ROBOBUYER

WORKING CAPITAL OPTIMIZATION

Leveraging A.I. to automate procurement

From ORS Group

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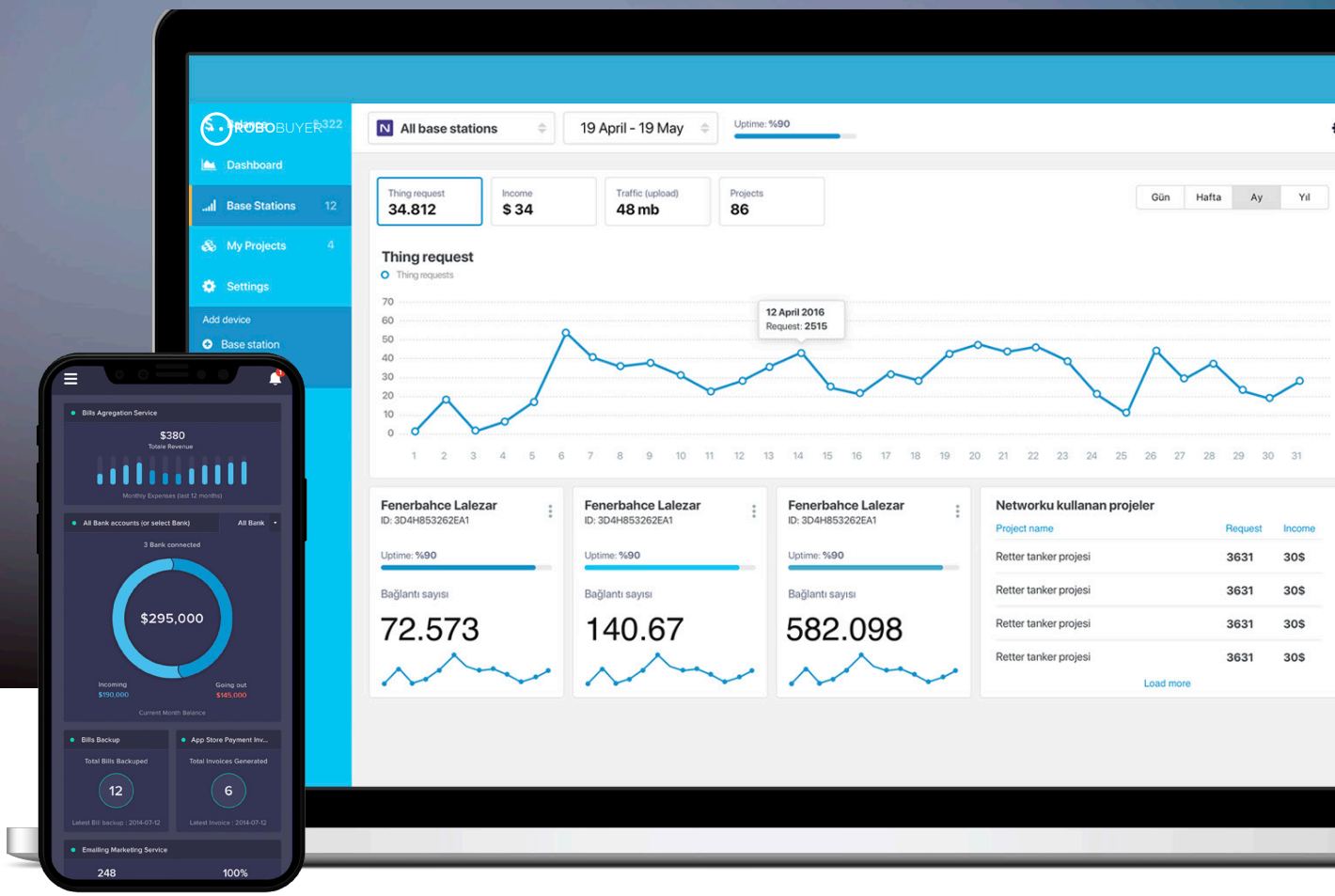


Enterprises that own, operate, or are part of a supply chain invest a significant portion of their capital in inventory—at times, up to 90% of their cash holding—to fulfill demand.

These include the raw materials, work in progress, and finished goods held by the company before becoming the property of the consumer.

While accounts payables and accounts receivables are significantly mature operational processes in most enterprises, the Procure-to-Pay cycle is one of the most cash-intensive processes today where enterprises have to invest significant capital in anticipation of future demand.

There are typically between six to seven steps in the chain from raw material to the customer:

Any small trigger in the customer front—preferences, seasonal demand, trends, and other factors—initiate a bullwhip effect in the supply chain, affecting inventory holding capacity, and thus, working capital. A recent Deloitte study of working capital in different enterprises found that "inventory management was a big variable that separated the strongest performers from the weakest."

To build a near-real time responsive supply chain that is agile to the sense-and-respond requirements of today's digital world, an enterprise has to leverage a data-driven approach to forecast, procurement, production, and order fulfillment.

Understanding Procurement

Since procurement is the most critical component in the supply chain, understanding the factors affecting it will help enterprises optimize their inventory investment and thus reduce risk in their working capital exposure.

Forecasting Demand

The accuracy of forecasting demand requires a seamless integration of internal data silos—including ERP, CRM, financial data, and so on—and external signals like economics, political, social, and weather. Enterprises that leverage a fully integrated data platform can be accurate and intelligent in their demand forecasting which will eventually reduce bullwhips in the supply chain.

Production Planning

Most supply chains have optimized their production planning to Just In Time (JIT) transactions that reduce inventory holding, but also hold the potential risk of missing deadlines if even a micro event goes out of sync. Enterprises that are aligned with their suppliers in real-time have significantly higher leverage than others that don't, and are better prepared for business continuity

Procurement Planning

Signals including market conditions, cost of input goods, and cost of discounts help organizations build a strong procurement planning process that minimizes working capital over-utilization

Cost of Goods Produced

Organizations need to consider the liquidity of the stock and work in progress as part of an overall risk assessment of the company as a whole. This will include an assessment of commodity risk for companies processing certain materials. The decision on whether to hold stock as raw materials, semi-finished or finished stock will depend on the relative liquidity of these three forms, and in turn, affect working capital utilization

Stocking

Warehouse costs, interest on produced goods, and inventory build-up are three major influencers on working capital utilization for any company. Even though organizations depend on JIT for producing very little or minimum inventory, inaccurate forecasts and bullwhips tend to quickly balloon out inventory, adding to over-utilization of capital or higher interest on produced goods remaining unsold

Distribution

In organizations that sell through a network—including channels, distributors, and resellers—the distribution costs influence the end pricing of the goods, the margins, and profits

Applying Artificial Intelligence in Procurement

In today's world, where data is infinite, cross-channel, and mostly unstructured, it is virtually impossible for traditional procurement teams to deliver at scale, and in near-real time. Applying machine learning and leveraging artificial intelligence can help smooth out the entire procurement process—from demand forecasting to order placement.

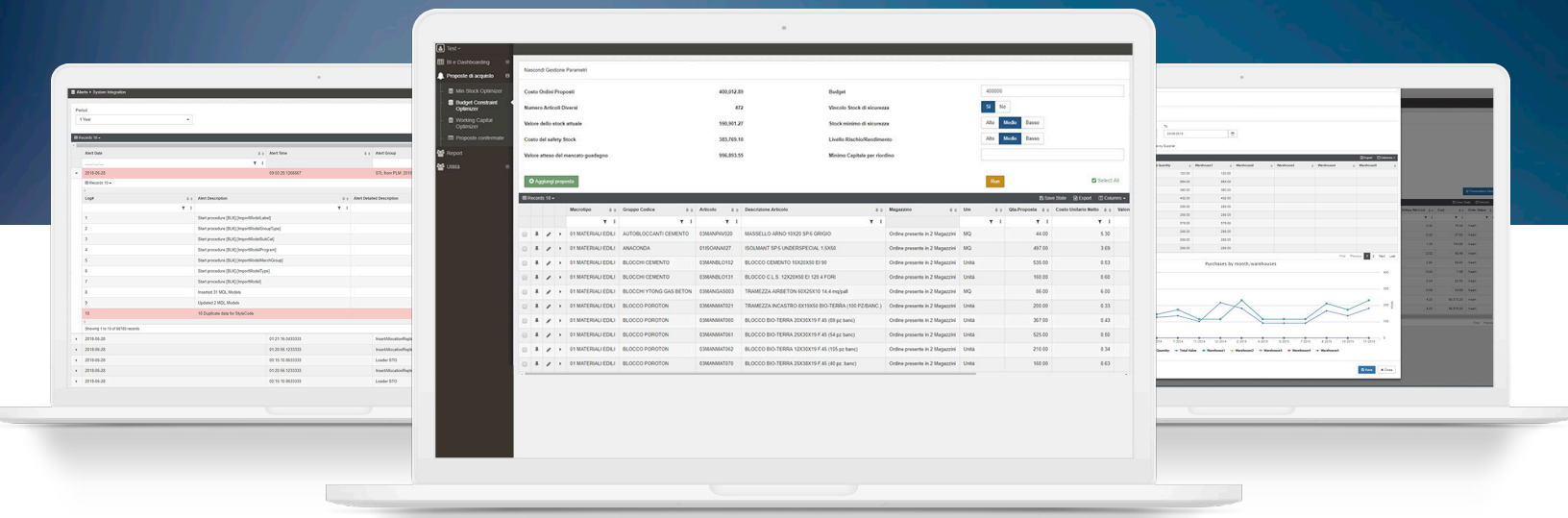
Organizations are finding it increasingly difficult to translate hard-fought negotiated savings into realized savings through contract and P2P transactional compliance. Doing so while creating an intuitive and compelling experience for procurement can be even more daunting. This will obviously require more than a by-rote "drive-by sourcing" event and the resultant contract thrown over the wall into a poorly designed and automated P2P process/system.

An A.I.-based platform helps reduce the friction in information flow across the supply chain, and the platform learns to look for Pricing Irregularities, Usage Anomalies, Contract Variance, Suspicious Spending, and Potential Fraud. When this is applied specifically to procurement, an A.I.-based platform can consume vast amounts of data at speed to compute:

- Past performance of goods at specific points of distribution
- Market trends, policy and environmental signals, and customer trends
- Profit margins and promotional pricing performance
- Minimum stock holding dependencies
- Supplier risk and preferred vendor pricing advantages
- Organizational data analytics—cash flow, capital needs, and working capital in the supply chain

The Rise of Automation in Procurement

Digital enterprises are exploring procurement automation that will leverage deep insights of organization and external data to deliver a risk-mitigated, always aware, and real-time “guided” transaction.



RoboBuyer 4.0

The ORS RoboBuyer 4.0 is a procurement automation platform that constantly seeks to connect data points that provide newer insights including:

- Third-party supplier or industry data that when linked to accounts payable creates a custom risk profile. It gauges supply chain disruption and sustainability in the procurement cycle.
- Sales reporting and purchasing records that can be connected to bring quantitative metrics and greater confidence into quality considerations.
- Historical purchases and external market information combined to offer predictive insights for negotiations and order quantities

RoboBuyer 4.0 offers retailers two options in their procurement

The Minimum Stock analyzes past sales logs and computes the minimum quantity to be held in stock: consequently, it will order only those products absolutely necessary to fulfill expected demand.

The Fixed Purchase Budget logic maximizes the expected margin, given a certain purchase budget. Similar to the Minimum Stock logic, the Fixed Purchase Budget logic analyzes past sales logs to estimate the sales probability distributions of each pair of product/warehouse.

Why RoboBuyer 4.0

Build a safety stock volume

The RoboBuyer 4.0 algorithm analyzes

Average sales and the lead-time between order placement and the actual arrival at the warehouse

The maximum quantity sold in a specific time range, for every item and at every warehouse. The lead-time is derived from historical orders with a weighted average, managing any possible conflicts that may arise.

The algorithm then creates thousands of goods/ warehouse combinations to estimate the right safety stock volume.

Leverage an accurate Sales forecasts engine

The RoboBuyer 4.0 sales forecast model analyses

Every historical series of product/ warehouse pair to detect periodic phenomena for increase/reduction of sales (for example items that are sold more in the summer or winter)

The average sales and the lead-time between order and arrival of goods in stock. In addition, the algorithm identifies each product's sales probability distribution and adapts the purchase order to different sales level

RoboBuyer™ allows users to modify the sales level, service level, safety stock and other parameters to plan for future events affecting sales, including campaigns and promotions.

For more information, please contact sales@ors.group