INSTITUTIONALIZING
DATA–DRIVEN DECISIONS
leveraging AI and ML for a $13 Billion+ retailer

CUSTOMER CONTEXT:
Establishing a data and analytics Center of Excellence and reshaping retail operations

Our client, the 3rd largest convenience store chain in the US with over 2,400 stores across the country, wanted to establish a data and analytics CoE to drive innovation and efficiency across supply chain, store operations, marketing, merchandising, and more.

MOBILIZING A FLYWHEEL OPERATIONAL MODEL :
A cross-functional approach to data and analytics

To unlock the power of their data leveraging AI and ML, Tredence and the client teamed up to implement a flywheel partnership model with a cross-functional team of data engineers, data architects, data scientists, business analysts, BI engineers, and retail subject matter experts.

Our team, consisting of four specialized groups, each focused on key areas of the project: laying a modern data foundation, establishing a data governance model, assisting in strategic business decision-making, and providing real-time in-stock predictions led by machine learning.

THE SQUADS
Tredence created dedicated squads to deliver true value differentiation for the client by developing next-generation data analytics and technology transformations.

- DATA FOUNDATION
- DATA GOVERNANCE
- COMMUNITY OF ANALYSTS
- AI/ML SOLUTIONS

DATA FOUNDATION SQUAD

A robust, dependable foundation of high-quality and reliable data was crucial for democratizing analytics.

Using Databricks' Lakehouse architecture, Tredence helped the client build a modern data foundation. This combined data from across their business to give data scientists and business users one platform to access, analyze and create insights from any data source. The results were impressive, to say the least.

In just months, we migrated and redesigned over 100 legacy workloads from siloed and expensive on-premise systems into a cloud-based architecture built for the speed and scale of the client's business. This not only enabled Big Data processing and streaming for real-time insights, but it also supported operationalization of AI/ML use cases.

DATA GOVERNANCE SQUAD

To help reinvent the Guest Experience the client needed to enable self-serve analytics leveraging the new data foundation. We created a hub-and-spoke governance model across domains as well as cataloging and lineage solutions to enable self-serve and democratize data across the organization. As a result, the new certified data assets are now considered the "Single Source of Truth," used daily by hundreds of users.

COMMUNITY OF ANALYSTS

We aligned a team of business analysts and BI developers with business areas across asset protection, guest insights, loyalty analytics, and fraud and risk analytics to help answer key strategic business questions and provide decision-making support.

AI/ML SOLUTIONS

The real value unlock comes from leveraging AI/ML against the certified data assets to solve business challenges. The client leveraged advanced ML models to forecast prepared foods production requirements at the store, SKU and hour level and created real-time in-stock predictions for managing online assortments, directly contributing to both the top and bottom line.

CLIENT IMPACT

$1M+ cost savings
through migration that involved cost optimization, performance tuning and replacement of legacy hardware.

10% improvement
in forecast accuracy resulting in **+$5MM savings** and a 5% reduction in spoilage.

$15M worth of grocery
and general merchandise shrinkage identified through inventory and asset-based transaction monitoring.

Improvement in online assortment
from 400 to 1.5K+ SKUs per store creating a better guest experience and increasing share of wallet.

This is just the beginning. With the data foundation and certified data assets in place Tredence and the client are continuing to leverage AI/ML to solve complex business challenges and unlock incremental new value daily.

Tredence is a global data science solutions provider focused on solving the last-mile problem in AI. The 'last-mile' is the gap between insight creation and value realization.