Expanding Automation Beyond Robotics:

Five Ways To Drive Supply Chain Success

Expanding Automation Beyond Robotics:
Five Ways To Drive Supply Chain Success
Sponsored by Blue Yonder

Supply chain automation benefits extend well beyond the bottom line. Employees are safer — and free to handle more rewarding work — while customer satisfaction rises when automation is deployed where it's appropriate and with careful planning.

Robotics have been an early and logical target for automation. Now, other aspects of supply chain services are also automating.

The technology is available for logistic providers, manufacturers and retailers to automate manual processes and expand supply chain automation in manageable phases. The sum of these actions is greater than their individual parts, as humans and robots work side-by-side in an orchestrated, automated process.

Starting in warehouses and distribution centers (DCs), robotics automation now mimics human capabilities for performing work including order processing, inventory checks, repetitive tasks and data entry. The machines can learn order patterns as they pick, spot product defects, identify and avoid safety hazards, and generally create better organization and workflows in real time.

While supply chain automation often begins in the warehouse, it can extend beyond to transportation management, fulfillment and returns, and even customer-facing locations including retail venues, malls, gas stations and more.

To begin, choose a starting point, learn from the experience, and move beyond competitors with these five keys ways to expand automation beyond robotics:

1 Digitalization Opens the Door to Automation

The first step to automating manual process and creating automated workflows is digitalization, which reduces manual work and increases accuracy and speed. Make an honest assessment of the current strengths and weaknesses of your organization's digital capabilities with process mapping.

Next, evaluate software options. Determine if your architecture enables cloud data to support machine learning (ML) and algorithms. You might want to move in phases, first focusing on one or a few core products that can be automated with a manageable software migration.

Assess your current state of data integration and understand the extent to which your systems do and don't talk with one another. Along with this, audit the data that comes from, for example, a warehouse to validate its level of accuracy.

Take small bites and be very clear about your objectives. It's important to have some initial wins to gain buy-in across your organization.

2 Use System Tools and Data To Create Better Solutions and Recommendations

With manual picking and packing operations it's often been necessary to learn through trial-and-error. Damage, product misplacement, and missed pick-ups increase costs and strain customer relationships.

Successful automation will greatly reduce these problems and replace them with new opportunities. By identifying the root-causes of supply chain inefficiency, you can quickly develop automated processes that improve delivery date performance, last-mile operations, and fulfillment decisions. Optimized, sustainable and cost-effective routing is enabled with transportation and load building opportunities.

In time, you can run virtual simulations on labor and order fill to reveal warehouse management plans that optimize internal processes and make it possible to batch and ship orders for logistics options that better match customer needs. At the same time, you can build network models that strengthen logistics networks for greater cost savings, efficiency and customer service by sourcing out the optimal location or route based on cost, service or sustainability goals.

3 Predictive Automation Arises From the Integration of Data Analytics and AI

Manual forecasting models are inherently dated and can't keep pace with always-evolving market demands. Artificial intelligence (AI) backed predictive automation enables the development of efficient workflows and proactive, autonomous responses and actions. With more accurate forecasts, automation stays ahead of sudden changes so customers can be consulted before problems occur and provided with options.

Predictive automation can integrate traditional customer order plans with other significant data including market conditions and historic trends based on experience with the customer. This information supports more accurate inventory and labor planning and creates an environment where supply chain events can be orchestrated for a better output.

The result? More accurate promises to your customer, improved service levels, and enhanced opportunities for additional value-added services.

4 Autonomy Enables Self-Sufficient Systems to Operate Independently

Depending on the existing level of supply chain visibility, autonomy can be employed to achieve improvements in Warehouse Management Systems (WMS) or — with greater visibility — optimization of the end-to-end supply chain. Options also include focusing on an array of opportunities including improved workflows, smarter robotics, and/or better exception management.

Autonomy automates decisions for random tasks that can be performed faster and with greater safety and accuracy by robots, while allowing team members to focus on higher level and more meaningful tasks, which reduces employee turnover. Autonomy also enables the interleaving of labor and robotics for streamlined task completion.

As autonomous operations generate data, AI and ML will increase system knowledge, enabling improved processing in applications such as yard operations.

5 Synchronized, End-to-End Supply Services Orchestrate Logistics Solutions in Real Time

Harness supply chain agility, decision-making, customer experience, resilience, margins and revenue when supply chain services are synchronized with AI, ML, microservices, unified data modes, and cognitive intelligence.

Expand agility through synchronized tools such as WMS, Transportation Management Systems (TMS), and Order Management Systems (OMS) that are designed to work together in a connected and interoperable way. Internally, redundant technology functionality can be reduced, and rigid legacy systems can be retired.

By seamlessly enabling business process workflows, supply chain service levels will increase as costs decline. Customer satisfaction will improve along with profitability and sustainability.

Resource Link: www.blueyonder.com