

MiGROS

Migros,
a Top-50 Worldwide
Grocery Retailer **reduces
inventory days by 11% and
increases availability by 1.7%**



Case Study

KEY RESULTS

1.7%

increase in availability
(from 96% to 98%)

11%

reduction in inventory
days

SOLUTIONS

- Demand Forecasting
- Store Replenishment Optimization
- DC Replenishment Optimization

About Migros

- **Annual Revenue:** \$4 Billion
- **Number of Employees:** 27.000
- **Number of Stores:** 2000
- **Number of SKUs:** 30.000
- **Number of DCs:** 11
- **Website:** www.migros.com.tr

The Migros success story at a glance

Migros is one of the world's top-50 grocery retailers, with over 2000 stores and annual revenue of \$4 billion. Migros serves its customers with a variety of formats, ranging from 50,000 sq-foot hypermarkets to 1,000 square-foot convenience stores. They have a well-deserved reputation for superior customer service and a wide selection of products, including high quality fresh produce and fresh meals. As such, Migros hypermarkets and convenience stores are the go-to grocery shopping destination for millions of customers every day.

Migros appointed Invent Analytics as their trusted partner to help manage their business-critical inventory operations. Following A/B testing in 200 stores, Migros rolled out the Invent Analytics AI-Powered solutions across their 11 warehouses and 2000 stores. These solutions provide Demand Forecasting, Store Replenishment and DC Replenishment.

Why did Migros choose Invent Analytics?

Migros is an innovative retailer with a history of efficient inventory management. As part of their DNA, they are constantly looking to improve their operations and customer service.

Following an in-depth assessment of 10 solution providers, they chose Invent Analytics' AI-driven forecasting and replenishment solutions to further reduce inventory levels without compromising product availability across their large, complex SKUs.

A profit-optimizing solution to conflicting KPIs

A fundamental challenge in retail is managing the trade-off between conflicting KPIs, such as inventory turns and in-stock ratios, across a wide range of products and stores and multiple distribution channels. The core of Invent Analytics solutions is the financial portfolio optimization approach which upgrades inventory decisions from a judgment-driven, KPI-measured process to a financial optimization-driven and measured process. This change enables retailers to simultaneously deliver superior customer service while squeezing every last basis point of margin from the business.

The team at Invent Analytics tailored their solutions to meet Migros' specific needs. After successful results in the A/B test, the systems rolled out for daily planning of Migros' 2000 stores and 11 warehouse operations by taking the following information into account:

- Store capacities and visual minimum quantities
- Demand fluctuations with special days and promotions
- E-commerce order fulfilment from the stores
- Expiry dates for perishable items
- Seasonal products such as fruits and vegetables
- Salvage costs of daily fresh products and fresh meals
- Promotion effects on competing or complementary products
- Supplier constraints.



We were impressed at how quickly we started seeing the benefits of Invent Analytics systems. With 1.3% lost sales reduction, inventory days reduced by more than 11% and stock availability increased by 1.7%, we saw a significant reduction in working capital in just five months.

İlker Tunaboyu

Planning & Supply Chain
Director, Migros



KEY BENEFITS

Speed to value

With simulations during a pre-go-live phase and successful A/B testing, Invent Analytics proved the benefits of their profit-optimal solutions.

Change-requests at no cost, forever.

For this project to succeed, Migros needed more than a set of black-box tools. They turned to Invent Analytics to tailor inventory optimization solutions to meet their specific, and evolving, omnichannel retail needs.



INNOVATION

Dark Store Inventory Management

With increasing demand volumes of store-fulfilled online orders, Invent Analytics solution was modified to manage uncertain future demand in an omni-channel environment for dark stores.

Besides, to improve forecast accuracy and product availability in retail stores, online orders to be fulfilled in store are used as advanced demand information for store sales forecasts.

Store replenishment optimization

Taking all the business rules, strategic priorities, and the supply chain and store constraints, the system then calculates the optimal inventory levels and places orders that maximizes profitability.

Advanced DC forecasting and replenishment

The solution generates store replenishment orders from multiple warehouses at the product-store-day level for over 30,000 SKUs at 2000 stores. The algorithm also calculates the e-commerce order fulfilment probability of each store to ensure availability with omni-channel orders. Total omni-channel demand at the product-store level is aggregated and supply recommendations are generated for optimal safety stock and maximum profit. The system also simultaneously plans warehouse replenishment from around 5000 suppliers.

How Migros benefits from sophisticated AI-powered demand forecasting

Each day, the system detects outliers and lost sales and automatically selects the most effective AI-based forecasts from the product-store-day level forecast models. That means it can predict the probability of sales for each unit of each item at each store.



The Migros team sets the strategy, Invent Analytics system takes care of the rest

Implementing the Invent Analytics' store and warehouse replenishment solutions has saved the Migros inventory planning team a huge amount of time. They no longer need to calibrate the system parameters to deal with changing operational developments each day. The system itself determines the optimal re-order points and order quantities taking into account product profitability, strategic considerations, changing demand patterns, and supply chain constraints.

TAILOR-FIT CAPABILITIES

The system makes over 20 million profit-optimized inventory decisions every day, without the need for constant parameter calibration.

Invent Analytics team delivers new tailor-fit capabilities every week and works with Migros team to identify opportunities to improve system performance every day.

Achieving key results in record time

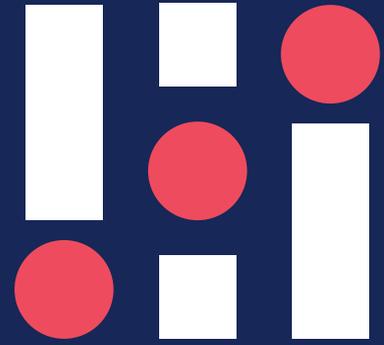
As a grocery retail giant, Migros is well known for pushing the boundaries of what is possible with advanced analytics and innovation. This financially optimized inventory management project is a great example of that. Crucially, store managers and central planners found the system easy to work with and the results transparent and accessible.

As a result, the system quickly gained credibility and there were minimal overrides of replenishment orders. Now, Migros is looking to extend its use of Invent Analytics solutions into other key areas of management decision making, such as assortment and pricing to maintain the competitive edge in the new omni-channel world of retail. The objective is to further improve efficiency, customer service, and profit margins.

KEY IMPACT

With Invent Analytics AI-powered inventory solutions, Migros has achieved an 11% reduction in inventory days, alongside a 1.7% increase in inventory availability, across its entire retail and supply footprint.





About Invent Analytics

Invent Analytics' Omni-AI **delivers significant financial improvement** by empowering retailers to **profit-optimize** their supply chain. It orchestrates a retailer's entire supply chain **by unifying network planning, inventory and price optimization, and fulfillment in one framework.**

Invent Analytics puts your **omni-customers at the heart of its tailor-fit solutions.** It **proves the financial benefits** with pre-go-live simulations and rigorous **A/B testing.** Invent Analytics' over 35 clients have experienced a **2-6% increase in profitability.**

Invent Analytics' profit-optimized inventory solutions:

- Omni-Plan Suite
 - AI-Based Demand Forecasting
 - Seasonal/Short-Life Allocation
 - Replenishment Optimization
 - Phantom Inventory
 - Buy Optimization
 - Transfer Optimization
 - Price Optimization
 - Markdown/Promo Pricing
 - Returns Positioning
- Omni-Fulfillment

Invent Analytics has been named as a representative vendor in **Gartner 2022 Market Guides**, including Retail Forecasting, Allocation and Replenishment Solutions and Retail Unified Price, Promotion and Markdown Optimization Applications – Short Life Cycle.



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