The Automation Perception

Almost from the beginning of the Industrial Revolution when people moved from farms to factories, workers have feared that advances in automation would put them out of a job. Science fiction writers heightened this sense of dread with tales of dystopian societies where every task is performed by a robot or malevolent supercomputer.

In a recent poll conducted by Edison Research for marketplace.org, 55% of respondents said they believed the decline in U.S. manufacturing jobs was due to "trade deals" rather than "natural changes in the economy." However, the forces of automation and increased specialization cannot be overlooked in shaping perceptions about this issue.

"Automation reduced the number of manufacturing jobs from 1900 to about 1990 fairly significantly. Many of those jobs were menial and dangerous and needed to be eliminated," said Peter Martin, Vice President of Strategic Ventures for Schneider Electric | Invensys.

"But since 1990, I believe the number of jobs has been steady, if not increasing and the quality of the jobs has definitely been increasing," Martin continued. "Industry is working through a severe talent shortage because the jobs that remain are high skill, high experience jobs. Automation, since 1990, has driven better jobs in industry at better wages. The traditional labor jobs may be down, but professional, high-quality jobs are in demand and will continue to be."

A 2015 study by McKinsey & Company found that only about 5% of American jobs are in danger of being completely automated in the near future. Learning the new skill sets required by technological advances and increased automation may prove to be the bigger challenge for the manufacturing workforce.

Industry leader Peter Zornio believes that while automation has upskilled many manufacturing jobs, it has impacted the overall employee numbers in certain sectors. "Talk to the average USA refinery or chemical plant manager and ask them how many folks work there compared to 30-40 years ago; I think it will always be less, and yet the plant output is likely higher than it was then," he said.

MCAA and other trade organizations are working with member companies and educational institutions to promote workforce development throughout the process controls industry. Many community colleges are adapting curricula to attract young people into career paths needed to fill tomorrow's manufacturing needs. Some colleges are also working with local manufacturers to allow employees to learn new skills both on the job and in a classroom setting.