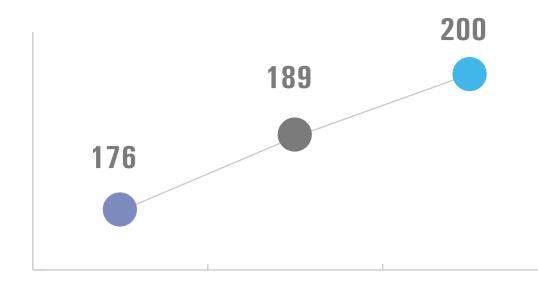


THE STATE OF MANUFACTURING AUTOMATION

UNITED GRINDING North America in 2019 surveyed 160 manufacturers across North America to capture their perspectives on the state of manufacturing automation.

MANUFACTURERS HAVE ROOM TO GROW, MUCH TO GAIN FROM UNDERSTANDING **AUTOMATION ROI**



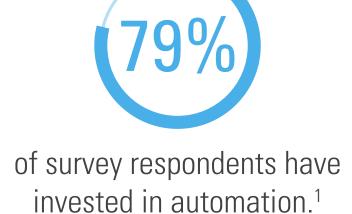
Robots per 10,000 Employees

Robot density in U.S. manufacturing reached 200 robots per 10,000 employees in 2017, up from 176 in 2015 and 189 in 2016.²

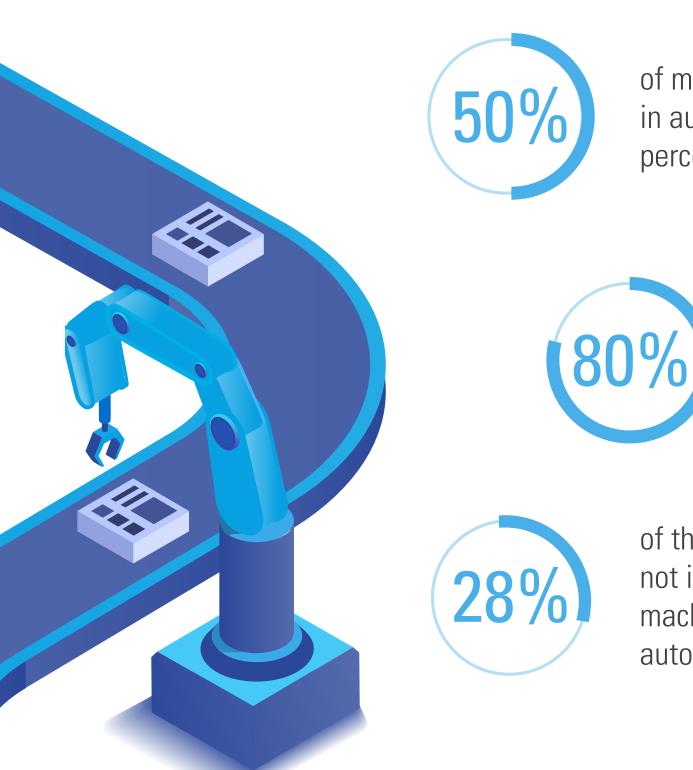


29,000 NEW MACHINISTS

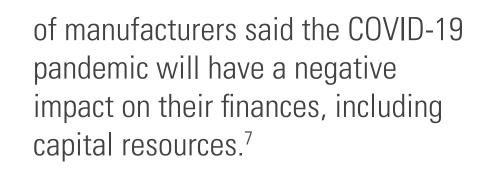
will be needed by 2024 to meet demand from retiring workers alone.³

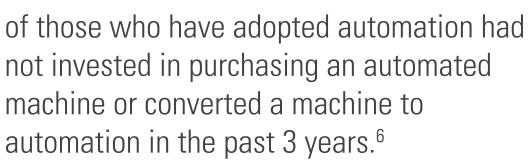


THE CURRENT STATE OF MANUFACTURING AUTOMATION



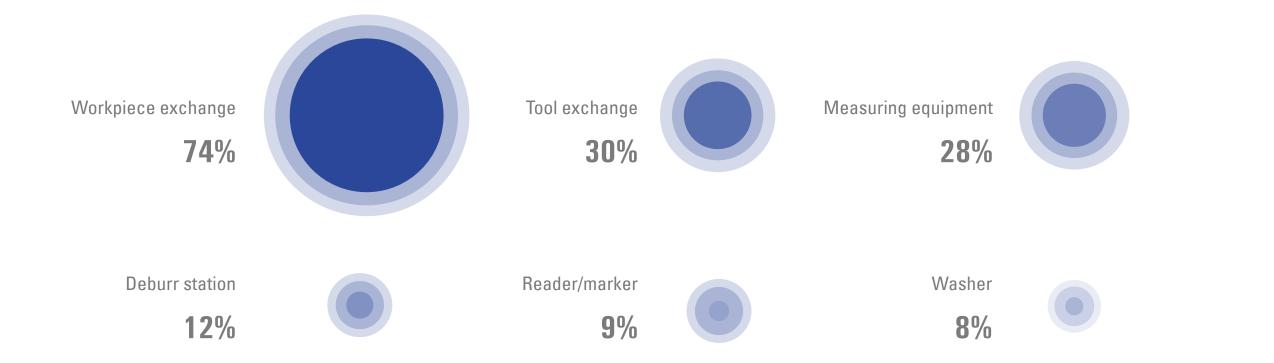
of manufacturers who have invested in automation have done so for 20 percent of their machines or less.⁵



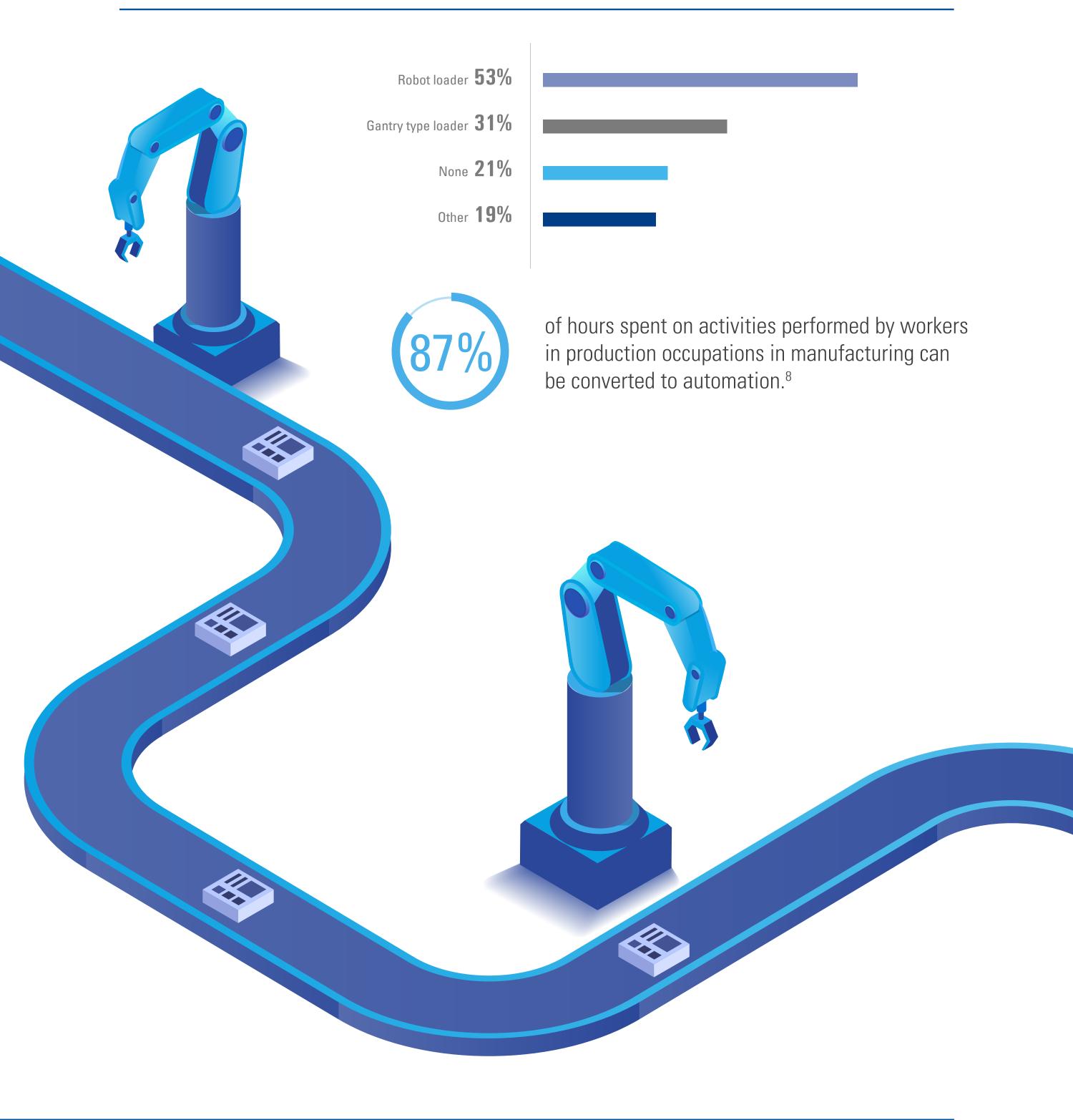


OPPORTUNITIES TO EXPAND AUTOMATION

Where manufacturers are using automation to increase efficiency/capacity:¹⁰

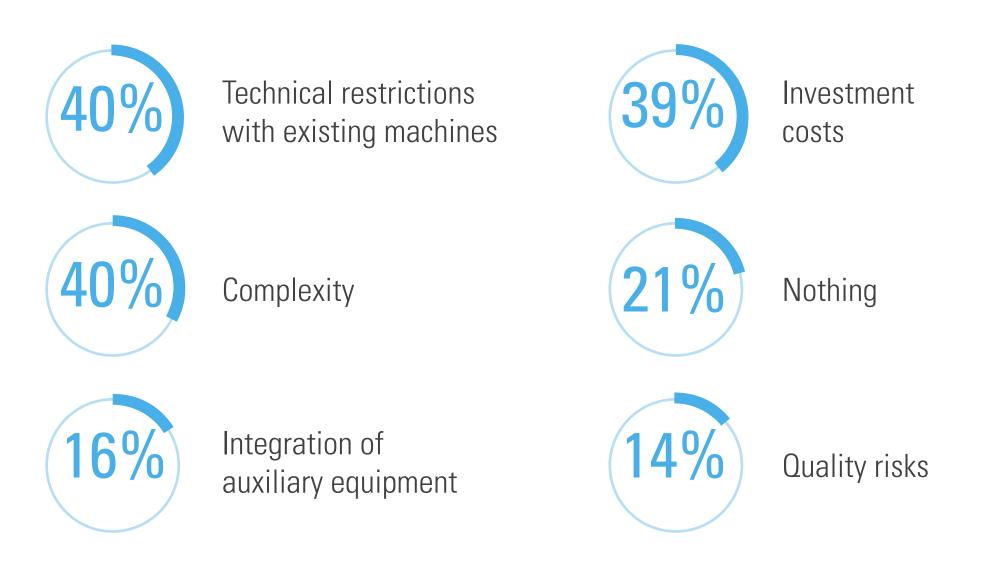


What type of automation do you currently use?⁹

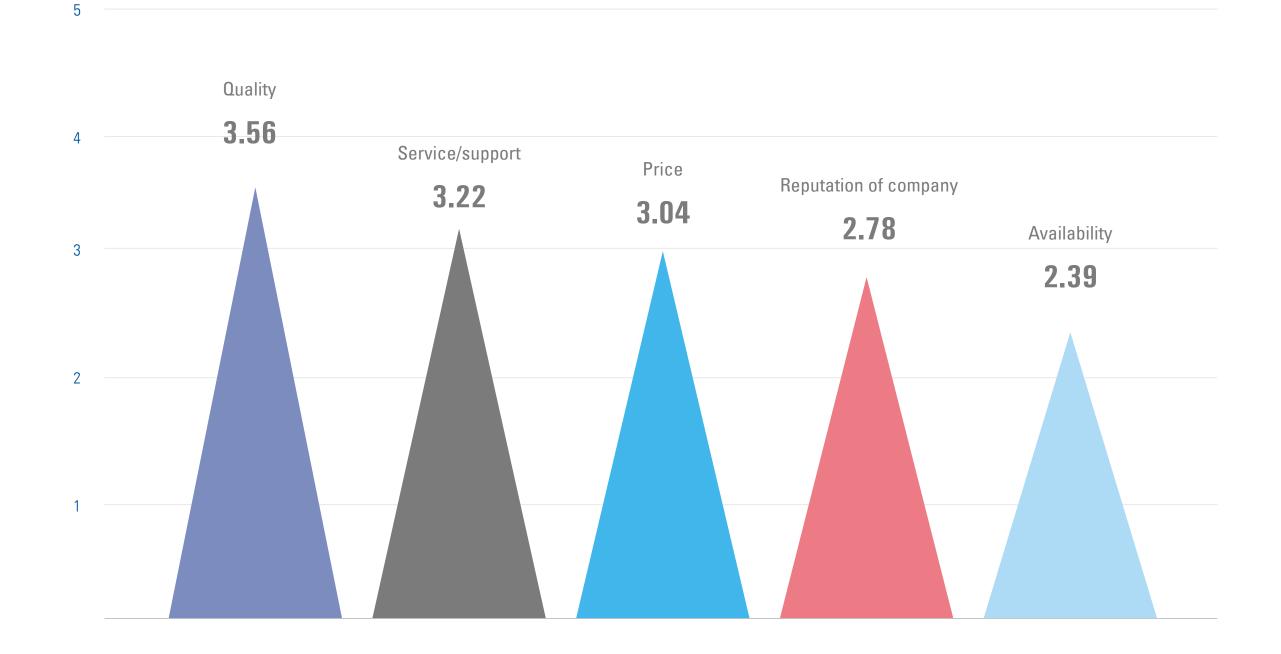


DECIDING FACTORS FOR WHAT HAPPENS NEXT WITH AUTOMATION

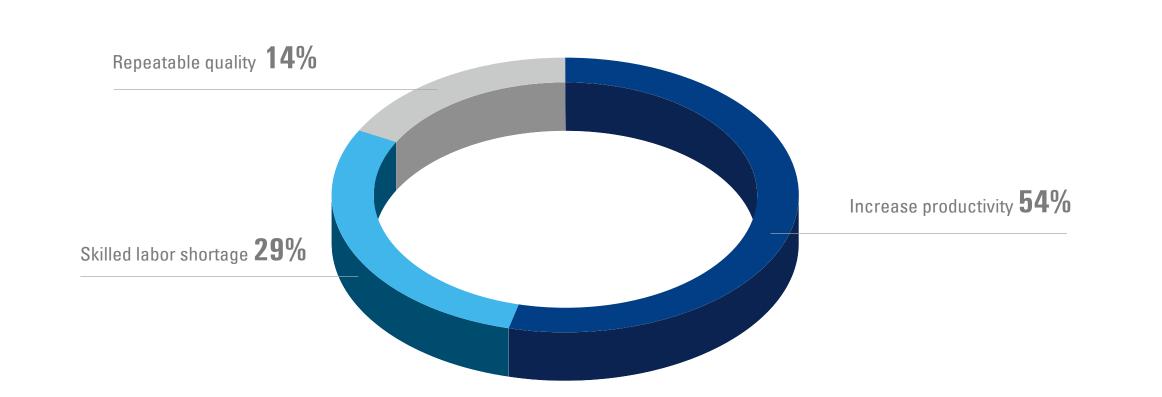
Most common roadblocks to automation cited were: ¹⁵



Factors Manufacturers Weigh When Investing in Automation¹²



Top reasons to automate: ¹¹



ALLOW UNITED GRINDING TO SHOW YOU THE ROI FOR GRINDING AUTOMATION

Our Automation Solutions are built and backed in the U.S. at UNITED GRINDING North America's state-of-the-art headquarters in central Ohio. Our automation engineers and service experts are in close proximity to manufacturing hubs so that our team can collaborate with customers on design, implementation, and ongoing training and service.

Learn more about UNITED GRINDING's Automation Solutions and start putting automation to work for your shop.

> 1, 5, 6, 9, 10, 11, 12, 15 - UNITED GRINDING North America survey 2- https://www.therobotreport.com/us-robot-density-ranks-7th-in-the-world/ 3- https://www.bls.gov/ooh/production/machinists-and-tool-and-die-makers.htm 7- https://www.pwc.com/us/en/library/covid-19/coronavirus-impacts-industrial-manufacturing.html 8- https://www.mckinsey.com/business-functions/operations/our-insights/human-plus-machine-a-new-era-of-automation-in-manufacturing#