

WORKFORCE DEVELOPMENT: Keeping up with the evolution.



➔ Manufacturing has been at the forefront of the U.S. economic recovery and will continue to play a vital role in the future, making workforce development a priority.

Nearly 12 million Americans—about 9 percent of the workforce—are employed in manufacturing.¹ To keep up the momentum, the workforce must update their skills.



Assessing the workforce:

- **Skilled workforce shortage** is estimated to be as high as 600,000.²
- **More than 83 percent** of U.S. manufacturers report a shortage of qualified employees.³
- **A shortfall of 875,000** skilled manufacturing professionals is estimated by 2020.⁴
- **60 percent of the new jobs** that will emerge in the 21st century will require skills possessed by only 20 percent of the current workforce.⁵

Community-based partnerships meet the challenge.



Manufacturers, industry associations, schools and government can provide the current workforce with the training to acquire the necessary skills. They can also work together to promote STEM education to the nation's youth to drive greater numbers into STEM-related fields.

1 National Association of Manufacturing.

2 Workforce Imperative: A Manufacturing Education Strategy, 2012, sme.org/workforceimperative.

3 "Boiling Point? The Skills Gap in U.S. Manufacturing," 2011. The Manufacturing Institute and Deloitte Consulting. LLP.

4 U.S. Bureau of Labor Statistics and Boston Consulting Group.

5 U.S. Chamber of Commerce.

WORKFORCE DEVELOPMENT 101: Solutions that work.



SME offers a six-point strategy to shore up the gap²:

- 1 ATTRACT** more students into manufacturing.
- 2 ARTICULATE** a standard core of manufacturing knowledge.
- 3 IMPROVE** manufacturing curriculum.
- 4 INTEGRATE** manufacturing topics into STEM.
- 5 DEVELOP** faculty to teach manufacturing.
- 6 STRATEGICALLY** deploy resources.



Case studies: Workforce development in action.

1 **SGS Tool Co.** Munroe Falls, Ohio

The longtime manufacturer began working with area schools to establish a pipeline of future associates. It also adopted an internal training program, including online training from Tooling U-SME.

Results: SGS now has just 5 percent turnover compared to typical turnover rates of 23 to 30 percent.

2 **Ivy Tech Community College,** South Bend, Indiana

Ivy Tech's Machine Tool Institute simulates a real machine shop, where students of all ages punch in and out, and learn the skills needed to succeed.

Results: In its first two years of the program, Ivy Tech's Machine Tool Institute issued nearly 300 NIMS certifications and regularly places students in local jobs.

3 **Hawthorne High School,** Los Angeles

An SME Education Foundation PRIME school.

Hawthorne receives grants and scholarships from the SME Education Foundation for future education.

Results: The partnership is producing a pipeline of skilled workers for local businesses, including Northrop Grumman, Boeing, Honeywell and SpaceX.