Knowledge Delivery

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"Education is not the filling of a pail, but the lighting of a fire."
– William Butler Yeats, Irish Poet
CESMII Imperative: Democratizing Knowledge
Drive the National Dialogue on Smart Manufacturing – At All Relevant Stages of the Smart Manufacturing Journey

Multiple capabilities are required to drive impact – requiring utilizing of the full Industrial IoT ecosystem

McKinsey 2018

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Change is a Team Sport
– Transformational Change, Even More So...

The vision behind Smart Manufacturing in the US is one of transformation: new technologies unleashing innovation to transform manufacturing companies, communities and the nation’s economy.

This movement cannot scale without a true public/private partnership – government’s help and industry’s engagement.
Rapid Change is Upon Us

"In the times of rapid change, learners inherit the Earth, while the learned find themselves beautifully equipped to deal with a world that no longer exists."

- Eric Hoffer

*Image Source: washingtonrebel.typepad.com, online
The Critical Role of Leadership in Today’s Digital Age

Digital Masters – firms that excel in both dimensions – far outperform the others.

• On average, Digital Masters:
  • are 26% more profitable than their industry competitors
  • generate 9% more revenue with their employees and physical assets

Smart manufacturing is poised to increase the productivity of the world’s factories by as much as 25 percent while adding $10 to $15 trillion to global GDP over the next 20 years.

*Image Source: “Manufacturing Digitalization” report, Information Technology & Innovation Foundation, August 2018*
For all smart manufacturing’s promise, U.S. manufacturers, especially SMEs, have been slow to adopt digital manufacturing practices, with most companies remaining just at the initial stages of smart manufacturing technology adoption.

*Image Source: “Manufacturing Digitalization” report, Information Technology & Innovation Foundation, August 2018*
Plant and enterprise initiatives are fragmented and disconnected.

Industry lacks the tools to tie Smart Manufacturing to business strategy and competitiveness, building a data-driven culture.
CESMII’s Outreach Mission

“To lead the creation of a national Learning Infrastructure to drive 21st-century competitiveness through the broad-scale adoption of Smart Manufacturing”
CESMII’s Outreach To Do’s

• bring renewed energy to the CESMII mission
  • stimulate new thinking
• operationalize April 2018 WFD/E Workshop Roadmap
  • Awarded two (2) Roadmap Projects
  • SM 101/102 delivered yesterday
    • available online to membership
    • RMC roll-out plan
• Developing next modules per roadmap
• SM Practitioner Certificate in process
Partners in Action – Committed Projects

• El Camino Community College
  • Smart Manufacturing Workforce Development Model Program

• Penn State University
  • Factory 4.0 Educational Toolkit
Partners in Action – MESA International

- 200+ training seats for CESMII members yesterday.
  - Classes will be available through RMCs.
- Each CESMII member gets one (1) complementary pass plus 35% discount for MESA unlimited online courses:
  - Smart Manufacturing Journey
  - Smart Manufacturing RoI
- Defining SM Practitioner Certificate based on existing 9-part education programs
- Pilot executive engagement program
Putting SM in Context
– Business Competitiveness through Plant Performance

+ **assess** Smart Manufacturing capabilities and connection to competitive performance,

+ **align** the understanding of capabilities, performance gaps and priorities using a common terminology,

+ **improve** Smart Manufacturing capability investments to close performance gaps, and

+ **impact** high-priority drivers of competitiveness.

* Source: a2i2, © February 2019
Poll Question: #1

How prepared is your company for disruption in manufacturing?

1. Don’t anticipate disruption for the enterprise as a whole or for manufacturing
2. Continuous improvement will be sufficient to sustain competitiveness
3. While competitive today, we are at-risk for meeting future requirements
4. Pilot projects are underway
5. We are developing an organization-wide transformation plan
6. We are making substantial progress on our organization-wide transformation
7. Can’t judge

* Source: a2i2, February 2019
Poll Question: #2

What is the connection in your company between Smart Manufacturing at the plant level and the company’s long-term competitiveness?

1. Don’t have strategic goals for manufacturing tied to enterprise competitiveness
2. Strategic manufacturing goals for the enterprise and only shorter-term operating goals at the plant level
3. Strategic goals at the enterprise level have been cascaded to plant level
4. Strategic goals at plant level have been cascaded to activity areas, like Quality, Safety & Maintenance
5. Plant Investments and priorities are based on a comprehensive roadmap
6. Plant investments are optimized across the enterprise for impact on competitiveness
7. Can’t judge

* Source: a2i2, February 2019
assess – align – improve – impact

Align competitive goals for performance to the plant level

Assess and improve those SM capabilities that drive performance gains specific to the future business model and requirements of each plant

* Source: a2i2, February 2019
Engaging **ALL** at Scale

**CESMII places the power of change and innovation at the fingertips of everyone who touches manufacturing**
Embrace Manufacturing Ecosystem Diversity – in the Room Today
Embrace Manufacturing Ecosystem Diversity – in the Rest of the World
IT’S ALL ABOUT OUTCOMES…

Lowering barriers to help
Leading positive change
Advanced Technology enabling:
• Unleashed safe innovation
• Lighter weight installations
• SM in context
Call-to-Action:

“When put in charge, take charge.”  - Gen. N. Schwarzkopf
CORE VALUES

Stewards of Smart Manufacturing

Connected Builders

Advocates for a Better Tomorrow

Inclusive by Design
PARTNER WITH US!

Democratizing SMART MANUFACTURING

EDUCATED, DATA-DRIVEN CULTURE
SMART ASSETS
SMART DECISIONS
OPERATIONS & SUPPLY CHAIN VISIBILITY

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