4R

Intelligent Inventory Optimization

HARDWARE AND HOME IMPROVEMENT
RETAILERS

Build a better supply chain in a competitive market and volatile times.

Hard Work for Hardware

Operating a successful and competitive business in the hardware and home improvement (DIY) retail sector has always been challenging, even in good economic times. Retailers carry a broad product portfolio, featuring a wide range of seasonal, evergreen, fast-moving and slow-moving product categories. The vast assortment of products coupled with the complexity of allocating the optimal assortment for every location makes effective inventory forecasting, planning and supply chain productivity even more challenging.

Other challenges for hardware and home improvement retailers include:

› A multi-faceted distribution model, including regional distribution centers, trans-load facilities, flat-bed distribution centers, and rapid deployment centers, as well as direct-to-store.

› Omnichannel retailing, due to the rise of BOPIS (buy online pickup in-store), and the need to build an e-commerce engine and adopt solutions that let customers shop the way they want to shop and receive their orders (in-store, pick-up, direct delivery).

› Long or unpredictable lead times for certain products from national and international suppliers

Build a Better Supply Chain

Manage inventory as an investment:

› Leverage granular POS and other supply chain data to Identify true demand and predict shopping trends to drive forecasts across all channels

› Harness AI to plan and order the optimal assortment and allocation of products to each product/store consumer profile

› Automatically replenish products in stores or distribution centers

› Identify optimal markdown of end-of-season or end-of-life items to preserve profitability

› Connect store operations with corporate strategies to resolve issues like phantom inventory

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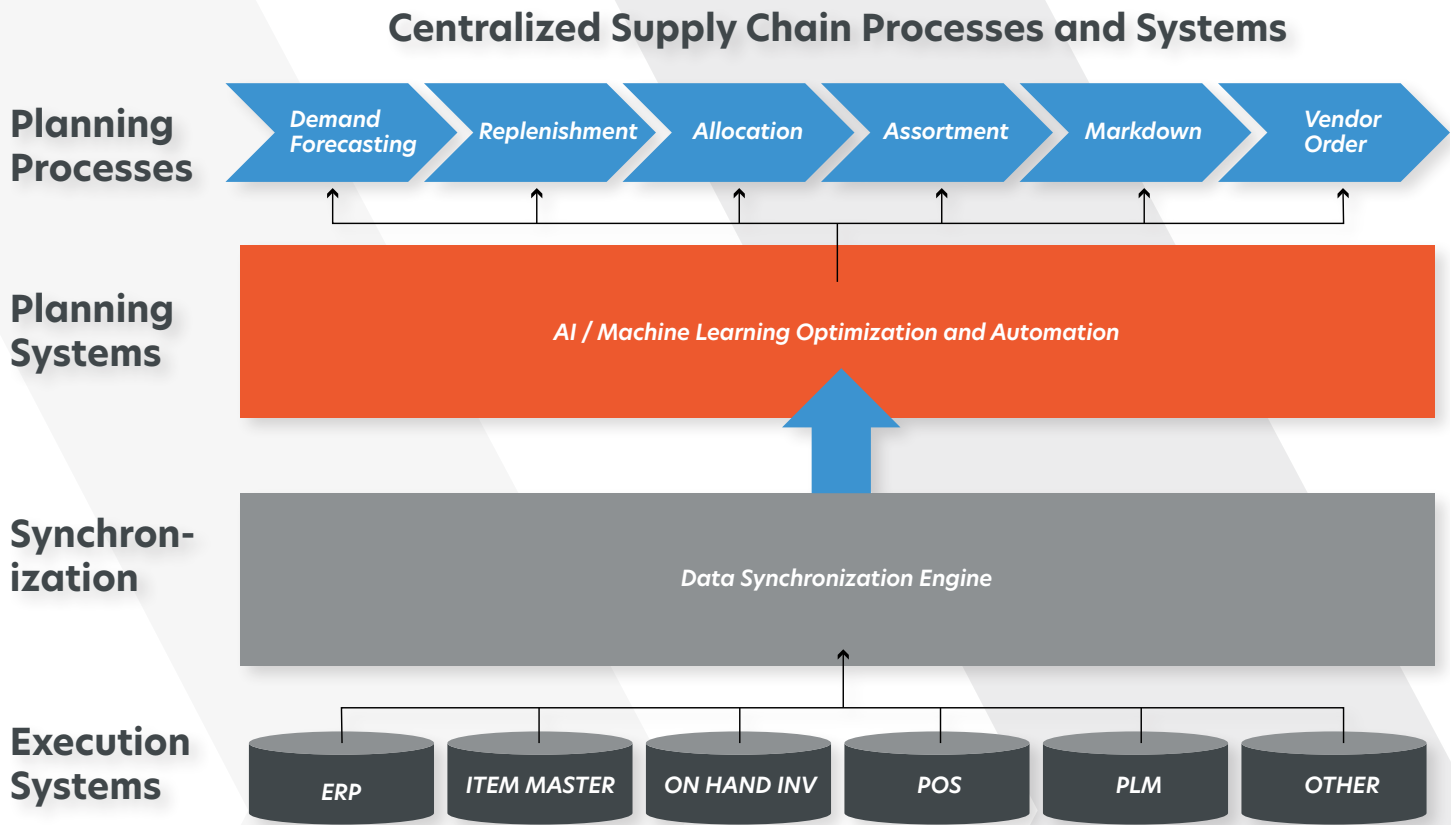**The biggest challenges Home Improvement Retailers face:**

• Supply chain challenges
• Price Fluctuations
• Hiring quality employees
• Customer fluctuation

How will you invest in your business?

• Invest in my employees
• Add new categories
• New technoloties
• Marketing programs
• Remodeling

Source: NHPA MidYear Report 2021

Layers of Inventory and Supply Chain Optimization

Centralized Supply Chain Processes and Systems

Planning Processes

| Demand Forecasting | Replenishment | Allocation | Assortment | Markdown | Vendor Order |

Planning Systems

AI / Machine Learning Optimization and Automation

Synchron-ization

Data Synchronization Engine

Execution Systems

ERP | ITEM MASTER | ON HAND INV | POS | PLM | OTHER

Supply Chain Execution Systems: Collects and maintains data; Executes supplier ordering and inventory tracking and placement

Synchronization: Brings together data from source systems; Prepares it for optimization and planning

Optimization: Applies AI/ML science to analyze historical data at the item and store (local) levels and other factors like demographic data (agve, income, gender, rural vs urban, etc.); Predicts and optimally matches consumer buying behaviors with the right assortment and allocation of products at the appropriate location and time

Planning Processes: Optimizes inventory, increases productivity and enables better decisions about inventory allocation, replenishment, and item/store level assortment that minimizes lost sales, maximizes profits, and reduce cash-to-cash cycle

Leading Inventory and Supply Chain Practices that Address Trending Hardware Challenges

Retailers report carrying more inventory on hand than in past years.	Retailers say buying habits are evolving and changing on a daily basis.	Retailers report that they are holding gross margin but it is a more difficult task.	Retailers see progress blunted by challenges beyond their control. Looking inward.

Hardware Retailer Challenges (NHPA 2021)

› Identify true demand that generates more accurate forecasts, driving more accurate upstream and downstream processes that maximize profitability and supply chain efficiency. › Maximize profit across all channels, reduce inventory carrying cost, reduce lost sales. › Position inventory more efficiently at the profit-optimized level, at the right place and at the right time, satisfy demand without carrying excess inventory.	› Optimize product offerings at the item/store level, continuously monitoring the POS systems to identify hourly customer purchasing habits to redirect inventory and orders to drive revenue growth and improved customer satisfaction. › Identify national and regional economic and demographic characteristics, indicators and predictions to enhance forecasting accuracy inside your purchasing window. › Analyze different scenarios to game out future up-side and down-side demand planning.	› Evaluate AI/ML solutions that optimize for profit, not only customer service › Analyze portfolio profitability at the most granular product/store level to identify best sellers for each location › Apply AI/ML and optimization to lifecycle planning and end-of-life exit plans › Utilize models and algorithms to calculate the appropriate markdown value and strategy for products considering at the specific selling location demand conditions	› Identify true demand that generates more accurate forecasts, driving more accurate upstream and downstream processes that maximize profitability and supply chain efficiency. › Maximize profit across all channels, reduce inventory carrying cost, reduce lost sales. › Position inventory more efficiently at the profit-optimized level, at the right place and at the right time, satisfy demand without carrying excess inventory.

Leading Practices to Address Challenges

SUPERCHARGE Your Supply Chain

The 4R solutions and services for retailers do the heavy lifting of inventory tracking and order management, honing in on what is needed to drive profit and reduce cash conversion cycle. The 4R tools help retailers reclaim time to spend doing the things they enjoy most about being a hardware and home improvement retailer...working with customers to help them choose the right tools and products for their projects.

Why Choose 4R?

The 4R suite of AI-powered supply chain management and inventory optimization solutions and planning team are meeting the challenge of today's turbulent consumer markets.

Predictive Demand Planning
Machine Learning-based forecasting solution that maximizes profitability and supply chain efficiency.

Replenishment Planning
Multi-echelon inventory management that is guaranteed to maximize profit across all channels.

Allocation Planning
The right amount of inventory to the most profitable locations at the right time to maximize sales and minimize stranded inventory.

Assortment Optimization
Optimize product offerings at each store to meet consumer preferences and drive revenue growth.

Markdown Optimization
The optimal timing and depth of end-of-season and end-of-life markdowns to achieve merchandising goals.

Inventory and Supply Chain Planning as a Service (PaaS)

4R's team has your supply chain and business covered...360 degrees!

The in-house 4R expert team dominates AI/ML science and technology. They are seasoned demand, replenishment and inventory experts that bring a human touch to the planning process. 4R performs planning activities on behalf the client in seamless collaboration with your management and leadership.

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