

THE INDUSTRY 4.0 WORKFORCE: NEEDS, ISSUES, AND SOLUTIONS

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MODERATOR



Jay Douglass

**Chief Operating Officer
Advanced Robotics for Manufacturing
(ARM) Institute**

PANELISTS



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Robin Fernkas

Deputy Administrator of the Office of
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U.S. Department of Labor



Lisa Masciantonio

Chief Workforce Officer
Advanced Robotics for Manufacturing
(ARM) Institute

BACKGROUND AND FOCUS

ROBIN FERNKAS

The Department of Labor distributes over \$3 billion to states to operate workforce programs (FY 2020)

Decentralized system led by local business-led boards

Deliver workforce services through ~2,400 American Job Centers in communities nationwide

Dual-customer system serving both businesses and job seekers

Serves over 13 million job seekers

INDUSTRY 4.0 WORKFORCE CHALLENGES

ROBIN FERNKAS

Assist employers in finding workers -- fill current demand and to build a pipeline of new workers

Address “skill gaps” or mismatches between open jobs and the skills of our workforce

Provide job training and reemployment assistance to the millions of unemployed due to the pandemic and shifts in the economy

Help employers reskill or retrofit their incumbent workers to remain competitive in an automated workplace

INDUSTRY 4.0 WORKFORCE SOLUTIONS

WWW.CAREERONESTOP.ORG/COMPETENCYMODEL/COMPETENCY-MODELS/PYRAMID-HOME.ASPX

[Get Started](#) [Industry Models](#) [Models in Action](#) [Tools](#) [Find Resources](#) 

Mechatronics

Professional, Scientific, and Technical Services

Retail Trade

Transportation and Warehousing

Other Models

Related Links

- [Industry Association Links](#)
- [Career Cluster](#)
- [Related Credentials](#)
- [Developing the Right Industry Focus](#)
- [Industrial Maintenance Training Center of PA](#)
- [Schmidt Training and Technology Center at Reading Area Community College](#)
- [COE in Packaging Operations](#)
- [Lancaster County WIB](#)
- [Certification Finder](#)

How To

- [Download the industry model and worksheets in several formats](#)
- [Instructions to view the model graphic](#)

Mechatronics is the interdisciplinary combination of mechanical engineering, electrical engineering, and computer science to make useful products. It emphasizes troubleshooting of automated machinery with a systems point of view.

Scroll down to view the industry model selected. OR Click on the left menu bar to select another model.

[Download the industry model and worksheets in several formats](#) 

Mechatronics Competency Model



Management Competencies		Occupation-Specific Requirements			
Industry-Sector Technical Competencies					
Mechatronics	Mechanical	Electrical	Computers	Controls	Industrial Safety
Industry-Wide Technical Competencies					
Design & Development	Operations	Maintenance, Installation, & Repair	Quality Assurance & Continuous Improvement	Health, Safety, Security, & Environment	
Workplace Competencies					
Business Fundamentals	Teamwork	Planning & Organizing	Problem Solving & Decision Making	Checking, Examining, & Recording	Working with Tools & Technology
Academic Competencies					
Reading	Writing	Mathematics	Science	Communication: Listening & Speaking	Critical & Analytical Thinking
Personal Effectiveness Competencies					
Interpersonal Skills	Integrity	Professionalism	Initiative	Dependability & Reliability	Lifelong Learning

INDUSTRY 4.0 WORKFORCE SOLUTIONS

ROBIN FERNKAS

Career One-Stop Business Center is your source for help to hire, train, and retrain a strong workforce:

<http://www.careeronestop.org/BusinessCenter/index.aspx>

American Job Center Locator provides contact information for the nearest American Job Center:

<http://www.careeronestop.org/LocalHelp/local-help.aspx>

You can also find a center by calling ETA's toll-free help line at 1-877-US-2JOBS (TTY: 1-877-889-5267).

BACKGROUND AND FOCUS

SCOTT LUCAS

WSU Tech-Wichita-Aviation and Manufacturing

Two year, public technical college affiliated with Wichita State University

National Center for Aviation Training

Developed programs specific for the facility-Robotics and Industrial Automation

Great example of industry, education, and government working together

Partner with WSU's National Institute for Aviation Research (NIAR)

Provide stackable curriculum options up to AAS degrees with 3rd party credentials

Most NC3 Certifications of any single campus in the country

Most dual credit technical hours of any college in Kansas

INDUSTRY 4.0 WORKFORCE CHALLENGES

SCOTT LUCAS

In education in our market, there are four questions that have posed our challenges

What's best for industry?

Know the market

Segment needs and supply chain needs

What's the best approach to instruction?

Faculty/Equipment/Method/Approach

What can we afford to do?

Public funding

Where are the students?

INDUSTRY 4.0 WORKFORCE SOLUTIONS

SCOTT LUCAS

What's best for industry?

ARM aided through a Research project that we spent time with over 60 companies

What's the best approach to instruction?

Ramifications of the Pandemic

What can we afford to do?

We have to invest in the future to support where we think industry will go

Where are the students?

High Schools

Applied Learning models

BACKGROUND AND FOCUS

LISA MASCIANTONIO

Chief Workforce Officer - The Advanced Robotics for Manufacturing Institute (ARM)

The ARM Institute is a **Manufacturing USA® Institute**

Strengthening U.S. manufacturing through innovations in robotics and workforce development

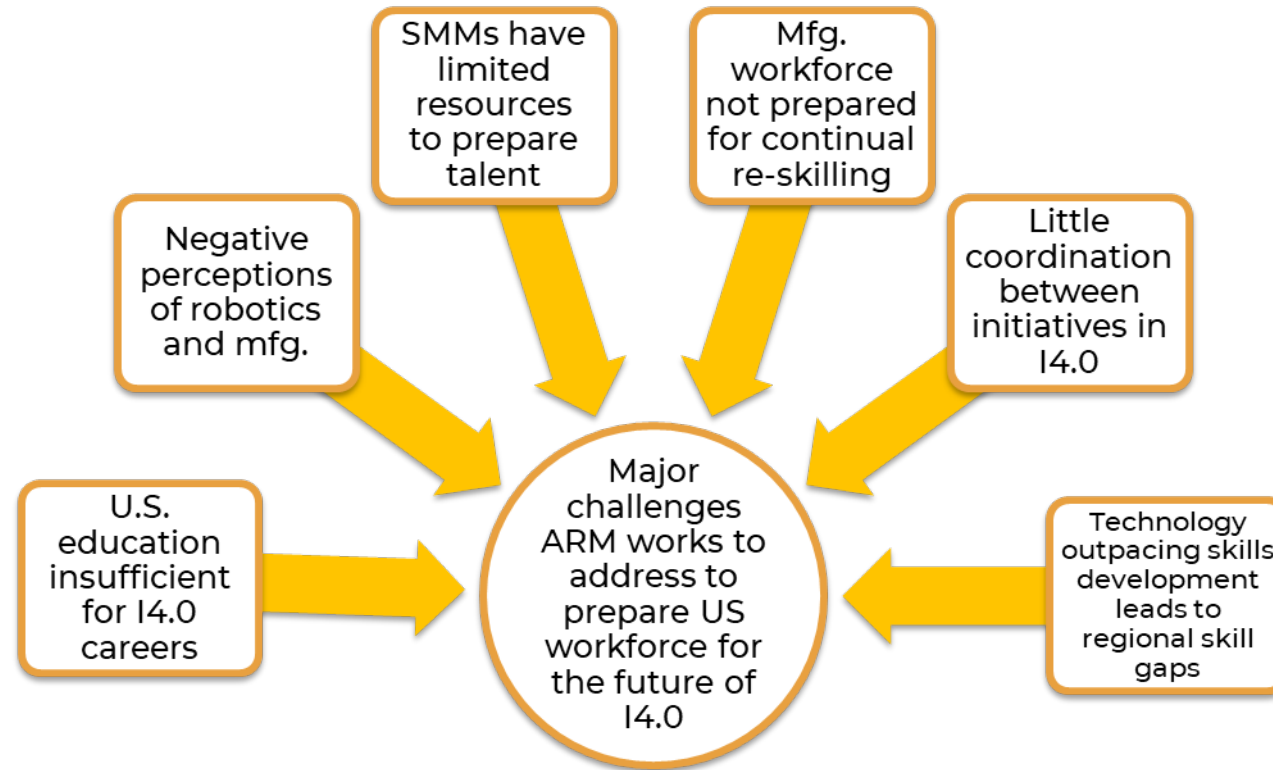
Keeping the manufacturing workforce on pace with the technological

Manufacturing careers no longer look they once did

With Industry 4.0, we need to focus on the fact that manufacturing careers are now a life-long learning journey and the skills will continually adapt to the technical changes

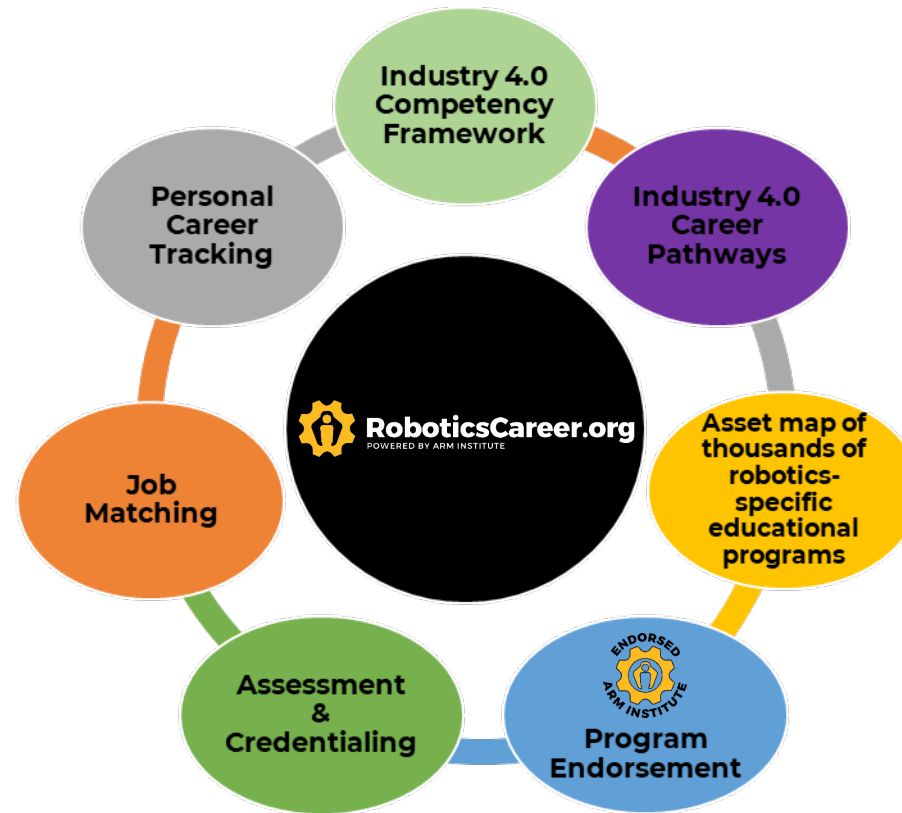
INDUSTRY 4.0 WORKFORCE CHALLENGES

LISA MASCIANTONIO



INDUSTRY 4.0 WORKFORCE SOLUTIONS

LISA MASCIANTONIO





PANEL DISCUSSION



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**AUDIENCE
QUESTIONS**

THANK YOU!