From proven value to industrial scale

Robotics is delivering results for manufacturers, but scaling those results will depend on workforce capability and connected systems.

https://www.intel.com/content/www/us/en/robotics/robotics-readiness-gap.html

Returns recognized

Manufacturing organizations have a relatively mature robotics deployment profile: over half (54%) classify themselves as either 'innovating' or 'leading'.

Robotics is already delivering value for organizations, with 55% reporting increased productivity, 43% seeing labor cost reductions, and 35% seeing quality and safety improvements.

Seven in 10 leaders are confident that their organization will be ready to manage a mixed human–robot workforce by 2030. But achieving this vision will depend on whether organizations can close the strategy gap.



of organizations have a formal human-robot workforce strategy

Work reconfigured

Robotics is already shaping the workforce. On average, robotics have freed up or redeployed 16% of workforce capacity – the highest among all sectors. And this is expected to jump to 27% by 2030.

But without faster investment in skills, organizations will struggle to redeploy talent into the higher-value roles robotics creates.

75% of leaders anticipate entirely new roles around managing and collaborating with robots

43% believe they currently have the right skills and staffing to support robotics at scale

Few manufacturing organizations report strong capability in areas critical to robotics deployment: data engineering and real-time analytics (19%), safety certification and regulatory compliance (19%), and edge computing and on-device AI infrastructure (13%).

The story for manufacturing



Scale constrained

Manufacturers are relatively well prepared for the day-to-day operational demands of managing a robot-human workforce: 65% report readiness for monitoring and incident response, 62% for managing energy and charging infrastructure, and 61% for diagnosing faults and performing repairs.

However, readiness falters when it comes to making sure robots are connected, protected and data-powered.

35% have the right high-quality and task specific data for scaling

50% are ready to scale cybersecurity for connected robots

59% say integration with existing systems is blocking scale

Primary readiness gaps:

Strategy Skills Safety Shape Scale

Robot types set to shape manufacturing:

Autonomous mobile robots	Fixed industrial arms	Drones
Inspection and sensing robots	Service robots	Autonomous vehicles