



AI-Powered Retail

Eight transformational use cases driving the future of customer experience and supply chain performance.

Customer Experience · Supply Chain · Store Operations · CPG Innovation

EXECUTIVE OVERVIEW

From Experimentation to AI-Powered Enterprises

Artificial intelligence has moved from isolated pilots to enterprise-wide ecosystems spanning customer engagement, merchandising, operations, logistics, and product innovation. Organizations integrating AI across digital and physical channels are building durable competitive advantage.

- ✓ **Efficiency** — Leaner operations and lower cost to serve across the value chain.
- ✓ **Experience** — Individualized, frictionless journeys online and in-store.
- ✓ **Innovation** — Faster trend-to-market cycles and smarter assortments.

ANNUAL PROFIT POTENTIAL FOR
CPG GLOBALLY

\$160B-\$270B

in additional annual profit that traditional
and generative AI can unlock across the
industry.

McKinsey research

THE FRAMEWORK

Eight Use Cases Across Four Value Streams



Customer Experience & Marketing

- 1 Hyper-Personalization & Journey Orchestration
- 2 Virtual Assistants & Agentic Discovery

Personalized, frictionless journeys at scale.



Supply Chain & Merchandising

- 3 Demand Forecasting & Assortment
- 4 Dynamic Pricing Optimization

Precision demand and margin decisions.



Store Operations & Logistics

- 5 Intelligent Agentic Stores
- 6 AI-Driven Reverse Logistics
- 7 Fraud Detection & Asset Protection

Self-monitoring stores and secure operations.



CPG Innovation

- 8 Accelerated Product Development

Trend-to-market in days, not months.



USE CASE 1

Hyper-Personalization & Journey Orchestration

Moving beyond segmentation to real-time, individualized experiences powered by analytical and generative AI.

KEY APPLICATIONS

Dynamic Product Detail Pages

Pages adapt layout, imagery, messaging, and recommendations to each shopper's intent.

Personalized Campaign Offers

AI optimizes promotions, channels, and messaging to maximize engagement and ROI.

LEADING THE WAY

- Amazon
- Sephora
- Starbucks

BUSINESS IMPACT

- ✓ Higher conversion rates
- ✓ Increased customer lifetime value
- ✓ Improved brand loyalty
- ✓ More effective marketing spend



USE CASE 2

Virtual Shopping Assistants & Agentic Discovery

Conversational experiences that simplify product discovery and decision-making beyond keyword search.

KEY APPLICATIONS

Conversational Search

Natural-language requests interpreted for context, style, budget, and intended use.

Visual Search

Computer vision lets shoppers upload images to find matching products in inventory.

LEADING THE WAY

- Walmart
- IKEA
- ASOS · Pinterest

BUSINESS IMPACT

- ✓ Enhanced customer engagement
- ✓ Reduced search friction
- ✓ Faster purchase decisions
- ✓ Improved online conversion



USE CASE 3

Demand Forecasting & Assortment Planning

Predicting demand with unprecedented precision by blending sales history with external signals.

KEY APPLICATIONS

Reduced Forecasting Errors

AI-enabled forecasting cuts errors up to 50% while lowering inventory costs ~10%.

Hyper-Local Assortment

Optimizes which products to prioritize by store, region, and demographic group.

50% fewer forecasting errors

LEADING THE WAY

- Target
- Kroger
- Unilever

BUSINESS IMPACT

- ✓ Lower inventory carrying costs
- ✓ Improved product availability
- ✓ Reduced stockouts
- ✓ Stronger supply-chain resilience



USE CASE 4

Dynamic Pricing Optimization

Real-time pricing engines that evaluate competitor moves, demand, inventory, and margins continuously.

KEY APPLICATIONS

Real-Time Price Adjustments

Automatically tunes digital shelf prices and launches flash promotions in peak windows.

Margin Protection

Balances revenue growth against profitability targets at the product level.

LEADING THE WAY

- Amazon
- Walmart
- Carrefour

BUSINESS IMPACT

- ✓ Increased revenue capture
- ✓ Stronger competitive positioning
- ✓ Improved gross margins
- ✓ Faster response to market shifts



USE CASE 5

Intelligent Agentic Stores & Shelf Optimization

Computer vision and edge computing turn physical stores into self-monitoring operational environments.

KEY APPLICATIONS

Real-Time Shelf Auditing

Smart cameras detect out-of-stocks, gaps, and planogram issues, triggering replenishment.

Traffic-Driven Scheduling

Predictive models forecast customer traffic and optimize staffing levels.

LEADING THE WAY

- Walmart
- Sam's Club
- Tesco · Ahold

BUSINESS IMPACT

- ✓ Improved inventory visibility
- ✓ Reduced operational inefficiency
- ✓ Better customer experiences
- ✓ Increased workforce productivity



USE CASE 6

AI-Driven Reverse Logistics

Turning returns from a profitability drain into recovered value through intelligent disposition.

KEY APPLICATIONS

Resell Optimization

Assesses product condition and calculates the optimal fulfillment location for resale.

Intelligent Recovery

Decides whether to restock, refurbish, liquidate, or recycle each returned item.

LEADING THE WAY

- Amazon
- Zalando
- Oporto

BUSINESS IMPACT

- ✓ Reduced return processing costs
- ✓ Increased recovery value
- ✓ Faster inventory reintegration
- ✓ Improved sustainability outcomes



USE CASE 7

Fraud Detection & Asset Protection

Real-time protection that identifies anomalies across transactions and customer interactions.

KEY APPLICATIONS

Payment Fraud Detection

Machine-learning models flag suspicious payment behavior within milliseconds.

Return Fraud Prevention

AI identifies unusual return patterns and potential abuse across channels.

LEADING THE WAY

- PayPal
- Visa · Mastercard
- Best Buy · Home Depot

BUSINESS IMPACT

- ✓ Reduced shrinkage
- ✓ Lower fraud losses
- ✓ Faster threat identification
- ✓ Improved operational security



USE CASE 8

Accelerated Product Development Cycles

Compressing trend-to-market cycles from months into days across the CPG portfolio.

KEY APPLICATIONS

Trend Sensing

AI analyzes search behavior, social conversations, reviews, and category preferences.

Faster Innovation Pipelines

Concept validation, packaging, and go-to-market completed in days, not months.

LEADING THE WAY

- Nestlé
- PepsiCo
- L'Oréal

BUSINESS IMPACT

- ✓ Faster speed-to-market
- ✓ Better alignment with demand
- ✓ Reduced development costs
- ✓ Higher innovation success rates

AT A GLANCE

Summary of AI Impact Streams

Value Driver	Core AI Technology	Primary Business Benefit	Example Companies
Personalization	Generative & Analytical AI	Increases conversion and customer loyalty	Amazon, Sephora, Starbucks
Inventory Planning	Predictive Machine Learning	Reduces excess inventory and stockouts	Target, Kroger, Unilever
Store Operations	Computer Vision & Autonomous Agents	Improves efficiency and productivity	Walmart, Sam's Club, Tesco
Pricing Execution	Autonomous AI Agents	Protects margins while maximizing revenue	Amazon, Walmart, Carrefour
Fraud Prevention	Machine Learning Analytics	Minimizes losses and operational risk	PayPal, Visa, Mastercard
Product Innovation	Generative AI & Predictive Analytics	Accelerates product development cycles	Nestlé, PepsiCo, L'Oréal

Six value streams, one platform shift — AI as foundational business capability across retail and CPG.

THE ROAD AHEAD

From Differentiator to Foundational Capability

AI is no longer a competitive edge in retail and CPG — it is becoming table stakes. The next wave of leaders won't simply adopt AI; they will build AI-powered enterprises that decide faster, smarter, and more profitably at scale.

1

Combine the four engines

Generative AI, predictive analytics, computer vision, and autonomous agents compound when deployed together.

2

Invest strategically now

Early movers like Amazon, Walmart, Target, Nestlé, and Unilever are already showing measurable returns.

3

Reinvest for share

AI-enabled capability captures market share, lifts profitability, and responds rapidly to shifting demand.