



Automation and Robotics Discovery

Leading industrial wholesale distributor leveraged Bricz as part of a market discovery into automation and robotics for distribution center fulfillment operations

The distributor, whose network of facilities spans the continental US, has recently begun to experience an increase in labor costs, decrease in associate retention, and inconsistency during peak seasons throughout their distribution centers. They sought to combat this by introducing automation and robotics into their facilities.

At the beginning of the engagement, the company's operations within the four walls were entirely manual with the exception of traditional lifts and clamp trucks. From transporting material to picking the product, each step in the operation was handled by a human.

The Bricz team conducted a review of the customer's operations and gathered and analyzed inventory profiles, fully burdened labor costs, and historical data with regards to normal and peak order volumes to identify qualified automation solutions that could alleviate some of the operational pain points.

Objective

- Evaluate transactional opportunities within the client's distribution center that may benefit from automation and robotics solutions. Provide detailed ROI analysis and recommendations for a future automation environment

Methodology

- **Discover** - Client operations and identify goals
- **Assess** – Identify and prioritize opportunities and build use cases
- **Engage** – Vendors to evaluate a solution fit
- **Recommend** – ROI reports and an executive summary of final recommendations

Results

- Identified potential annual savings of \$75,000+ with an approximate 3-year ROI period
- Provided insight into 10-year solution viability based on projected normal and peak volumes
- Recommended process improvement opportunities within the facility that would complement the introduced robotics solutions
- Built use cases and roadmap for future automation

THE PROVEN BRICZ METHODOLOGY

Discover

The Bricz team visited the client's flagship distribution center to conduct an initial walk through and gather observations and business requirements. During this session, Bricz engaged with the client to understand their standard operating procedures and to gather the necessary data pertaining to labor metrics, product volumes and locations, order history, and general pain points within their operations. In addition, the team performed labor and time studies on the major operations taking place within the distribution center. Once the necessary information was collected, Bricz was able to identify the operations that presented the greatest opportunities for labor and cost reduction.

Assess

The team then performed a detailed analysis of the facility's operations and translated it into opportunities for robotics and automation. These opportunities were prioritized based on their impact on the daily operations of the facility and their associated labor costs. As a general rule, the team focused primarily on operations that required high investments in time and associate resources. For example, Bricz found that, on average, the client was spending upwards of \$100,000 annually on labor that involved material transport within their facility. Bricz converted these high-level opportunities into specific use cases in order to begin qualifying solutions that could best accommodate the scenarios.

Engage

After building out use cases for each opportunity, Bricz began to qualify and shortlist market solutions. By utilizing existing partnerships and relationships with robotics vendors, the team was able to further explore the viability of their services and solutions. Bricz also connected with new robotics companies to gather the necessary documentation and statistics regarding their product offerings. All in all, the team was able to gather worthwhile information from 18 of the leading robotics and automation companies in the market today.

During these engagements, Bricz collected a number of pertinent data points pertaining to the solutions. These included physical solution specifications, entry point volume thresholds, long term pricing, and system integration requirements to name a few. This data allowed the team to disqualify solutions that had minimal viability and shift focus onto those that could create the greatest value within the client's facility.

Recommend

After vendor engagements were completed, Bricz began to prepare recommendations for the client. The first metric created was a Total Cost of Ownership (TCO) breakdown on the most viable solutions that had been previously determined. This was used to show what 5-10 years of ownership of the solutions looked like in terms of total capital investment.

Using this report, the team then began to calculate the Return on Investment (ROI) for the solutions. The team utilized multiple data points to formulate ROI for the qualified solutions. These included fully burdened labor cost per associate, solution speed and payload, item location, order history, facility traffic routes and distances, and many more factors.

These metrics were included with detailed reports on the final qualified solutions along with an executive summary report detailing disqualified solutions. These items were presented on site to the client along with a road map for future success in the automation and robotics space.

