



EMILY STOVER DEROCCO  
PRESIDENT

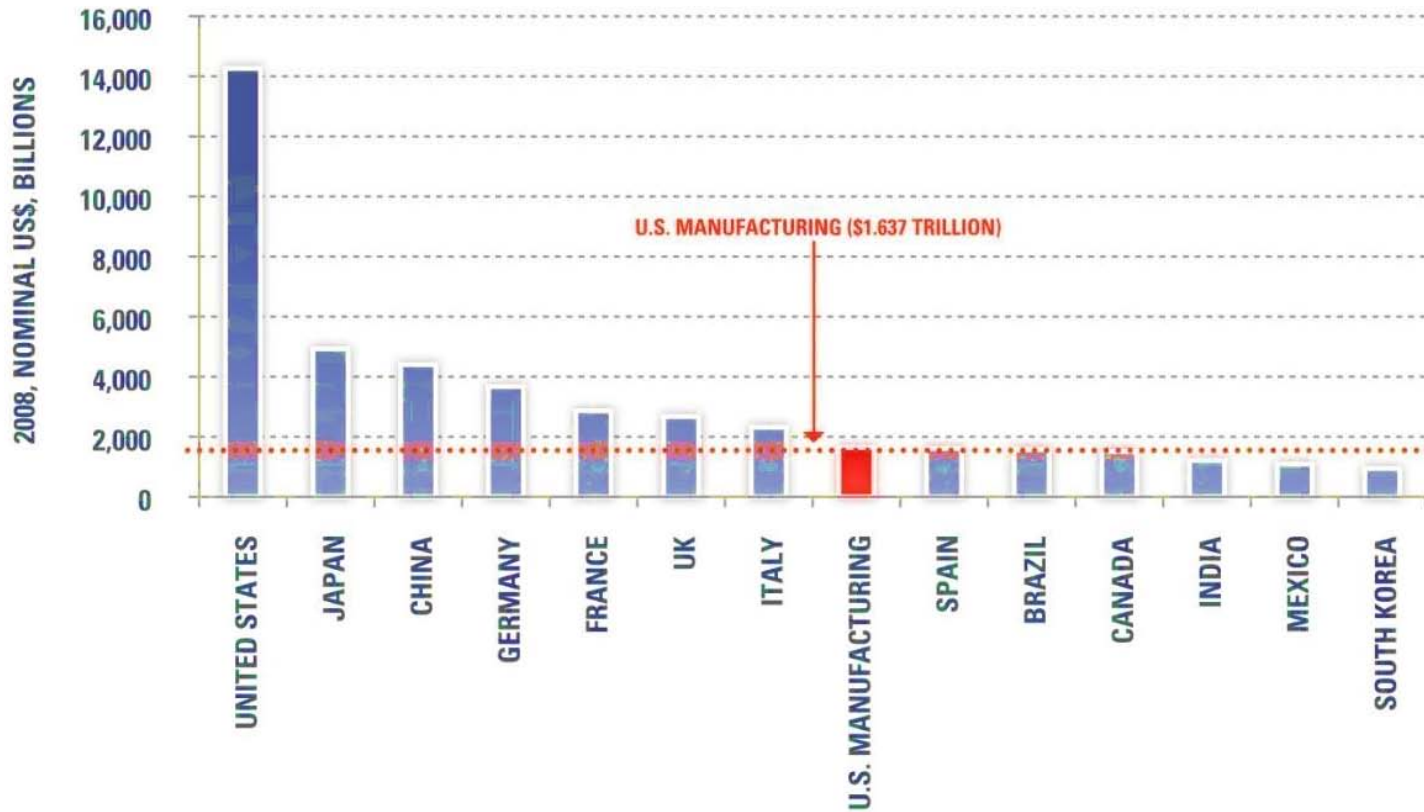
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**CREDENTIALING & CERTIFICATIONS**

# U.S. Manufacturing Is Strong

FIGURE 1.

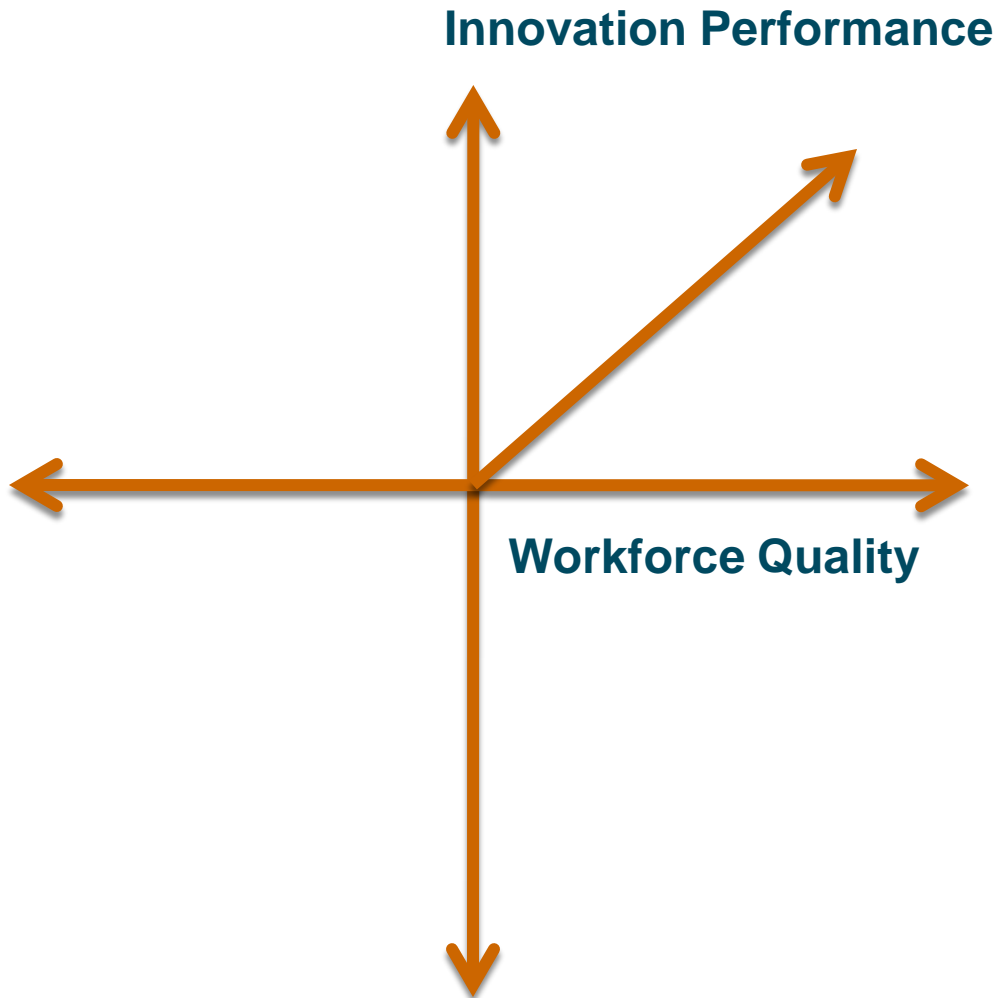
## U.S. Manufacturing Is 8<sup>th</sup> Largest Economy



Sources: International Monetary Fund and U.S. Bureau of Economic Analysis

# An Educated and Skilled Workforce

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- In these tough economic times, business innovation is a strategic imperative.
- A highly skilled and educated workforce is the most critical element for innovation success.

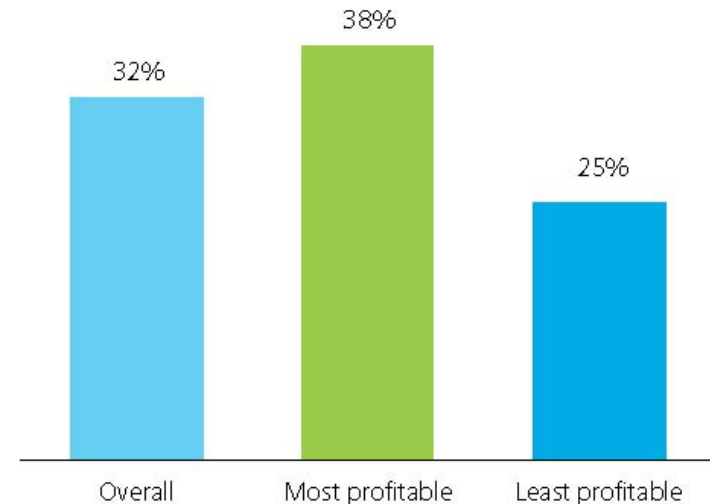
# The Challenges

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- Even at the height of the global recession, **32% of surveyed companies reported moderate to serious skills shortages in the hiring pool.**
- Contributing to our workforce challenges are:
  - Demographics: We face a graying workforce coupled with a shrinking pipeline.
  - Technological advances in modern manufacturing require more advanced skill sets.
  - Major deficits in our education system hamper U.S. competitiveness on the world stage: our global competitors continue to surpass our educational system in producing a high-volume, high-quality technical workforce.

Moderate to serious shortages across all skills

Most profitable and least profitable companies



Source: [People and Profitability—A Time for Change](#)

# The Shrinking Pipeline



FOR EVERY 100 9TH GRADERS:



68 GRADUATE ON TIME;



OF THOSE, 40 ENROLL DIRECTLY IN COLLEGE;



OF THOSE, 27 ARE STILL ENROLLED THE FOLLOWING YEAR;



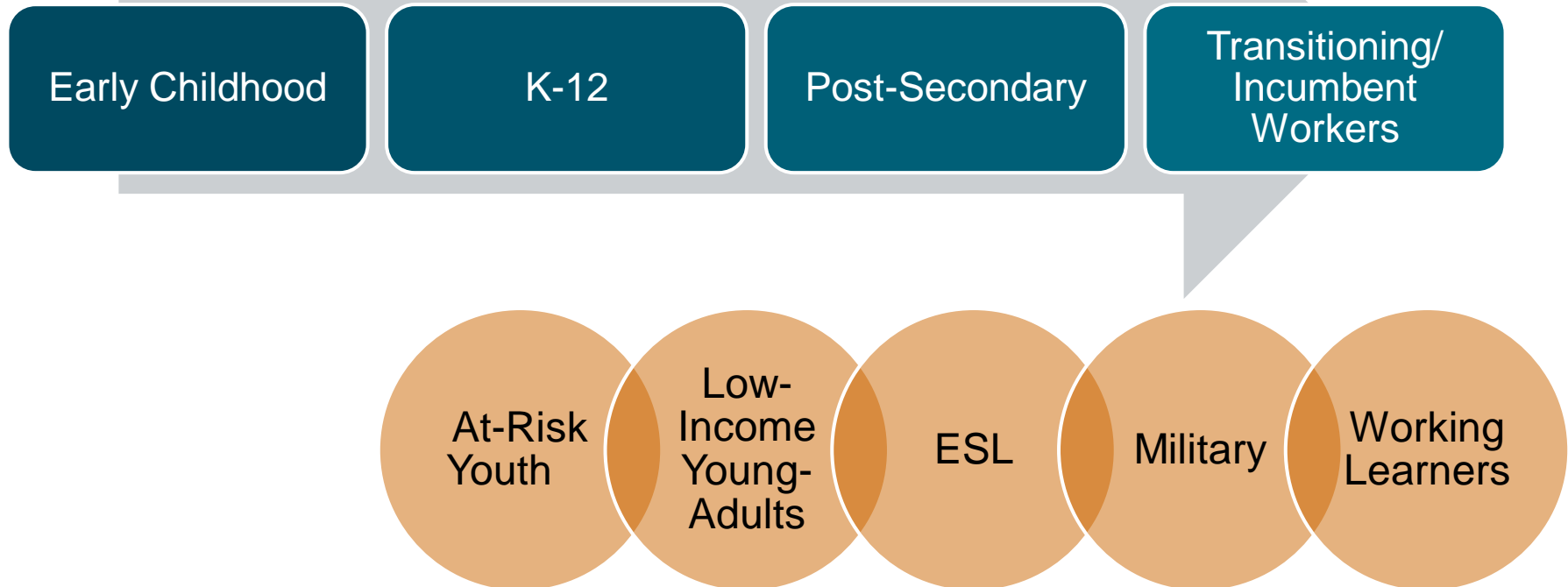
OF THOSE, 18 EARN AN ASSOCIATES DEGREE WITHIN 3 YEARS OR A B.A. WITHIN 6 YEARS.

**82 DON'T MAKE IT!**

# National Solutions and Customized Strategies

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Our Education and Workforce Development agenda focuses on implementing quality education reform for the entire pipeline:



Foundational skills in English language communication, reading, applied STEM, and workplace competencies such as teamwork, work ethic, integrity, and creativity are **necessary** for **all** individuals to pursue **any** career in manufacturing.

# A Million-Dollar Investment

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“I advise each of my staff that every worker hired is a million-dollar investment for this company. I’m calculating that most hires are under 45 years old; we intend to keep them for at least 20 years, and our average annual salary/benefits package is \$55,000. In other words, we can’t afford to make a mistake—to hire someone without the right skills. Verifiable skills certification programs can make the difference between a good investment and a high-risk.”

*Dennis Rohrs,  
Human Resource Manager  
Fort Wayne Metals, Inc.*

# Demographics in Auto Manufacturing

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- 690,000 people work in motor vehicle and parts manufacturing;
- 20% of manufacturing employees expected to retire in the next 10 years.
- 138,000 new workers in the auto industry in the next ten years.
- Continued foreign direct investment may substantially raise demand for skilled workers.

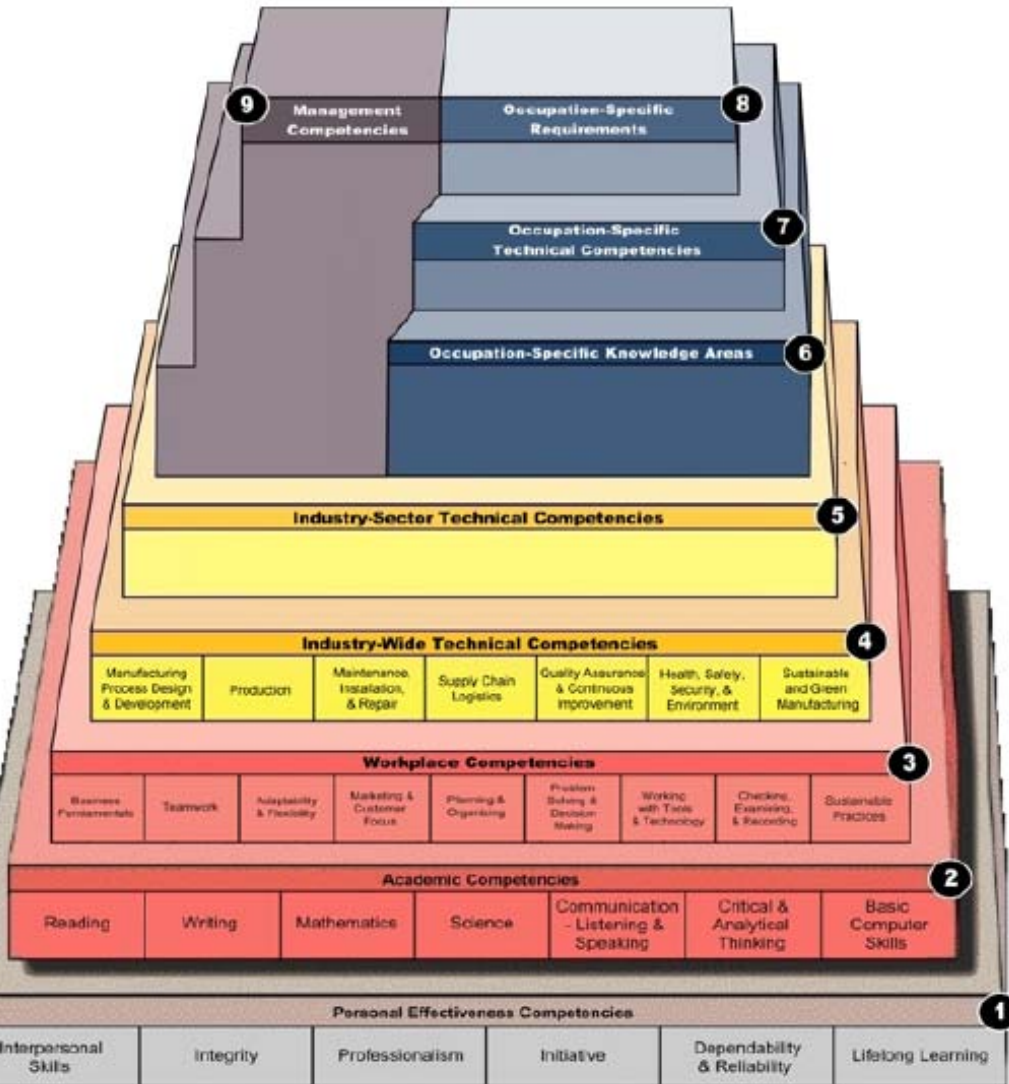


MANUFACTURING  
Institute

*Skills Certification System*

***Providing competency-based, customized education and training for the manufacturing workforce...today and tomorrow***

# Advanced Manufacturing Competency Model



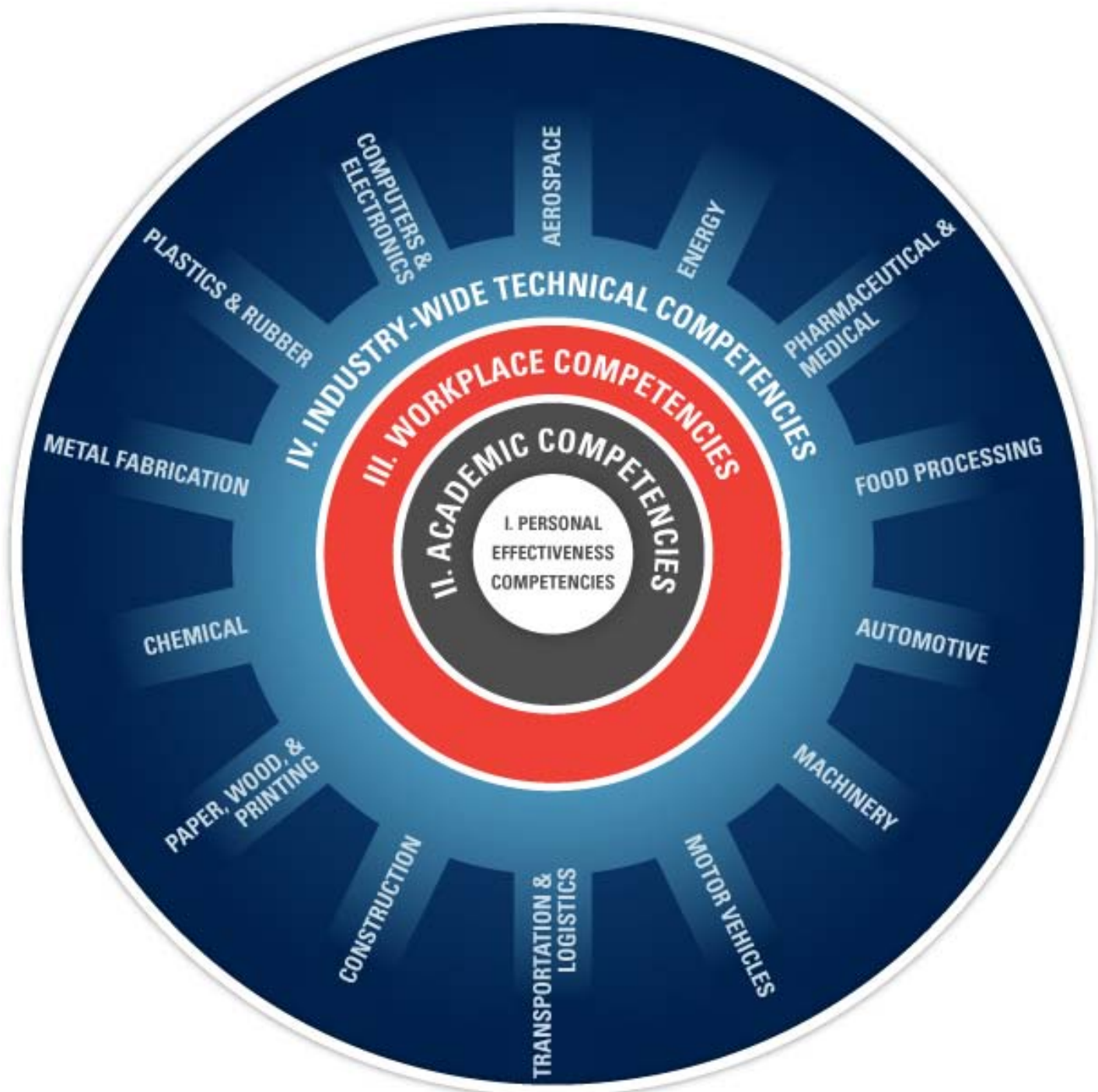
Career Paths – Life Long Learning

*High Quality Middle Class Jobs*

Occupation-Specific Certifications

Entry Level Industry Certifications

Ready for Work, Ready for College



I. PERSONAL  
EFFECTIVENESS  
COMPETENCIES

II. ACADEMIC  
COMPETENCIES

III. INDUSTRY-WIDE TECHNICAL  
COMPETENCIES

IV. INDUSTRY-WIDE TECHNICAL  
COMPETENCIES

METAL FABRICATION

CHEMICAL

PAPER, WOOD, &  
PRINTING

CONSTRUCTION

TRANSPORTATION &  
LOGISTICS

MOTOR VEHICLES

MACHINERY

AUTOMOTIVE

FOOD PROCESSING

PHARMACEUTICAL &  
MEDICAL

ENERGY

AEROSPACE

COMPUTERS &  
ELECTRONICS

PLASTICS & RUBBER

# The NAM-Endorsed Manufacturing Skills Certification System

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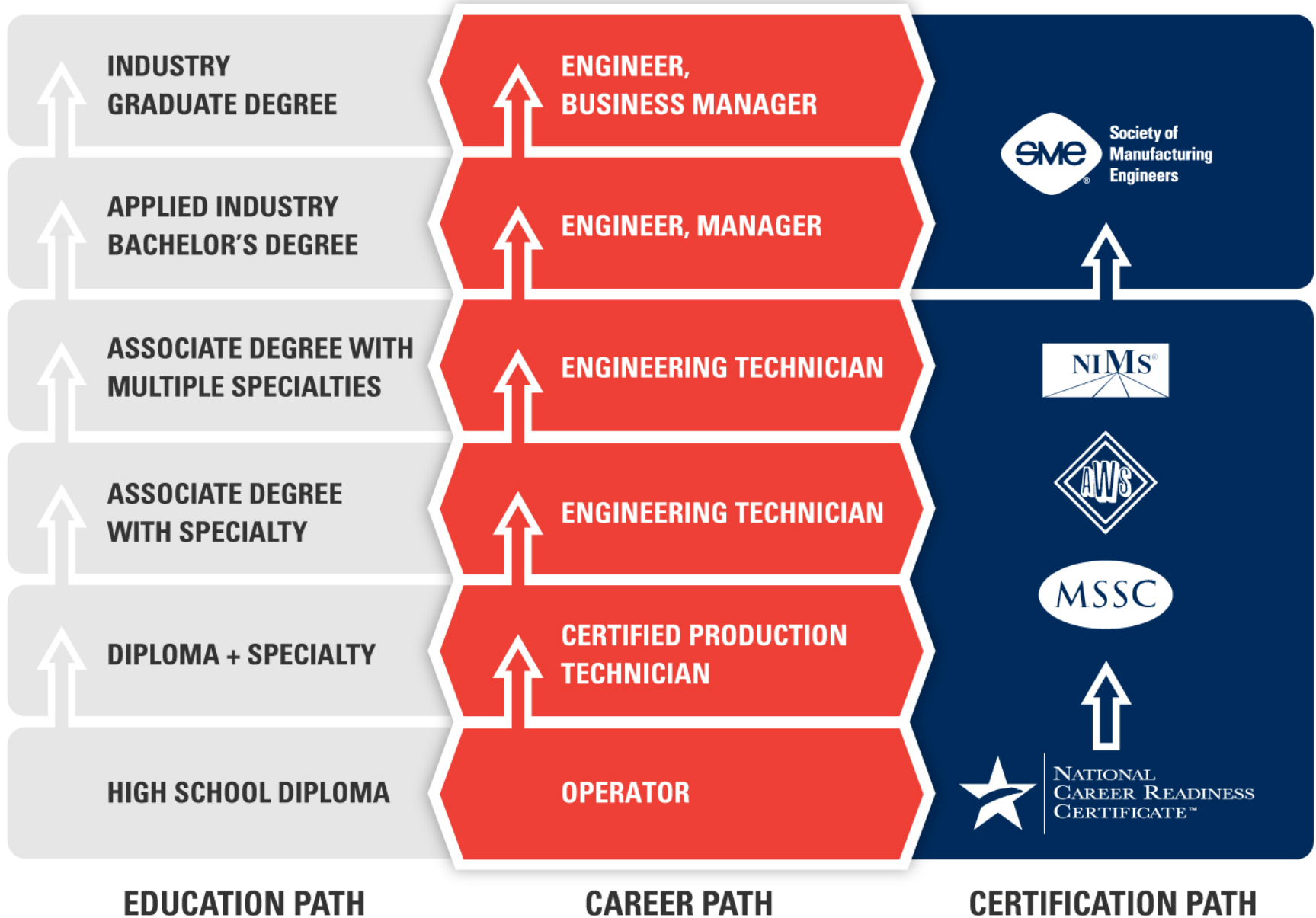
- Aligned to the Manufacturing Competency Model
- Nationally Portable
- Third-Party Validated (ISO/ANSI Preferred)
- Industry-Driven
- Data Based and Supported



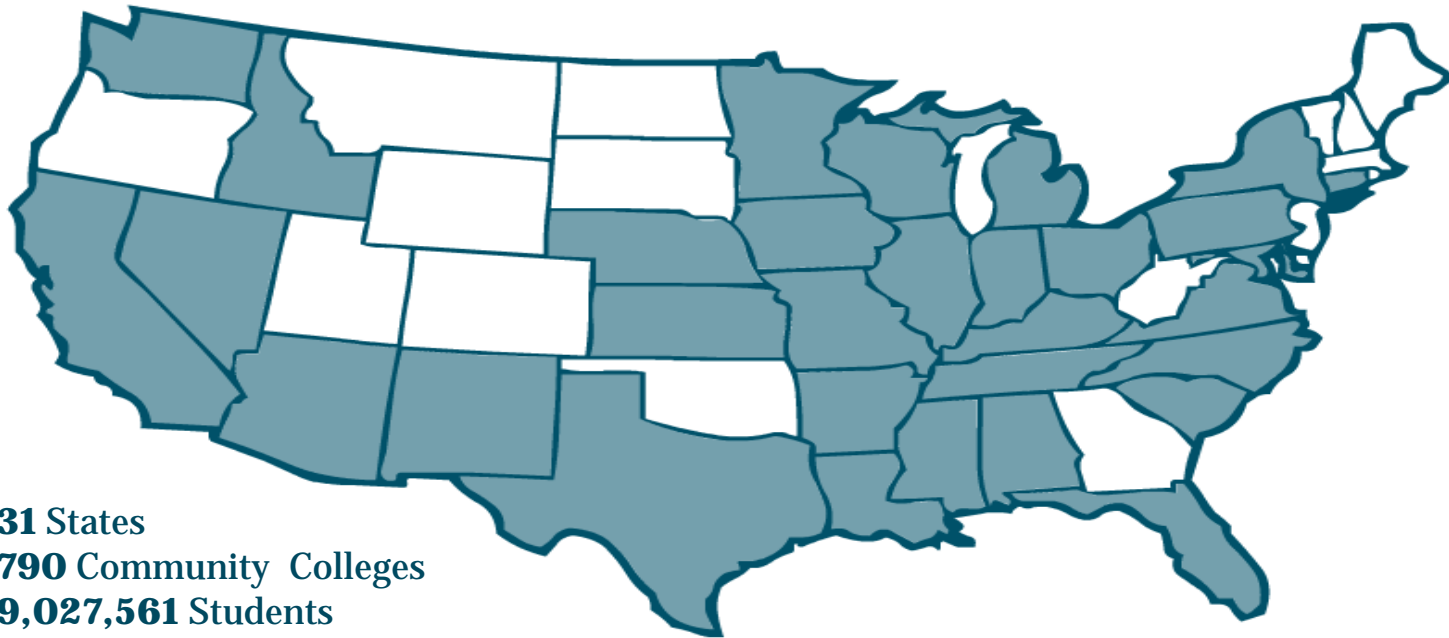
# Certifying the Auto Manufacturing Workforce

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- All of those new employees need to read, write, and think critically – NCRC
- All of those employees should understand manufacturing – MSSC
- At least 10% of those employees (>13,000) will need to apply welding and metalworking skills – NIMS & AWS



# TARGET OPPORTUNITIES OF THE MANUFACTURING INSTITUTE



**31 States**  
**790 Community Colleges**  
**9,027,561 Students**

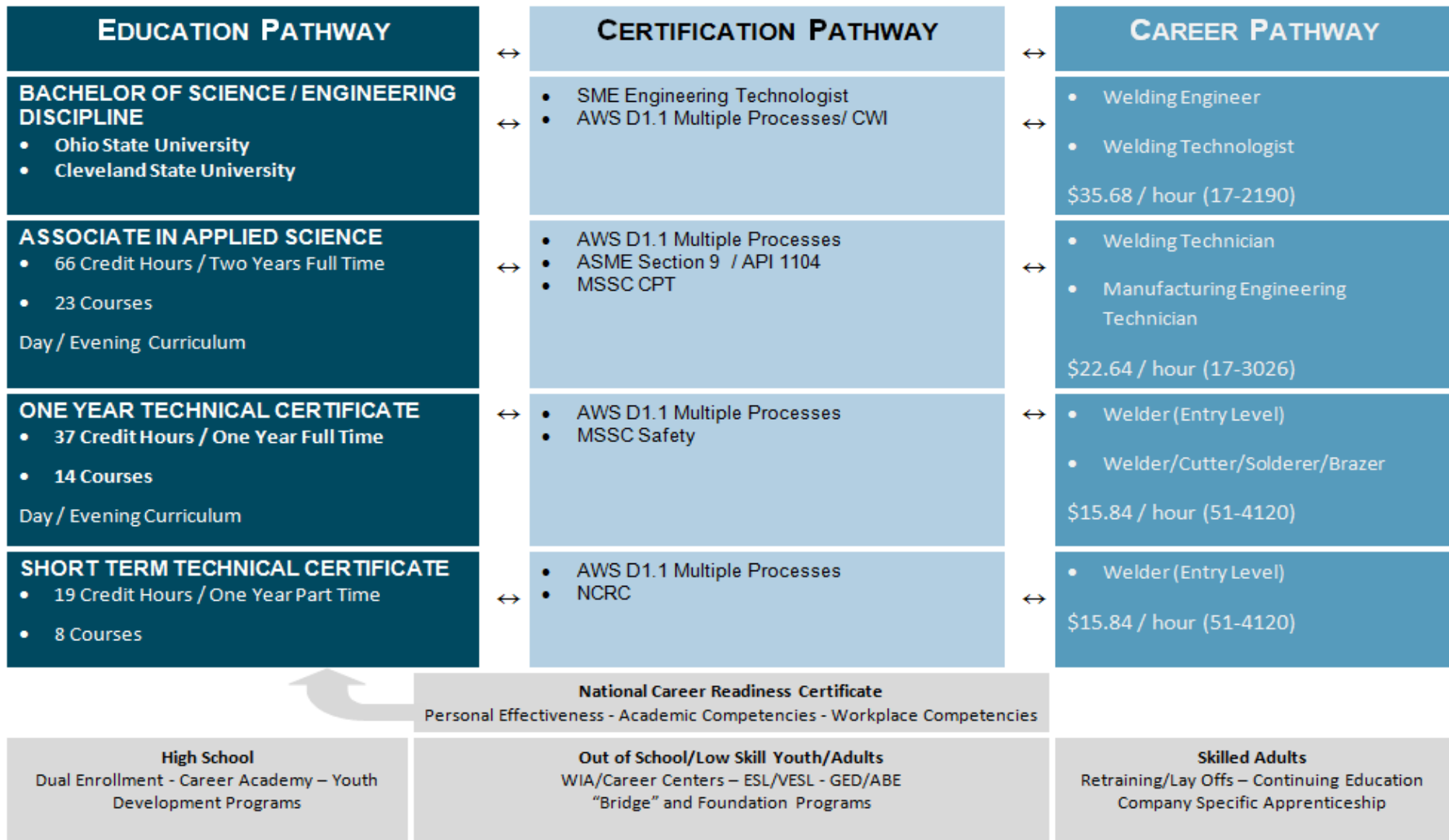
THROUGH FULL STATEWIDE DEPLOYMENT OF THE NAM-ENDORSED  
MANUFACTURING SKILLS CERTIFICATION SYSTEM, THE MANUFACTURING INSTITUTE:

CAN **IMPACT 80%** OF **COMMUNITY COLLEGES...**

...**ENROLLING 77%** OF **COMMUNITY COLLEGE STUDENTS...**

...**BENEFITTING 84.1%** OF **MANUFACTURING EMPLOYMENT**

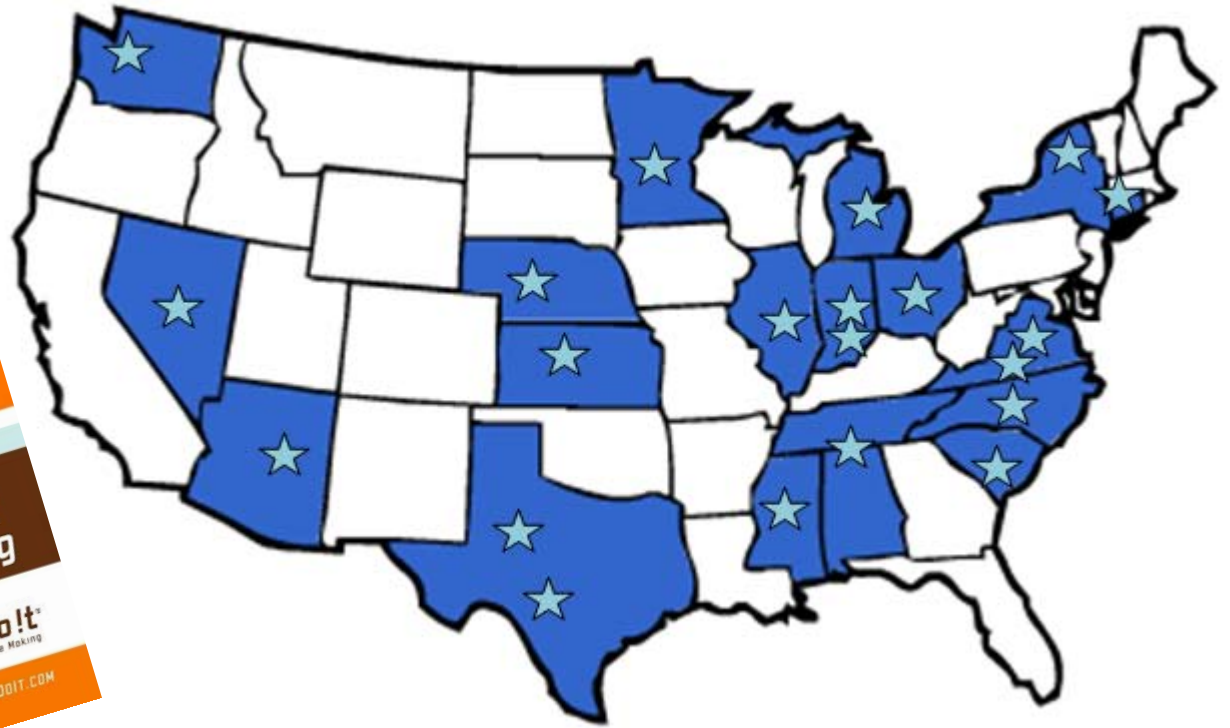
# ALIGNING EDUCATION, CERTIFICATION, AND CAREER PATHWAYS *For the Welding Industry at Lorain County Community College*



# Recruiting Students Into STEM Careers

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## *Dream!t Do!t*<sup>®</sup>



# A “Win-Win” Scenario



# U.S. Department of Labor Trade Adjustment Assistance

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- Skills for America's Future
  - TAA/Replacing American Graduation Initiative
  - \$500 million in state grants; \$2.5m/state
  - Consortia of Higher Ed institutions: \$2.5m - \$20m
  - Must involve employers

# Towards a Statewide Talent Strategy

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## 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