

A background image of a retail store interior. It shows clothing racks with various items, a mannequin wearing a blue dress, and a table with folded clothes. A large window in the background displays a scenic view of a lake and rocks. The Competera logo is in the top right corner.

CASE STUDY

Fortune 500 Department Store Boosts Online Revenue by 40% with AI Price Optimization

This case study explores how a major US-based Fortune 500 department store chain revolutionized its digital retail performance through AI-driven price optimization. By implementing more coherent and attractive pricing strategies, the retailer achieved a 40% increase in online revenue while significantly improving customer retention across all segments.

Executive Summary

A leading US-based retailer with 1,000+ department stores, operating digital commerce across 49 states and, faced intense competition from price-driven retailers using dynamic pricing strategies. With their legacy business model limiting growth, the company sought to transform their operations through innovative pricing technology. By partnering with Competera to implement an AI-powered pricing platform specifically designed for e-commerce operations, the retailer achieved exceptional improvements in both customer retention and business performance. The solution's success in digital channels has led to broader implementation across their retail operations.

⊗ Challenges

The retailer was operating with a legacy business model that resulted in consecutive years of market share losses to more dynamic competitors. Recognizing the need for significant operational changes, they identified pricing as a key area for improvement that could deliver quick P&L results without heavy capital investment. Despite significant investments in external pricing expertise over several years, their efforts had not delivered the desired business outcomes:



Reactive Pricing Strategy

- Reactive pricing and markdown approaches resulted in operational inefficiencies
- Significant margin leakage due to unoptimized price management
- Limited ability to respond proactively to market changes



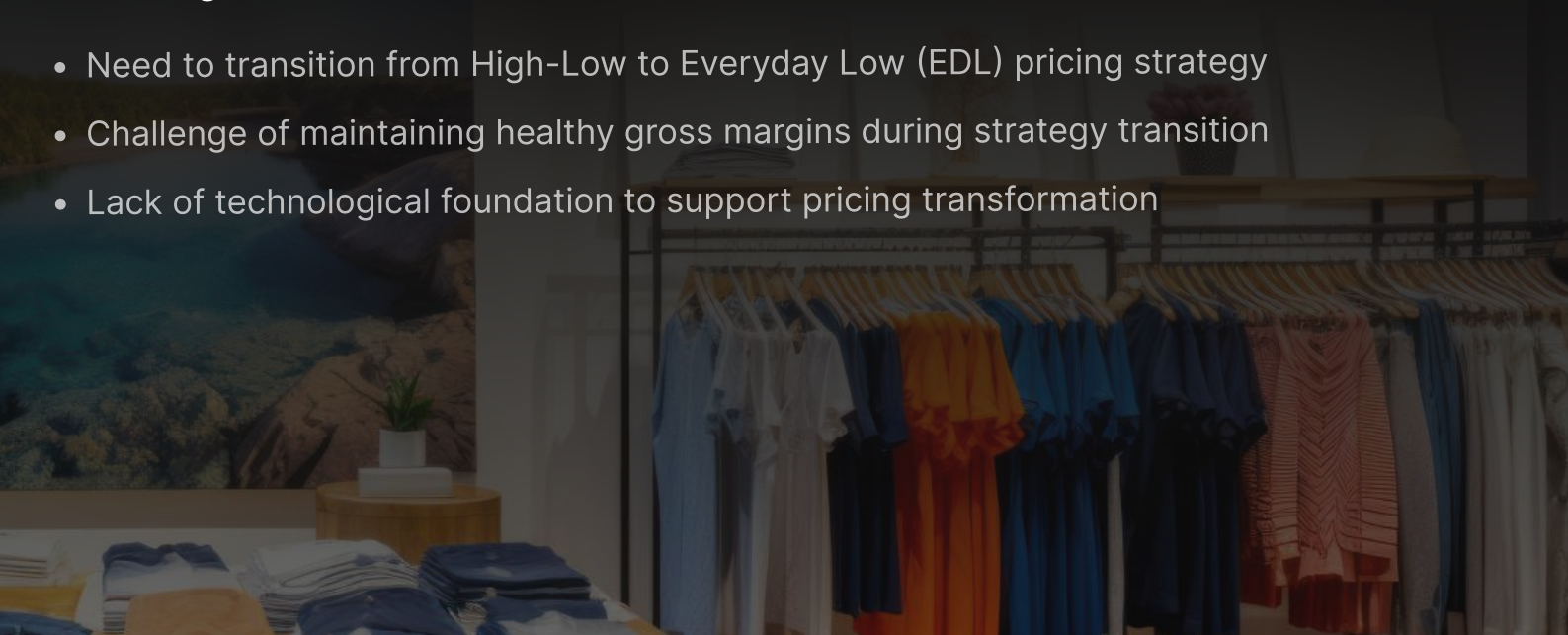
Promotional Pressure

- Multi-layer promotional campaigns created complexity
- Historical markdown strategies placed additional pressure on gross margins
- Difficulty maintaining profitability during promotional periods



Strategic Transformation Barriers

- Need to transition from High-Low to Everyday Low (EDL) pricing strategy
- Challenge of maintaining healthy gross margins during strategy transition
- Lack of technological foundation to support pricing transformation



Solution

The retailer's primary goal was to transition from a rules-based manual decision-making process to 90%+ automated price recommendations utilizing 20+ factors. This transformation would reduce the daily repricing operations from requiring a team of 20+ people working full days to just 2-3 dedicated managers spending only a few hours.

To achieve this, the retailer implemented a proof of concept (POC) using Competera's Solutions, evaluating efficacy through A/B Split testing to optimize pricing to achieve following optimization goals:



Solution Functionality

- AI-powered price & impact modeling to support strategic price decisions
- Automated price recommendations for efficient digital retail operations
- Real-time competitive data to boost productivity of price recommendations
- Scenario planning capabilities for balanced, more transparent price strategy selection management
- Unified platform for streamlined pricing processes and decision-making
- Systematic transition support from Hi-Lo to EDLP strategy
- Built-in markdown optimization to protect margins and reduce overstock



A/B Split Testing Methodology:

- Product clustering based on sales dynamics, attributes, and promotional pressure
- Test and control groups selected with minimum 50% optimization potential
- Advanced co-occurrence analysis to minimize cross-influence between groups
- Weekly measurement of key performance indicators during 6-10 week pilot



POC Details

- Duration: 4-months
- Scope: 10% of business across 100 stores, 4 product categories and 3000 items.
- Data Volume: 4.4 million market data points delivered per week
- Frequency: 3 000 price adjustments recommendations per week
- Implementation Timeline: 22-week period from discovery to go-live

Key Results

By optimizing its pricing process with AI technology, the retailer achieved remarkable improvements across all key performance indicators. In the POC, the retailer conducted a rigorous A/B test, comparing clustered product groups with similar characteristics. The test demonstrated that AI-optimized pricing recommendations resonated with customers, who responded with increased spending and higher return rates.

The following results illustrate how the test group significantly outperformed the control group across all key metrics:

Customer Retention Success:

+30%

in new customer acquisition

+50%

in reactivated customers

Business Performance Improvements:

+40%

in revenue

+59%

in units sold

+25%

in margins

Digital Funnel Performance:

+85%

in page views compared
to trend

+71%

in visits with purchase compared
to trend



Continued Partnership

Following these strong online store results, the retailer **expanded the AI-driven pricing solution** across its entire digital product portfolio.

Based on this success, the company has also begun implementing a **proof of concept** for its physical store network.

This successful transformation demonstrates how **intelligent price optimization in digital retail** can simultaneously **drive customer retention** and business performance, setting new standards for retail excellence.