

4R



Intelligent Inventory Optimization

CONVENIENCE RETAILING

Keep your “convenience” promise and stay competitive.

Convenience Stores of CHOICE

Convenience retailers are constantly looking for ways to remain "convenient" for customers and stay ahead of competitors. Over the last few years, c-stores have adopted new technologies and product lines to adjust to changing consumer needs and expectations.

Technology trends, like cashier-less checkout, app-based ordering and payments, emerged to help c-stores adjust to changing consumer expectations. Many convenience retailers now offer fresh or prepared foods and quick service restaurants (QSR) to draw consumers and meet the demand.

These trends add complexity to an already challenging inventory forecast and planning process, specific to the convenience retailing industry.

Now as supply chain issues, labor shortages and inflation impact businesses, c-stores need innovations that streamline operations, open new revenue opportunities, and better manage the supply chain to keep customers satisfied and coming back.

Be the convenience store of choice, not a store people only enter if they happen to pass by.

TRENDS	CONSIDERATIONS	RESOLUTIONS
App-based ordering and payments	<ul style="list-style-type: none">• Capture the huge volumes of rich transactional data produced by these systems• Integrate the data with that from traditional ERP & POS systems• Extract the value in using new data to improve better supply chain and merchandising planning decisions	<ul style="list-style-type: none">• Gain insights on market and consumer trends• Incorporate data rich analysis to improve planning processes by implementing a data synchronization engine that makes data available for AI-powered planning systems
Offering localized product mix	<ul style="list-style-type: none">• Consider matching product offerings to consumer buying patterns and product attribute to be much more specific to local markets and demographic areas• Create localized assortment plans that increase consumer demand and are operationally executable	<ul style="list-style-type: none">• Leverage AI-powered forecasting and modeling to optimize product assortments for individual store locations• Execute allocation and replenishment plans to keep assortment mix optimized• Utilize optimized vendor orders to keep store shelves stocked and minimize lost sales
Fresh, QSR items	<ul style="list-style-type: none">• Consider product shelf life and expiration dates for perishable products• Minimize overall product spoilage and wastage when making inventory planning decisions	<ul style="list-style-type: none">• Incorporate product shelf life into inventory assortment and replenishment plans• Leverage AI to streamline allocation and vendor orders to maximize freshness and minimize waste

Innovate Your Supply Chain

Manage Inventory as an Investment

Inventory is the largest investment inside the c-store footprint. Getting the most out of this investment requires that retailers match supply with demand. Demand and Rapid Replenishment along with Assortment Planning are strategies for optimizing inventory and providing customers with what they need, when they need it, where they need it and at the right price. The integration of advanced analytics, market insights, merchandising strategies and risk mitigation options are important components of these strategies.

The 4R Solutions for Convenience Retailing helps c-stores answer questions, like:

- › How can we predict and quickly react to the ever-changing customer demand?
- › What can we do to decrease the negative impact of supply chain uncertainty and inventory interruptions?
- › How should we balance many locations and rapid replenishment?
- › How do we estimate required labor workforce for periods of high demand and ensure staff accordingly?
- › What can we do to maintain control over escalating transportation and receiving costs?
- › Can we link new payment technologies with c-store inventory and ROI forecasts?
- › How do we apply inventory analytics to improve overall store operations?

The 4R Solutions for Convenience Retailing provides:

- › High-value processes and automation for optimizing supply chain and inventory management across five core functions: Demand Planning, Replenishment Planning, Assortment Optimization, Allocation Planning and Markdown Optimization
- › Cloud-based business applications, using Machine Learning and Artificial Intelligence analytics minimize inventory costs while improving in-stocks
- › Economic models that analyze demand patterns, inventory costs, margin, case pack size, lead times, and other supply chain parameters to determine optimal order quantity



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

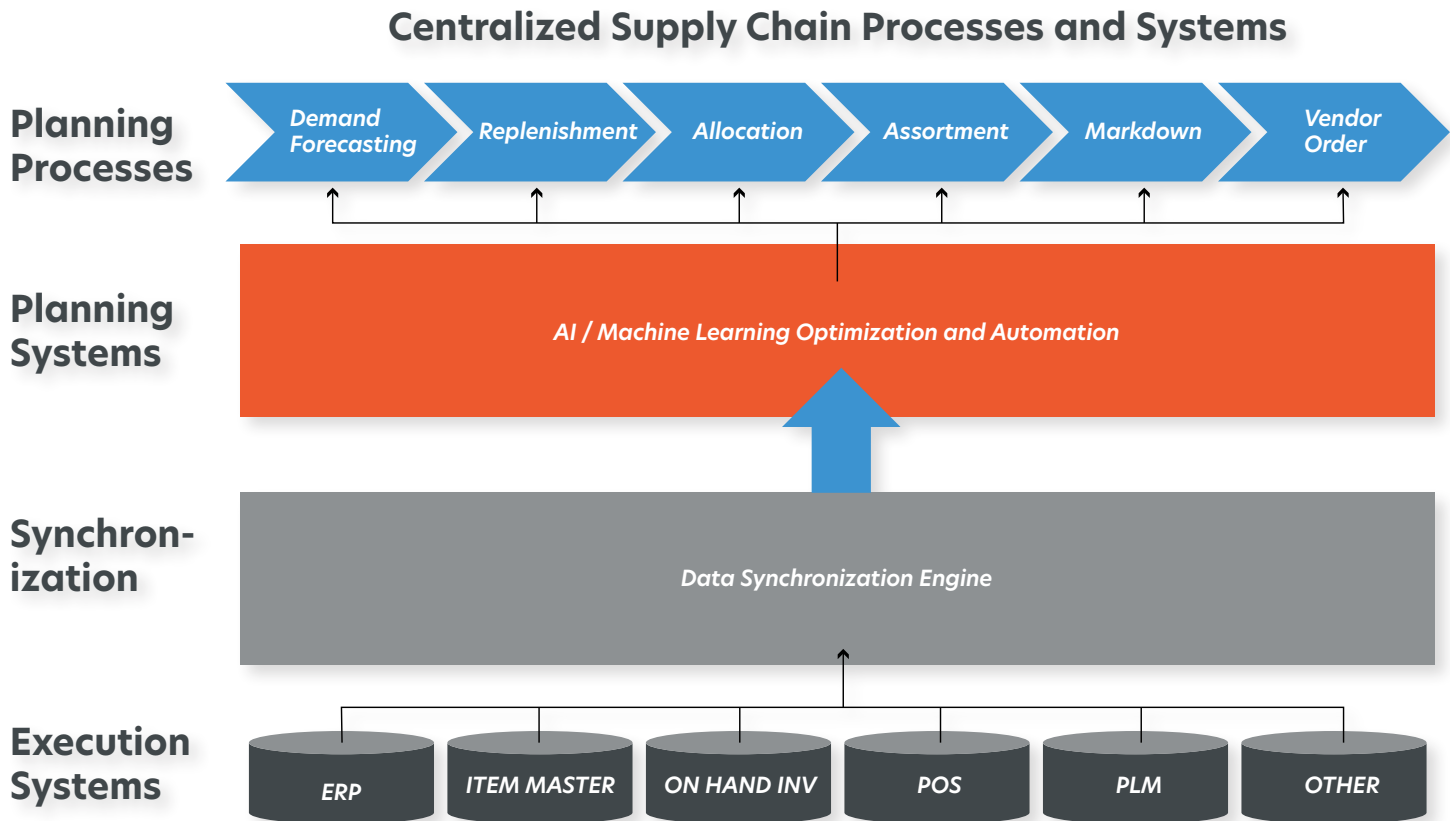
The optimal timing and depth of end-of-season and end-of-life markdowns to achieve merchandising goals.



Vendor Order Optimization:

Enable buyers to make informed decisions on buying requirements when executing demand, replenishment and allocation plans.

Levels of Supply Chain Planning and Execution for Inventory Optimization



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 (age, 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

Supply Chain Planning as a Service

Let 4R Harness the Power of AI/ML Planning for You

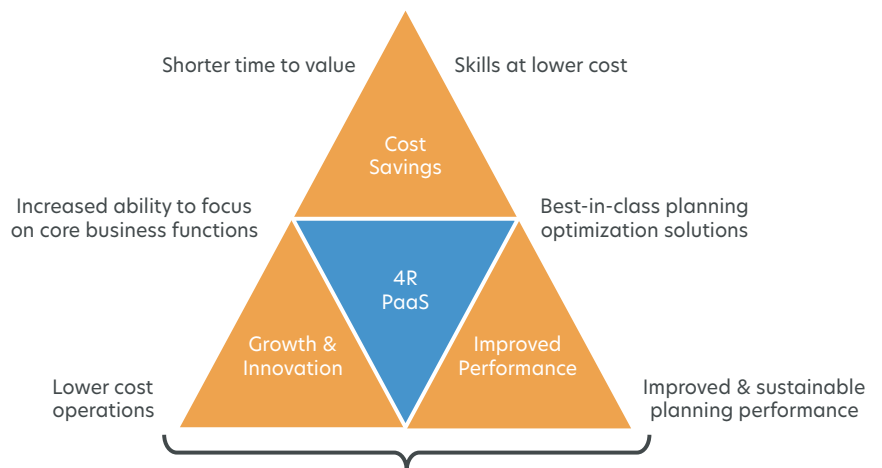
4R Planning as a Service (PaaS) helps companies achieve positive results by building optimal demand plans within the organization and across trading partner channels and relationships.

PaaS is an ongoing services delivery model enabling a one-stop-shop for supply chain planning services. 4R offers a very predictable and stable monthly subscription approach that provides greater elasticity and agility. The 4R experts who built the best-in-class AI-powered solutions will run it to maximize overall business efficiency and ROI.

4R PaaS approach is proven to drive revenue growth, reduce costs and improve capital efficiency.

Why 4R PaaS?

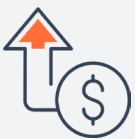
- ✓ 4R has provided and optimized this service in collaboration with our solutions since the company was founded...it is in our DNA!
- ✓ Certified analytical expert planners guide you towards a fast ramp-up, quick results, and continuous improvement and optimization.
- ✓ Alerts to supply chain issues and real-time adjustments free up clients to focus on more important strategic decisions and activities.
- ✓ The in-house employee management cost and burden are removed from your business.



PROVEN ACHIEVED AND SUSTAINED BENEFITS

Product Availability	➔	10-30% reduction in stock outs
Inventory	➔	5-20% increase in inventory turns
Obsolescence	➔	20-40% reduction in obsolete inventory
Operating Costs	➔	10-30% reduction in operating costs

Does your current supply chain team and solutions achieve these types of business results?



**INCREASE SALES
BY
12-18%**



**INCREASE PROFIT
BY
6-10%**



**REDUCE INVENTORY
CARRYING COSTS BY
2-8%**



**REDUCE
STOCK-OUT BY
14-25%**



**REDUCE
MARKDOWN LOSS BY
12-20%**

**4R benchmarking results from 40 clients*

“We have recently been challenged with volatile and quick-changing demand patterns that can’t be modeled off previous years. We ask 4R for the best recommendations regarding how to resolve these cases and they always come through. Because of 4R, we’ve increased sales and profits, improved store in-stocks, decreased lost sales and reduced inventory investment while protecting margins. 4R’s solutions and people are instrumental in helping us grow our business.”

*~ Senior Executive
Current C-store Client*



801 Cassatt Road, Suite 202 | Berwyn, PA 19312 USA | +1 610-644-1234 | optimize@4r.ai | www.4r.ai