THE INVESTOR'S GUIDE TO:

LOGISTICS AUTOMATION

Understanding the robotics & artificial intelligence landscape from an investment perspective
E-commerce has exploded. A decade ago, the industry barely existed. But in the age of Amazon and Alibaba, retailers with any hope of competing must adapt, adopt, and automate—or perish. This focus on automation has already driven the logistics automation market to astronomical highs. Much of this growth can be directly attributed to strong economic growth, a tight labor market, the e-commerce boon, and soaring consumer demand for quick, easy online retail. Use of automation, warehouse management systems (WMS), and other technologies like omni-channel fulfillment give retailers the capability to cope with many of the challenges in logistics. The interest in robotics and automation is spreading as the technology improves and gets cheaper and easier to adopt.

Over the past three years, the ROBO Global logistics automation subsector has outperformed the S&P 500 by an impressive 53%. Considering the level of investment in the space—by both the giants and by the smaller retailers who are following in their footsteps—investors can expect tremendous growth in the logistics automation subsector for years to come.
GROWTH DRIVERS

The logistics automation market is expected to reach $86 BILLION BY 2023
That’s a CAGR of 12.1% since 2017

WHY NOW?

The need for faster delivery times and lower transportation costs will drive warehousing to be even more dependent on technology and automation.

E-commerce Boon
The rising demand for e-commerce and rapid online delivery is creating a need for fulfillment that only robotics can aid in providing. With Amazon upping the game in warehouse automation, retailers everywhere are working to keep up. The addition of mobile robots and automated solutions can cut the amount of time needed to fulfill an order in half.

Robots on Retail Floors
This automation is needed not only behind the scenes, but on the front end as well. From restocking shelves to cataloging inventory for customers, logistics fulfillment is stretching far and wide.

Improved AI Capabilities
AI uses tremendous amounts of data for decision making, and the potential for applications is enormous, including managing payment processing, handling customer service, increasing supply chain efficiencies, and accelerating inventory picking and order fulfillment.

Delivery Options
Consumers want more delivery options, and companies such as Instacart, FreshDirect, and Amazon have solutions. Shippers and carriers have to massively invest in infrastructure to meet the ever-evolving needs of the consumer.
More consumers shop online today than ever before, and they expect fast delivery. For retailers, the key to meeting that demand is to employ robots and cobots that work alongside human workers to help increase efficiencies and reduce costs throughout the order-fulfillment process. In 2017, Amazon set the bar high, delivering more than 5 billion items in under two days to its Prime members with the help of 100,000+ Amazon warehouse automation robots.

To remain competitive, retailers large and small are following in Amazon’s footsteps. Walmart’s newest robots roam its store aisles to check inventory and help workers locate and price items for customers. Specialty retailers are using robots with mechanical arms to scan and sort clothing orders. As demand for labor outstrips supply, retailers and logistic companies are turning to robotics, automation, and AI for innovative solutions.

ROBO Global Strategic Advisor Insight:

“There are still many tasks that are repetitive and not cognitively demanding, making them ripe for automation. In addition, new capabilities, such as accurate and fast grasping robots – made possible by better sensors, actuators, computing platforms, and algorithms – are greatly increasing the role of automation in logistics.”

-Raffaello D’Andrea, PhD

ROBO Global Strategic Advisor & Co-founder of Kiva Systems (Now Amazon Robotics)
EXPLORING DEMAND:
Opportunities for growth in logistics automation

Today’s modern warehouses are swarming with robots, cobots, and driverless forklifts. These powerful "team members" work alongside human workers to move the inventory along at a rapid pace and make each robot-enabled team more efficient than ever before. And yet despite the dramatic success reported by companies that have made the transition, the penetration rate of automation in warehouses remains in the low single digits, which is great news for investors.

According to a recent IDC survey, only about 16.5% of organizations across several industries are using commercial service robots, which means that the vast majority of warehouses are still using manual labor in the fulfillment process. Major material handling solution providers like Japan-based Daifuku and German-based KION Group stand to benefit from this pent up demand. The same is true for Zebra Technologies whose track & trace solutions drive improvements in every area of the warehouse, and industrial conglomerates like Honeywell that are continuing to make significant organic and external investments in their own warehouse and logistics automation capabilities. Every one of these advancements is fanning the flames of an already hot battle for logistics excellence in the US grocery industry. The battle is on, and for investors, the future couldn’t be brighter.

MARKET PERFORMANCE & GROWTH STATS

The growth across the space has been outstanding. Since the inception of the ROBO Global Robotics & Automation Index in August 2013, the logistics automation subsector alone has grown 150% (cumulative as of Q4 2018), the best subsector in our universe.

Since the inception, Daifuku has soared +246%, followed by Zebra at +218% and Kardex AG with +185% growth. This growth continues to be driven by the shift to e-commerce, resulting in the adoption of a vast range of robotics and automation technologies at traditional retailers, grocers, and across the entire transportation and logistics industry.
Online grocery retail is expected to grow at a double-digit rate globally over the next 24 months, according to grocery research firm IGD. Amazon’s Whole Foods acquisition signaled the convergence of traditional e-commerce and grocery in the US—and set the stage for a complete industry disruption. That shift is mirrored in the UK by Ocado, the world’s largest online-only grocery chain.

Ocado’s home-grown warehouse solution uses a machine learning algorithm that operates the company’s giant, three-story grids and cubes where robots zoom around the top of the blocks picking items from crates. Currently, Ocado processes 1.7M items a day across its four automated fulfillment centers, each of which can pick and pack an order of 50 groceries in just 5 minutes. Shares of Ocado surged more than 99% in 2018 after the company signed big deals with supermarket giants all over the world. It’s largest partner, Kroger, recently paid $247 million for a 5% stake in the company. There’s no doubt about it: the future of the grocery warehouse revolution is on its way.

*All data as of 12/31/2018