

Thought Leadership Series

Building an Automation Business Case for 3PLs



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Third-party logistics (3PL) companies continue to be one of the fastest-growing sectors of the logistics industry. 3PLs offer an attractive alternative to traditional warehouse operations, where a company outsources its entire inventory, distribution and shipping operations. While 3PLs have some of the same challenges as conventional distribution centers (DC), 3PLs have unique issues such as service level agreements (SLAs), multiple client requirements, accurate reporting systems, ERP and value-added software integration and the availability of labor. 3PLs also carry the weight of caring for and managing inventory and customer satisfaction for their contracted partners and transparency in their operations.

With the demand for 3PLs continuing to rise in 2021, the 3PL market was valued at \$976 million; by 2028, it is expected to rise to \$1.7 billion¹, facility planning, and operational design have become essential. Optimized facilities and flexible automation paired with scalable operations can lead to growth as new customers and contracts are acquired.

^{1.} https://www.fortunebusinessinsights.com/third-party-logistics-market-105802

The Need for Flexible Automation



3PLs are unique in that their product mix can grow and shrink quickly. Radical changes in product dimensions, weight and characteristics can cause significant issues within a 3PL, as previously used automation tools might not fit current needs, leading some organizations to hesitate in investing in automation. However, with the labor market continuing to tighten, flexible automation and technology are becoming more imperative to drive cost controls, inventory management and productivity.

Kevin Smith, CEO of Sustainable Supply Chain Consulting, recently commented, "There aren't enough people to do these jobs, and the only way to supplement the amount of labor you need is to automate what you can. 3PLs are willing to make that investment because they can sell it."

A recent 3PL study and survey² found that 3PLs ranked the following as the most important to 3PLs as they move into 2023:

- Data and analytics
- Customer focus
- Innovation & transformation
- Talent acquisition
- Supply chain relationships
- End-to-end supply chain
- Sustainability

Transparent data and customer focus can be interwoven together, as many customers will want insight into a 3PL's operation in real time, so that both entities can work from the same data sets to make quicker business decisions.

The same can be said for the next two topics: innovation & transformation and talent acquisition. As the full and part-time positions continue to be challenging to fill, 3PLs will turn to automation to lessen the impact.



Automation Right for Any 3PL

The start of any automation process begins with the management of inventory. Real-time inventory and order fulfillment is imperative in any operation, but vital for 3PLs and while investing in a new technology comes with some degree of unease, there are proven automation solutions that 3PLs can leverage to begin moving from a manual to an automated operation.

Warehouse and Inventory Software – Since 1975, when JCPenney created the first software to manage their inventory, many different types of warehouse management software have been introduced to the market: from slotting software to a warehouse control system (WCS), a warehouse management system (WMS) and a warehouse execution system (WES). Many offerings align with the number of orders per day, inventory turns or the ERP it integrates into. Warehouse management software can provide vital business information and real-time data on inventory, productivity, and throughput. Utilizing the right supply chain partner can help analyze and select the right software to streamline operations today and into the future.

Wireless Scanning Devices – Much like software, wireless scanning devices come in a wide variety. Laser barcode scanners, RFID, 2D scanners and wearable mobile devices can all be utilized in receiving and picking activities. Using a data-driven, technology-agnostic approach can allow an operation to select the right technology.

Shipping Software - Another critical piece of software is shipping software, also called transportation management system (TMS), which allows an operation to rate shop for the best cost shipping options among carriers that still meet customers' delivery expectations.

Picking Technologies – Picking continues to be the most labor-intensive part of a distribution center operation. Utilizing pick-to-light or pick-to-voice technologies can significantly impact productivity and accuracy.

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Building a Business Case for Automation on a Greater Scale



While the need to automate and apply organizational best practices exists in any size operation, there are several factors to consider when moving to a higher degree of automation and complexity.

Culture and staff adoption, integration plans and capital and operational costs must be weighed when creating a business case for an organization's leadership to consider before investing.

Delivering a clear business case that can answer questions on costs and ROI, as well as expected performance and long-term savings, is essential. Below are some components to building a solid business case for automation.

- Analyze and select the best-case scenario
- · List the business risks and mitigation plans
- · Determine projected capital investment
- Define projected operating costs
- Establish projected performance and cost improvements
- · Capacity and productivity impacts
- Create implementation plan and timeline

New technology can now help build a business case with the advent of virtual and augmented realities, the metaverse and digital twins, which can create avenues to take your best design scenario and test it before any investment decision is made. Use 3D headsets to take a virtual tour of your new facility, or travel through the warehouse in 2D space. Emulate running the system at an optimal speed and throughput, and then add disruption and different parameters to measure what happens to productivity as you move levers like labor, SKU proliferation and tighter shipping windows.

The Goods-to-Person Solution for 3PLs

With the unique needs of a 3PL and the changing supply chain landscape, a goods-to-person system (GTP) is a good fit for expanding operations with a new greenfield site or revitalizing an existing brownfield site. High-density storage, paired with a GTP station, can be an attractive automated solution as it is scalable, eliminates laborious picking operations and creates operational efficiencies in productivity, accuracy, capacity and throughput.

A GTP solution consists of three main pieces of automation:

- Automated storage/retrieval system (AS/RS)
- A picking or goods-to-person workstation
- Conveyor or autonomous mobile robot system (AMR)

GTP Automated Process

- 1. Order received through warehouse management system software.
- 2. Order assigned to a picking station.
- 3. Product totes for order automatically brought to the picking station (AS/RS) by robots or shuttles.
- 4. Picker picks, scans and places product in order tote.
- 5. Product tote automatically sent back into AS/RS to be stored.
- 6. When order is complete, the picker places the order tote on a conveyor or autonomous mobile robot (AMR).
- 7. Order travels to pack and ship station.

While automating most processes within the four walls of the warehouse will improve productivity and throughput, a GTP solution can magnify the benefits for a 3PL. As SLAs become more inflexible and filled with performance penalties for not meeting expected levels and delivery times, a GTP system allows an operator to scale up for peak by offering more SKUs significantly increasing order fulfillment time while controlling inventory with less dependence on temporary or seasonal labor.

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FORTNA CAN HELP

The team of industry experts at FORTNA can help create a winning automation strategy and design for your 3PL operations. Need to build an automation business case? FORTNA can take your unique business needs, growth plans and challenges and apply datadriven solutions that improve performance today while ensuring flexibility for the future.

Contact us today at www.FORTNA.com

