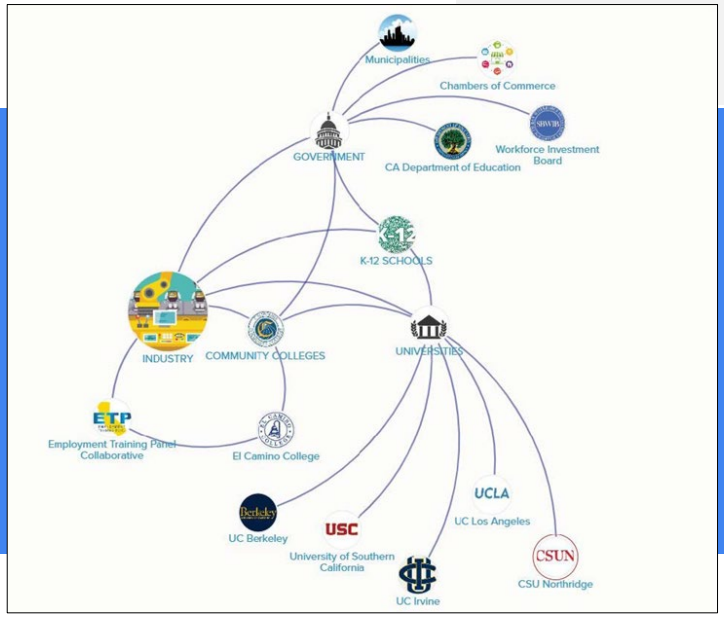
Industry
Small & Medium Sized Manufacturers
Defense

Technology
Workforce Development

CESMII
THE SMART MANUFACTURING INSTITUTE

PROJECT CASE STUDY

Smart Manufacturing Workforce Development Model



PROJECT LEAD

El Camino College

PROJECT TEAM

Cal State University Northridge, UCLA, UC Berkeley

PROJECT OBJECTIVE

The goal of this project is to develop a smart manufacturing workforce model that leverages existing education and workforce training systems to establish a comprehensive Smart Manufacturing worker training program that can be replicated across a region or the nation.

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California Workforce Development Program Trains Over 2,000 Manufacturing Workers on Smart Manufacturing Technologies

BENEFITS TO OUR NATION

As US manufacturers continue to incorporate advanced technologies on the production floor, it's vital that workers are trained in smart manufacturing techniques so they can adapt and participate in our ever-changing global economy. A workforce that is equipped with smart manufacturing skills will help domestic producers continue to improve productivity and quality, and better compete with offshore manufacturers that enjoy lower labor costs.

BENEFITS TO INDUSTRY

With technological advancements rapidly reshaping industries, imparting skills in smart manufacturing ensures a workforce that can effectively harness automation, data analytics, and digital tools to become more productive and valuable. Training workers in smart manufacturing techniques leads to streamlined processes, increased operational efficiency, and reduced downtime, ultimately resulting in higher productivity and improved product quality. Any domestic industry that intends to remain viable in the 21st century will have to employ a well-trained workforce that's comfortable with smart manufacturing, machine learning, and other advanced technologies.

PROJECT DESCRIPTION

TECHNICAL APPROACH

This program will be designed so that any curriculum, training component, or business assessment tool can easily be adopted and customized nation-wide.

ACCOMPLISHMENTS

- Completed national inventory of existing Smart Manufacturing workforce development programs.
- Developed Smart Manufacturing Core Competencies Standard for operators, technicians, engineers, and managers.
- Developed training modules and certificate model program for an incumbent workforce.
- Developed class modules for high school, community college and university systems.
- Developed standard for Smart Manufacturing Post-Bachelor certificate program.
- Developed Smart Manufacturing content for a Chemical Engineering degree program.

DELIVERABLES

- Delivered complete national inventory of existing Smart Manufacturing Education and Workforce Development programs.
- Delivered training module models focused on an incumbent workforce.
- Delivered curriculum modules for high school, community college and university systems.
- Delivered Smart Manufacturing Post-Bachelor certificate curriculum and standard.
- Delivered Smart Manufacturing content for Chemical Engineering degree program.

REUSABLE OUTCOMES / SM MARKETPLACE

- Smart Manufacturing Training Modules for an incumbent workforce·
- High School, Community College, and University Smart Manufacturing Curriculum Modules.
- Smart Manufacturing Post-Bachelor Certificate curriculum.
- Smart Manufacturing content for Chemical Engineering degree program.

RESULTS

2,017

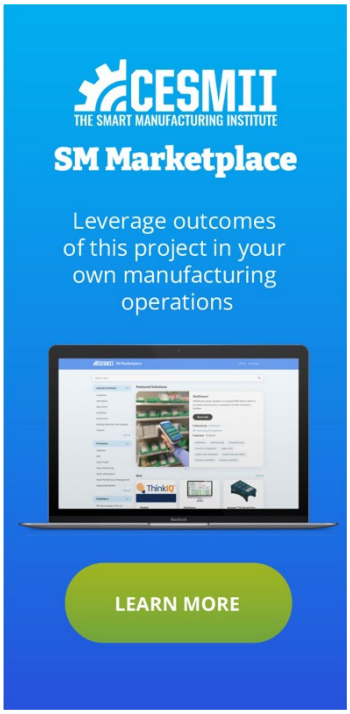
2,017 manufacturing workers trained on Smart Manufacturing skills through the California Employment Training Panel program.

361

361 defense industry workers trained on Smart Manufacturing skills through the California CADENCE program.

227+

Over 200 UCLA Chemical Engineering students + 27 UC Berkeley Engineering students trained on Smart Manufacturing technologies.



PROJECT DETAIL
Budget Period: BP4
Submission Date: 3/17/2022
Sub-Award (contract) Number:
4550 G WA323
SOPO: 233

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