

NIST Advanced Manufacturing Series 600-2

**Network Charter
Manufacturing USA Program**

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Manufacturing USA Deputies Working Group

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NETWORK CHARTER MANUFACTURING USA

A. Introduction

Under the authority of the Revitalize American Manufacturing and Innovation Act of 2014,¹ the Secretary of Commerce shall establish the Network for Manufacturing Innovation, generally called the Manufacturing USA network. The network, along with its manufacturing innovation institutes, makes up the Manufacturing USA program. This document hereby charters the Manufacturing USA network.

B. Manufacturing USA Background

The launch of the Manufacturing USA network represents an exciting new phase in the implementation the Revitalize American Manufacturing and Innovation Act of 2014 (RAMI)¹. The network will enhance America’s global competitiveness by more effectively connecting the best talents and capabilities from all partners in the Manufacturing USA program and help realize the nation-wide potential of the Manufacturing USA institutes.

The National Science and Technology Council (NSTC) report, *National Network for Manufacturing Innovation: A Preliminary Design*,² first presented a set of guiding principles for establishing a network composed of the individual manufacturing innovation institutes,³ referred to as “institutes” in this document. Per the design document, individual and unique Manufacturing USA institutes, each with a distinct technology focus, pursue a common goal of closing the gap between early-stage research and development and the deployment of technology innovations in the domestic production of goods. This concept became part of the RAMI legislation, which called for a “Network for Manufacturing Innovation” (referred to as the “network”),⁴ recognizing the collective power of this family of institutes pursuing common objectives. Thus, the network of Manufacturing USA institutes leverages the combined assets of all stakeholders and participants within the manufacturing community throughout each

¹ “Public Law No: 113-235: Consolidated and Further Continuing Appropriations Act, 2014, Division B, Title VII— Revitalize American Manufacturing and Innovation Act of 2014, Pp. 2220-2234.” Legislation, December 16, 2014. <https://www.congress.gov/113/plaws/publ235/PLAW-113publ235.pdf>.

² National Science and Technology Council, *National Network for Manufacturing Innovation: A Preliminary Design*, January 2013, pg.4. http://www.manufacturing.gov/docs/nnmi_prelim_design.pdf

³ The terms “Centers for Manufacturing Innovation” (the term used in RAMI), “Manufacturing Innovation Institutes (MIIs)”, “Institutes for Manufacturing Innovation (IMIs)”, and “Clean Energy Manufacturing Innovation Institutes” have all been used in different framing documents to refer to institutes in the Manufacturing USA program.

⁴ “Public Law No: 113-235: Consolidated and Further Continuing Appropriations Act, 2014, Division B, Title VII— Revitalize American Manufacturing and Innovation Act of 2014, Pp. 2220-2234.” Legislation, December 16, 2014. <https://www.congress.gov/113/plaws/publ235/PLAW-113publ235.pdf>.

region, forming a national network of associations that serves to amplify and enhance the effects of the innovation ecosystem created by each institute.

A network of regional, collaborative institutes can collectively address the immediate needs of individual stakeholders and provide safe, collaborative environments to address common and pre-competitive manufacturing challenges. The institutes, strengthened by the network as a whole, provide a powerful platform for U.S. manufacturers to compete in the global marketplace and help to grow the economy, strengthen national security through manufacturing capability improvements, and enable the growth of the manufacturing sector and supply chain. A key to ensuring that the Manufacturing USA network remains connected to those it is intended to serve and meets its intended purposes is to leverage a structure that includes representatives from key stakeholders in its governance and various advisory groups.

Program Vision

The vision of the Manufacturing USA program is *U.S. global leadership in advanced manufacturing*.

Program Mission

The Manufacturing USA program is composed of the collective of institutes and a connective network, each with a complementary mission.

- The Manufacturing USA program mission is *connecting people, ideas, and technology to solve industry-relevant advanced manufacturing challenges, thereby enhancing industrial competitiveness and economic growth, and strengthening our national security*.
- The Manufacturing USA institutes mission is *to build U.S. leadership in and create regional impact around specific emerging technology areas by combining the efforts of the U.S. government, industry, and academia to solve the technological, workforce, and deployment challenges to advance these technologies into commercial production*.
- The Manufacturing USA network mission is *to maximize the integrated impact of the manufacturing innovation institutes on U.S. manufacturing competitiveness*.

Program Elements

The network serves the institutes, the institutes connect through the network, and the program serves the Nation.

Each institute is a public-private partnership, with sponsorship from a lead funding agency. The respective sponsoring agency and institute are jointly responsible for institute management.

The Advanced Manufacturing National Program Office (AMNPO) is a Federal interagency team that supports network functions and provides required reporting on the Manufacturing USA program.

C. Scope

The Manufacturing USA program implements executive direction and the Revitalize American Manufacturing and Innovation Act (RAMI), Public Law No: 113-235.⁵ RAMI authorizes the Department of Commerce to associate the institutes into a network in order to assist and better enable the institutes to strengthen America’s global competitiveness by more effectively connecting the best talents and capabilities from all the partners.

New institutes established by the U.S. Government after the passage of RAMI and any existing, qualified and accepted centers that were established outside⁶ of the Manufacturing USA program will become members of the network, consistent with the RAMI Act. Manufacturing USA already includes institutes funded by the Department of Defense (DoD) and the Department of Energy (DOE). See ManufacturingUSA.com for a full institute listing.⁷

D. Network Operating Principles

The Manufacturing USA Deputies agreed to the following four operating principles regarding network governance:

1. The network supports its member institutes in meeting the goals of the program and creates a collective impact greater than the sum of constituent parts. Individual institute governance is the purview of the lead funding agency and respective institute members. Legislatively mandated reporting on individual institute performance is the responsibility of the respective lead funding agencies.
2. Network governance is a shared responsibility amongst the network membership. Mechanisms and structures are necessary to collect inputs and needs of key stakeholders, including the private sector.
3. Decisions concerning inter-institute issues in the network should be made at the lowest responsibility level. In resolving issues, there should be a general preference towards empowering action at the institute level.
4. The AMNPO is responsible for supporting network functions.⁸ The AMNPO working with the lead funding agencies is also responsible for reporting to Congress on the Manufacturing USA program and related institutes.

E. Network Functions

The network is expected to provide or support a variety of functions and activities based on the evolving needs of its members. The agencies participating in Manufacturing USA

⁵ “Public Law No: 113-235: Consolidated and Further Continuing Appropriations Act, 2014, Division B, Title VII— Revitalize American Manufacturing and Innovation Act of 2014, Pp. 2220-2234.” Legislation, December 16, 2014. <https://www.congress.gov/113/plaws/publ235/PLAW-113publ235.pdf>.

⁶ Entry into the network by existing (non-NNMI established) centers requires “acceptance” by the Secretary of Commerce (per RAMI), implying that certain (yet-to-be established) qualifying criteria must be met.

⁷ <https://www.manufacturingusa.com/>

⁸ The Secretary of Commerce has charged the Advanced Manufacturing National Program Office at NIST with overseeing and carrying out the tasks assigned by RAMI to the “National Office of the Network for Manufacturing Innovation Program” (also called the “National Program Office”).

have prepared a preliminary list of four high-level network functions with several sub-functions which has been reviewed by various stakeholders, including the existing institutes.

1. *Establish the network.* This function serves the purpose of creating the network, including the following sub-functions: i) establishing memoranda of understanding (MOU) as needed between the AMNPO and affected Federal departments and agencies; ii) developing and deploying essential network operational policies, procedures, and protocols; and iii) developing and deploying the initial version of the Manufacturing USA Program Strategic Plan.
2. *Facilitate intra-network collaboration.* This function serves the network's internal information clearinghouse needs, including the following sub-functions: i) establishing forums for network collaboration, information exchange and knowledge management; ii) facilitating the organization and sharing of lessons learned and best practices across the network; iii) identifying challenges or problems faced by all institutes and their approaches to addressing them; iv) communicating awareness of key legislative and administration activity, relevant international affairs, etc.; v) facilitating network-level discussions between institutes regarding management of technology interfaces, technology gaps, etc.; and vi) enabling resolution of disputes not addressed by other network functions.
3. *Foster robust communication between the network and external stakeholders.* This function serves the network's external information clearinghouse needs, including the following sub-functions: i) developing and deploying a network brand and public messaging strategy; ii) establishing a framework and facilitating two-way information flow across the network boundary; iii) promoting U.S. advanced manufacturing to government, non-member industries and academic stakeholders, and the media and public; and iv) managing administration, congressional, and interagency communications as they relate to the network.
4. *Sustain, strengthen and grow the network.* This function serves the network's longer-term sustainment and growth needs, including the following sub-functions: i) updating the Manufacturing USA Strategic Plan; ii) facilitating funding and other resources need to sustain network-level functions; iii) identifying and achieving economies of scale in areas of common-need of the institutes; iv) establishing, maintaining, and executing network membership policies; v) providing network-level support and guidance for newly established institutes; vi) assessing and reporting on the program; vii) adjusting the Governance system and functions over time as needed.

Disclaimer

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