

Unified view of customer and distribution relationships *strengthened downstream fulfillment.*

A large food manufacturer and distributor · Supply chain & logistics · AI & machine learning · Data engineering & platforms

01 THE SITUATION

Business Problem

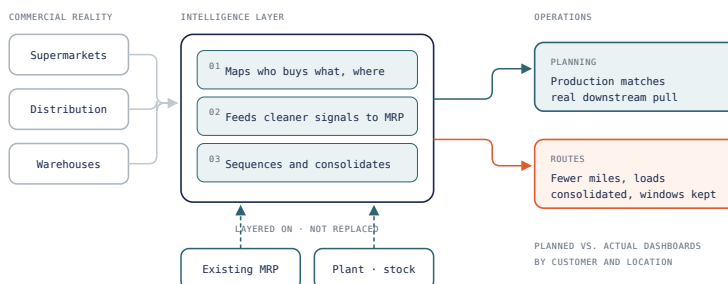
The company wanted clearer visibility into “who we’re really supplying, from where, and on which routes” across supermarkets, distribution centers, and warehouse deliveries. The existing MRP system handled demand and production planning, but it wasn’t fully exploiting newer AI/analytics signals (store-level pull, route performance, lead-time variability) to tighten planning and to optimize how trucks and loads were routed to these supermarket partners.

02 THE CHALLENGE

We had to connect commercial reality (which supermarket chains, which distribution centers, which delivery patterns) with operational reality (plant output, inventory positions, truck capacity, driver windows) without disrupting the current MRP. That meant layering intelligence on top—NOT ripping and replacing—so planners could make better decisions and logistics could run smarter routes.

03 THE SOLUTION

We built an AI-and-analytics layer on top of the existing MRP that identified actual supply relationships (supermarket/distribution center/warehouse), fed that into enhanced planning, and used the same data to optimize delivery routes.



IMPACT

12%

Reduction in delivery miles per fulfilled order through smarter routing and load consolidation.

18%

Decrease in stockout-related incidents at key supermarket partners due to better alignment between production and actual delivery points.

9%

Improvement in plan adherence as enhanced MRP used real downstream partner patterns.

CLIENT BACKGROUND

A large food manufacturer and distributor with direct relationships to major supermarkets and grocers, delivering both to central warehouses and, in some cases, store networks. Because they run on an MRP backbone and move high-volume SKUs, even small planning or routing inefficiencies create cost, stockouts, or delayed deliveries.

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KEY COMPONENTS OF THE SOLUTION INCLUDED

- 01

Supplier/partner relationship mapping

Reconciled who buys what, from where, and how often—supermarkets, distribution locations, and direct-to-warehouse flows.
- 02

Enhanced MRP signals

Fed cleaner demand, lead-time, and location data into the existing MRP so production and replenishment plans matched real downstream pull.
- 03

Route optimization engine

Used AI to sequence deliveries, consolidate loads, and pick routes that minimized miles and time while respecting delivery windows.
- 04

Planner dashboards

Gave supply chain teams a view of “planned vs. Actual” by customer/location so they could tune future cycles.

WHERE IT LEADS

THE PRACTICE

AI & machine learning

Where this engagement was delivered, and where the work continues at scale.

dataproducs.io/practices/ai-machine-learning/

START HERE

Data Platform Accelerator

The fixed-scope, fixed-fee engagement that starts work like this — scoped with you before you commit.

dataproducs.io/starter-services/data-platform-accelerator/

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