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The Future of **Material Requirements Planning**: A Case Study on AI Implementation

A 25% inventory reduction with a simultaneous increase in service levels. It sounds impossible, right? It's not. This case study reveals how also you can achieve the seemingly unattainable by leveraging the power of AI-driven material requirements planning (MRP).

Find more on: itm-p.com/autodispo

Our Breakthrough Solution

We revolutionized our client's material requirements planning (MRP) by discarding the traditional ABC-XYZ analysis and replacing it with a cutting-edge, machine learning (ML) powered demand forecasting model. This model goes beyond simple demand prediction; it generates robust forecasts that quantify the inherent uncertainty in future demand.

By understanding not just the expected demand, but also the potential range of demand variation, we can precisely calculate the optimal stock levels needed to meet the client's targeted service level. This eliminates guesswork and manual adjustments, leading to a truly automated MRP system that optimizes inventory while ensuring high customer satisfaction.

The result? A significant reduction in inventory costs and a boost in service levels – a combination previously thought impossible.

material requirements planning
enhanced planning
inventory optimization

ITM Case Study: MRP

Key Insights & Rapid Implementation

- **Standardized AI-Powered Demand Forecasting:** We implemented a cutting-edge, AI-based demand forecasting model, tailored to the unique needs of the client's business and trained on 5 years of historical demand data.
- **Simulation-Based Validation:** To quantify the impact of our approach, we simulated the client's MRP system using both the AI model and their current methods. This provided a direct comparison of inventory levels and service levels.
- **Optimized Service Levels:** Using the simulation results, we determined the optimal service level for each individual product (SKU) based on the client's specific requirements and priorities.
- **Rapid Project Delivery:** The entire project, from concept to deployment, was completed in just 3 months, demonstrating the efficiency and effectiveness of our approach.

✓ **Proven AI Solution**
✓ **High ROI**
✓ **Seamless ERP Integration**

25% + Inventory Reduction

Improved Service Levels

80% less Manual Effort in Planning

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