

Report Out and Next Steps

- Technologies with Broad Impact
 - Q1: What criteria should be used to select technology focus areas?
 - Must be industry PULL
 - Commercialization focused
 - Should build on existing consortiums
 - Institute should be able to leverage existing consortiums, national labs, etc.
 - Should address manufacturing needs that a) affect multiple manufactures and industries and b) cannot be done by industry because of high cost of development

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 - Q2: What technology focus areas meet these criteria that you would be willing to co-invest in?
 - Share scale up equipment
 - Advance Composites
 - Organic electronics
 - Pharmaceuticals
 - Bio-based
 - Fresh water technologies
 - Metal processing, forging, joining
 - Surface engineering, coating, cleaning, friction
 - Modeling and simulation
 - Thermal processing
 - Fiber

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 - Q3: What measures could demonstrate that Institute technology activities assist U.S. manufacturing?
 - Member reported
 - Industry surveyed
 - Mission specific goals and objectives
 - Industry survey
 - Global market share export
 - Trade balance

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 - Q4: What measures could assess the performance and impact of Institutes?
 - Manufacturing success as reported by industries
 - Investments – private
 - Sustainability – industry support
 - Global recognition

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- 1st Session

- How to balance focus on technology with focus on applications
- The mass applicability of the Institutes' products and services
- Open innovation architecture
- Ability to leverage existing technologies
- Large scale automation of composites
- Access of Modeling/simulation with validation/verification for SMEs
- Number of collaborations
- Level of engagement with investment community
- Extent of adoption of technologies at the production level by end users
- Focus on MRLs in addition to TRLs
- Demonstrated leadership in collaborations and technology transfer
- Early engagement of all aspects of the supply chain
- Balance between the needs of innovation and production

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- Technologies with Broad Impact
 - 2nd Session
 - Awareness of needs and market potential for technologies
 - Connectivity with other Institutes, industry, and academia
 - Transformational potential of technology focus area
 - Ability to address product life cycle (recyclability)
 - Fluid power-hydraulics/pneumatics, Bio-inspired manufacturing
 - High fidelity simulation tools that integrate with design tools
 - Inline metrology, knowledge management-human factors
 - Success in product commercialization, supply-chain management
 - ROI that justifies public investment
 - Number of new or re-shored manufacturing jobs
 - Quality of new or re-shored manufacturing jobs
 - Number of start-up companies that use Institute knowledge
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