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To: amtech
Cc: Evans, Paul T.
Subject: SwRI AMTech Survey Response

Attached, please find Southwest Research Institute's response to the AMTech Consortium survey questions. Should you desire clarification or more detail in any area, please feel free to contact me directly.

Good luck in your planning activities!

Clay

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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?

Broad industry focus will have the greatest impact and participation in the consortium. In addition it provides the opportunity for technology transfer between industries.

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?

We suggest consortium language which prevents competition between industry and federal agencies. Federal agencies might participate in activities such as standards development.

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

In general, no. Small business participation might be incentivized.

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?

Federal agencies and governments should be excluded to prevent competition with industry and to maximize the impact in the private sector.

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

- Potential economic impact
- Technical merit
- New and novel approaches
- Technology transfer approach
- Workforce development/augmentation
- Cross-industry impact

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

Applied research and development in manufacturing processes that have clear transition paths to industry. For example, research results should be demonstrated with a manufacturing partner in a relevant industry.

7. Should conditions be placed on research awards to ensure funded activities are directed toward assisting manufacturing in the U.S.?

Yes. Industries deemed critical to US manufacturing growth should be targeted for funding.

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

One approach is to require small business partnerships/participation at a significant level.

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

Open-source, open-result, on-line repositories of research results. Organization, maintenance, and advertising of this on-line repository is critical to its success.

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?

SwRI's preference would be for free and open access to the results of the consortium activities.

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?

Planning grants are helpful. Also, having clear communication on future funding levels is strong incentive.

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

For some organizations (non-profits, universities) cost-sharing is a hindrance to participation.

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

See question 5.

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

In our experience having some level of paid staff manage the consortia is useful. A technical advisory board could be elected by the members and would be unpaid.

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

In our experience, these criteria are difficult to assess. Another approach is to have periodic reviews that evaluate project performance and future funding levels.

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

Yes, the consortia (and the funded programs) should be reviewed periodically for effectiveness towards the goals. Three to five years seems typical/reasonable.

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

One example is the NIST MEP which assesses the direct economic impact of each program through third party survey.

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?

Peer led panel reviews of project performance on a periodic basis with the mandate to cut funding of some percentage of under-performing programs.

19. How should the NIST AMTech program be evaluated?

Clear metrics extracted from the economic impact surveys (question 17) should be compiled.

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

Transparency of the review process and program performance is critical.

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

Careful and clear communication of program goals/needs will help drive the most effective research solutions.

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

AMTech must be cognizant of other Federal programs to make sure that funded research builds upon and is not duplicative of other Federal funding. Possibly consider having participation by other Federal funders (DoD, DoE, DoC, NASA etc.).

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

Initially, it would be useful to invite participation of other consortium leaders and program managers to provide guidance, best practices etc.