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# AI PLANNING EBOOK

# AI-Powered Planning from Forecast to Action

## How New Horizon applies AI across forecasting, analysis, optimization, and planner workflows.



**NEW HORIZON**  
The AI Planning Suite

# The Role of AI in New Horizon

New Horizon uses AI to help planners move from raw data to better decisions with less manual effort. The platform applies AI across three connected jobs: predicting what is likely to happen, explaining what the data is showing, and helping planners act on those insights.

## From signal to decision



### Predict

AI and machine learning improve forecast accuracy by selecting stronger forecasting approaches and adapting to changing demand.

### Explain

The AI Agent summarizes trends, seasonality, inventory risk, and recommended planning actions in plain language.

### Act

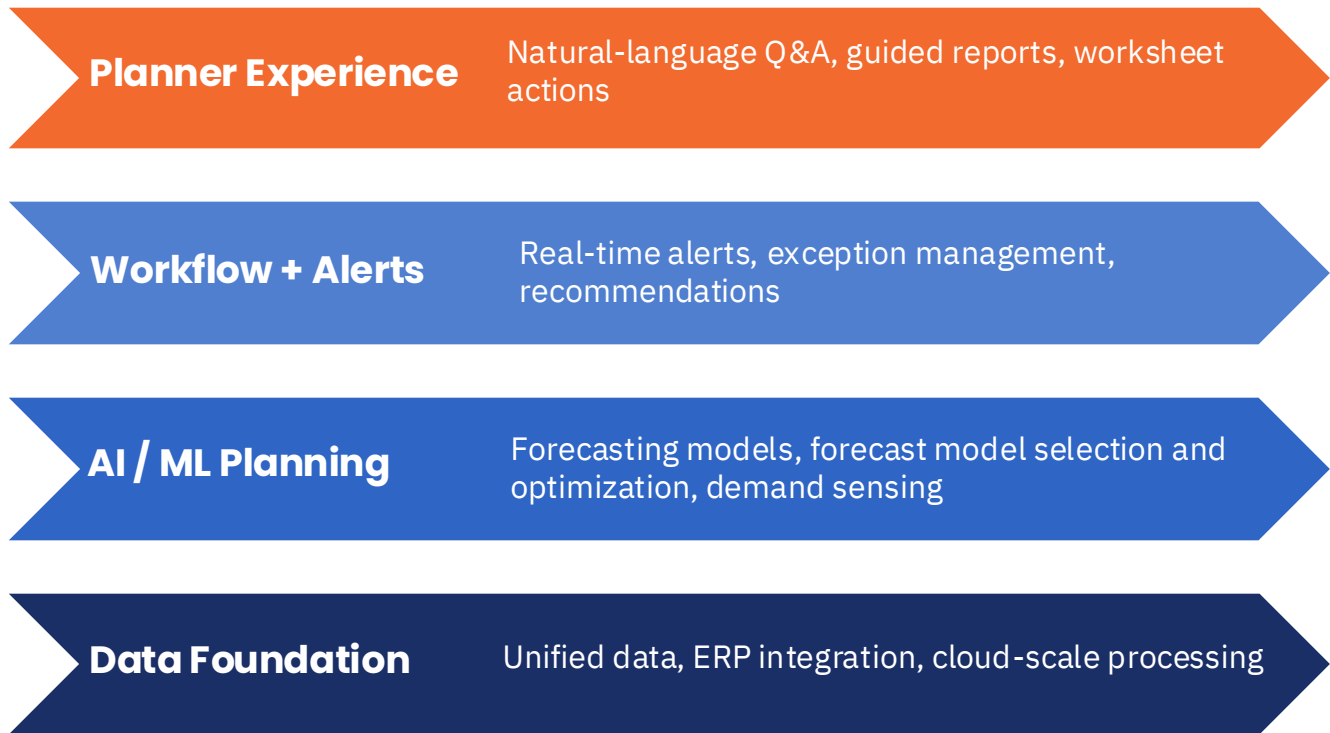
Natural-language commands and guided workflows retrieve reports, run checks, and update worksheet values with confirmation.

## Planner control remains built in

When the AI Agent proposes worksheet updates, planners can preview the affected cells and confirm the change before it persists. AI accelerates the path from insight to action without removing the review step.

# AI Is Built into the Planning Stack

AI is not isolated in a single feature. New Horizon positions it across the data foundation, planning intelligence, workflow layer, and planner experience so insights can move through the planning process.



## PLANNING AREAS

**Demand • Supply • Inventory • Replenishment • Production • S&OP • Strategic Planning**

The structure connects data, AI/ML planning, workflow and the planner interface. That means a detected issue can be analyzed, surfaced as an exception or recommendation, and acted on without jumping between disconnected tools.

# AI-Powered Demand Forecasting

Forecasting AI blends statistical and machine-learning methods so planners can start with a stronger baseline and spend more time on the exceptions that matter.

- Selects the best forecasting approach across multiple methods
- Uses machine learning to adapt to demand changes and events
- Highlights forecast error, drivers, outliers, and exceptions
- Supports more accurate plans without requiring data scientists

## How the signal becomes a forecast



**Output: Accurate and explainable demand plan**

The aim is not only a more accurate forecast, but a stronger planning baseline that can be understood, reviewed, and acted on by the people responsible for the plan.

# AI Agent: Ask, Analyze, Follow Up

The AI Agent gives planners a natural-language way to retrieve history, analyze demand signals, and continue the conversation with follow-up questions.

A planner can ask the agent to examine sales and shipment history for a specific item, customer, and distribution center. The agent can explain trend, seasonality, and recent shifts, then suggest demand-plan and inventory actions. Because the interaction is conversational, the planner can keep refining the question as the exception is investigated.

## Ask and analyze

analyze forecast for the next 12 month for item "MDRW-IP-05-011-Menards Rugged Wear Impact XL" and customer "Menards, Inc." and DC "100001-US"

Here is the monthly historical sales data for item "MDRW-IP-05-011-Menards Rugged Wear Impact XL" at customer "Menards, Inc." and DC "100001-US" for the past 12 months (P\_1 to P\_12) and current month (P\_0):

| Month                | Sales Quantity |
|----------------------|----------------|
| Current (P_0)        | 372            |
| 1 month ago (P_1)    | 858            |
| 2 months ago (P_2)   | 810            |
| 3 months ago (P_3)   | 690            |
| 4 months ago (P_4)   | 618            |
| 5 months ago (P_5)   | 666            |
| 6 months ago (P_6)   | 996            |
| 7 months ago (P_7)   | 936            |
| 8 months ago (P_8)   | 942            |
| 9 months ago (P_9)   | 660            |
| 10 months ago (P_10) | 726            |
| 11 months ago (P_11) | 558            |
| 12 months ago (P_12) | 612            |

### Analysis & Forecast Suggestions:

**Trend:** The sales fluctuate with some seasonality. The sales were higher around 6-8 months ago and have shown some decline recently to the current month.

**Seasonality:** There is some monthly variation. Peaks around 6-8 months ago could indicate seasonality or campaign effects.

# AI Agent: Ask, Analyze, Follow Up

## Follow up and explore the recommendation

### Forecast for next 12 months:

Trend-based forecast: Average of the last 12 months excluding current month (P\_1 to P\_12) is about  $(858+810+690+618+666+996+936+942+660+726+558+612)/12 = \text{approx. } 729$  units/month.

Adjust for recent decline: The current month is lower at 372 which might signal a downward trend or short-term drop.

Conservative forecast: Around 700 units/month for the next 12 months.

Optimistic forecast: If seasonality repeats, expect peaks around 900-950 units/month in some months.

### Inventory & Safety Stock:

Consider safety stock to cover demand variability, e.g., 20-30% of monthly demand (~150-220 units).

Align reorder points with supplier lead times and consider minimum order quantities.

### Promotions & Market Events:

Check if past peaks align with promotions or events. If expecting similar events, increase forecast accordingly.

If no events expected, use conservative forecast.

Would you like me to provide a detailed month-by-month forecast or recommendations for inventory optimization?

# Natural-Language Updates Inside Worksheets

AI can also help planners move from analysis to execution. Rather than navigating through worksheet fields manually, a planner can describe the intended update in natural language.

The screenshot displays a supply chain planning interface. On the left, a worksheet titled "100b Demand Plan by Item\_DC - 4050 - 1" is visible. It features a list of items with columns for Channel Desc, Item Desc, DC Desc, Series Name, and various time periods (2026-02-01(4) through 2026-09-01(14)). The right side of the interface shows a natural language update dialog. At the top, a blue box contains the text: "Update H950 User Notes on worksheet 4050 for Channel Desc: Other and Item Desc: MG-KEY-91-Key Chain - Original Hi-Viz Yellow Glove and DC Desc: 100001-US for 2026 June and July to 'test'". Below this, a white box states: "I'll process your request" and "Worksheet: '100b Demand Plan by Item\_DC - 4050 - 1'". A section titled "Worksheet: '100b Demand Plan by Item\_DC'" indicates that the update will affect 2 columns across 1 or more rows. It includes a table with the following data:

| Series Name     | Column        | Current Value |
|-----------------|---------------|---------------|
| H950 User Notes | 2026-06-01(0) | N/A           |
| H950 User Notes | 2026-07-01(1) | N/A           |

Below the table, a "Condition" section shows "Item Code" as "MG-KEY-91" and "DC Code" as "100001". A note states: "Note: This will only update the worksheet cell values. You can review the changes before clicking the save button to persist the data." A confirmation prompt asks: "Do you want to proceed with these updates?" with a "Confirm" button. At the bottom, there is a text input field for "Enter your supply chain question... (Shift+Enter for new line)" and a "Lightning" button.

## Planner Intent

Describe the update for the selected item, customer, DC, and months.

## AI Translation

The agent resolves the worksheet, series, months, row filters, and current values.

## Human Control

A preview shows what will change, and confirmation is required before updates persist.

**Less navigation. Fewer repetitive worksheet steps. Planner control remains intact.**

# Guided AI Workflows for Common Planning Needs

Configurable AI Agent workflows help users get to the right report or health check without having to know the navigation path.

001 SKU Health Check

002 Volume-Ranked OOS

003 Open PO View

## Why it matters

New and occasional planners can retrieve insights quickly, manage by exception, and focus attention on stockout risk, projected balance, and supply issues.

The screenshot displays a complex supply chain planning interface. On the left, a large table lists various SKUs with columns for Vendor Desc, Item Desc, DC Desc, Rank by Variability Desc, Rank by Volume Desc, Series Name, Item Buy, and Item Lead Time. The table is filtered to show items with a 'Select' status. On the right, a 'New Horizon AI Agent' chat window is open, displaying a message from the agent: 'Hi! I'm a Supply Chain Planning Expert focusing on inventory and procurement. I can assist with: Data Analysis: Sales trends, turnover rates, safety stock. Demand Forecasting: Predict demand using historical data, trends, and events. Inventory Optimization: Balance costs, risks, and supplier factors. Risk Management: Identify risks and create contingency plans. Let me know your supply chain questions for expert advice!'. Below the chat window, a 'Parameters' section lists: 'Agent: 001 SKU Health Check using Proj Balance', 'Worksheet: 6930', 'Global Filter: Non-Filter', 'Worksheet Levels: Rank by Variability: X, Y', and 'Proj Avail Balance: FINAL\_INV\_PROJ\_W\_BUY'. The chat window also shows a status message: 'Agent executed successfully.' and a 'Worksheet: \*331t SKU inventory health check - 6930 - 1\*'. At the bottom of the chat window, there is a text input field with the placeholder 'Enter your supply chain question... (Shift+Enter for new line)' and buttons for 'Lightning' and 'Forecast'.

The value is speed to insight: users can invoke a familiar planning check from the agent, get the relevant view, and concentrate on the exceptions that require a decision.

# AI for Supply, Inventory, and Cost Optimization

AI extends beyond forecasting by helping planners evaluate service, inventory, procurement, and logistics trade-offs. The same planning intelligence can support decisions across several connected areas.

## Inventory Optimization

Safety stock and multi-echelon inventory decisions.

## Supply Planning

Capacity, procurement, allocation, and replenishment plans.

## Load and Order Logic

Truck load, vendor calendar, MOQ, and group-order decisions.

## Root-Cause Analysis

Diagnosis of data-feed issues and supply-chain disruptions.

**Result: More realistic plans and fewer manual trade-off analyses**

When constraints conflict, planners can spend less time assembling the trade-off manually and more time reviewing the recommendation and deciding how the business should respond.

# Production Planning with Heuristic AI

Heuristic AI helps planners convert demand, capacity, and material constraints into feasible production plans.



## How it works

- Evaluates production alternatives against rules and constraints
- Sequences work to reduce bottlenecks and avoid infeasible plans
- Recommends schedule adjustments planners can review and approve

## What it optimizes

- Capacity utilization and load balancing
- Material availability and production timing
- Service commitments while reducing manual plan repair

## Planner benefit

- Faster scenario evaluation
- Clearer recommendations when constraints conflict
- More realistic MPS and production schedules

**Result: Production plans that are faster to build, easier to explain, and more executable.**

# Machine Learning for Multi-Echelon Inventory Optimization

Machine learning improves multi-echelon inventory optimization by learning demand, supply variability, and risk patterns across the network.



**ML learns variability + risk by echelon → dynamic inventory targets**

## Inputs AI learns from

Demand history, seasonality, and volatility; lead-time variability and supply reliability; service levels, costs, and inventory position.

## Optimization decisions

Where inventory should sit across echelons; how much safety stock is needed by location; when buffers should increase, decrease, or rebalance.

## Business impact

Better service at lower inventory cost; earlier detection of shortage and excess risk; more resilient planning during demand and supply shifts.

**Result: Inventory is positioned where it protects service most – not where static formulas happen to place it.**

# AI for Truck Load Optimization

Transportation-aware planning connects purchasing decisions with load utilization before execution. AI can recommend consolidation, purchase timing, and load decisions while considering operational constraints.



**Cube • Weight • Calendar • MOQ • Delivery Window**

## Planning intelligence

Groups orders that can ship together; considers cube, weight, order minimums, and vendor calendars; evaluates whether to pull forward, defer, or split orders.

## Optimization goals

Increase truck utilization; reduce freight waste and inbound bottlenecks; balance logistics efficiency with service risk.

## Planner benefit

Clear load recommendations before execution; better procurement timing; more coordinated replenishment decisions.

**Result: Smarter order timing and consolidation decisions that turn planning data into logistics savings.**

# What AI Changes for Planners

Across these use cases, New Horizon uses AI to make planning more accurate, faster, and easier to act on.

1

## Better Forecasts

AI/ML models, model selection, and machine learning improve demand signal quality

2

## Faster Response

Alerts, analysis, and guided workflows reduce time from issue to action

3

## Less Manual Work

Natural-language interactions reduce navigation and spreadsheet-like tasks

4

## More User Adoption

Sophisticated AI is surfaced through an intuitive planner experience

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**From Forecast → Insight → Recommended Action → Confirmed Execution**

## About New Horizon

New Horizon's AI Planning Suite supports demand, supply, inventory, replenishment, production, S&OP, and strategic planning in a connected planning environment. AI and machine learning are used across forecasting, analysis, optimization, workflow, and planner interaction to help teams move from forecast to insight to recommended action to confirmed execution.

Want to see what a transparent, executable supply chain plan looks like? [Talk to our experts.](#)

### To Learn More

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