A Global Luxury Fashion Brand Achieves Projected Lost Sales Reductions of $11M in North America and $21M in EMEA with AI-Native Inventory Optimization

Challenge

A global luxury fashion brand operates a complex multi-region retail network with diverse store formats, seasonal assortments, and region-specific constraints. Existing allocation processes lacked automation, visibility, and standardized decision logic.

Inconsistent Allocation Logic

Allocation decisions were driven by business intuition instead of demand signals.

Limited Demand Visibility

Store-level demand and size performance were not clearly visible.

Manual Allocation Process

Allocation required significant manual effort and planner intervention.

No Material & Store Scheduling

Allocations could not be scheduled at the material and store levels.

Store Capacity Constraints

Physical store limits in certain regions could not be systematically enforced.

Lack of Standard Reporting

Key allocation KPIs such as Lost Sales, Excess Inventory, and In-Stock % were not standardized.

Poor Scalability

Heavy reliance on overrides reduced the scalability of allocation operations.

Low Planner Confidence

Frequent overrides reduced trust in allocation outcomes.

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Action

The brand implemented InventorySmart, an Impact Analytics AI-native allocation and replenishment platform, to modernize inventory allocation across regions and channels, establishing a globally standardized operating model with **70%** global design, **20%** regional configuration, and **10%** market-level nuance.

Demand Forecasting

AI/ML forecasting generated demand signals at the SKU–store level to guide allocation decisions.

Allocation Automation

Initial allocations and replenishment were automated using configurable strategies combining presentation minimums, weeks of supply, and demand prioritization.

Optimization & Constraint Management

Optimization models distributed inventory intelligently while enforcing store capacity limits and regional operational constraints.

Allocation Scheduling & Insights

Automated scheduling streamlined the allocation lifecycle, supported by centralized reporting on allocation performance and inventory outcomes.

Outcome

InventorySmart enabled demand-led allocation aligned to store-level demand, improving availability and reducing excess. Automation, constraint enforcement, and standardized reporting reduced effort, eliminated exceptions, and increased planner confidence globally.

$11M Lost Sales Reduction (NA)

*Projected reductions based on six months of operational data.

$21M Lost Sales Reduction (EMEA)

*Projected reductions based on eleven months of operational data.

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About Impact Analytics

Impact Analytics delivers AI-native SaaS solutions and consulting services that help companies maximize profitability and customer satisfaction through deeper data insights and predictive analytics leveraging Agentic AI. Our end-to-end platform for planning, forecasting, merchandising, pricing, and promotions powers smarter, real-time decisions across retail, grocery, QSRs, CPG, and manufacturing.

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