



CUSTOMER STORY

ABB

How ABB Uses AI-Powered Automation to Increase Efficiency and Improve S&OP

Industry

- Robotics

Solution

- InventoryAI

Project Results

- 34% improvement in inventory efficiency
- 24 pp increase in sales forecast accuracy
- 23% savings opportunity

About ABB

ABB Robotics is a global leader in providing advanced B2B industrial technology. The Swedish company is best known for highly customized robotics and automation technology.

Because of the high level of customization involved in each end product, bill-of-material requirements remain incredibly complex and cause a high level of production unpredictability. This makes forecasting demand difficult, and ABB had traditionally asked salespeople to estimate future sales manually.

Any stockout in parts needed for custom orders would cause costly production delays and customer dissatisfaction. To avoid this outcome, ABB stocked high levels of inventory, often exceeding demand by 50% or more and in some cases covering as many as 20 standard deviations of demand.

Unpredictability of B2B Demand Causing Excess Inventory

Alessandro Ermanno, Group Vice President of ABB Robotics and Head of Supply Chain Management at ABB, saw an opportunity to innovate. B2B demand was unpredictable, especially in a company like ABB, where customization was a critical competitive advantage. The ripple effects from forecast issues made ABB's sales and operations planning (S&OP) inefficient.

"Our salespeople are experts in our products, and they have a deep understanding of our customer needs, but there are inherent limits to manual forecasting. When S&OP decisions are made based on forecasts with high error rates, the whole supply chain becomes inefficient. I wanted to improve on our system, but I wasn't sure that automation was even possible when selling such complex products."

Additional, critical problems stood in his way:

1. **Salesforce Buy-In:** ABB's sales team has always been heavily involved in forecasting. Their buy-in would be critical to success and it was not clear how they would react to automation.
2. **IT Integration:** A multitude of diverse IT systems already played a critical role in S&OP. Adding more automation could add further complexity and negatively impact efficiency if not integrated properly.
3. **R&D Capabilities:** The ABB Group already had high technological capabilities. Ermanno wanted to leverage this internal resource efficiently. He wasn't sure an external partner would be willing to work collaboratively with their staff on R&D.

Responsive Supply Chain Proof of Impact

ABB partnered with Evo, a ToolsGroup company, to automate and improve their sales forecasts using Evo InventoryAI.

"Evo had plenty of compelling cases from other industries, showing how they could increase the impact from automated sales forecasting, but what made their proposal convincing was their unique approach to the problem. Evo would assess opportunities across all S&OP processes through integrated, automated decision-making. As a company that values precisely this kind of technological innovation, we were enthusiastic to explore what they could accomplish."



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- Alessandro Ermanno, GVP ABB Robotics



Evo demonstrated a responsive supply chain solution: more efficient end-to-end S&OP decisions based on more accurate forecasts.

This approach relies on:

1. Tracking Historical Sales and Attribute Data

Evo InventoryAI tracks order data which includes customizations and attribute combinations. To provide additional data and forecast accuracy, Evo carefully matched over 1 million comparable products with relevant attributes.

2. Forecasting Parts, Production, and Orders

Evo identified three critical areas of opportunity: parts purchasing, production optimization and demand management. By using the tool to forecast areas of S&OP beyond just orders, ABB can capture substantial impact.

3. Recommending Actions Across the Full S&OP Spectrum

Evo InventoryAI optimizes all critical S&OP activities, from recommending which parts to purchase and when, to anticipating production needs from new orders.



I was impressed by the scope of the pilot but still skeptical of how much opportunity we could really capture without risking costly stockouts. I needed to see the Evo system in action."

Evo designed a rapid 4-week pilot program of iterative A/B-tested meta-models to determine which final model would most accurately forecast sales. Evo tested both the manual approach and the new AI-generated methods for efficiency.

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Initial Impact: 34% Inventory Efficiency Improvement

Within the first month, the pilot research achieved an immediate 16% increase in sales forecast accuracy, providing a €1.4–1.9 million initial savings opportunity.

The new S&OP system sized a 34% inventory efficiency improvement within the first year by mapping lead times, reducing inventory needs and aligning processes, in addition to efficiencies created through self-learning.

“The efficiency gains far exceeded my expectations. Costs and excess stock could decrease substantially without any negative impacts on production.”

Already during the pilot, error rates dropped significantly: 36% in purchasing, 24% in production and 42% in orders.

Moreover, Evo built a simple front-end that integrated with existing systems, paving the way for future internal buy-in from the sales team and supply chain managers. A collaborative process ensured that Evo could adequately address ABB’s needs and fulfill all specifications.

“Evo made a simple new system for ABB. The learning curve would be minimal to eventually accelerate ROI,” said Ermanno.

Scaling Impact: Global S&OP Decision Integration

After such significant pilot results, Ermanno identified how to achieve his primary objective. Meanwhile, the Evo team identified additional opportunities for efficiency gains.

By isolating the sales forecast as the primary variable driving S&OP, ABB was sacrificing gains from other metrics. Evo proposed further integration of S&OP using what they called zero-based S&OP forecast, essentially a system that recommends actions based on systemwide inputs and impact.

The global system could therefore be optimized to reduce excess inventory and costs, increasing overall efficiency. Decision integration would drive better outcomes from purchasing through sales and production and reduce volatility.

Within the first month, Evo had validated the opportunity and sized all the potential further benefits from switching to zero-forecast innovative S&OP.

“By eliminating the separation between traditional forecasting and operations planning, they surfaced the opportunity to integrate decisions. This not only eased manual data-processing workload but also delivered significant efficiency gains,” said Ermanno.

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