

Emerging Technologies in Transition: Forecasting the Future of Automobile and Humanoid Robots

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In our two most recent emerging technology webinars, we examined two sectors undergoing transformative shifts—the automobile industry and robotics, specifically electric vehicles (EVs) and humanoid robots. The auto industry shifted focus to EVs a few years ago, and more recently, there has been growing momentum in humanoid robot development. These technologies have generated significant press and investment. Each presenter helped separate fact from fiction in these evolving spaces.

Our April presenter, industry veteran Joe McCabe, provided insights into the global and North American automotive markets, drawing from his firm's comprehensive forecasting models. His firm forecasts every vehicle produced globally over the next decade. While much attention has been given to government regulations and environmental mandates promoting EV adoption, McCabe emphasized that consumer demand remains the ultimate market driver. He outlined global light vehicle production—where the industry was, where it is today, and where he sees it going.

He focused on suppliers and industry shifts that will directly impact relationships between suppliers and OEMs. He noted that in North America, 14 vehicle manufacturers produced 17.8 million units in 2016, the highest sales year on record. This year, 24 manufacturers are making fewer units, and his forecast shows 28 manufacturers in play by 2031. Pricing can no longer remain as it was; everything will cost more. The impact is already being felt—16 vehicle programs have been moved out of the forecast to 2028 and beyond, with production not returning to 2016 levels. McCabe also shared insights on specific vehicle programs, tariffs, and other key market factors.

In May, Ruben Scriven, leader of the warehouse automation research practice at Interact Analysis (IA), turned the spotlight on robotics, particularly the recent surge in humanoid robot interest. Despite increased investment and media attention in 2024 and 2025, Scriven was quick to temper expectations.

He shared findings from IA's March market study, "Humanoid Robots—2025: A pragmatic assessment of the potential and likely future development of a nascent market." He noted that in the current climate, insurers are hesitant to provide coverage for humanoid robots due to a lack of technical specifications and

an immature regulatory framework. He also pointed out that not all warehousing and manufacturing roles are substitutable with humanoids—only about 27 percent of U.S. manufacturing roles are technically feasible for replacement. Furthermore, core technical barriers must still be overcome before humanoids can match human dexterity and productivity.

Nevertheless, IA forecasts that by 2032, humanoid robots will be sold in the tens of thousands per year, generating over \$2 billion in revenue, with considerable additional potential.

Meanwhile, mobile automation systems—such as autonomous mobile robots (AMRs) and shelf-to-person solutions—are outpacing fixed infrastructure in downstream applications. The warehousing boom sparked by the pandemic has cooled, but optimism is rising in manufacturing automation and reshoring, where robots—humanoid or otherwise—could help address persistent labor shortages.

The message from both webinars is clear: the future is being built—but not without disruption. Companies operating in or adjacent to these sectors must balance innovation with pragmatism and view emerging technologies as part of a longer-term evolution, not a short-term revolution.

The AGMA Emerging Technology committees continue to have high-level discussions on these topics and more. I encourage you to join the conversation. Please reach out to me at doran@agma.org. Both webinars discussed in this article are available free, on-demand, on the AGMA website.

agma.org/events-education/on-demand-webinars/

