

2025 Edition

Smarter Stock, Stronger Service

How AI-Driven Planning is Reinventing Retail & Distribution

How AI-powered planning helps retailers and distributors optimise stock, boost service, and build operational resilience.



Contents

- 
- 1** Introduction: The New Era of Retail & Distribution
 - 2** Challenges of Modern Forecasting, Scheduling, and Inventory Management
 - 3** From Forecast to Flow: AI-Driven Planning and Scheduling for Modern Retail & Distribution
 - 4** The Evolution of Production Planning & Scheduling: From Manual to AI-Driven
 - 5** How AI and Digital Tools Are Transforming Production Planning & Scheduling
 - 6** Real-World Applications: Success Stories from HSO
 - 7** About HSO

Chapter 1

Introduction: The New Era of Retail and Distribution

The retail and distribution industry has entered a new era, defined by digitisation, customer centricity, and supply chain disruption. Consumers expect instant availability, flexible delivery, and seamless omnichannel experiences. Behind the scenes, however, many retailers and distributors still struggle with outdated planning systems and rigid scheduling methods.

In this environment, traditional forecasting and replenishment techniques are no longer sufficient. Businesses need to become agile, data-driven, and responsive to real-time demand signals.

This eBook explores how AI-powered planning and scheduling—using platforms like Microsoft Dynamics 365 and methodologies such as DDMRP (Demand-Driven Material Requirements Planning)—are enabling retailers and distributors to optimise stock, boost service levels, and increase resilience across their operations.

“AI can significantly enhance merchandising and supply chain operations for retailers by analysing purchasing patterns and market trends to predict demand accurately and help optimise inventory management.”



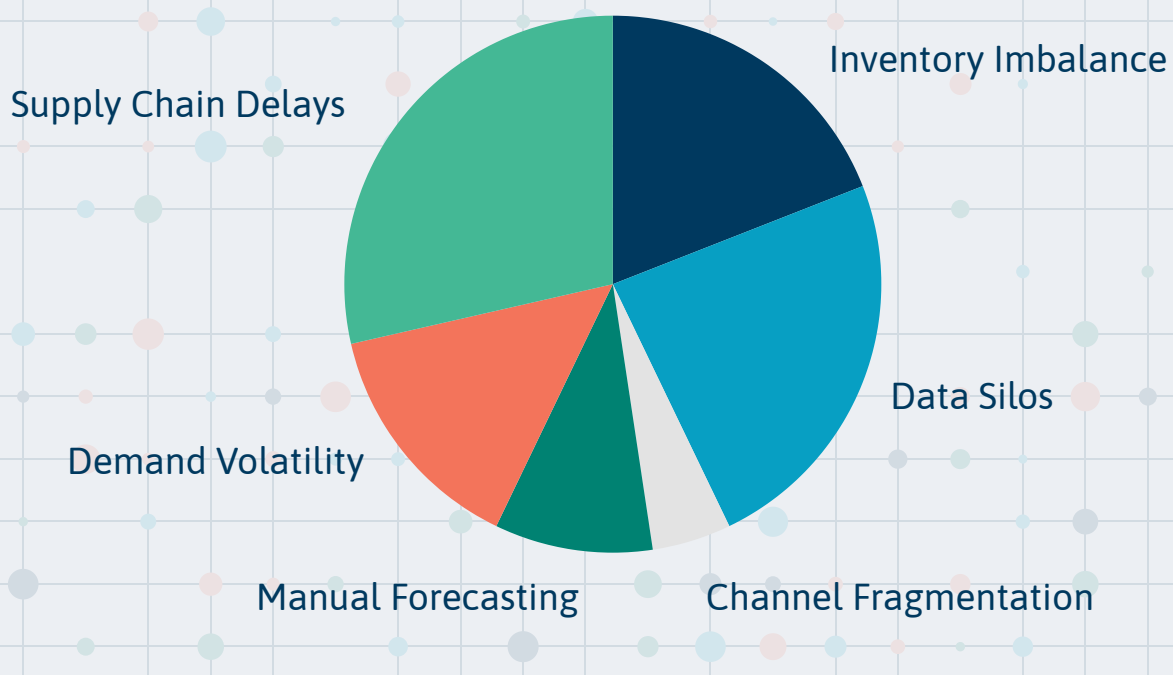
Microsoft, Microsoft Adoption Library



Chapter 2

Challenges of Modern Forecasting, Scheduling, and Inventory Management

Top 6 Planning Pain Points in Retail & Distribution



Retailers and distributors face mounting operational challenges, including:

- **Demand Volatility:** Rapid shifts in consumer preferences and sales patterns
- **Supply chain uncertainty:** Long lead times, supplier delays, and global disruptions
- **Channel complexity:** Coordinating online, in-store, and third-party fulfillment
- **Inventory imbalance:** Excess stock in some locations, shortages in others
- **Siloed data:** Lack of real-time visibility and collaboration across departments

These challenges often lead to stockouts, lost sales, unnecessary markdowns, and reduced customer satisfaction.

Manual planning tools and spreadsheet-driven workflows can't keep up. Retailers need intelligent systems that connect data, learn from it, and enable planners to make faster, more accurate decisions.

Chapter 3

From Forecast to Flow: AI-Driven Planning and Scheduling for Modern Retail & Distribution

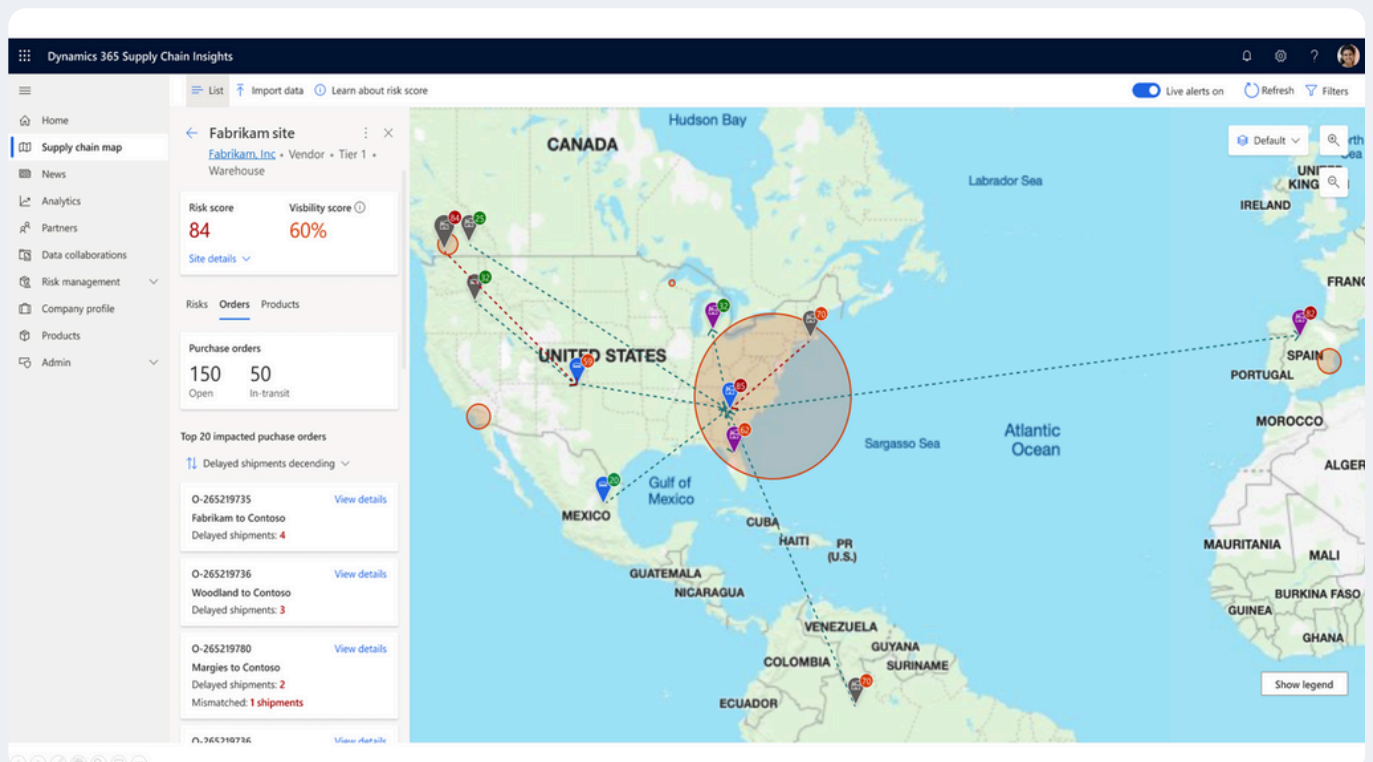
Planning and scheduling have traditionally been forecast-based and reactive—relying on historical sales data and manual intervention.

Today, that model is being replaced by demand-driven, AI-powered approaches that incorporate:

- **Real-time demand sensing**
- **Predictive analytics and machine learning**
- **Dynamic buffer positioning (via DDMRP)**
- **Automated replenishment and scenario simulation**

AI-driven planning doesn't just forecast—it responds, adapts, and optimises continuously, empowering supply chain and operations teams to:

- **Anticipate disruptions**
- **Reduce excess stock**
- **Improve service levels**
- **Make confident, data-backed decisions**



Chapter 4

The Evolution of Production Planning & Scheduling: From Manual to AI-Driven

STAGE 2: THE DIGITAL TRANSITION

The advent of digital tools marked a significant step forward. Planners and schedulers began using software to create plans and schedules, track progress, and collaborate with other departments. However, these tools were often siloed, limiting their effectiveness.

STAGE 4: THE AI-DRIVEN FUTURE

Today, the most forward-thinking are leveraging AI and machine learning to revolutionise both production planning and scheduling. These technologies enable companies to optimise long-term resource allocation, predict potential disruptions, and make real-time data-driven decisions.

STAGE 1: THE MANUAL ERA

In the early days, production planning and scheduling were manual processes, relying on physical boards, index cards, and spreadsheets. While these methods provided a basic level of organisation, they were time-consuming, error-prone, and lacked integration with other systems.

STAGE 3: THE AGILE REVOLUTION

As retailers & distributors embraced lean principles and agile methodologies, production planning and scheduling processes became more flexible and responsive. Planners could develop long-term strategies, while schedulers could quickly adjust daily operations in response to changes in demand or operational conditions.

Chapter 5

How AI and Digital Tools Are Transforming Production Planning & Scheduling

Focus on Microsoft Dynamics 365

At the centre of this transformation is Microsoft Dynamics 365, a modern ERP and supply chain platform that brings cognitive planning into everyday operations.

Powered by the Microsoft Cloud for Retail, Dynamics 365 enables retailers and distributors to:

- Use AI-driven forecasting models tailored to seasonality, promotions, and real-time data
- Run “what-if” scenarios to model supply chain changes and risks
- Improve collaboration between demand planners, supply teams, and sales
- Automate low-value tasks and focus human input where it adds the most value

When paired with DDMRP, D365 helps businesses move from reactive to proactive planning by:

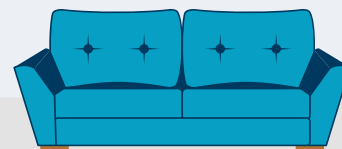
- Creating strategic inventory buffers based on actual demand
- Triggering replenishment automatically when buffer levels fall
- Reducing inventory by 45%, cutting lead times by 80%, and improving service levels to 99%+

Feature	Traditional MRP	DDMRP + Dynamics 365
Planning Basis	Forecast-driven	Demand-driven
Inventory Positioning	Static	Dynamic Buffer Zones
Responsiveness	Low	High (real-time signals)
Lead Times	Long	Reduced by up to 80%
Inventory Levels	High	Reduced by 30–45%
Planner Productivity	Manual-heavy	Decision-supported

Chapter 6

Real-World Applications: Success Stories from HSO

HSO, a global Microsoft partner, has helped leading UK and European retailers and distributors embrace AI-driven planning with Dynamics 365 and DDMRP. Key outcomes from recent projects include:

**Client: Global Home Goods Retailer**

- Reduced stockouts by 40% during seasonal peaks
- Improved store-level availability while cutting DC inventory by 25%
- Automated replenishment from central distribution to over 300 stores

**Client: UK Wholesale Distributor**

- Implemented DDMRP inside D365 for real-time, demand-based planning
- Cut planning cycle time from 3 days to under 4 hours
- Increased planner productivity by 70%

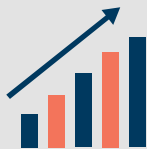
**Client: Online Fashion Retailer**

- Leveraged cognitive planning to better align promotions with fulfilment
- Reduced returns by improving stock accuracy and customer alignment
- Achieved 99.5% on-time delivery during Black Friday peak

Chapter 7

Summary

AI-Driven Planning at a Glance



**Smarter
Forecasts**



**Faster Replenishment
Cycles**



**Decision Intelligence
with AI**



**Improved
Availability**



**Reduced
Inventory Costs**



**Streamlined
Planning Operations**

Retail and distribution businesses are facing unprecedented change, but with the right tools, they can turn uncertainty into competitive advantage.

AI-driven planning and scheduling, built on platforms like Microsoft Dynamics 365 and guided by DDMRP principles, empower businesses to:

- ✓ **Plan smarter with real-time insights**
- ✓ **Reduce working capital tied up in stock**
- ✓ **Serve customers better and faster**
- ✓ **Improve resilience against disruption**

It's time to break free from outdated planning systems and embrace the future of supply chain execution.

Ready to Take the Next Step?

Talk to HSO about how your retail or distribution business can benefit from smarter planning with Microsoft Dynamics 365 and DDMRP.

[Book a Demo](#)

About HSO

HSO isn't your run-of-the-mill technology company. We combine unparalleled expertise and transformative enterprise business solutions with a unique approach to delivery and 24/7 worldwide support to accelerate business growth.

For more than three decades, HSO has been designing, building, delivering and optimising complete management capabilities that improve the results of our 80+ retail clients. We have grown to become one of the world's leading Microsoft partners. We use the Microsoft Azure Cloud platform, Dynamics 365, Office 365 and our own industry-specific solutions to help our customers solve their challenges, grasp opportunities and drive success in a changing world.



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