

**Government-University-Industry Research Roundtable (GUIRR) Webinar on the  
National Network for Manufacturing Innovation (NNMI)**

**Written Responses to Participant Questions**

The presenters from this GUIRR webinar on the National Network for Manufacturing Innovation (NNMI) provided the following responses to questions submitted by webinar participants. To access the webinar recording and presenter slides, visit [http://sites.nationalacademies.org/PGA/quirr/PGA\\_080979#nnmi](http://sites.nationalacademies.org/PGA/quirr/PGA_080979#nnmi).

Questions in ***bold italics*** and answer non-italics.

Presenters:

- Brad Kinsey, Assistant Director for Research Partnerships, Advanced Manufacturing Office, U.S. Department of Energy
- Scott Smith, Assistant Director for Technology, Advanced Manufacturing National Program Office

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***What exactly do you mean by "regional"? Several times you mentioned that these are regional institutes, but then you talked about having national and international partners and impact. Something is either regional OR national OR international, not all 3. Please define "regional" in the context of the NNMI.***

The vision for NNMI is that the Institutes will be focused in a given region of the country so that a critical mass of companies (both small and large), universities, community colleges, government agencies, etc. with similar technology interests and within close proximity to each other will make up an ecosystem and the core of an Institute. The regional focus of the Institute will also facilitate the creation of a bricks & mortar location for the Institute which will be necessary for workforce training and shared facilities. As with the NNMI pilot institute on additive manufacturing, it is likely and expected that there will be participants from beyond the local region, extending to have a national impact. Additionally, successful Institutes are expected to strengthen current – or create new – regional manufacturing hubs. Regional hubs, through their collective supply chain and customer base, translate into having a national impact

***The hub and spoke model is interesting--regional focus but potential national partners. Possibly talk more about how that might work? Second, the 50% or more matching funds requirement - I would assume the funding arrangement would have to be sufficiently described - would actual partners and contributions have to be named?***

The vision for NNMI is that the Institutes will be focused in a given region of the country so that a critical mass of companies (both small and large), universities, community colleges, government agencies, etc. with similar technology interests and within close proximity to each other will make up an ecosystem and the core of an Institute. The regional focus of the Institute will also facilitate the creation of a bricks & mortar location for the Institute which will be necessary for workforce training and shared facilities. As with the NNMI pilot institute on additive manufacturing, it is likely and expected that there will be participants from beyond the local region, extending to have a national impact. Additionally, successful Institutes are expected to strengthen current – or create new – regional manufacturing hubs. Regional hubs, through their collective supply chain and customer base, translate into having a national impact

Consult the current Department of Defense and Department of Energy solicitations for specifics regarding cost sharing requirements for their funding opportunities. For future NNMI proposals, the vision is that the non-federal co-investment will need to be documented sufficiently to allow proposal evaluation. Note also that co-investment includes both cash and in-kind contributions. The value of in-kind contributions should be determined in accordance with OMB Circular A-110, Subpart C, Section 23.

***He's not answering the question -- it was about "Investing in Manufacturing Communities" IMC, not AMTech. IMC is administered by EDA; planning grants in 2013 and "challenge" grants in Pres 2014 budget request***

The question was misunderstood during the webinar. The "Investing in Manufacturing Communities" program, or IMC, is an economic development activity led by the Department of Commerce, Economic Development Administration. The NNMI is a multi-agency, Administration initiative being coordinated by the Interagency Advanced Manufacturing National Program Office. IMC and NNMI are different initiatives.

***How will the institutes be complementary to or different from NIST's Manufacturing Extension Partnership program? It appears there could be some potential overlap and/or redundancy in efforts? Thanks.***

The NNMI will be more applied technology research focused (TRL 4-7) than the MEP program which is technology transfer and support for small and medium manufacturers (TRL 7-9). NNMI is positioned to be complementary to the Hollings Manufacturing Extension Partnership Network. For example, the NNMI pilot institute on additive manufacturing, NAMII, has several MEP centers as active participants.

***What is the scope of "Advanced Manufacturing" topics acceptable for Institutes? Are technologies for continuous process industries such as pulp and paper and chemicals in scope? FY13 and FY12 topics address discrete parts manufacturing only.***

The June 2011 report to the President from the President's Council of Advisors on Science and Technology (PCAST) entitled "Report to the President on Ensuring American Leadership in Advanced Manufacturing" ([http://www.manufacturing.gov/pubs\\_resources.html](http://www.manufacturing.gov/pubs_resources.html)) defines advanced manufacturing as "...a family of activities that (a) depend on the use and coordination of information, automation, computation, software, sensing, and networking, and/or (b) make use of cutting edge materials and emerging capabilities enabled by the physical and biological sciences, for example nanotechnology, chemistry, and biology. This involves both new ways to manufacture existing products, and especially the manufacture of new products emerging from new advanced technologies." Advanced manufacturing encompasses various industries including the chemical and pulp/paper ones mentioned in the question.

***Can an Institute be national (industry-specific) rather than regional as stated today? The Prelim Design report says national institutes are okay. Has this changed?***

The vision for NNMI is that the Institutes will be focused in a given region of the country so that a critical mass of companies (both small and large), universities, community colleges, government agencies, etc. with similar technology interests and within close proximity to each other will make up an ecosystem and the core of an Institute. The regional focus of the Institute will also facilitate the creation of a bricks & mortar location for the Institute which will be necessary for workforce training and shared facilities. As with the NNMI pilot institute on additive manufacturing, it is likely and expected that there will be participants from beyond the local region, extending to have a national impact. Additionally, successful Institutes are expected to strengthen current – or create new – regional manufacturing hubs. Regional hubs, through their collective supply chain and customer base, translate into having a national impact

As per the NSTC report on NNMI, future institutes may well be chartered in an industry segment topic, so may be optimally defined as multi-regional or national. The regional aspect still is applicable for the institute location.

***Is there value to incubating startups as part of an IMI?***

The specific structure of the Institute is up to the proposing organization. With that said, assisting new startup companies would be one way to support the generation of new technology ideas for the Institute and may contribute to IP generation. Startups could certainly benefit from the shared facilities of the Institute.

***Is a hub and nodes model acceptable to encourage investment from multiple state and local governmental entities?***

The specific structure of the Institute is up to the proposing organization. However, the vision for NNMI is that the Institutes will be focused in a given region so that a critical mass of companies (both small and large), universities, community colleges, government agencies, etc. with similar technology interests and within close proximity to each other will make up an ecosystem and the core of an Institute. Hub and nodes models involving multiple state and local entities are acceptable.

***On Slide 28 you indicate virtual partners in an institute would not be allowed. I understand the need for an industrial commons, but that shouldn't rule out some of the partners coming from beyond the region, should it?***

The vision for NNMI is that the Institutes will be focused in a given region of the country so that a critical mass of companies (both small and large), universities, community colleges, government agencies, etc. with similar technology interests and within close proximity to each other will make up an ecosystem and the core of an Institute. The regional focus of the Institute will also facilitate the creation of a bricks & mortar location for the Institute which will be necessary for workforce training and shared facilities. As with the National Additive Manufacturing Innovation Institute (NAMII) pilot institute, it is likely and expected that there will be participants from beyond the local region, extending to have a national impact. Additionally, successful Institutes are expected to strengthen current – or create new – regional manufacturing hubs. Regional hubs, through their collective supply chain and customer base, translate into having a national impact

***Can international university research institutes participate/partner?***

The solicitation documents from the DoD and the DoE control who can and who cannot be partners for the 3 newly proposed Institutes. Generally international partners who have a U.S. presence may participate.

***The MEP role in the NNMI is in the area of tech transitioning and training. This is the role being played in the NAMII.***

The NNMI will be, and NAMII is, more applied technology research focused (TRL 4-7) than the MEP program is technology transfer and support for small and medium manufacturers (TRL 7-9). NNMI is positioned to be complementary to the Hollings Manufacturing Extension Partnership Network. The NNMI pilot institute on additive manufacturing has several MEP centers as active participants serving their designated role.

**Question about slide 24: proposer should be an industry-based non-profit. I saw in the preliminary design document that there is a sense that academic institutions should not be the lead/proposer. But the DOE solicitation says academic institutions are eligible. To continue: is it a good rule of thumb that an academic institution should not be the lead?**

The NSTC NNMI report ([http://www.manufacturing.gov/pubs\\_resources.html](http://www.manufacturing.gov/pubs_resources.html)) describes the intent for the pending up-to-15 Institutes in the President's proposal. The slide mentioned in the question refers to that document. The lead must be an "industry-focused non-profit". An academic institution could certainly establish such a non-profit, so are eligible to be the lead. Academic institutions are welcome to lead or participate in these consortia.

**How can you say the products made elsewhere are not due to labor costs? Conventional wisdom says otherwise.**

While labor cost is a consideration in choosing where to manufacture, it is one consideration among many. Others include proximity to the market, shipping costs, raw material costs, IP practices, security, infrastructure, currency risks, lead times, taxes, and regulations. The slide referenced in the question shows some particular example products where the U.S. led in the development of technology, surrendered manufacturing, and then lost the innovation that followed. .

**How will communication and cooperation between institutes be administered?**

There is a section in the NNMI preliminary design document on NNMI Institutes that provides some concepts regarding Institute interactions. See [http://www.manufacturing.gov/docs/nnmi\\_prelim\\_design.pdf](http://www.manufacturing.gov/docs/nnmi_prelim_design.pdf).

**Could the NNMI be nested within the IMCP (Investing in Manufacturing Community Partnerships) that are also being currently promoted by the DoC, and which are also targeting the creation of ecosystems? Or are these necessarily mutually exclusive?**

The "Investing in Manufacturing Communities" program, or IMC, is an economic development activity led by the Department of Commerce, Economic Development Administration. The NNMI is a multi-agency, Administration initiative being coordinated by the Interagency Advanced Manufacturing National Program Office. IMC and NNMI are different initiatives.

**I would like to learn about the IP sharing agreement that was agreed to by the parties of the pilot additive manufacturing initiative. Can you point me to this document? Would this be the framework for the new 3 initiatives as well?**

On the NAMII FAQ website it states, "Rights for intellectual property vary with funding sources and membership levels. NAMII exists to advance technology and processes through intensive and open collaboration. In this vein, projects utilizing NAMII federal or membership funds will provide safe harbor for collaboration on research and royalty free non-exclusive rights for commercial development for all NAMII IP. Self-funded applied research projects may retain exclusive rights for IP developed from the project. For more information, on IP, including the use of IP in project development, send your request to [namii.info@ncdmm.org](mailto:namii.info@ncdmm.org)."

The IP agreement for each Institute will be unique; however, a common framework is being developed for the proposed NNMI.

***Are the DOE and two DOD institutes in addition to the fifteen NNMI institutes?***

Yes- the DOE and DOD Institutes are in addition to the proposed up-to-fifteen NNMI Institutes.

***Is the future funding for the 15 Institutes, which you mentioned requires Congressional action, targeted for "new" federal funding for manufacturing or is it dependent on corresponding cuts in other budget areas?***

The proposal for the NNMI Institutes uses mandatory funding and thus is not counted in discretionary budget caps. It indeed requires congressional authorization.

***IMI being project leading agency, are the leaders taken from academic institutions or industries and what kind of field experience is proposed to be explored?***

For the 3 Institutes being funded under existing budgets and authorities, eligibility to lead is specified in the funding documents. For the proposed up-to-15 Institutes of the NNMI, the preliminary design calls for the Institutes to be proposed by industry-focused, non-profit organizations. However, for any institute, academic participation will be essential for technology development, research and workforce training activities. As for the "field experience", the Technology Readiness Levels of interest for the Institutes are TRL 4-7, i.e., bridging the gap between demonstration and implementation in a production environment.

***Can you give more details on the new DOC program mentioned on the last slide?***

The Advanced Manufacturing Technology (AMTech) Consortia Program has its initial funding in FY13 to provide grants for industry-led road mapping and R&D consortia development. There will be a solicitation shortly. Please see <http://manufacturing.gov> for updates.

***What lessons learned can you share from the NAMII institute? What has gone well? Where are their opportunities to improve?***

At this time, there are no public reports available regarding lessons learned from NAMII. Outcomes from NAMII though have been used in the design and planning of the NNMI. With the one-year anniversary of NAMII approaching in August 2013, there may be opportunities for reflection. Please see <http://manufacturing.gov> for updates.

***To what extent will national security issues be addressed? How will the National Munitions List, Export Licenses, the Commerce Control List, ITAR and other related matters be handled?***

Each Institute will be required to have IP and export control policies. Some of the provisions may be common for all Institutes, while other details will be flexible for the Institutes to determine based on the individual partners and the technology area.

***When will the next conference be held?***

The next NNMI event is tentatively being planned for the fall. Please visit <http://manufacturing.gov> for updates.

***The NAMII is established in the OH PA region - does this impair this region to stand up other institutes?***

No. The Institutes will be funded through a competitive solicitation process based on the quality of the proposals received. The existence of NAMII does not in any way preclude the OH-PA region from establishing additional Institutes.

***What are some specific major holes you've experienced in the workforce and could you illustrate how NNMI will help to bridge some of those specific gaps?***

There are a number of examples of workforce needs in manufacturing (e.g., welders, CNC operators, engineers, etc.). The Institutes will be involved in a broad range of workforce development including certificate programs through graduate/post-graduate level research. The shared facilities within an Institute will provide an excellent educational opportunity for workforce training.

***Has a similar type of institute ever been historically created? Much like SEMATECH in the late 1980's.***

There are examples of consortia in the U.S. that are similar to the NNMI Institutes (e.g., SEMATECH as mentioned). There are also programs in several other countries that have similarities to the NNMI model. The need exists to create these Institutes at the scale necessary to spur economic growth and innovation in the U.S.

***As a small business, being precluded from responding to a solicitation, how do small businesses find the non-profit organizations that will be providing proposals and negotiate a position on the proposing non-profit's team?***

In addition to the Proposers' Days for the two DOD Institutes that are being funded this year LM3I (July 9<sup>th</sup>) and DMDI (July 10<sup>th</sup>) there is an electronic means of indicating participation interest through LinkedIn. See [http://manufacturing.gov/dod-led\\_institutes.html](http://manufacturing.gov/dod-led_institutes.html) for further information.

***The 3 new institutes will be for: 1) a product (semi-conductor) 2) design collaboration/facilitation tools 3) a target (lightweighting). Why aren't the institutes focused on specific manufacturing processes (e.g. joining, machining, casting, forming, molding)?***

The three Institutes are being created through existing budgets and authorities by the Departments of Defense and Energy, and the topics were chosen to meet priority needs of those agencies along with expected fit with industry. Future institutes may well be chartered on selected specific manufacturing processes. Should Congress authorize the NNMI network, the intent is to have wholly open solicitations for any topic.

***How will IP be handled for the work done at these institutes?***

There will be a document that will provide guidelines for the IP policy of the Institutes. Some of the provisions may be common for all Institutes, while other details will be flexible for the Institutes to determine based on the individual partners and the technology area.

***Are these slides available on manufacturing.gov?***

The slides are available on the GUIRR website at [http://sites.nationalacademies.org/PGA/quirr/PGA\\_080979](http://sites.nationalacademies.org/PGA/quirr/PGA_080979).

***We have two innovative technologies of which we have completed most of the R&D. We have aligned ourselves with university partners, but require assistance with developing a proposal team. Where should we begin?***

The two DOD BAA opportunities each have a LinkedIn group which can be used to facilitate communication between interested parties. The Advanced Manufacturing National Program Offices is not able to assist with consortia formation currently. Proposing teams should draw on all of their resources, including state and local governments, economic development agencies, and their network contacts in order to identify potential partners.

***We have identified a government lab to build one of our prototypes but need funding and to solidify a team.***

There are various funding opportunities in advanced manufacturing across the federal government. Please visit resources such as <http://www.grants.gov/>.

***Will existing roadmaps such as iNEMI be incorporated in new planning and roadmaps?***

Consortia may use existing roadmaps or create new ones to provide structure to proposed activities. This will be determined by the individual consortium.

***Since the Institutes have a regional ecosystem focus, how do interested entities not located in the Institute's region gain access to the institutes resources without having to physically relocate?***

There may be, for example, opportunities for companies (both within a region and outside of the region) to use the shared user facilities for a fee. There are existing models for this type of activity (e.g., the National Nanotechnology Infrastructure Network).

***For academe membership, is it paid as an educational institute membership and/or individual faculty membership?***

The individual Institutes will determine their own fee structure and membership.

***Is there a published list of proposers for closed RFIs for lightweight metals and wide bandgap scs?***

There is not a published list of respondents for the RFI process. As per manufacturing.gov, there were Proposers' Day events held for the two DOD Institutes that are being funded this year LM3I (July 9<sup>th</sup>) and DMDI (July 10<sup>th</sup>). See <http://manufacturing.gov> for links to further information.

***Can international companies submit proposals?***

For the three Institutes that are currently being created, please consult the respective solicitation for eligibility requirements. For the preliminary design document, international partners, e.g., companies with U.S. subsidiaries or components, can participate provided that the case can be articulated as to how this benefits U.S. manufacturing.

***If industry pays 50% cost share, how can it share IP with the government?***

The IP agreement for each Institute will be unique; however, a common framework is being developed for the proposed NNMI.

***Is there any idea as to when the BAAs may issue?***

The BAAs for the two DOD Institutes have been released. See <http://manufacturing.gov> for links to further information.

***How are the topics selected for NNMI calls? What is the process and how long does this take? How can I provide input to this process?***

The three Institutes that are being created through existing budgets and authorities by the Departments of Defense and Energy were selected based on the given agency's mission. The process and time frame is dependent on the given agency so cannot be generalized.

***Can the physical location of facilities be more than one? (Say 2 or 3)?***

While there may be more than one facility that is involved in an Institute, the vision in the preliminary design document is that a main facility will exist.

***Can you clarify the relation between regional and national? Can participants in each institute be from different parts of the country?***

The vision for NNMI is that the Institutes will be focused in a given region of the country so that a critical mass of companies (both small and large), universities, community colleges, government agencies, etc. with similar technology interests and within close proximity to each other will make up an ecosystem and the core of an Institute. The regional focus of the Institute will also facilitate the creation of a bricks & mortar location for the Institute which will be necessary for workforce training and shared facilities. As with the NNMI pilot institute on additive manufacturing, it is likely and expected that there will be participants from beyond the local region, extending to have a national impact. Additionally, successful Institutes are expected to strengthen current – or create new – regional manufacturing hubs. Regional hubs, through their collective supply chain and customer base, translate into having a national impact

***What is the expected (hoped for) time frame for the next 15 institutes?***

While the Administration's proposal for the NNMI is for Fiscal Year 2014 (October 2013 through September 2014), Congressional action is required, and the Advanced Manufacturing National Program Office cannot speculate on the time frame.