

Intelligent Replenishment Optimisation in Odoo 17



AI Replenishment Optimization

Industry:

Wholesale & Retail Distribution

Employees:

80+

Location:

EU-based

Modules

INVENTORY

SALES

REPORTS

Services

DATA ANALYSIS

INTEGRATION

IMPLEMENTATION

CUSTOMIZATION

The Challenge

The client operated a network of warehouses and regularly faced two major issues: excess stock for certain SKUs, which tied up working capital, and stockouts during peak demand, which led to lost sales. The standard Odoo 17 replenishment mechanism was insufficient because it could not account for seasonality, historical sales trends, or automatically adjust parameters for specific product categories.

Key Objectives

The goals were to:

- Automate the definition of Min/Max levels for products based on sales and stock history;
- Factor in seasonal demand patterns and period-specific sales behavior;
- Reduce excess inventory while minimizing stockout risk;
- Make inventory management more predictable and less dependent on manual configuration.

aiboost's Solution

We designed and implemented a data-driven replenishment model that enhances Odoo’s standard features.

This involved:

→ **Sales & Stock History Analysis:**

Pulling historical data from Odoo and segmenting products by category, demand volatility, and seasonality.

→ **Integration with Odoo 17 Replenishment:**



The dynamically calculated Min/Max levels are pushed back into Odoo’s settings, with a role-based dashboard allowing planners to review suggestions before applying them.

→ **Dynamic Min/Max Calculation:**

A calculation engine was developed to determine recommended Min/Max levels for each SKU based on past sales for the same period, average daily sales rate (ADS), and lead time buffers.

→ **Continuous Feedback Loop:**

The system was configured to regularly re-calculate Min/Max levels based on fresh sales data and automatically adjust safety stock when volatility increases.



Provided Services

The provided services can be broken down into the following stages of implementation:

→ **Business Implementation:**

This included the design of the data-driven replenishment model, analysis of historical sales and stock data, and the setup of dynamic Min/Max calculation logic.

→ **Technical Implementation:**

This involved developing a Python-based analytical model for time series analysis and safety stock calculations, as well as creating an integration layer with Odoo 17 and an optional integration with Facebook’s Prophet forecasting library.

→ **Testing & Results:**

The model was tested using a 12-month historical data period to simulate its performance and compare its suggestions to the actual settings used.

Key Achievements & KPIs

Metric	Before Odoo	After implementation	Impact
Stockout (for fast-moving SKUs)	Frequent	Significantly reduced	-40%
Overstock (for slow-moving iteams)	Regular	Substantially reduced	-25%


Technologies Used

Odoo v17

Docker, PostgreSQL

Python-based calculation engine

Prophet (Facebook’s forecasting library)



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Client Testimonial

"Our inventory management was a constant headache. aiboost's intelligent Odoo solution completely changed that. We saw a 40% reduction in stockouts and a 25% drop in overstock. This has significantly improved our sales and freed up a huge amount of capital. Their expertise was invaluable."















Director
Wholesale and Retail

SalesOrdersTo InvoiceProductsReportingConfiguration

NewUploadSales Orders⚙️

Q Search...

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<input type="checkbox"/>	Number	Order Date	Customer	Salesperson	Activities	Company	Total	Invoice Status	⌵
<input type="checkbox"/>	S00024	08/14/2025 12:26:03	Gemini Furniture	 Marc Demo	🕒	My Company (San Francisco)	\$ 1,990.00	Nothing to Invoice	
<input type="checkbox"/>	S00023	08/14/2025 12:26:03	Gemini Furniture	 Marc Demo	🕒	My Company (San Francisco)	\$ 4,350.00	Nothing to Invoice	
<input type="checkbox"/>	S00022	08/14/2025 12:26:03	Gemini Furniture	 Marc Demo	🕒	My Company (San Francisco)	\$ 1,475.00	Nothing to Invoice	
<input type="checkbox"/>	S00021	08/14/2025 12:26:03	Gemini Furniture	 Marc Demo	🕒	My Company (San Francisco)	\$ 2,175.00	Nothing to Invoice	
<input type="checkbox"/>	S00016	08/12/2025 18:13:27	Gemini Furniture	 Marc Demo	📈 Order Upsell	My Company (San Francisco)	\$ 1,186.50	Nothing to Invoice	
<input type="checkbox"/>	S00014	08/12/2025 18:13:27	Gemini Furniture	 Marc Demo	🕒	My Company (San Francisco)	\$ 1,582.00	Nothing to Invoice	
<input type="checkbox"/>	S00013	08/12/2025 18:13:27	Gemini Furniture	 Marc Demo	🕒	My Company (San Francisco)	\$ 415.50	Nothing to Invoice	
<input type="checkbox"/>	S00012	08/12/2025 18:13:27	Gemini Furniture	 Marc Demo	✅ Email	My Company (San Francisco)	\$ 556.00	Nothing to Invoice	
<input type="checkbox"/>	S00010	08/12/2025 18:13:27	Gemini Furniture	 Marc Demo	✅ Confirm Delivery	My Company (San Francisco)	\$ 751.00	Nothing to Invoice	
<input type="checkbox"/>	S00008	08/12/2025 18:13:27	Gemini Furniture	 Marc Demo		My Company (San Francisco)			
<input type="checkbox"/>	S00007	08/12/2025 18:13:27	Gemini Furniture	 Marc Demo		My Company (San Francisco)			
<input type="checkbox"/>	S00006	08/12/2025 18:13:27	Gemini Furniture	 Marc Demo		My Company (San Francisco)			
<input type="checkbox"/>	S00004	08/12/2025 18:13:27	Gemini Furniture	 Marc Demo		My Company (San Francisco)			
<input type="checkbox"/>	S00009	08/05/2025 18:13:27	Gemini Furniture	 Marc Demo		My Company (San Francisco)			

InventoryOverviewOperationsProductsReportingConfiguration

NewProducts⚙️

Q🔍 Goods X Search...

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☆ Acoustic Bloc Screens 2 Variants Price: \$ 295.00 On hand: 16.00	☆ Apple Pie Price: \$ 12.00	☆ Bagel Price: \$ 1.25	☆ Black embroidered t-shirt Price: \$ 25.00
☆ Blue Denim Jeans Price: \$ 80.00	☆ Blueberry Muffin Price: \$ 1.80	☆ Butter Croissant Price: \$ 1.20	☆ Cabinet with Doors [E-COM11] Price: \$ 140.00 On hand: 33.00
☆ Cable Management Box [FURN_5555] Price: \$ 100.00 On hand: 90.00	☆ Cable Management Box [FURN_5800] Price: \$ 120.00 On hand: 0.00	☆ Casual Denim Short Price: \$ 35.00	☆ Casual T-shirt Price: \$ 20.00
☆ Chair floor protection Price: \$ 12.00	☆ Cheese Croissant Price: \$ 1.65	☆ Cherry Pie Price: \$ 14.00	☆ Cinnamon Roll Price: \$ 1.75
☆ Classic Brown Jacket Price: \$ 50.00	☆ Classic Leather Belt Price: \$ 25.00	☆ Conference Chair 2 Variants Price: \$ 33.00 On hand: 56.00	☆ Corner Desk Left Sit [FURN_1118] Price: \$ 85.00 On hand: 2.00
☆ Corner Desk Right Sit [E-COM06] Price: \$ 147.00	☆ Cozy Sweater Price: \$ 50.00	☆ Crocheted Poncho Unisize Price: \$ 25.00	☆ Customizable Desk 5 Variants Price: \$ 750.00