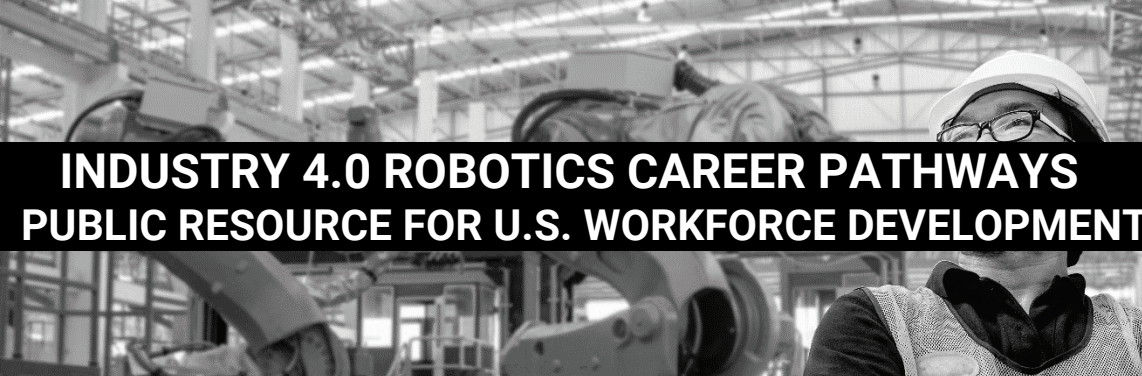




INDUSTRY 4.0 ROBOTICS CAREER PATHWAYS

PUBLIC RESOURCE FOR U.S. WORKFORCE DEVELOPMENT

THE NEED FOR SKILLED INDUSTRY 4.0 MANUFACTURING EMPLOYEES HAS NEVER BEEN GREATER

The U.S. manufacturing sector faces a significant problem that has been compounded by the trade war and the pandemic: an ever-growing skills gap. A 2018 report by The Manufacturing Institute and Deloitte found that 4.6 million jobs will need to be filled in the sector over the next decade, and 2.4 million jobs may be left open due to a lack of trained workers.

Increased use of robotics within an advanced manufacturing environment will play a crucial role in returning the U.S. to a global leadership position. But this will only occur if there is a concerted effort to develop the needed workforce by identifying and standardizing the required competencies and skills, promoting and enhancing the educational resources, and sharing the available jobs in a comprehensive, yet easily accessible manner.

The Advanced Robotics for Manufacturing Institute (ARM), a Manufacturing USA® Institute funded by the Department of Defense, has taken on this challenge through a unique public-private partnership. For the past three years, over 200 elite manufacturers, educators, robotics suppliers, economic development and government experts have regularly convened under ARM's leadership to develop strategies to address the skills gap issue.

Our response to this challenge is a public website that addresses these key issues:

- What competencies and roles are required to meet manufacturing employer needs?
- Where can education seekers find programs that best meet these needs?
- What career pathway makes the most sense for me as a job seeker?
- What jobs are available that meet the skills I have developed in robotics?



A UNIQUE, FOCUSED PUBLIC WEBSITE CAN ADDRESS THIS NEED

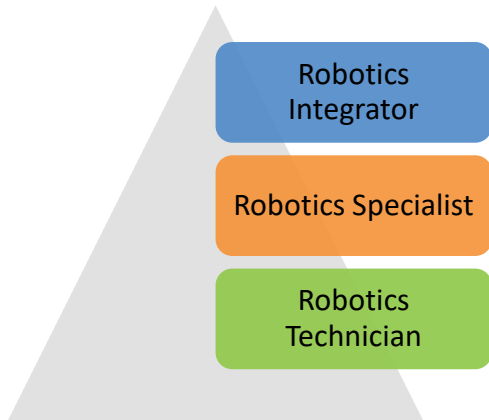
With the support of the Department of Defense, ARM is working closely with the industry experts within its member consortium and other partners to launch a public website that addresses these key issues. ARM's solution identifies the most comprehensive list of education providers nationally and endorses programs and institutions that provide the skills needed for robotics jobs as identified by industry. Future versions will include job listings and career pathway planning.

Many career and skills-oriented websites exist, but the ARM solution has these unique qualities:

- Established niche primarily in the robotics for advanced manufacturing/Industry 4.0 sector
- Broad identification of robotics education/training programs from badges to PhDs
- Endorsement of those training programs that meet national consortium-defined requirements for competency
- Definition of the competency models and robotics jobs necessary to meet the skills requirements for advanced manufacturing/Industry 4.0
- Addresses both commercial and defense skills requirements
- Acts as an honest broker working directly with education seekers, employers, and education providers for guidance and updated site content.

BUILDING UPON CONSORTIUM-DEFINED CAREER PATHWAY AND COMPETENCY MODEL

The ARM member consortium has defined an initial career pathway, comprised of three roles, to begin to standardize robotics-focused advanced manufacturing roles. This standardization will make it easier for employers to communicate job openings and more easily identify qualified personnel for hire. It will also make it easier for interested job seekers to better understand the skills needed to obtain a job in advanced manufacturing.

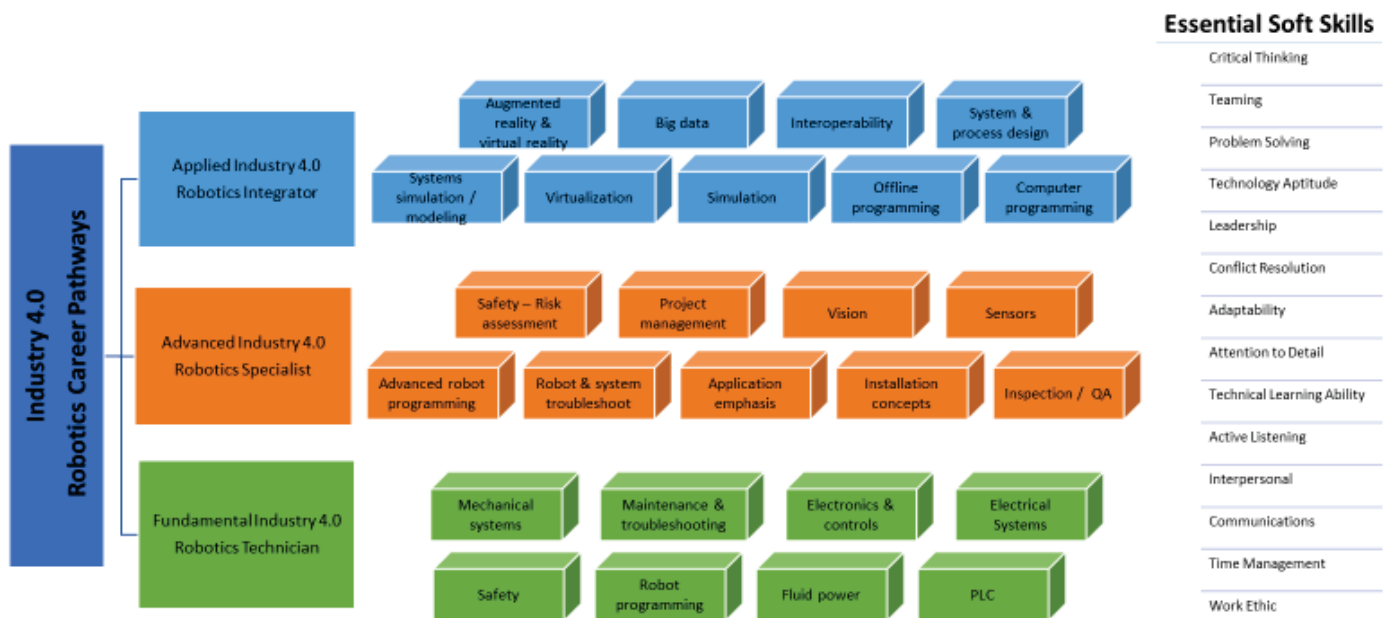


The Robotics Integrator is the subject matter expert on automation and robotics. The Integrator understands how applying robots and automation to the manufacturing floor brings greater profitability to their company and will create plans for those areas ripe for automation or robotic features.

The Robotics Specialist is the subject matter expert on the robotic system on the manufacturing floor and is responsible for proposing upgrades to the system that increase productivity for their manufacturing sector.

The Robotics Technician is the subject matter expert on the equipment and day-to-day robotic maintenance on the manufacturing floor.

These roles were created by defining recommended competencies and soft skills. These competencies, like the career pathways, were created through ARM's member consortium, and are a proprietary model.



ARM Proprietary Model

FOR MORE INFORMATION

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