REQUEST FOR INFORMATION ON PILOTS TO INFORM THE CREATION OF POTENTIAL NEW MANUFACTURING TECHNOLOGY ACCELERATION CENTERS (M-TACS)

Question 1: What are the specific types of technology transition and commercialization tools and services that should be provided by M-TACs? Emphasis is on the alignment of these tools and services with the most pressing needs of small and mid-sized U.S. manufacturers.

The M-TACs should be configured to accelerate OEM requirements for new supply and technologies down through the pipeline to tier 1, 2 and 3 level suppliers. Specific tools would include:

- Industry-specific technical elements such as geometric dimensioning, rapid proto-typing, and CAD design.
- Business planning tools such as target costing.
- Technology scouting and TDMI tools.
- Supplier sourcing and qualification tools.
- Operational excellence tools.
- Business development and growth tools.

M-TAC personnel must be deeply conversant in all aspects of the key technologies, supplier requirements, business relationships, and future trends within a given industry sector. M-TAC personnel must have access through existing and developed commercial relationships within the MEP system at all levels. This means that a strong network must be developed among centers to facilitate cross-jurisdictional communication and interaction.

Question 1a: How would M-TAC services complement the services currently offered by MEP Centers?

The existing MEP center network provides unusual access to tier 2 and 3 suppliers that is unique among all other public-private entities engaged in providing services to small business. Existing mechanisms for finding and qualifying appropriate companies and engaging with company leaders to facilitate change is the stock and trade of the MEP system. This will be a critical success element for the M-TACs.

The alignment of M-TAC services within the center structure will be critical to success. Models that support strong interaction with existing center tool sets, including operational excellence, access to finance, business growth tools, and development of human capital, must be developed. As mentioned, systems that facilitate inter-center activity will also be critical. Supply chain work requires an agnostic attitude to local or state boundaries and M-TAC staff must be empowered to move freely within the MEP system to access services and companies.

Question 2: What role should future M-TACs play with respect to supply chain needs? How should OEMs participate? How can industry associations, professional societies, and other appropriate national organizations participate?

M-TACs should function as the repository for all information and access to technical expertise relevant to a particular supply chain. To accomplish this, the M-TAC must have relationships with key OEM's at both the highest level and at key procurement levels. Procurement decision-makers are key influences within supply chains and relationships must be cultivated and grown. This will require a strong emphasis on the value-added element of the M-TAC—the ability to bring qualified suppliers to the OEMs and the ability to strengthen the efforts of the existing supply base.

A key catalyst in establishing and building industry sector relationships are the various industry, trade, professional and employer associations. Because of their non-commercial nature and role as business developers and purveyors of best practices within their sectors, they are usually a trusted source for industry and a critical player in developing industry relationships. Most MEP centers have developed strong relationships with these groups and the availability of value-added services would position the M-TACs well as partners.

To solidify these critical relationships, it is worth considering establishing industry sector M-TAC advisory panels that consist of key OEMs, and trade and professional associations. A structure that provides for national level panels by industry with affiliated local chapters could be a key way to ensure that M-TAC services were aligned with industry needs. If the M-TAC's value-added element can be sufficiently defined and demonstrated, a play-to-play position on the advisory panels could be workable.

Question 3: Is there a particular long-term scalable and financially sustainable business model that should be implemented by future M-TACs that will enable small and mid-sized U.S. manufacturers to effectively access and benefit from the technology transition and commercialization assistance and other resources they need?

Effective operation of M-TACs will require an on-going financial investment. Standard federal mechanisms, such as state or local funding, would not be workable because of the cross-jurisdictional nature of supply chains. In addition, project fees would only be applicable to the portion of the work that is directly value-adding to a particularly company benefitting from the service. Other general activities including industry research, broad-based technology scouting, advisory panel management, and company relationship development and management would require an independent source of funding.

As suggested in the response to question 2, if the value-added element of the M-TACs can be clearly demonstrated, it may be possible to develop a financial support system of fees to be charged to large OEMs, tier 1 suppliers, and industry professional associations. This is likely to be a management challenge in and of itself as any membership organization leader can tell you.

Question 4: How should an M-TAC's performance and impact be evaluated? What are appropriate measures of success for future M-TACs? Please explain your response including the value of performance measure to business growth.

Measurement of M-TAC effective requires a recognition at more than one level. Level one is the development of a knowledge system that benefits a particularly industry sector. This would include activities such as supplier qualification matrices, technology introduction through stronger relationships among university and industry labs and supply chain participants, improvements to requirements communication up and down the supplier chain, and other similar activities. These activities would be hard to measure and simply counting instances of desired actions would not be particularly meaningful. A system of deeper and more thoughtful investigation from evaluation panels whose key purpose would be to share best practices and approaches among M-TACs to enhance system development would be more useful than counting activities or outcomes and provide insight into performance.

At another level, M-TAC's will ultimately not deemed to be effective without measures related to economic benefit at the industry and company level. A thoughtful system focused on a small number of financial outcomes relevant to each particular industry's needs, current state, and desired future state would work best. Performance measure research shows that overall measures of performance based on "one-sized-fits-all" assumptions regarding success will only encourage short-term thinking and measurement game playing.

Question 5: Are there any other critical issues that NIST MEP should consider in its strategic planning for future M-TAC investments that are not covered by the first four questions? Is so, please address those issues here and explain your response.

The ASMC has provided a response to this RFI and we are in support of the overall response to question 5 contained in that document. Key elements of concurrence include:

1. A national perspective—the program should not be gerrymandered within the existing system. Industry supply chains exist exclusive of jurisdictional boundaries and the system finances and measurement system should be designed to support and encourage true and deep inter-MEP center collaboration.
2. Strong financial support—Existing federal match requirements will cause centers to model their M-TACs after proven existing activities that are successful at securing match. That may mitigate against the big thinking and creativity necessary to put this new system into place.
3. MEP Center Involvement—Although it appears that M-TAC operation will be based on the existing MEP center framework, it is worth emphasizing this critical element. A parallel structure would result in redundancy of both management and services and create significant brand confusion for the existing MEP operation.