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DEPARTMENT OF COMMERCE

National Institute of Standards and Technology

[Docket No.: 161128999-6999-01]

Request for Information on Identification of New Capabilities Needed by the Hollings Manufacturing Extension Partnership Program

AGENCY: National Institute of Standards and Technology, Department of Commerce

ACTION: Notice; request for information.

SUMMARY: The National Institute of Standards and Technology (NIST) plans to publish a Notice of Funding Opportunity (NOFO) in fiscal year 2017 (FY17), subject to the availability of appropriated funding, to competitively fund grants and/or cooperative agreements (hereinafter referred to as awards) to existing Hollings Manufacturing Extension Partnership (MEP) Centers to add capabilities to the MEP program, including the development and conduct of projects to solve new or emerging manufacturing problems. This notice is not the NOFO; 15 U.S.C. § 287k(f), the statute under which NIST expects to conduct the future award program, requires the NIST Director to consult with small and mid-sized manufacturers regarding their needs and, in

turn, for NIST to use the information provided to develop one or more themes for future NOFOs, which will be disseminated through www.grants.gov. Through this notice, NIST requests information from small and medium-sized U.S. manufacturers related to the needs of such manufacturers in four areas: (1) critical manufacturing technologies; (2) supply chain requirements; (3) potential business services, including information services; and (4) other technologies or services that would enhance global competition. In addition, NIST requests responses related to other critical issues that NIST should consider in its strategic planning for potential future NOFOs to be conducted pursuant to the authority contained in 15 U.S.C. § 278k(f).

DATES: NIST will accept responses to this request for information until 11:59 p.m. Eastern Time on [PLEASE INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Responses will be accepted by e-mail only. Responses must be sent to meprfi@nist.gov with the subject line "MEP Competitive Awards Program RFI Responses."

FOR FURTHER INFORMATION, CONTACT: Diane Henderson, 100 Bureau Drive, Mail Stop 4800, Gaithersburg, MD 20899-4800, 301-975-5020, meprfi@nist.gov; or David Cranmer, 100 Bureau Drive, Mail Stop 4800, Gaithersburg, MD 20899-4800, 301-975-5020, meprfi@nist.gov. Please direct media inquiries to NIST's Office of Public Affairs at 301-975-NIST (6478).

SUPPLEMENTARY INFORMATION: Pursuant to 15 U.S.C. § 287k(f), NIST will consider the information obtained in response to this request for information in the development of one or more NOFOs to competitively fund awards to existing MEP Centers to add capabilities to the MEP program, including the development and conduct of projects to solve new or emerging manufacturing problems.

The MEP National Network

MEP is a nationwide network of Centers located in all 50 States and Puerto Rico that serve as trusted business advisors focused on transforming U.S. manufacturers to compete globally, supporting supply chain integration, and providing access to technology for improved productivity. MEP Centers are a diverse network of State, non-profit university-based, and other non-profit organizations, comprising more than 1,200 technical experts offering products, technical expertise and services that address the critical needs of their local manufacturers.

Each MEP Center works directly with area manufacturers to provide expertise and services tailored to their most critical needs, ranging from process improvement and workforce development to business practices and technology transfer. Additionally, MEP Centers connect manufacturers with government and trade associations, universities and research laboratories, and a host of other public and private resources to help manufacturers realize individual business goals.

Small U.S. manufacturers are a critical segment of our economy, comprising over 99% of all

manufacturing establishments and approximately 73% of manufacturing employment.[1]

Small U.S. manufacturers have proven to be flexible and adaptable in their approach to improved competitiveness and profitable growth through new markets, new customers, new products and new processes. Yet gaps remain in identifying, acquiring and implementing new manufacturing and other technologies, business models and supply chain practices that small U.S. manufacturers need to compete globally. Of particular interest is the gap between the research being performed by universities, federal labs, research consortia, as well as other entities, and the readiness of many small U.S. manufacturers to adopt both existing and emerging technologies into their products and processes to respond to the quality and performance requirements of original equipment manufacturers. Within this readiness gap, NIST includes workforce development, education and training needs related to those technologies and practices. Reports by the President's Council of Advisors on Science and Technology[2,3] and the Information Technology and Innovation Foundation[4] emphasize that small and mid-sized manufacturers lack the financial resources and technical capabilities that large manufacturers possess to be able to monitor and gain access to the universe of emerging technologies and processes being constantly innovated around the globe. As a result, technology adoption rates of smaller U.S. manufacturers lag behind those of larger manufacturers.

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[1] "2014 County Business Patterns," U.S. Census Bureau Data, release date 04/2016, http://www.census.gov/data/datasets/2014/econ/cbp/2014-cbp.html.

[2] "Report to the President on Accelerating Advanced U.S. Manufacturing," President's Council of Advisors on Science and Technology, Executive Office of the President, October 2014, https://www.whitehouse.gov/sites/default/files/microsites/ostp/PCAST/amp20_report_final.pdf.

[3] "Report to the President on Capturing Domestic Competitive Advantage in Advanced Manufacturing," President's Council of Advisors on Science and Technology, Executive Office of the President, July 2012, http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast_amp_steering_committee_report_final_july_27_2012.pdf.

[4] "International Benchmarking of Countries' Policies and Programs Supporting SME Manufacturers," Stephen J. Ezell and Dr. Robert Atkinson, The Information Technology and Innovation Foundation, September 2011, http://www.itif.org/files/2011-sme-manufacturing-tech-programss-new.pdf.

Through the efforts of its existing network of MEP Centers to provide services to small U.S. manufacturers, NIST MEP has made strides to address many of the needs of small U.S. manufacturers. However, to effectively assist small U.S. manufacturing firms to compete in the global economy, these firms require meaningful expertise specific to a given technology, supply chain and/or sector.

Bridging the gap between available technologies and commercial adoption by small U.S. manufacturers is essentially a two-part problem. First, there is the critical step of translating available technologies into competitive market advantage including but not limited to the identification of viable business opportunities related to those technologies. Second, the adoption of new technologies requires addressing the variety of challenges that serve as barriers to small U.S. manufacturers to incorporating technology solutions into their processes and product portfolio. These challenges include, but are not limited to, the same challenges that were identified when the MEP program was first created[5] -- disproportionate impact of regulation; lack of awareness of changing technology, production techniques and business management practices; isolation; lack of knowledge of where to seek advice; and scarcity of capital -- albeit in different form than initially conceived. Since its creation in 1988, the MEP program has become a source of trusted advice about new technologies, production techniques and business management practices for a significant number of firms (about 8,000 to 10,000 per year). The MEP program touches another 20,000 to 22,000 firms each year in training and outreach events. However, NIST recognizes that past events do not predict of the future, and the MEP program

[5] "Learning to Change – Opportunities to Improve the Performance of Smaller Manufacturers," National Research Council, 1993, https://www.nap.edu/read/2239/chapter/1.

must continue to add new skills and capabilities to its MEP Centers to continue to support small U.S. manufacturers in the United States. Further information on the MEP program is available at: https://www.nist.gov/mep.

Background Information

15 U.S.C. § 287k(f), the statute under which NIST expects to conduct the future award program, requires the NIST Director to consult with small and mid-sized manufacturers regarding their needs and, in turn, for NIST to use the information provided to develop one or more themes for NOFOs to address the needs of small U.S. manufacturers and MEP Centers that support them. NIST is providing the statutory language below to better enable small and mid-sized manufacturers and other members of the public to provide relevant information in response to the request for information.

15 U.S.C. § 278k(f)(3) states that the themes identified for the future award competition:

(A) shall be related to projects designed to increase the viability both of traditional manufacturing sectors and other sectors, such as construction, that increasingly rely on manufacturing through the use of manufactured components and manufacturing techniques, including supply chain integration and quality management;

(B) shall be related to projects related to the transfer of technology based on the technological needs of manufacturers and available technologies from institutions of higher education, laboratories, and other technology producing entities; and

(C) may extend beyond these traditional areas to include projects related to construction

industry modernization.

15 U.S.C. § 278k(f)(5)(A) also provides requirements for the selection of awardees under the future NOFO. Awards made under this program should:

(i) create jobs or train newly hired employees;

(ii) promote technology transfer and commercialization of environmentally focused materials, products, and processes;

(iii) increase energy efficiency; and

(iv) improve the competitiveness of industries in the region in which the MEP Center or Centers are located.

Additionally, under 15 U.S.C. § 278k(f)(5)(B), awards may:

(i) encourage greater cooperation and foster partnerships in the region with similar Federal, State, and locally funded programs to encourage energy efficiency and building technology; and

(ii) collect data and analyze the increasing connection between manufactured products and manufacturing techniques, the future of construction practices, and the emerging application of products from the green energy industries.

No Confidential Proprietary, Business or Personally Identifiable Information

No confidential proprietary information, business identifiable information or personally identifiable information should be included in the written responses to this request for information. Reponses received by the deadline may be made publicly available without change at: www.nist.gov/mep.

Request for Information

The responses to the questions below are intended to assist NIST in developing one or more NOFOs for the funding of competitive awards to existing MEP Centers to add capabilities to the MEP program. In addition, the NIST Director is fulfilling the consultation requirement contained in 15 U.S.C. § 278k(f)(3) via publication of this request for information. As required by the same statutory provision, the NIST Director will also consult with the MEP Advisory Board concerning topics for the future NOFO. Further information on the MEP Advisory Board is available at: https://www.nist.gov/mep/who-we-are/advisory-board.

NIST is seeking information that responds to one or more of the questions listed below. Responses should clearly indicate which question is being addressed.

(1) What are the key problems and issues facing small U.S. manufacturers and their competitiveness and opportunities for growth in the near-term (1 to 2 years), mid-term (3 to 5 years) and/or long-term (more than 5 years)?

(2) What advanced manufacturing technologies are and/or will be needed by small U.S. manufacturers for the companies to be competitive and grow in the global marketplace in the near-term (1 to 2 years), mid-term (3 to 5 years) and/or long-term (more than 5 years)?

(a) What would be the appropriate Manufacturing Readiness Level[6] or Technology Readiness Level[7] for those technologies in order for small U.S. manufacturers to consider adoption?

(b) What information will be required for small U.S. manufacturers to understand a technology or related group of technologies and the risks and opportunities associated with making or not making an investment in any given technology?

(c) How is the information about advanced manufacturing technologies best delivered to small U.S. manufacturers and/or MEP Centers that support those small U.S. manufacturers?

(3) What technologies and/or business models are important to small U.S. manufacturers as they choose and participate in any particular supply chain?

(4) What complementary business services, including information services, are and/or will be needed by small U.S. manufacturers and/or MEP Centers to take full advantage of advanced manufacturing technologies at the company or supply chain level?

(5) Are there any other critical issues that NIST MEP should consider in its strategic planning for future investments that are not covered by the first four questions?

Response to this request for information (RFI) is voluntary. Respondents need not reply to all questions; however, they should clearly indicate the number of each question to which they are responding. Brevity is appreciated. No confidential proprietary information, business identifiable information or personally identifiable information should be submitted in response to

[6] "Manufacturing Readiness Level (MRL) Deskbook," OSD Manufacturing Technology Program, version 2.0, May 2011; http://www.dodmrl.com/MRL_Deskbook_V2.pdf.

[7] Mankins, John C., "Technology Readiness Levels: A White Paper," April 6, 1995, NASA; https://www.hq.nasa.gov/office/codeq/trl/trl.pdf.

this RFI, as all responses received by the deadline may be made publicly available without change at: www.nist.gov/mep/. Please note that the U.S. Government will not pay for response preparation, or for the use of any information contained in the response. Responses should be typed using 12-point font and be single-spaced. Responses containing references, studies, research, and other empirical data that are not widely published may include copies of the referenced materials as attachments to the responses.

Phillip A. Singerman
Associate Director of Innovation and Industry Services
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