

From: Mike Wixom [mailto:mwixom@a123systems.com]
Sent: Thursday, October 20, 2011 1:25 PM
To: amtech
Subject: AMTech Comments

1. Should AMTech consortia focus on developments within a single existing or prospective industry, or should its focus be on broader system developments that must be supplied by multiple industries?

The consortia should be organized by key manufacturing processes – welding, coating, powder milling, separations etc.

2. Who should be eligible to participate as a member of an AMTech consortium? For example, U.S. companies. *i.e.*, large, medium, and/or small; institutions of higher education; Federal agencies; state, local, and tribal governments; and non-profit organizations?

All should be able to participate

3. Should AMTech place restrictions on or limit consortium membership?

No.

4. Who should be eligible to receive research funding from an AMTech consortium? For example, U.S. companies *i.e.*, large, medium, and/or small; institutions of higher education; Federal agencies; state, local, and tribal governments; and non-profit organizations?

All should be eligible, but it is worth considering imposing cost share on large companies

5. What criteria should be used in evaluating proposals for AMTech funding?

Clarity of manufacturing readiness level criteria
Create or strengthen domestic supply chain
Impact on process efficiency
Reduction of product development cycle time

6. What types of activities are suitable for consortia funding?

Proof of concept through pilot scale demonstration of new process technology

7. Should conditions be placed on

research awards to ensure funded activities are directed toward assisting manufacturing in the U.S.?

Yes, but US owned companies should not be restricted from practicing or validating in off shore operations. If the technology is licensed, the license terms should include incentives to practice domestically.

8. What are ways to facilitate the involvement of small businesses in AMTech consortia?

Programs require supply chain integration plans including small companies. Link SBIR awards to AMT participation.

9. What are best practices for facilitating the widest dissemination and adoption of knowledge and technology through consortia?

Fraunhofer and Taiwan ITRI

10. While it is expected that the research efforts of AMTech consortia (including participants from the Federal, academic, and private industry sectors) will take place largely at the pre-competitive stage in the development of technologies, the generation of intellectual property is possible, and even likely. What types of intellectual property arrangements would promote active engagement of industry in consortia that include the funding of university-based research and ensure that consortia efforts are realized by U.S. manufacturers?

This is outside my area of expertise.

11. Would planning grants provide sufficient incentive for industry to develop roadmaps and initiate the formation of consortia? If not, what other incentives should be considered?

Industry participation must be driven by ROI. We have more than enough roadmaps. May be able to use membership as a consideration in federal procurement decision making or patent fee structures

12. Should each member of an AMTech consortium be required to provide cost sharing? If so, what percentage of cost sharing should be provided?

20% cost sharing by large companies is appropriate for pre-competitive program. Can scale with MRL or as risk is reduced.

13. What criteria should be used in evaluating research proposals submitted to an AMTech consortium?

Clarity of manufacturing readiness level criteria
Create or strengthen domestic supply chain
Impact on process efficiency
Reduction of product development cycle time

14. What management models are best suited for industry-led consortia?

Not sure - Seems like a good B-school topic?

15. Should the evaluation criteria include the assessment of leadership and managerial skills?

Sounds good, but pretty subjective. Suggest getting input from VC community how to do this.

16. Should limitations be placed on the duration of consortia?

No – same negatives as term limits. But there should be a reapplication evaluation process and rewards/penalties for performance

17. How should an AMTech consortium's performance and impact be evaluated? What are appropriate measures of success?

Big challenge here is that pre-competitive programs will take time to show ROI. May need to select initial programs to include early off ramp deliverables and manage the AMTech project portfolio to span MRL and assure there is ongoing new technology emerging from pipeline. Some initial programs may need to be more incremental.

18. What are the problems of measuring real-time performance of individual research awards issued by an industry-led consortium? What are appropriate measures of success?

Consulting activities and recruitment of staff are indicators of successful programs. Process technology IP may be managed as trade secret, so publications and patents may not be best measures.

19. How should the NIST AMTech program be evaluated?

Impact on balance of trade is more important than jobs created. Must recognize that new processes or mfg technology can have negative impacts on job creation from the narrow

perspective. Program could be evaluated based on industry participation and support; industry hiring of staff or tech transfer activity (industry personnel time on site)

20. What are lessons learned from other successful and unsuccessful industry-led consortia?

Also seems like a good B-school topic and tough to offer a short response.

21. How can AMTech do the most with available resources? Are there approaches that will best leverage the Federal investment?

Where AMTech is aligned with regional clusters, local and state support should be required.

22. How should AMTech interact with other Federal programs or agencies?

Tie SBIR program to AMTech is one idea DoD and ManTech Title III programs are also potential matches

23. What role can AMTech play in developing, leading, or leveraging consortia involving other Federal agencies?

TRL criteria applied in other R&D portfolios should be expanded to address Manufacturing Readiness Levels and supply chain gaps. This should be input on AMTech portfolio.

Patrick, thank you for the opportunity to provide input. I have had to be very brief in most of these. If there are a few specific topics that could use some elaboration, please let me know.

Mike Wixom
Senior Technical Director
A123Systems
Advanced Research & Government Solutions Group
3850 Research Park Drive Suite A | Ann Arbor MI 48108
P 734 205-1432 | F 734 213-3758