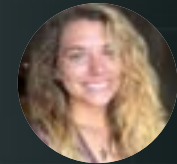
Meet the team behind the work. Discover how their unique skills and collective efforts have created lasting impact.

OLIVIA'S CONTRIBUTION

As the Product Program Manager, Olivia was responsible for overseeing the suite of applications and spearheading the Kroger Task Management Program.

She leads cross-functional teams and works closely with clients to strategically implement project objectives, such as introducing rapid discovery, which produced a strong project foundation and accelerated development timelines.

She actively empowers and elevates the contributions of her varied team of developers to build a vibrant and collaborative atmosphere.



OLIVIA GORDON
Product Program
Manager Retail and
Consumer LLP

RYAN'S CONTRIBUTION

As the store Subject Matter Expert for the Task Management team, Ryan was responsible for making sure that the product team developed apps that benefit store associates as well as produce useful data for future analysis.

By using Data Science and AI to find patterns, Ryan and his team may find value that's been overlooked or missed entirely. But the real impact was when he visited stores, and the employees told him how the applications improved their work and job satisfaction.

This project exemplifies his expertise in a mission that will help transform retail operations.



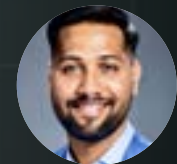
RYAN KLAVAN
Retail Design Lead
Deloitte Consulting LLP

SACHIN'S CONTRIBUTION

For Sachin, being a Data Scientist with an Applied AI background helped him contribute a fresh perspective on the Task Optimization for stores.

His team's strong collaborative spirit and dedication proved instrumental in streamlining the most challenging tasks, particularly being able to leverage AI and technology for on-the-go operations on mobile devices.

As a result, Sachin and his team implemented a number of strategies and design modifications that resulted in an astounding 95% increase in performance and improvements in the store associates' productivity.



SACHIN SINGH
Lead Data Scientist
and Solutions Architect

LET'S CONNECT.

Do these challenges sound familiar?



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