Advanced Manufacturing Working Group Discussion Meeting

December 8, 2014—11:00 A.M. – 1:00 P.M.
Deloitte
200 Berkeley Street
Boston, MA 02116

Meeting Summary

Attendees

Name	Organization	Desired report outcomes
Bethany Costello	Rhode Island School of Design	Understand the role of design in supporting the advanced manufacturing industry
Greg Victory	Rhode Island School of Design	Learn what skills currently make up the manufacturing "skills gap"
Caitlin Campbell	New Balance Athletic Shoe, Inc.	Learn what role New Balance can play in both supporting the region's advanced manufacturing industry
Lucy Flynn	Natixis	Inform the creation of a pilot advanced manufacturing certificate program with Madison Park High School
Don Walsh	Northeastern University	See the continued momentum of New England manufacturing (particularly in MA)
Gary Kaplan	JFY NetWorks	Explore how college readiness can prepare students to work in advanced manufacturing
Gordon Leversee	Keene State College	Understand how Keene State can serve as a node in the broader New England manufacturing ecosystem
Daniel Henderson	Keene State College	Learn about exemplary corporate workforce partnerships
Fenna Hanes	New England Board of Higher Education	Learn how a grant from the NSF can be used to teach advanced manufacturing using problem based learning to high school students
Sara Putnam	New England Board of Higher Education	Learn how a grant from the NSF can be used to teach advanced manufacturing using problem based learning to high school students
Emily Heisig	New England Council	Use report as a tool to educate policy makers
Loren Walker	University of Massachusetts, Amherst	Position the region as an attractive candidate for federal funding opportunities in advanced manufacturing (ex. NNMI)

Mike Prior	MassMEP	Create a system that supports small and medium sized manufacturers
Karen Wocszyna-Birch	Center for Next Generation Manufacturing, Connecticut College of Technology	Explore ideas creating a pipeline between secondary schools and universities, with a focus on advanced manufacturing industry
Laurie McCorry	Bunker Hill Community College	Gather information to develop an advanced manufacturing program at Bunker Hill
Heather Rielly	TD Bank	Better understand the needs and challenges of manufacturing clients
Heidi Riccio	Medford Vocational Technical High School	Prepare for a grant application to purchase CNC machinery and develop an advanced manufacturing program in partnership with Bunker Hill CC
David Lashmore	University of New Hampshire	Learn how the region can support the development and use of advanced materials within the context of advanced manufacturing
Janet Raymond	Greater Providence Chamber of Commerce	Better understand the region's competitive strengths in advanced manufacturing
John Cohan	McLane Law Firm	Help manufacturing clients understand manufacturing trends in New England
John Traynor	Peoples United Bank	Learn about the economic impacts of advanced manufacturing on the New England Economy
Bob Zider	Vermont Manufacturing Extension Center	Identify areas for proactive collaboration between stakeholders in the region
Brenan McCarrager	Draper Laboratory	Better position the region to improve candidacy for a federal funded NNMI
Pat Downs	Connecticut Center for Advanced Technologies	Learn about potential synergies between NEC members to support advanced manufacturing
Elliot Ginsberg	Connecticut Center for Advanced Technologies	Understand how to collaborate with regional players to position New England for the next NNMI application
Peter Larkin	Public Policy Advisors	Better understand the interests of manufacturing clients
David Luzzi	Northeastern University	

Workshop Discussion

- New England's Competitive Advantage in Value Add
    - The question was raised about other countries having access to the same automation technologies that give New England a competitive advantage
    - Other countries don't necessarily have the same capabilities for automating manufacturing processes
    - Many people are worried about China gaining ground in automation and advanced manufacturing, but we should be more worried about Mexico, which is graduating more engineers annually than the US
    - The topic of the durability of an advantage in innovation/design was discussed

    - No advantage is permanent, but by harnessing the advanced manufacturing "game changers" (internet of things, additive manufacturing, and digital manufacturing) and continually innovating, New England has the potential to stay ahead
- Skills Gap
    - What are the specific skills manufacturers have identified that are currently lacking in the workforce?
    - There are currently deep skills shortages in…
        - Software engineering
        - Manufacturing engineering
        - CNC operations
        - Master schedulers
        - Supply chain management
        - Access to special processes (heat treat, special coatings, etc.)
        - Advanced analytics and big data
        - Test engineering (both mechanical and electrical)
    - NEC Member Comments
        - Would like Deloitte to validate the types of skill shortages during interviews with regional manufacturers
        - There are more basic skills gaps in small and medium sized manufacturers
        - Potential resource: The Manufacturing Advancement Center Workforce Innovation Collaborative (MACWIC) is led by Waters Corporation and is composed of around 150 manufacturing companies with a goal of defining and reducing the manufacturing skills gap in Massachusetts
        - The Massachusetts Legislature recently formed a Manufacturing Caucus, which will help inform law makers about the needs of regional manufacturing companies and ways in which government can be supportive
- Internships (NEC Member Comments)
    - Internships are a form of job training and can help reduce the skills gap
    - Need policies that challenge/incentivize industry to put skin in the game and pay for student internships
    - Rhode Island's Governor's Workforce Board partially reimburses wages for companies that provide internships to college students
    - Many students can't afford to take on unpaid internships during the summer
    - Schools need to adapt their policies to provide credit for internships taken during the school year
- Branding (NEC Member Comments)
    - Surprised that more vocation schools aren't involved in this discussion, given the difficulty of successfully branding "vocational" to parents, who ultimately determine where kids attend school
    - Opportunity to rebrand "vo-tech" schools as "technology and innovation" schools
    - Northeastern University example
        - Northeastern was held back in reputation for a long time because the internship program was seen as "vocational"

        - The program underwent a rebranding campaign to describe the internships as "experiential education", and has since improved in reputation
    - At the White House summit last week on college readiness, the words "vocational" and "manufacturing" were not mentioned once
    - Michelle Obama recently discussed a new initiative to provide financial support to promote awareness of STEM subjects/jobs to high school counselors
    - CTE (career and technical education) is frequently used today in place of "vocational"

**The New England Council thanks Miles Biggs and Avanti Deshpande of Deloitte for compiling these notes.*