MEMORANDUM of UNDERSTANDING
BETWEEN THE
U.S. DEPARTMENT OF DEFENSE
OFFICE OF THE SECRETARY OF DEFENSE
DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR
MANUFACTURING AND INDUSTRIAL BASE POLICY
AND THE
U.S. DEPARTMENT OF COMMERCE
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
HOLLINGS MANUFACTURING EXTENSION PARTNERSHIP

May 2015

I. PURPOSE AND GOALS

This Memorandum of Understanding (MOU) constitutes an agreement between the U.S. Department of Defense (DOD) Office of the Secretary of Defense (OSD) Deputy Assistant Secretary of Defense for Manufacturing and Industrial Base Policy (DASD-MIBP); and the U.S. Department of Commerce (DOC) National Institute of Standards and Technology (NIST), Hollings Manufacturing Extension Partnership (MEP) – hereinafter referred to individually as "Party" and collectively as the "Parties."

The purpose of this MOU is to define an agreement through which:

- The DOD will leverage the assets and resources of the national MEP Program to assist the National Network for Manufacturing Innovation (NNMI) Institutes for Manufacturing Innovation (IMIs) led by the DOD as they strive to broadly and deeply enhance their impact on small and medium sized U.S. manufacturers.
- NIST MEP will expand its ability to positively impact the competitiveness and growth of U.S. manufacturers by developing expertise in the focus areas of the DOD-led IMIs.

The intent of this MOU is to provide an overarching framework to identify opportunities for synergy and collaboration among the programmatic efforts of the DOD, the DOD-led IMIs, and NIST MEP. The Parties' goal is to enhance collaboration by engaging small and medium-sized U.S. manufacturers more fully to optimize benefits and results from the public and private investments in the IMIs.

The objectives of the Parties to this MOU are to coordinate, leverage, and build upon the experience and capabilities of NIST MEP relating to the needs of small and medium-sized U.S. manufacturers, in order to effectively and efficiently meet the goals and objectives of the DOD-led IMIs; to ensure that collaborative programmatic efforts efficiently draw upon the expertise of each Party; and to avoid redundancies among these two Federal departments.

The goals of the Parties in supporting this MOU are to identify and capitalize on opportunities to facilitate the means by which:

- Small and medium-sized U.S. manufacturers are made aware of the technologies (applying to both products and processes), technical methods, technological approaches, resources, and assets of the DOD-funded IMIs;

- Small and medium-sized U.S. manufacturers are involved in the processes and activities associated with informing and developing the research agendas of the DOD-funded IMIs;
- Small and medium-sized U.S. manufacturers are represented in the conduct of research projects occurring through the DOD-funded IMIs; and
- The results of research occurring through the DOD-funded IMIs are transitioned to small and medium-sized U.S. manufacturers for implementation.

II. BACKGROUND

President Obama has proposed building the NNMI, consisting of regional hubs that will accelerate development and adoption of cutting-edge manufacturing technologies for making new, globally competitive products. Over the past two years, the network has been jumpstarted by launching four innovation hubs and initiating the establishment of four more. [1]

Individually and together, these regional hubs—public-private partnerships called Institutes for Manufacturing Innovation (IMIs)—will help to strengthen the global competitiveness of existing U.S. manufacturers, spur new ventures, and boost local and state economies.

In his 2013 and 2014 State of the Union Addresses, the President called for creating a full-fledged nationwide network devoted to innovating and scaling up advanced manufacturing technologies and processes.[2] He asked Congress to authorize a one-time $1 billion investment—to be matched by private and other non-federal funds-to create an initial network of up to 15 IMIs. The President proposed building out the NNMI to encompass 45 IMIs over the span of ten years. The Administration has made significant progress toward building a manufacturing innovation network with nationwide reach and impact. On December 16, 2014, the President signed the Revitalize American Manufacturing Act, into law.[3]

Included among this progress has been the creation of IMIs that leverage DOD authorities and resources, as detailed below.

- America Makes, the National Additive Manufacturing Innovation Institute was launched in August 2012 as the NNMI pilot hub. Headquartered in Youngstown, Ohio, America Makes was established with an initial federal investment of $30 million and has since been increased to more than $50 million.[4] Now a 94-member consortium that includes manufacturers, universities, community colleges, and non-profit organizations, America Makes is devoted to helping the U.S. grow its capabilities in 3D printing, also known as additive manufacturing, by fostering collaboration in design, materials, technology, workforce and more.
- Announced in February 2014, the Digital Manufacturing and Design Innovation Institute is headquartered in Chicago and led by UI Labs.[5] This competitively selected consortium consists of 73 companies, universities, nonprofits, and research labs. It is funded with a $70 million federal investment, which was more than matched by non-federal partners. This partnership

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[1] www.manufacturing.gov

[2] http://www.whitehouse.gov/the-press-office/2013/02/12/remarks-president-state-union-address; www.whitehouse.gov/the-press-office/2014/01/28/president-barack-obamas-state-union-address

[3] http://www.gpo.gov/fdsys/pkg/BILLS-113hr83enr/pdf/BILLS-113hr83enr.pdf

[4] https://americamakes.us/

[5] http://dmdii.uilabs.org/

will work to enable interoperability across the supply chain, develop enhanced digital capabilities to design and test new products, and reduce costs in manufacturing processes across multiple industries.

- Lightweight Innovation for Tomorrow (LIFT), also announced in February 2014, will develop processes that accelerate scale-up of production of lightweight alloys for use in wind turbines, air frames, medical devices, combat vehicles, and other products, leading to significant reductions in manufacturing and energy costs.[6] Headquartered in the Detroit area and led by the American Lightweight Materials Manufacturing Innovation Institute (ALMMII), the competitively selected 60-member consortium pairs leading aluminum and titanium manufacturers with universities and laboratories in pioneering technology development and manufacturing research. The Institute is funded with a $70 million federal investment, which was matched by non-federal partners.
- In November 2014, the DOD released the Funding Opportunity Announcement soliciting proposals to establish an Integrated Photonics IMI.[7] This was followed by an additional DOD Funding Opportunity Announcement in December 2014, soliciting proposals to establish a Flexible Hybrid Electronics IMI.[8]
- On March 18, 2015, DOD released a Notice of Intent to announce the U.S. Government's intent to seek proposals for the ninth Manufacturing Innovation Institute (MII). The technical focus of this institute was announced as Revolutionary Fibers and Textiles.[9]

III. ROLES AND RESPONSIBILITIES OF THE PARTIES

Each Party of this MOU intends to carry out its responsibilities through the organizations identified as follows:

A. **DOD:** OSD DASD-MIBP intends to provide expertise to NIST MEP to facilitate interagency coordination and support activities conducted pursuant to this MOU. The DOD will work with the IMIs it is funding to encourage the ongoing engagement of small and medium-sized manufacturers in the research efforts conducted by the IMIs.

B. **NIST:** NIST MEP intends to provide leadership and expertise from its MEP Program staff to facilitate coordination with its nationwide network of MEP Centers, participating at their discretion, to support the activities of the IMIs as noted in the goals under Section I, above.

C. As indicated in Section I of this MOU, opportunities may be identified that may benefit from collaborative efforts in specific focus areas between NIST MEP Centers and individual DOD-led IMIs. To help guide these potential collaborations, NIST MEP and DOD intend to jointly develop guidance documents that will provide guidance from the two agencies to facilitate the formation, operation and management of these collaborations.

IV. MOU MANAGEMENT

The DOD's Principal Point of Contact (POC) for this agreement is the OSD DASD-MIBP or his designee. The NIST Principal POC is the Director of the MEP Program or her designee.

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[6] http://lift.technology/

[7] https://www.fbo.gov/index?s=opportunity&mode=form&id=a354f1a61c1e7f0a5f222ae309b5ae8e

[8] http://www.grants.gov/web/grants/view-opportunity.html?oppId=271891

[9] http://manufacturing.gov/rft-imi.html

Contact information for the DOD and NIST MEP is provided below.

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Subject to legal and fiscal limitations, each Party plans to engage relevant programs, offices, and other entities within their agency to provide or coordinate resources or activities; support development of appropriate tools or training; and make staff available or otherwise provide employee support for collaboration.

Both Parties expressly acknowledge that the activities under this MOU shall be subject to the availability of agency resources in conjunction with agency programmatic requirements and priorities.

V. METRICS AND TARGETS

The Parties intend to develop metrics and annual targets related to the Parties' goals, and to work collaboratively to seek continuous improvement and enhanced performance over time.

VI. AUTHORITIES

The authorities to enter this framework MOU are:

- DOD: 10 U.S.C. Section 2521
- NIST MEP: 15 U.S.C. §§272 (b)(1), and 278k

VII. LIMITATIONS

Nothing in this MOU is to be construed as indicating a financial commitment by a Party for the expenditure of funds.

This MOU does not, and is not intended to impose any legally binding requirements on the Parties. If necessary or desirable, the Parties may jointly agree upon and issue formal guidance interpreting this MOU and background materials upon which it is based. This MOU does not constitute final agency action on any issue. Any actions contemplated by this MOU are to be carried out in an appropriate administrative process by the acting agency in accordance with all applicable laws and regulations.

This MOU does not create any right or benefit, substantive or procedural, enforceable by law or equity, by persons who are not a party to this agreement against the Parties, their officials or employees, or any other person. This MOU does not direct or apply to any person outside of the Parties.

VIII. COMMENCEMENT / DURATION / MODIFICATION / TERMINATION

This MOU is to take effect upon the last signature date of the Parties, and shall remain in effect for a period of 5 years. This MOU may be extended or modified at any time while it is in effect, per the mutual written agreement of the Parties in the form of an amendment to this MOU. Additionally, a Party may terminate its participation in this MOU at any time by providing written notice to the other Party's Principal POC at least 60 days in advance of the desired termination date.

Signed,

Carroll Thomas
Director, Hollings Manufacturing Extension Partnership Program
National Institute of Standards and Technology
U.S. Department of Commerce

Date: May 13, 2015

Andre Gudger
Acting Deputy Assistant Secretary of Defense for Manufacturing and Industrial Base Policy
Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics

Date: August 4, 2015