Filling the Skills Gap:
Pathways to Manufacturing Careers
Buffalo, NY

Jacey Wilkins
Director of Communications
The Manufacturing Institute
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MANUFACTURING Institute

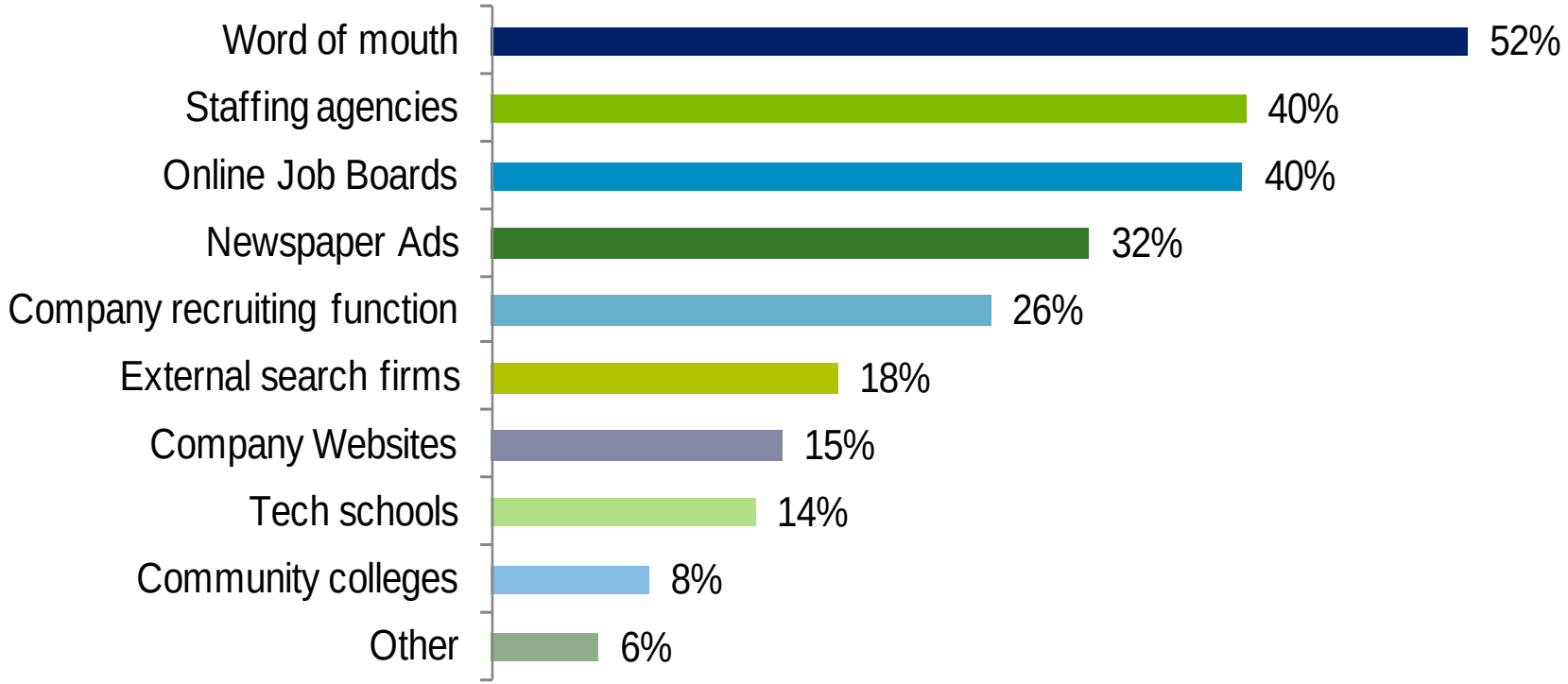
80%

The Skills Gap in Manufacturing

- 82% of manufacturers report a moderate or serious skills gap in skilled production.
- 74% of manufacturers report that this skills gap has negatively impacted their company's ability to expand operations.
- 69% of manufacturers expect the skills shortage in skilled production to worsen in the next 3-5 years.
- 5% of all jobs in manufacturing unfilled due to lack of qualified workers.

Manufacturers Need New Workforce Strategies

Top sources for new employees



Roadmap to Education Reform for Manufacturing

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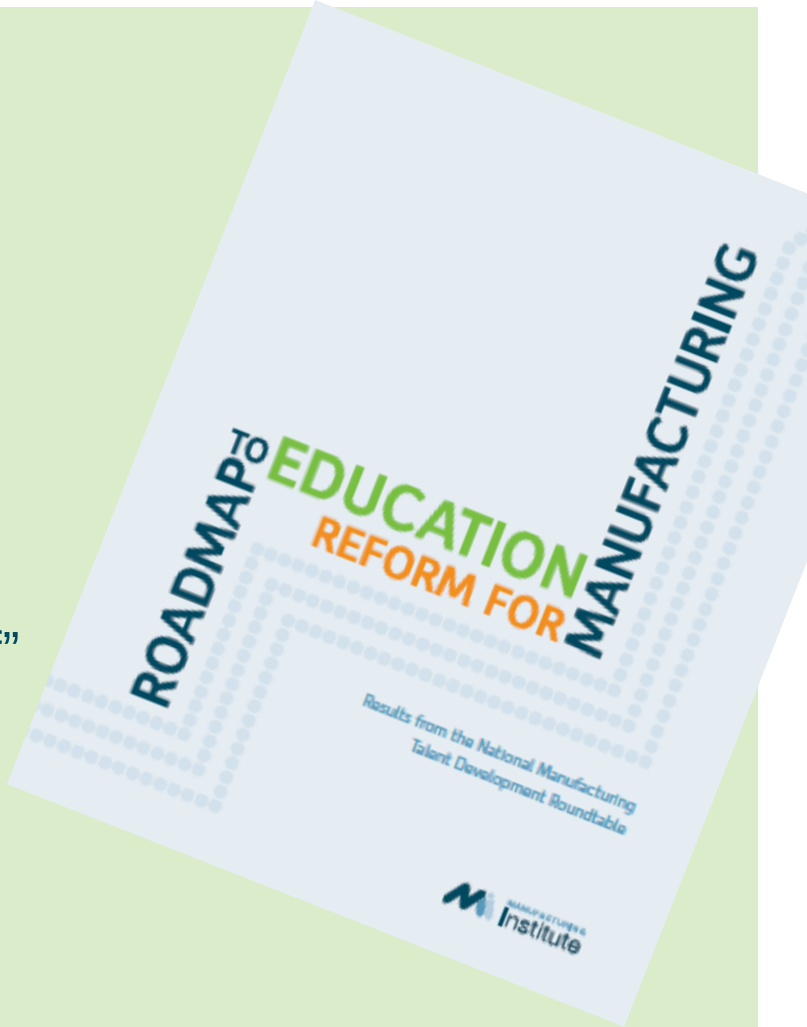
Manufacturers support policies at every level of education to improve the talent pipeline.

Manufacturers support:

- Technology-infused postsecondary education alternatives;
- Competency-based postsecondary pathways;
- Compressed secondary-postsecondary learning;
- Accelerated pathways to credentials and more “on and off” ramps to postsecondary education;
- More Learn & Earn programs of study;
- More internships and mentorships.



Paths to Manufacturing Through Education

The Need

- A highly educated and skilled workforce for U.S. manufacturing
- Increased graduation rates, post-secondary enrollment and completion, and advanced-education attainment
- Excitement about STEM and awareness of high-paying, high-quality manufacturing careers

The Solution

- **Technology-infused**, more "life-relevant" education
- Increased access to post-secondary degrees and **industry-recognized credentials**
- Clear career pathways aligned to **competency-based education** and certification programs
- **Excitement about STEM** and awareness of high-paying, high-quality manufacturing careers

MANUFACTURING Institute

Skills Certification System

PROVIDING COMPETENCY-BASED, CUSTOMIZED EDUCATION AND TRAINING FOR THE MANUFACTURING WORKFORCE…TODAY AND TOMORROW

THE NATIONAL ASSOCIATION OF MANUFACTURERS ENDORSED

Skills Certification System

Producing a High-Performance Manufacturing Workforce

Founding Partners

ACT

MSSC™

AWS

NIMS®

sme Society of Manufacturing Engineers

Partners

APICS The Association for Operations Management®

AST&L American Society of Transportation and Logistics

ASQ

nccer

FMA

PMMI

ISA™

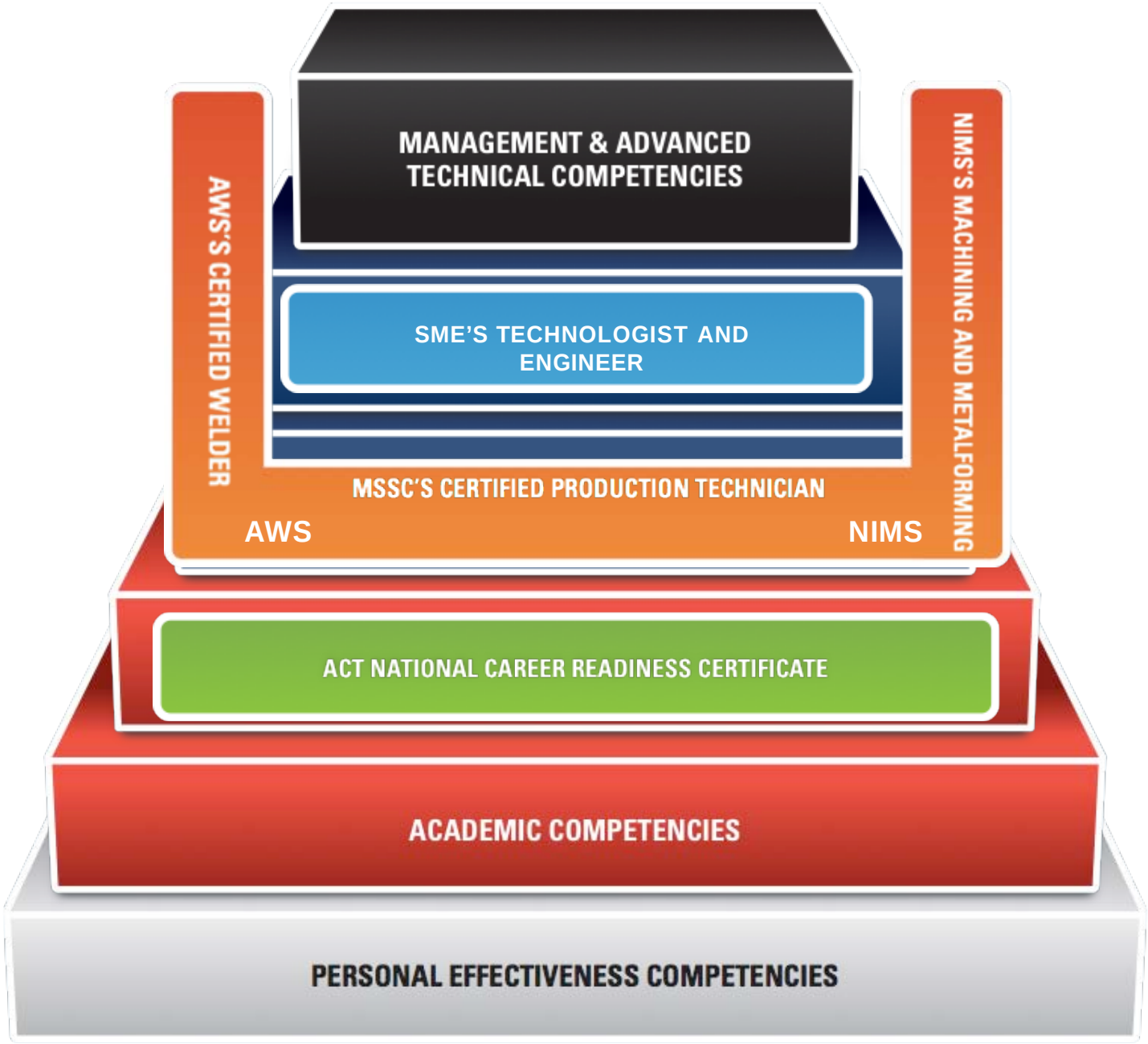
NADCA NORTH AMERICAN DIE CASTING ASSOCIATION

Fluid Power Society International™

The NAM-Endorsed Manufacturing Skills Certification System

- Aligned to the Manufacturing Competency Model
- Nationally Portable
- Third-Party Validated (ISO/ANSI Preferred)
- Industry-Driven
- Data Based and Supported

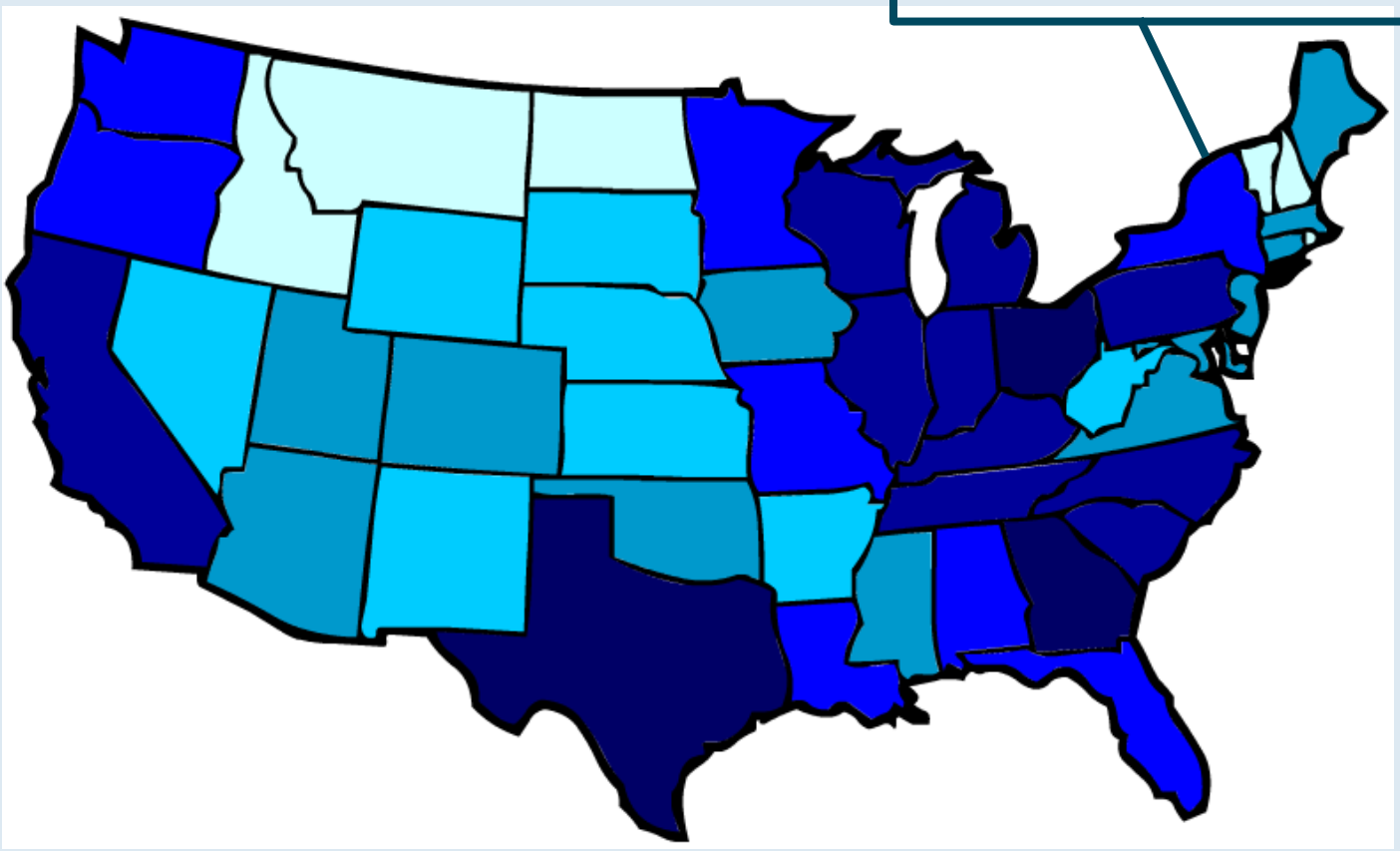
I. Personal Effectiveness Competencies
II. Academic Competencies
III. Workplace Competencies
IV. Industry-wide Technical Competencies
Automation
Aerospace
Energy
Pharmaceutical & Medical
Food Processing
Automotive
Machinery
Motor Vehicles
Transportation & Logistics
Construction
Paper, Wood, & Printing
Chemical
Metal Fabrication
Plastics & Rubber
Computer & Electronics


MANAGEMENT & ADVANCED TECHNICAL COMPETENCIES
SME'S TECHNOLOGIST AND ENGINEER
AWS'S CERTIFIED WELDER
NIMS'S MACHINING AND METALFORMING
MSSC'S CERTIFIED PRODUCTION TECHNICIAN
AWS
NIMS
ACT NATIONAL CAREER READINESS CERTIFICATE
ACADEMIC COMPETENCIES
PERSONAL EFFECTIVENESS COMPETENCIES

Education Path	Certification Path	Career Path
Industry Graduate Degree	Society of Manufacturing Engineers	Engineer, Business Manager
Applied Industry Bachelor's Degree		Engineer, Manager
Associate Degree with Multiple Specialties	NIMS	Engineering Technician
Associate Degree with Specialty	AWS MSSC	Engineering Technician
Diploma + Specialty		Certified Production Technician
High School Diploma	National Career Readiness Certificate™	Operator

2011 Distribution of Manufacturing Industry Certifications by State

New York: 1541 certifications in 2011



 # certifications

- >250
- 250-499
- 500-999
- 1000-2499
- 2500-4999
- 5000-10,000