## Eliminating Supply Breakdowns with the Application of Time Series
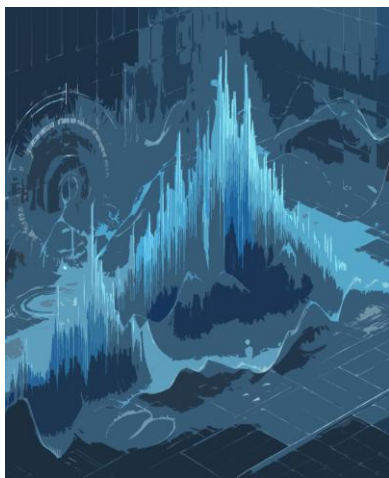


There is a dilemma experienced by companies: "have product in stock and reduce customer service time" or "reduce inventory costs and optimize financial performance".

In this context, the S&OP (Sales and Operations Planning) process integrates the commercial vision with production capacity.

When starting S&OP, companies are faced with the need to have more accurate sales projections, especially in the medium and long term..

One of the impacts of this constant search for stock optimization is the disruption of supply to customers, especially when it comes to imported raw materials or those with long manufacturing lead times. And all of this starts with commercial projections that are inaccurate.

### Common challenges in companies

**Lack of Predictability:** Uncertainty is a constant, and projections are based on intuition.

**Operational inefficiency:** Unbalanced inventories hamper operational efficiency, directly impacting on costs and customer satisfaction.

**High number of SKUs for projections:** Companies with a large number of product combinations end up generating forecasts at a more macro level, due to the difficulty in processing and validating a large number of projections.

*According to research by the ISM (Institute for Supply Chain Management),*

# 45%

*of the manufacturing companies surveyed started 2024 without an effective solution for dealing with shortage or excess stock problems.*

### Where to start

**Implement the S&OP process:** start with alignment meetings between sales and manufacturing, led by PCP. Prioritize the discussion of strategic products and record decisions.

**Evaluate Historical Data:** Use at least 3 years of historical data to identify patterns, and above all exercise different stratifications: product line, customers, segment, sales region.

**Analytical Tools:** Explore your historical data to identify relevant patterns and trends. For example, seasonality, customer purchasing profile.

### Future Vision and Roadmap

**Implementation of Advanced Predictive Models:** Integrate more complex predictive models to obtain more accurate forecasts that can be adapted to different scenarios. One of the most accurate and advanced techniques on the market is the use of Time Series with ARIMA-X.

**Big Data Analysis:** explore large-scale analysis, incorporating Big Data for a more comprehensive and detailed view.

**Integrated Process Optimization:** Develop customized solutions, optimizing internal processes and effectively integrating S&OP for a more aligned and effective strategy.

For the implementation of advanced statistical techniques, NESI Intelligence for Business is a consultancy specializing in time series projections and is available to collaborate and drive your company towards success.

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