Informational Update:
Advanced Manufacturing

S.H. McKnight
ENG Advisory Committee Meeting
April 2013
Advanced Manufacturing

• Context
  – The President’s Advanced Manufacturing Agenda
  – NSF/ENG core programs across the Directorate – budget has been increasing

• Recap of Prior AdCom meetings
  – 2011: Discussion of AMP
  – 2012: Interagency panel focused on partnerships

• Today
  – Interagency Coordination
  – Feedback and Discussion
Interagency Coordination and Collaboration

• President’s Advanced Manufacturing Initiatives:
  – Pilot Institute on Additive Manufacturing (2012)
  – 3 Additional “Manufacturing Institutes” DOE and DOD 2013
  – Dept. of Commerce Investing in Manufacturing Communities

• Specific NSF activities of interest to our partners:
  – NSF center, innovation, and industrial partnership programs
  – Educational activities / advanced manufacturing workforce.
  – Linkages to existing NSF grantees / students
  – SBIR/STTR: collaboration with institutes.

• Coordination is occurring at multiple levels
Additional DOD/DOE Institutes in FY13 and FY14

• Topic driven, “mission relevant,” applied research through pilot-scale development activities.
• NSF is partnering with DOE and DOD on each institute
• DOE and DOD expect that our research community will be part of teams
  – Leverage ongoing NSF (and DOE, DOD) research at universities
  – Education / workforce development (ATE, fellowships, etc.)
  – Learning from basic research priorities and sharing basic research “needs” with NSF to strengthen linkages with institutes
• The President has asked Congress to authorize and fund 15 more institutes as part of the DoC (NIST) budget request
Investing in Manufacturing Communities
Department of Commerce

• IMC Goals:
  – Maximize effectiveness of Federal resources through coordination and info sharing across agencies
  – Encourage states to develop rigorous plans and utilize best practices
  – Help localities leverage investments to attract domestic and foreign investments particularly in advanced manufacturing

• NSF community is viewed as critical part of regional ecosystems: education, research, and innovation programs
Related Programs with Significant Interagency Coordination/Collaboration and Advanced Manufacturing Content

• National Robotics Initiative

• National Nanotechnology Initiative
  – Sustainable Nanomanufacturing Signature Initiative

• Materials Genome Initiative
  – Designing Materials to Revolutionize and Engineer our Future (DMREF)

• Cyber Physical Systems
  – Smart Manufacturing
  – Cyber Manufacturing

• Systems Engineering and Design
  – NASA, DOE, DOD, Commerce, and NSF coordination
Thank You!

• Thoughts?
• Questions?
• Discussion?