

# ROBO

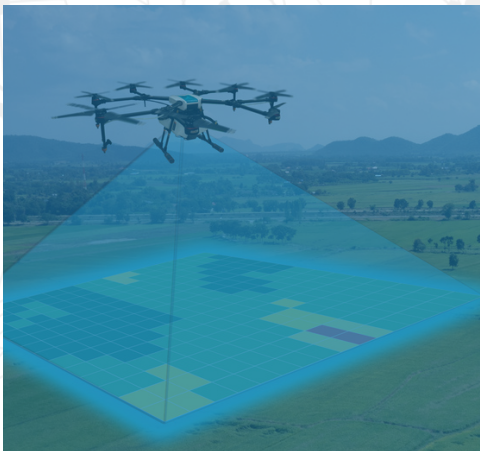
## INVESTING IN ROBOTICS & AUTOMATION

### ROBOTICS, AUTOMATION, AND ARTIFICIAL INTELLIGENCE ARE ENTERING ALL INDUSTRIES—NOW MAY BE THE TIME FOR INVESTORS TO EMBRACE THIS INNOVATION

From the earliest agricultural machinery to today's high-speed welding robots used in manufacturing, we have been automating dull, dirty, and dangerous work for nearly a century. But the realms robotics have recently entered have far exceeded what humans previously imagined possible. Just as the Internet transformed how we work and communicate, robotics and artificial intelligence (AI) are changing the fundamental structure of sectors across the economy.

Drones are being used to survey the health of crops, surgical robots are conducting over one million procedures each year<sup>1</sup>, and autonomous vehicles are making delivery treks. This is all being made possible due to the convergence of declining technology costs, increasingly reliable performance capabilities, and the availability of massive amounts of data fueling machine learning and intelligence.

For investors, the name of the game is to look toward the growth and disruption potential of the technologies of tomorrow. Since the [ROBO Global Robotics & Automation Index ETF](#) (NYSE: ROBO) was established in 2013, a dozen competing strategies have come to market around the world. ROBO Global combines active research with industry experts to take a forward-looking view of the opportunities. Our ETF provides investors with pure-play exposure to best-in-class robotics and automation companies as well as enabling technologies.



## GETTING TO THIS MOMENT

When we first launched the ROBO ETF, many investors were not attuned to the expansive potential of robotics and automation beyond factory applications. Yet, we saw the signs forming and believed that it was just the beginning of a multi-decade transformation that would influence every aspect of how we, and future generations, live and work. The tremendous growth in robotics and automation is occurring due to a few key factors:

1. **Improving Technology.** We see exponential advances and declining cost curves of key enabling technologies, from computing power to machine vision to voice recognition and machine learning, significantly expanding the scope of robotics and automation applications. Ongoing advances also create opportunities as previous generations of robots and technology must be upgraded.
2. **Wider Deployment.** Robotics and automation are finding applications far beyond manufacturing, bringing greater efficiency to many diverse uses, including automated distribution centers, surgical robots, diagnostics tools, drones, and autonomous vehicles.
3. **Macro and Social Challenges.** These challenges include aging populations and a shortage of skilled workers, the need for greater crop productivity to feed a growing population, healthcare systems running at full capacity yet not reaching the entire population, slow productivity gains, and more recently automation solutions needed to serve a post-pandemic world.

## HOW COVID-19 HAS ACCELERATED THE DEMAND FOR ROBOTICS

While this technological revolution is still in its infancy, the COVID-19 pandemic has shed an enormous spotlight on the clear need for automation and robotics technology across all sectors of the economy. The turbocharging of digitization, the work-from-home culture, and the surge in demand for rapid e-commerce fulfillment and touchless deliveries have created clear gaps that only technology can fill.

The use of robotics and automation can create safer and more efficient workplaces, from factories to hospitals to offices, and has been crucial to companies during the downturn. In these ways, we believe that COVID-19 has both validated and accelerated the investment case for robotics and automation.

Let's use logistics and supply chains as an example. According to McKinsey, it is now believed that 10 years of e-commerce adoption was compressed into just three months during 2020. This shift in consumer behavior is making it mandatory for retailers to incorporate automation and AI to keep up. In the not-too-distant future, people will be surprised to know that retail shops ever closed (with computer vision, robotics, and touchless payments), or that even highly customized items couldn't be created, shipped, and delivered in a short window.

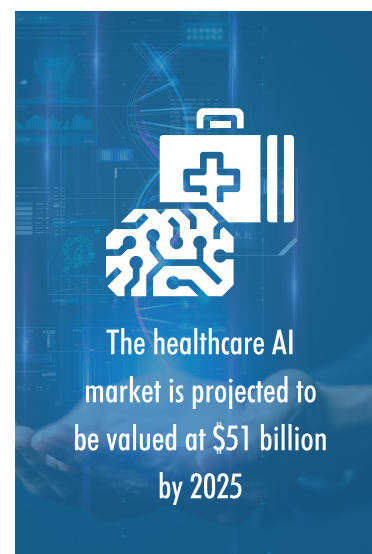
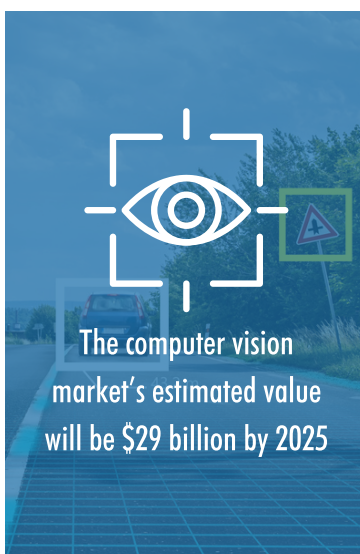
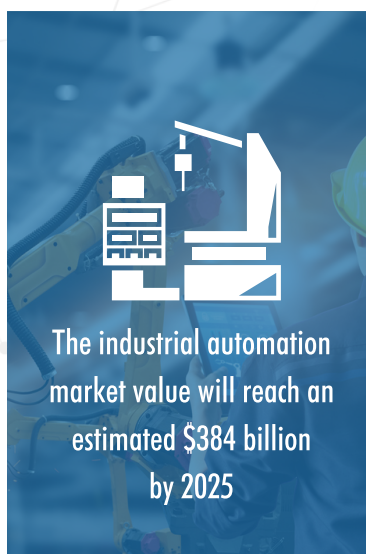
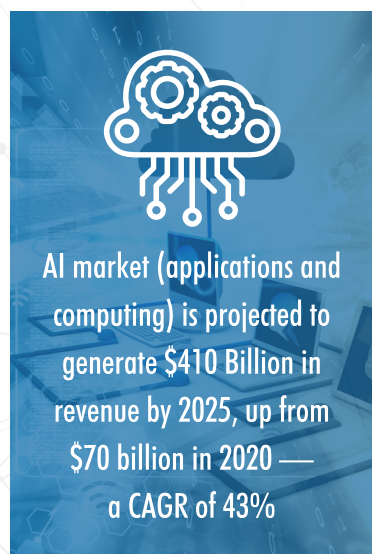
This transformation also required the introduction of more logistics and warehouse automation for companies to stay above water when it came to order fulfillment. The e-commerce boom is just one of many examples of how robotics can be used in response to a changing world.



## THE MODERN CORPORATE TALE: DISRUPT OR BE DISRUPTED

Before the COVID-19 pandemic, corporate giants globally had understood this vision of the future, aggressively deploying capital to develop and acquire the technologies needed to take their businesses to the next level. The choice, they knew, was simple: disrupt or be disrupted. As companies rush to leverage and build on all that robotics and automation have to offer, the pace of acquisitions has continued to accelerate.

***The exponential growth trends across robotics and AI are undeniable:***



Source: ROBO Global Research Estimates

## CAPTURING THE COMPLEXITIES OF THE ROBOTICS REVOLUTION

Never have we seen such an explosive mix of exponential technological change, an abundance of disruption, and high levels of mergers and acquisitions. Since the inception of the ROBO Global Robotics & Automation Index in 2013, 25 of its members have received takeover offers—reflecting the increasingly high value given to robotics, automation, and AI technologies by large companies.

The challenge for investors is how to best invest in this theme, as this is a highly unstructured universe of companies with rapid technological advances suddenly changing the landscape across the many areas of society where we see robotics and automation deployed.

Investors who hope to capture this complexity will seek risk-adjusted returns by building a diversified portfolio of industry leaders across geographies, small and large companies, and technologies and applications. Additionally, they will rely on the guidance of industry experts, academics, and entrepreneurs to select tomorrow's growth leaders and to provide them with the knowledge and insights to more accurately foresee emerging trends, identify the most promising new technologies, and understand the intricate interactions between technologies and their specific applications.

## AN ETF APPROACH TO INVESTING IN ROBOTICS & AUTOMATION

Because robotics and automation cut across traditional industry classifications, we believe active research is essential for identifying best-in-class companies at the forefront of this theme. And because the theme targets rapidly growing areas of the economy, thorough research is vital in ensuring the index portfolio can evolve with the theme. A static index based solely on backward-looking data and historical business models, in contrast, may not capture the fast-changing dynamics of the markets involved.



Combining this active research with a transparent and rules-based systematic strategy implemented through an ETF of liquid securities helps to ensure that exposure to the theme is not subject to behavioral biases or unintended risks.

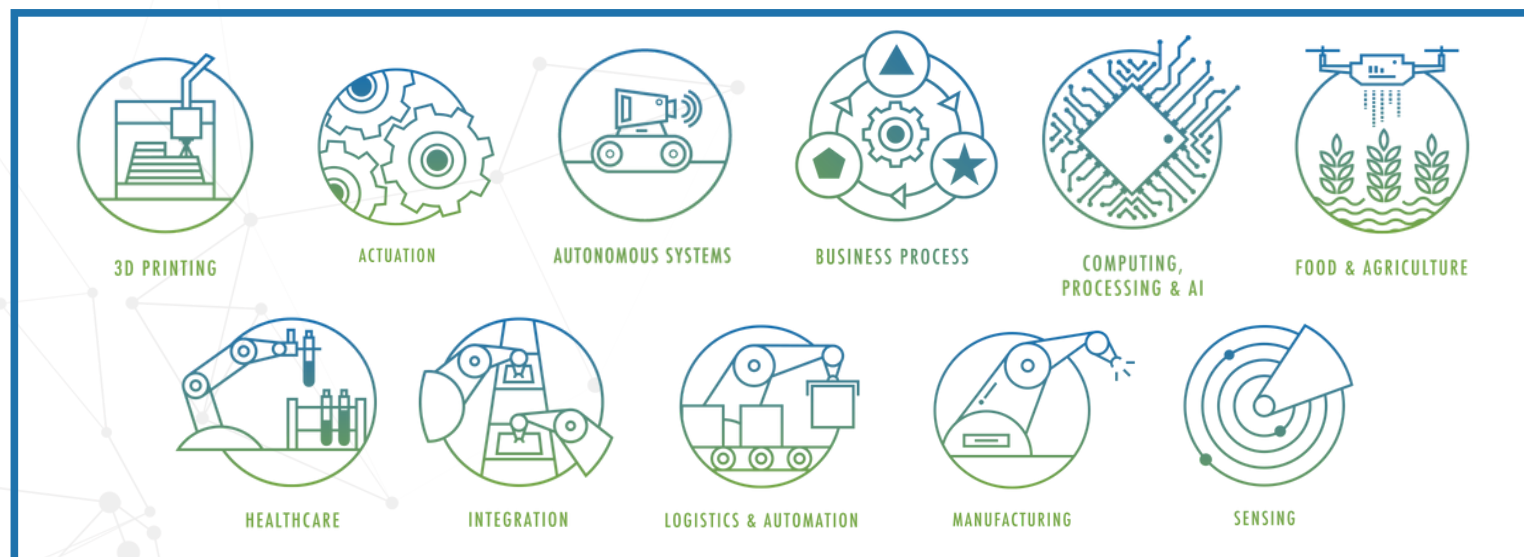
Today, it seems there's an investment product available to tackle nearly every theme and style an investor can dream up, providing more options to choose from than ever before. But understanding precisely what those options offer can be a challenge—even for experienced investors and portfolio managers. To decipher this complexity, it is important to investigate how the underlying index is constructed and how often it is rebalanced, along with the index turnover rate, performance history, and track record.

Not all portfolios are created equally. And that is precisely why those who choose to invest in disruptive technology would be wise to choose their investment vehicle carefully. While each may offer the opportunity to direct the portfolio toward robotics and AI, it's important to recognize that these products may pursue vastly different investment strategies, and some are significantly riskier than others. Certain funds invest in just a handful of large-cap stocks in the sector in the hope that these will be tomorrow's winners. And yet it's very possible—if not highly likely—that in today's dynamic environment, the largest players will change nearly as quickly as the technologies themselves. For that reason, a strategy that includes broad exposure to the global value chain may be a more prudent approach.

This broad exposure may include not only large-cap participants, but also providers of both the key enabling technologies (sensing, computing, machine learning, actuation, etc.) and the applications that deliver capabilities in every industry (factory automation, surgical robotics, food and agriculture, 3D printing, logistics automation, and more).



ROBO Global's Industry Classification is a forward-looking road map, supported by insights from a dedicated coverage team, to ensure subsectors evolve and expand at the right time. The Industry Classification is updated on a quarterly basis and managed by the ROBO Global Industry Classification Committee.



For investors seeking a way to capture the growth of robotics and AI, these are the details that matter. At ROBO Global, we strive to deliver a research-driven portfolio, focused on providing long-term growth. The time to invest in all that robotics, automation, and AI have to offer may be now, and investors would be wise to consider using the ROBO ETF as a means to gain diversified exposure to this innovation.

## PRODUCT INFORMATION CHART:



<b>Fund Name:</b>	<b>ROBO Global Robotics &amp; Automation ETF</b>
<b>Benchmark:</b>	<b>ROBO Global Robotics &amp; Automation Index</b>
<b>Ticker:</b>	<b>ROBO</b>
<b>Listings:</b>	<b>NYSE Arca</b>
<b>Fund Inception Date:</b>	<b>10/21/2013</b>
<b>Expense Ratio:</b>	<b>0.95%</b>
<b>Issuer:</b>	<b>Exchange Traded Concepts</b>

Sources:

<sup>1</sup> Da Vinci Surgical

## LEARN MORE

To learn more about the ROBO Global Robotics & Automation Index ETF, visit [www.roboglobaletfs.com/ROBO](http://www.roboglobaletfs.com/ROBO).

## IMPORTANT DISCLOSURES

Diversification may not protect against market risk. Investing involves risk, including the possible loss of principal. Narrowly focused investments and investments in smaller companies typically exhibit higher volatility. International investments may also involve risk from unfavorable fluctuations in currency values, differences in generally accepted accounting principles, and from economic or political instability. Emerging markets involve heightened risks related to the same factors as well as increased volatility and lower trading volume. Indices are unmanaged. One cannot invest directly in an index. There is no guarantee the fund will achieve its stated objective. Holdings are subject to change. Current and future holdings are subject to risk.

The Fund invests primarily in the equity securities of robotics and automation companies and, as such, is particularly sensitive to risks to those types of companies. These risks include, but are not limited to, small or limited markets for such securities, changes in business cycles, world economic growth, technological progress, rapid obsolescence, and government regulation.

**Carefully consider the Fund's investment objectives, risk factors, charges and expenses before investing. This and additional information can be found in the Fund's full or summary prospectus, which may be obtained at [www.roboglobaletfs.com](http://www.roboglobaletfs.com). Read the prospectus carefully before investing.**

This information is not intended to be individual or personalized investment or tax advice and should not be used for trading purposes.

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Shares are bought and sold at market price (closing price) not net asset value (NAV) and are not individually redeemed from the Fund. Market price returns are based on the midpoint of the bid/ask spread at 4:00 pm Eastern Time, and do not represent the return you would receive if you traded at other times.