BROAD AGENCY ANNOUNCEMENT

OVERVIEW INFORMATION

Federal Agency Name: Office of Naval Research (ONR), on behalf of the Office of the Secretary of Defense (OSD), Office of the Deputy Assistant Secretary of Defense for Manufacturing and Industrial Base Policy (MIBP), via its Manufacturing Technology Program

Program Name: DoD-Led Institutes for Manufacturing Innovation

Broad Agency Announcement (BAA) Title: Lightweight and Modern Metals Manufacturing Innovation (LM3I) Institute

Broad Agency Announcement Type: This is the Initial Announcement. This document supersedes all previously released information about this program.

Broad Agency Announcement Number: ONRBAA13-019

Catalog of Federal Domestic Assistance (CFDA) Number(s): 12.630, Basic, Applied, and Advanced Research in Science and Engineering (Primary CFDA Number) and 12.330, Science, Technology, Engineering & Mathematics (STEM) for K-12 & Institutions of Higher Learning-NAVY

Proposers Day: The Government will hold a Proposers' Day for this solicitation on <u>Tuesday, 9 July 2013</u> at the Skyline Technology Center, 5275 Leesburg Pike, Falls Church, Virginia 22204. The purpose of the Proposers' Day is to familiarize potential proposers with the concept and vision for the LM3I Institute and the associated technology needs. This Proposers' Day is for informational purposes only. Attendance is not a prerequisite for submitting a proposal. It will provide, however, a valuable opportunity for potential proposers to ask questions and receive answers about the solicitation. Participation is voluntary. There is no fee to attend. The Government will not reimburse the attendees for any cost associated with participation. In addition, the Government is under no obligation to award any related contract/agreement associated with this event. Further details on this event (including registration information) can be found at http://www.proposersday.org.

Concept Paper Due Date and Time: The deadline for receipt of concept papers is no later than 3:00 PM Eastern Time (ET) on Friday, 9 August 2013. See Section IV for further information. Concept papers received after the due date and time shall be governed by Section VI.B.3 of this announcement.

Full Proposal Due Date and Time: Offerors whose concept papers are deemed of "particular value" to the Government will receive invitations to submit full proposals, which must be received no later than 3:00 PM ET on Tuesday, 15 October 2013. Invitations for full proposals are expected to be sent by 19 August 2013. See Section IV for further information. Full Proposals received after the due date and time shall be governed by Section VI.B.3 of this announcement.

Oral Presentations: Offerors, whose full proposals are considered to be among the most highly rated proposals to the Government, may receive invitations to make an oral presentation of their proposal in Arlington, Virginia during the week of <u>November 18, 2013</u>. The Government also reserves the right to conduct site visits as deemed appropriate prior to making a selection. See Section IV for further information.

Solicitation Request: This publication constitutes a special competition as contemplated in the Department of Defense Grants and Agreements Regulations (DoDGARS), Part 22.320. A formal Request for Proposals (RFP), other solicitation, or additional information regarding this announcement will not be issued.

The Office of Naval Research (ONR) will not issue paper copies of this announcement. The ONR provides no funding for direct reimbursement of proposal development costs. Technical and cost proposals (or any other material) submitted in response to this announcement will not be returned. It is the policy of the ONR to treat all proposals as sensitive competitive information and to disclose their contents only for the purposes of evaluation.

The ONR is soliciting concept papers, followed by technical and cost proposals, on the endeavor described herein. This is a restricted solicitation limited to independent, U.S. non-profit organizations to serve as the award recipient to lead a Lightweight and Modern Metals Manufacturing Innovation (LM3I) Institute. The Government encourages small businesses to participate through teaming arrangements with the lead non-profit organization. The NAICS Code for this acquisition is 541712 (for Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)). Proposals submitted shall be in accordance with this announcement. Offerors should be alert for any amendments to this announcement that may adjust submission dates or other submission requirements.

System for Award Management (SAM): All offerors submitting proposals or applications must: (a) be registered in SAM prior to submission; (b) maintain an active SAM registration with current information at all times during which it has an active Federal award or an application under consideration by any agency; and (c) provide its DUNS number in each application or proposal it submits to the agency. The SAM is a free web site that consolidates the capabilities you used to find in CCR/FedReg, ORCA, and EPLS. Future phases of SAM will add the capabilities of other systems used in Federal procurement and awards processes. SAM may be accessed at https://www.sam.gov/portal/public/SAM/.

Type of Award Instrument: The Government intends to award a Cooperative Agreement for Research based on the Department of Defense Grant and Agreement Regulations (DoDGARS). The Government reserves the right to award other assistance instruments, if deemed in the best interests of the Government.

Estimated Program Funding: The Federal Government anticipates funding \$70.0 million (\$70M) for this Institute, distributed across five fiscal years (FY). In addition, the recipient must provide a minimum of \$70.0M of industry or other non-federal government funding, to provide a required

minimum 1:1 cost share. This sets the minimum total program funding at \$140M. The anticipated minimum program funding, broken out by FY, is:

Minimum Program Funding (\$ in millions)

Fiscal Year	FY14	FY15	FY16	FY17	FY18	Total
Federal Government Funding	17	14	14	14	11	70
Industry / Non-Federal Government Cost Share (Minimum)						70
Total Program (Minimum)					140	

Anticipated Number of Awards: The Government reserves the right to make a single award or no award from this announcement. The Government anticipates only one (1) award will be made.

Brief Program Summary: This announcement is to solicit proposals to establish and sustain a Lightweight and Modern Metals Manufacturing Innovation (LM3I) Institute as part of the National Network for Manufacturing Innovation (NNMI). On March 9, 2012, President Obama announced the NNMI initiative, which proposes, subject to Congressional approval, establishing up to fifteen institutes for manufacturing innovation around the country

(http://www.whitehouse.gov/blog/2012/03/09/president-obama-talks-about-how-boostinnovation-manufacturing). During the 2013 State of the Union Address, President Obama announced, as part of a "We Can't Wait" initiative, that the DoD and DOE would stand up a total of three Institutes in 2013 using existing funding and authorities. These Institutes will bring together industry, academia (four- and two-year universities, community colleges, technical institutes, etc.), and federal and state agencies to accelerate innovation by investing in industrially-relevant manufacturing technologies with broad applications. This will provide support to help bridge the gap between basic/early research and product development and introduction. It will provide shared assets to help companies - particularly small manufacturers - access cutting-edge capabilities and equipment and create an unparalleled environment to educate and train students and workers in advanced manufacturing skills. Each Institute will have a specific technical or market focus and will serve as a regional hub of manufacturing excellence in that focus area, providing the critical infrastructure necessary to create a dynamic, highly collaborative environment spurring manufacturing technology innovations and technology transfer leading to production scale-up and commercialization. When established, each Institute for Manufacturing Innovation (IMI) will be a public-private partnership and key part of the NNMI network of institutes.

The Government intends for this solicitation to support the establishment of a Lightweight and Modern Metals Manufacturing Innovation (LM3I) Institute that will advance the state of processing and fabrication technologies for lightweight and modern metals by facilitating the transition between basic/early research and full-scale production of associated materials, components and systems. This research activity generally falls within a manufacturing readiness level (MRL) range of 4 to 7. These manufacturing advancements in-turn spur the integration of new material, component and system designs for defense and commercial applications. The Government seeks proposals to this announcement that describe the proposed infrastructure, technical applications

and sustainable business plan for the Institute, to include providing detailed example research project focus areas and technology transition plans supporting DoD and other high value governmental and commercial applications.

The Office of the Secretary of Defense (OSD) is overseeing the DoD's support to the NNMI initiative via the Office of the Secretary of Defense (OSD), Manufacturing and Industrial Base Policy (MIBP), and its Manufacturing Technology Program. This particular solicitation, as well as the anticipated award and the management of the LM3I Institute, is a cross-agency effort, led primarily by the Office of Naval Research.

Proposals Point of Contact (POC): Section VII of the Full Text Announcement lists the proposals POC.

Address any business questions to Contracting POC: Mr. Wade Wargo, Office of Naval Research, Agreements Officer, email: wade.wargo@navy.mil

Address any technical questions to Technical POC (TPOC): Dr. William M. Mullins, Office of Naval Research, Program Officer, email: william.m.mullins@navv.mil

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FULL TEXT ANNOUNCEMENT

I. SOLICITATION DESCRIPTION

The Office of Naval Research is soliciting technical and cost proposals on the following effort:

A. STATEMENT OF OBJECTIVE/NEEDS

The objective of this solicitation is to select an award recipient to establish a Lightweight and Modern Metals Manufacturing Innovation Institute. Submissions must demonstrate that the proposed Institute has the potential to significantly advance manufacturing within the United States.

The purpose of the Institute is to accelerate advances in lightweight and modern metals processing and fabrication technologies (in the target range of MRL 4-7) and facilitate technology transition to U.S. manufacturing enterprises. These manufacturing advancements, in-turn, will spur the development, demonstration, and integration of new material, component, and system designs, for DoD and commercial applications. The DoD vision for this Institute is to bring together large and small businesses, academia, and federal and state agencies to accelerate innovation by investing in industrially-relevant advanced manufacturing technologies.

The Government has made significant investment in basic/early research, supporting the development of new lightweight and high performing metals and alloys, and it now requires a robust and effective ecosystem to help move these promising new metals and alloys into defense and commercial systems to improve U.S. competitiveness. The Lightweight and Modern Metals Manufacturing Innovation Institute will serve to bridge the gap between early research and product development and introduction, provide shared assets to help companies access cutting-edge capabilities and equipment, and create an unparalleled environment to educate students and train workers in advanced manufacturing skills. This Institute will serve as a technical center of excellence, providing the innovation infrastructure to support manufacturing enterprises of all sizes and ensure that the U.S. manufacturing sector is a key pillar in an enduring and thriving economy. The goal of the Institute is to increase the successful transition of lightweight and other emerging modern metals by enabling advanced manufacturing innovation. This, in turn, will create an adaptive workforce capable of meeting industry needs. These will further increase domestic competitiveness; meeting DoD and other participating commercial and civilian agency requirements.

The DoD in particular requires a dynamic partnership with the U.S. industrial base to produce and integrate the use of highly advanced lightweight and modern metals to maintain its technological advantage. The LM3I Institute can play an integral role as a regional/national hub within the National Network for Manufacturing Innovation (NNMI) construct. It shall foster resource leveraging and innovation in advanced metals processing and fabrication to improve performance, lower life cycle costs (development, procurement, operational and sustainment), decrease weight (for fuel savings, and increased performance), and improve design capabilities for existing and future components and systems. Advanced metals manufacturing innovation will be critical for the U.S. industrial base to provide cutting-edge capabilities, support the DoD's need for affordability

and be price competitive on the global market. The Institute will work with defense contractors, small businesses, defense acquisition program offices, the defense research and engineering enterprise, and academia to mature and transition manufacturing technologies that make possible enhanced production and repair of DoD platforms, systems, and equipment. The Institute's focus on critical materials manufacturing solutions will enable current and future DoD acquisition programs to achieve critical cost and production goals. Whereas, the specific technical issues that the Institute addresses will vary over time, based on operational needs and technological challenges/opportunities, it's focus will be to affordably deliver manufacturing technologies that have the most benefit to the warfighter.

B. Institute Requirements

The President has launched a major, new initiative focused on strengthening the innovation, performance, competitiveness, and job-creating power of U.S. manufacturing called the NNMI. Key design tenets for the NNMI are captured within *National Network for Manufacturing Innovation: A Preliminary Design*, a report issued by the White House National Science and Technology Council on January 16, 2013.¹ In support of this initiative, the Department of Defense (DoD) established the National Additive Manufacturing Innovation Institute (NAMII) that utilizes a multi-agency, "whole of Government," approach to serve as a national model for innovation and technology advancement. Based upon the success of this Pilot Institute, the President has challenged the Federal Agencies to develop concepts for, and to establish, three more institutes in Fiscal Years (FY) 13-14 to develop and scale critical technologies in the manufacturing readiness level (MRL) 4 to 7 range. This announcement relates to one of the proposed new institutes: the Lightweight and Modern Metals Manufacturing Innovation (LM3I) Institute. The ONR is issuing this announcement in collaboration with the OSD's Office of the Deputy Assistant Secretary of Defense, Manufacturing and Industrial Base Policy (MIBP).

The LM3I Institute will help to advance the systems engineering approach needed for the design and manufacture of lightweight and modern metal components and structures. This is of great importance to the DoD, and to other government agencies and commercial markets, who recognize the role of lightweight and modern metals in achieving enhanced system performance and weight reductions – leading to greater energy efficiency and lower life-cycle costs. Because of legacy handbook-style engineering practices, however, new structural alloys face tremendous barriers to application. This is largely due to a lack of qualified design guides and certifications. Faced with this, as well as with cost and scale-up challenges in a hyper-competitive global marketplace for metals, U.S. industry chooses production efficiency over the uncertainty of expansion into new applications and markets. This has affected adversely the investments and innovations made into lightweight and modern metals, resulting in a dearth of new metal and alloy development and applications, particularly in lightweight metals that are critical to the U.S. industrial base for both DoD and commercial applications.

To address these technical barriers and market constraints, and to bring about cost effective transition to production of these advanced metals and alloys, the LM3I Institute needs to enable an

¹ http://www.manufacturing.gov/docs/NNMI prelim design.pdf

integration of primary and secondary manufacturing processes to close capability gaps that hurt U.S. competitiveness. The Institute must bring together the resources and developmental potential of the Federal Government, original equipment manufacturers (OEMs) and other manufacturers, metals producers, component suppliers, product designers, academia, state and local governments, and other key stakeholders. This public-private partnership will foster agile manufacturing advances that provide support to both government and commercial needs, developing market focused manufacturing advances supporting product and system performance, affordability, and ultimately increased market demand. These dynamics suggest strongly the need to instill within this collaborative environment an *integrated approach* that applies systems engineering principles to foster advanced manufacturing innovations that help to optimize component and system designs and accelerate time to market. The focused collaboration, and the leverage of resources, of the Institute will drive innovations across the MRL 4-7 range to reduce industrial risks. This will help transition these critical new manufacturing capabilities into the U.S. industrial landscape to enable production scale-up and commercialization.

To accomplish this broad engineering challenge, the Institute should utilize the full range of engineering and analytical tools, processes, and principles to improve efficiency and effectiveness of its integrated approach. A keystone supporting lightweight and modern metals development and production is Integrated Computational Materials Engineering (ICME). ICME is the integration of materials information, captured in computational tools, with engineering product performance analysis and manufacturing-process simulation. Employing this powerful emergent field, many groups have demonstrated the possibility of halving the overall time and cost needed to design new alloys and their processing and manufacturing into commercially viable components and systems. The recent successes and future paths for exploitation are discussed in the National Research Council report entitled Integrated Computational Materials Engineering: A Transformational Discipline for Improved Competitiveness and National Security.² It is also a priority of the Administration's Materials Genome Initiative, which the President announced on June 24, 2011. The manufacturing and design of lightweight metals into components and systems, however, is not a mere matter of substitution, especially for DoD applications, as detailed in the report of the National Research Council entitled Application of Lightweighting Technology to Military Vehicles, Vessels, and Aircraft³. ICME provides a quantitative framework for the design of the material and its processing for the target application. This turns the materials and processing into design parameters to enable overall engineering design of a lightweight system. Integrating the emerging manufacturing capabilities in metals processing, fabrication and design, increases the speed at which lightweight and modern metals enter the marketplace at competitive price points, thus improving U.S. Manufacturers' global competitiveness. The intent of the LM3I Institute is to bring together materials designers, materials suppliers, product designers, and manufacturers to collaborate on the design, production, and commercialization of affordable, manufacturable, lightweight systems.

² http://www.nap.edu/catalog/12199.html

³ http://www.nap.edu/catalog.php?record id=13277

Advanced metals processing and fabrication activities span a wide range, including metal reduction/subtractive technologies; casting, forming, and system assembly operations; additive manufacturing; solid-state joining; laser and next generation welding; thermal drilling; precision machining; metals manufacturing characterization and process modeling; non-destructive evaluation and inspection processes; and end-of-life recycling and recovery. The design, optimization, and implementation of these processes must integrate tools and techniques for considering the materials and their structure-property evolution; the processing operations and their selection, control, and sequencing; and the requirements for the final component or system. LM3I Institute investments can foster focused collaboration between industry, academia, and government across this full range of activities and can be organized more broadly around four key themes:

- Rapidly maturing and demonstrating production scale-up of existing, innovative, lightweight and modern metals;
- Shortening the time necessary to design, integrate, and evaluate novel, affordable, metals, including lightweight alloys and next generation metals into new and existing products;
- Developing more affordable, competitive, automated manufacturing processes relevant to lightweight and modern metals; and
- Developing the tools, skills and knowledge base within the materials design and manufacturing workforce to be able to leverage the latest advances as incorporated by or brought forth by the successes of the LM3I Institute.

The long-term goals of the Institute are to create market expansion and new consumers of products and systems utilizing new, lightweight high performing metals and alloys. The Institute will achieve this through their leadership and partnerships across defense, aerospace, automotive, energy, and consumer products industries.

More detailed Institute requirements follow.

1. Institute Model and Management

The Government seeks a creative model for public/private partnerships that goes beyond what currently exists. To help maximize the model's flexibility, the ONR plans to award the LM3I Institute as a Cooperative Agreement to a non-profit organization. The role of the LM3I Institute is to bring government, industry, and academia together in an environment where joint development and commercialization of alloys, processes, and products can occur. As such, it should have an appropriate geographic center of mass for the region(s) and technologies addressed. This may include a coherent, coordinated collection of distributed facilities — where focused, collaborative research, development, design, prototyping, pilot manufacturing, and workforce development can take place. The Institute will be responsible for attracting industry investment to match the Federal investments. The structure of the Institute's governance model should enable objectivity and independence from undue influence from its partner organizations and institutions. An example of such a structure would include oversight by an independent Board of Directors with strong and balanced industry representation. Further, the Federal Government will have a well-defined participatory role that includes oversight and stewardship of public funds committed to the

Institute, participation in technical reviews, development of overall Institute objectives, and providing advice and appropriate supervisory and policy guidelines during its inception and initial growth.

Underpinning the management of the Institute must be a Business Plan and organizational structure that supports the public-private partnership model and the requirement to be financially self-sufficient from dedicated federal funding within a five-year period. This includes a balanced and effective membership structure (tiered membership being one consideration), as well as defined royalty, licensing and other revenue generation methods; effective mechanisms and policies to ensure robust participation by small and medium-sized businesses and enterprises; well-structured and coherent Intellectual Property management across the range of contractual research arrangements; and other strategies and policies needed to support long-term selfsustainability. As a self-sustaining and impactful manufacturing research institute, the LM3I Institute must maintain a persistent focus on effective technology transition and robust and meaningful education/workforce development. It must also develop creative and effective marketing/outreach and communication strategies to support strong relationships/interfaces with external stakeholders (national, regional and local manufacturing organizations, manufacturing associations and other manufacturing and metals research entities) and operate effectively within a broader network of manufacturing institutes. Further, the Institute's management and partners will have ongoing responsibilities to develop or refine its research, development, and demonstration (RD&D) investment technology thrusts and obtain industrial support (direct or inkind) for the activities of the Institute; attract new industrial and non-industry partners; actively engage with technical subject matter and educational experts; and facilitate easy access to educational and workforce development opportunities. Lastly, the Institute's Business Plan must have effective mechanisms to measure progress towards goals and objectives and drive appropriate course corrections. These collective activities, effectively structured and managed within the Institute's Business Plan, will help ensure self-sustainability and strong, positive, longterm impacts to DoD and the nation.

2. Institute Technical Focus

The Institute's technical focus should demonstrate its full awareness of the complex and dynamic landscape of lightweight and modern metals, and maintain a mission focus on generating positive economic impacts through manufacturing innovations for DoD and commercial applications.

The Institute will be responsible for a facility — or a coherent, coordinated collection of facilities — where collaborative research, development, design, prototyping, pilot manufacturing, and workforce development can take place. The Institute will identify, select, fund, and manage projects and activities that advance the manufacturing innovation and capabilities of lightweight and modern metals in the U.S. industrial base.

The example technical projects included in the proposal should demonstrate the offeror's breadth and depth of understanding of the market for lightweight and modern metals, and how the advances in metals manufacturing will have definable value to the DoD and commercial requirements, and address critical gaps in metals manufacturing. The leveraging of existing

technical resources, educational and workforce development programs, and other non-federal investments as part of an Institute proposal is encouraged.

The Institute's technical foci and investments should have direct relevance to national defense and U.S. industrial base economic impact (job creation, spin-off companies, etc.) through technology transition of advanced metals manufacturing capabilities and applications.

3. Technology Transition

The Institute's business plan and strategy to effect technology transition are critical to its long-term success, financial self-sufficiency, and economic impact. The technology transition strategy will affect the Institute management plan, technical focus areas, intellectual property and data management, and personnel. The Institute's technology transition activities should exercise fully its "industrial commons" and needs to be integral in the selection process for the Institute's technical projects.

There are several metals manufacturing technologies that the DoD has interest in scaling up from MRL 4 to MRL 7, and into production (MRL 8-9). These include, but are not limited to, the manufacturing of low-cost and high performing metal components and assemblies for lightweight ground, aerospace, and maritime systems; applications utilizing advanced alloys (e.g., titanium-, aluminum- and magnesium-based alloys and processing) and novel materials architectures (e.g., metallic foams, cellular structures, etc.) that reduce system weight; and materials for lightweight high-efficiency engines. The DoD also envisions that other government agencies will have similar manufacturing problems of interest for the LM3I Institute.

These manufacturing challenges present practical objectives that can lead to new products for market expansion. They also allow engineers and researchers to address the core technology challenges associated with lightweight design in an integrated manner, using processes including ICME and its associated tools. The ONR has identified tentatively four of these core metals manufacturing technology areas of interest for the LM3I Institute. These are: (1) applications of new/novel metals and alloys; (2), primary metal manufacturing processes; (3) secondary manufacturing processes; and (4) development of products exploiting lightweight and modern metals. The ONR recognizes that a critical component of transition includes education and workforce development. Further, the ONR acknowledges that this list is not all-inclusive, and that another categorization of the core technologies may offer superior utility.

In response to this solicitation, offerors must develop and describe three example technical RD&D projects to: (1) demonstrate the offeror's vision of how essential LM3I Institute technology transitions would occur in the context of the immediate previous paragraphs; (2) more broadly address the overall operation, processes and effectiveness of the Institute as proposed; and (3) provide the offeror's assessment of technology commercialization potential and the marketplace impact of the Institute. Specific format and submission requirements for these example technical project proposals are described later in this document.

4. Intellectual Property (IP)

A crucial aspect of the Institute is how the recipient will handle intellectual property. The Government envisions that the Institute acting as a "trusted broker" to maintain confidentiality of the IP and special know-how, and, if needed, assist in the negotiating of IP rights among participants within the Institute. The Institute should make all data they generate readily available to manufacturing researchers to the fullest extent feasible. This should include the instrumentation of production pilots to provide real-time data streams for model development and validation. The structure of the Institute must allow for the open exchange of manufacturing information, such as design tools, processing tools, qualification and certification approaches and potentially fabrication costing methods amongst participants to the greatest extent possible while still incentivizing private investment in innovation. The Institute must provide a process to allow for the protection of IP, yet enable the sharing of pre-competitive best practices. Technology developed under this Cooperative Agreement shall have Government Purpose Rights as defined in the section entitled: I. Program Description, F. Rights in Technical Data and Computer Software.

The Institute Business Plan shall incorporate an IP management approach that addresses clearly the IP issues inherent with collaborations and/or multi-user facilities that engage multiple stakeholders. The situations associated with such collaborations include: open, pre-competitive environments such as academic research and development; closed and strictly proprietary projects; and mixed projects that include tasks of pre-competitive work within an overall proprietary project. The Intellectual Property Management plan in the proposal should address:

- a. The treatment of confidential information between members (for example, the use of non-disclosure agreements);
- b. The treatment of background IP (for example, any requirements for identifying it or making it available);
- c. The treatment of inventions made under the project (for example, any requirements for disclosing to the other members, filing patent applications, paying for patent prosecution, and cross-licensing or other licensing arrangements between the members);
- d. The treatment of data produced, including software, under the project (for example, any publication process or other dissemination strategies, copyrighting strategy, or arrangement between members), including licensing new learning materials and curriculum to the public under a Creative Commons Attribution License (CC BY) and specific datasets to be delivered in an open, machine-readable format to publically accessible data discovery platforms like www.OpenEl.org, www.data.gov or equivalent open web technologies;
- e. Any technology transfer and commercialization requirements or arrangements between the members;
- f. The treatment of any intellectual property issues that may arise due to a change in membership of the consortia or team;
- g. The handling of conflicts of interest;
- h. The handling of disputes related to intellectual property between the members; and
- i. The protection of the government's rights and license to use IP developed under the agreement.

5. Institute Infrastructure

The Government envisions that the Institute shall serve as a technical resource for industry in the design, development, and pilot manufacturing of lightweight systems. To accomplish this, the Government expects the Institute to obtain an infrastructure that provides unique capabilities for the Nation.

At the same time, Government funds are ineligible for the construction of buildings, or to buy land or other facilities. In addition, equipment purchased under this award cannot be for a general purpose, but must be unique special purpose equipment, equipment adapted for the unique needs of the Institute, or in direct support of the mission of the Institute.

6. Institute Education and Workforce Development

Integrative education, training, and workforce development shall be a core, sustained aspect of the Institute's mission given this area's importance to the long-term health of the defense and U.S. industrial bases. The Institute must foster active partnerships between academia and industry as well as involving industry associations, professional societies, and economic development entities in these education and development efforts. Institute programs should be linked to, and leverage effectively, regional and national Science, Technology, Engineering and Mathematics (STEM) frameworks. The Institute must house and sustain rigorous educational programs that delineate career pathways with multiple entry and exit points for students and incumbent workers. The Institute should integrate undergraduate research experiences, industry internships, and apprentice programs within its programs. Mechanisms should exist to enable secondary schools, community and technical colleges, and four-year institutions to all participate in the Institute with a strong emphasis on community and technical colleges in preparing the manufacturing technician workforce. The Government also expects programs that inform and provide professional development for teachers and faculty.

7. Institute Personnel

The key personnel of the Institute must have a strong balance of technical expertise in the field of manufacturing metals and of lightweight systems, business development, organizational leadership, and financial management expertise. The quality of the Institute personnel is critical to the operation and sustainment of a successful institute. The Institute needs sufficient staffing and access to manufacturing engineers/experts, product testers/evaluators, designers, systems engineers and personnel with analytical skills to guide users in the development of new manufacturing processes, maintain the infrastructure, and provide hands-on training. In addition, the Institute needs to develop and improve continuously its internal education and workforce training efforts, applying this objective to each project supported by the Institute.

8. Schedule

The period of performance is sixty (60) months. The Institute must develop plans for long-term financial self-sufficiency, without any additional federal funding for management and operation, beyond five years.

It is also important that the Institute have plans for the creation, assessment, and completion of technical projects it undertakes, along with the various educational and training programs.

C. REPORTING ITEMS

- 1) Funds and Man-hour Expenditure Report (Quarterly)
- 2) Recipient Progress, Status, and Management Report (Quarterly)
- 3) Presentations from Program Reviews (Semi-annually)
- 4) Strategic Business and Marketing Plan (Six months after award, then annually)
- 5) Technical Projects Reports (quarterly, and final)
- 6) Final Report (at the conclusion of the agreement)

D. OTHER REQUIREMENTS

1. Program security classification:

Unclassified

2. Program Protection Plan.

The Government will address any critical program information (CPI) with a potential requirement for a program protection plan (PPP) generated as part of this effort as needed.

3. Operations Security (OPSEC)

The awardee shall participate in the ONR's OPSEC program, following appropriate OPSEC measures during the performance of this Cooperative Agreement. The ONR requires OPSEC to reduce program vulnerability from successful adversary collection and exploitation of critical information. The awardee shall ensure that research projects conform as required to the OPSEC and marking requirements as necessary, based on the project sensitivity level. The OPSEC program requirements will be covered in the Sample Cooperative Agreement in Appendix I.

4. Export Control:

It is expected that various research projects under the institute may involve export-controlled items. The following clause is to provide information to offerors on the applicable laws, Executive orders, and regulations related to Export-Controlled Items.

Export-Controlled Items

- (a) Definition. "Export-controlled items," as used in this clause, means items subject to the Export Administration Regulations (EAR) (15 CFR Parts 730-774) or the International Traffic in Arms Regulations (ITAR) (22 CFR Parts 120-130). The term includes:
 - (1) "Defense items," defined in the Arms Export Control Act, 22 U.S.C. 2778(j)(4)(A), as defense articles, defense services, and related technical data, and further defined in the ITAR, 22 CFR Part 120.
 - (2) "Items," defined in the EAR as "commodities", "software", and "technology," terms that are also defined in the EAR, 15 CFR 772.1.
- (b) The Recipient shall comply with all applicable laws and regulations regarding exportcontrolled items, including, but not limited to, the requirement for Recipients to register with the Department of State in accordance with the ITAR. The Recipient shall consult with the Department of State regarding any questions relating to compliance with the ITAR and

shall consult with the Department of Commerce regarding any questions relating to compliance with the EAR.

- (c) The Recipient's responsibility to comply with all applicable laws and regulations regarding export-controlled items exists independent of, and is not established or limited by, the information provided by this clause.
- (d) Nothing in the terms of this section or any resulting agreement adds, changes, supersedes, or waives any of the requirements of applicable Federal laws, Executive orders, and regulations, including but not limited to—
 - (1) The Export Administration Act of 1979, as amended (50 U.S.C. App.2401, et seq.);
 - (2) The Arms Export Control Act (22 U.S.C. 2751, et seq.);
 - (3) The International Emergency Economic Powers Act (50 U.S.C. 1701, et seq.);
 - (4) The Export Administration Regulations (15 CFR Parts 730-774);
 - (5) The International Traffic in Arms Regulations (22 CFR Parts 120-130); and
 - (6) Executive Order 13222, as extended;
- (e) The Recipient shall include the substance of this clause, including this paragraph (e), in all subawards and subcontracts.

E. GOVERNMENT FURNISHED PROPERTY (GFP) AVAILABILITY

The Government does not anticipate making GFP available under any award.

F. RIGHTS IN TECHNICAL DATA AND COMPUTER SOFTWARE

The Rights in Technical Data and Computer Software for any resulting award will be in accordance with Article 8 of the attached Sample Cooperative Agreement. Given the cost sharing requirements for this agreement, the mixed funding for the projects developed under this agreement will provide for the following rights in technical data and computer software.

- 1. Technical Data: Government Purpose Rights
- 2. Non-Commercial Software (NCS): Government Purpose Rights
- 3. NCS Documentation: Government Purpose Rights

II. AWARD INFORMATION

The Government intends to award a Cooperative Agreement based on the Department of Defense Grant and Agreement Regulations (DoDGARs), under 10 USC 2358 and 10 U.S.C. 2192. The Government reserves the right to award other agreements. The complete version of the DODGARS can be found online using one of the following two methods below:

- Under the Electronic Code of Federal Regulations website, use "DODGARS" as simple search under http://www.ecfr.gov/cgi-bin/ECFR?SID=7b38076abacd8f09ed443505ec854eac&page=simple
- The Department of Defense Issuances website at http://www.dtic.mil/whs/directives/corres/html/321006r.html

A. ANTICIPATED AWARD DATE

Not later than <u>Tuesday</u>, <u>31 December</u>, <u>2013</u>. Offerors may be ineligible for award if they do not meet all requirements of this announcement by the award date.

B. Anticipated funding for the program

- 1) FY14/\$17.0M; FY15/\$14.0; FY16/\$14.0M; FY17/\$14.0M; FY18/\$11.0M; Total: \$70.0M, with additional industry/non-federal government cost share applied at a minimum ratio of 1:1.
- 2) This funding profile is an estimate only, and is subject to change due to Government discretion and the availability of funds.

C. Number of Awards anticipated

The Government anticipates making a single award, and reserves the right to make no awards, resulting from this announcement.

III. ELIGIBILITY INFORMATION

A. Eligible Offerors

This is a restricted solicitation limited to independent U.S. non-profit organizations. The Government encourages small businesses to participate through teaming arrangements with the lead non-profit organization.

B. Cost Sharing or Matching

The Government requires at least a 1:1 recipient cost share. The Government will consider state and local funding (not originating from Federal funds), as well as private sector investment. Cost sharing includes cash and third-party in-kind such as equipment, facilities, and manpower. For more detailed information on cost sharing, refer to DoDGARS § 32.23.

C. FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS

Federally Funded Research & Development Centers (FFRDCs), including Department of Energy National Laboratories, are not eligible to receive awards under this solicitation or team with an offeror prior to award of this cooperative agreement. However, FFRDCs are encouraged to enter into collaborative teaming arrangements with the Institute following the award of this cooperative agreement, provided they are permitted to do so by charter, statute, and their Government sponsor.

D. FEDERAL GOVERNMENT ORGANIZATIONS

The ONR recognizes that the participation of federal government organizations may be very valuable in the planning and execution of the product design and demonstration process. In cases where there are unique facilities, capabilities, and expertise, federal organizations may partner with

the Institute on specific technical projects. They may not, however, serve as technical project leads, or be involved in the management or administration of the Institute at its inception or with the proposal development prior to award. As the Institute evolves, federal government organizations may interact with the Institute in a manner compatible with their respective purpose, missions, and general competencies.

E. FOREIGN PARTICIPATION

The recipient of the award shall be registered as a U.S. organization. U.S. incorporated companies that are wholly-owned subsidiaries of foreign companies may become eligible to be members of the Institute, and sub-awardees of federal support if they are able to demonstrate to the satisfaction of the LM3I Institute and the ONR that: 1) their participation is in the best interest of the LM3I Institute, U.S. industry, and U.S. economic development; 2) adequate IP and data protection protocols exist between the U.S. subsidiary and its foreign parent organization; 3) the work is conducted within the U.S.; 4) other conditions that may be deemed necessary by the Institute and the Government to protect U.S. government interests are met, and 5) The Institute and its members are in compliance with 8 U.S.C. 1324a and 8 CFR 274a.2.

Some projects within the Institute may be subject to export control laws and regulations. Under no circumstances may foreign entities (organizations, companies or persons) receive access to export controlled information unless proper export procedures have been satisfied. The Institute will address participation by foreign entities (organizations, companies or persons) on a case-by-case basis, and will ensure measures that properly protect Export Controlled information.

IV. APPLICATION AND SUBMISSION INFORMATION

A. OVERVIEW

The proposal submission process includes concept papers and written full proposals, and also may include oral presentations and/or site visits.

The purpose of the concept paper phase is to minimize the labor and cost associated with the production of detailed full proposals that have very little chance of selection for funding. Based on an assessment of the concept papers by the evaluation team, offerors whose concept papers are deemed of "particular value" to the Government will be sent invitations to submit a full proposal that will be due no later than 3:00 PM ET on Tuesday, 15 October 2013. However, any such request does not assure a subsequent award. Any offeror whose concept paper was not identified as being of "particular value" is ineligible to submit a full proposal under this announcement or be further considered for award.

Based on an assessment of the written full proposals, the evaluation team may recommend a subset of the most highly rated proposals for oral presentations and further evaluation. Oral presentations are expected to include a question and answer session that would allow for clarifications and discussions specifically related to the offeror's proposal and therefore are considered revised proposals. More specific instructions on the format and time limits for the oral presentations, question and answer session, and whether revised written proposals will be required after Oral Presentations will be provided in the invitations to oral presentations. After the oral presentations,

the Government may elect to perform site visits on this set or subset of the most highly rated revised proposals to obtain further information and possible further revisions to the proposal prior to making a final recommendation for selection. If ONR conducts Oral Presentations, any offeror whose full proposal was not identified as one of the most highly rated proposals is ineligible to provide an Oral Presentation, receive a site visit, or be further considered for award under this solicitation. The ONR reserves the right to <u>not</u> conduct Oral Presentations or site visits if in the best interests of the Government.

B. General Instructions for Written Documents

Concept papers and full proposals submitted shall be in accordance with this announcement. Offerors may submit only one concept paper and, if invited, one full proposal. Proposed subrecipients or formal collaborators may, however, team on multiple proposals. The proposal must be valid for at least 180 days. All proposals must reference this announcement number. Offerors should be alert for any amendments to this solicitation that may adjust submission dates or other submission requirements. The ONR will accept only electronic submissions to this solicitation. All submissions must be unclassified. The Government will not reimburse any cost associated with participation in the proposal process.

The Government reminds offerors that only warranted Agreements Officers could bind or otherwise commit contractually the Government. The cost of preparing proposals in response to this announcement is not an allowable direct charge to any resulting agreement (or any other federal award/contract).

All offerors should note that these submission instructions require the use of Microsoft Office, version 2007 or later, and/or Adobe Acrobat, version 8.1.3 or later – or their fully compatible equivalents. At this time, the ONR knows of no fully compatible equivalents.

The format requirements for all documents are as follows:

- Page Size 8.5 x 11 inch paper
- Margins 1 inch
- Spacing single or double spaced
- Font a proportional-spaced serif font (for example Times New Roman) in 12 point

These requirements are to ensure the readability of the document by the evaluation team. If the offeror does not follow these guidelines, and the evaluation team determines that the document is unreadable, then the ONR will consider the concept paper or full proposal non-responsive.

The offeror is also responsible for performing a virus check on each concept paper and/or full proposal before emailing or uploading it electronically. The detection of a virus or other malware in any submission is cause for rejection.

The concept paper and full proposal should not contain any hyperlink references to circumvent the page restrictions called out below. The offerors may not password-protect the documents included in the concept paper or full proposal.

C. CONCEPT PAPER FORMAT AND SUBMISSION REQUIREMENTS

The concept paper consists of a summary (or initial layout) of the business plan for the Institute; and drafts of plans for three notional technical projects that exemplify the vision and mission of the proposed Institute. The main text of the concept paper is limited to eighteen (18) pages in length, exclusive of cover page, and appendices. The organization and content requirements for the concept paper are as follows:

- Cover Page (not included in the page limitations): The Cover Page shall be labeled "CONCEPT PAPER" and shall include the solicitation number, proposed title, technical points of contact, telephone number, facsimile number, e-mail address, and the offeror's Contractor and Government Entity (CAGE) Code.
- **Business Plan (twelve page maximum):** The Business plan shall include the following:
 - 1. Proposed Director and lead organization
 - 2. A vision for the Institute, including potential stakeholders, and draft long-term mission and sustainability plan that considers stakeholder input.
 - 3. List of proposed member, affiliate, and/or supporting organizations. The list may be included as an appendix, and does not count as part of the page limit. Plan needs to include the Institute's interrelationships with other NNMI institutes.
 - 4. Governance, Education and Workforce Development, and IP management
 - 5. A brief description of plans to bring together and manage the facilities and equipment; along with a list of proposed facilities and equipment. The list may be included as an appendix, and does not count as part of the page limit.
- A brief outline of plans for the cost sharing and how the contributions from the member organizations will be developed and implemented; along with a list and schedule of cost share showing when the proposed cost share will be available to the agreement. The list may be included as an appendix, and does not count as part of the page limit. Example Technical Projects (two page maximum for each of the three example projects six pages total):
 - 1. Proposed Principal Investigator and lead organization
 - 2. List of collaborating organizations
 - 3. Proposed project abstract
 - 4. Budget outline (one paragraph maximum)
- Appendices (not included in the page limitations): This consists of the lists of proposed member/affiliate organizations, the equipment and facilities, and the cost shares and contributions.

The concept paper must be a Microsoft Word 2007 or Adobe PDF compatible format (pdf is the preferred format). The file name must have the form LM3I_Concept_Paper_orgname.doc (or .docx) or LM3I_Concept_Paper_orgname.pdf, where orgname is replaced to provide a unique identifier for the submission. The ONR requires offerors to submit its concept paper using the ONR file upload site at:

https://onroutside.onr.navy.mil/aspprocessor/332Materials/

Successful uploading will result in an automated email to the sender to confirm success.

NOTE: Do not send or email hardcopies of concept papers (including facsimiles) as only electronic submissions through the ONR upload site will be accepted and reviewed. Also .ZIP files, other compressed archive files, or password-protected files will not be accepted. Concept papers received after the due date and time shall NOT be evaluated or considered for an award by the Government in accordance with Section VI.B.3.

D. FULL PROPOSAL FORMAT AND SUBMISSION REQUIREMENTS

The complete proposal package will consist of the completed SF424 with its attachments. The SF424 must be downloaded from the Grants.gov application package. (Note: This form will not be provided in the FedBizOpps.gov posting of this announcement.) When downloading the SF424 from Grants.gov, the offeror shall only use the SF424 with the Attachments Form (which is listed under the Optional section) as a method to attach the other full proposal requirements described below. In addition, the SF-LLL (Disclosure of Lobbying Activities) shall also be included if applicable to a particular offeror based on the Certification Regarding Lobbying Activities in Section VI.B.1. None of the other four Optional forms shown in the Grants.gov application package should be used with this announcement. The attached sections should be in pdf-compatible format (preferred), or in a Microsoft Office 2007 compatible format, except for the electronic file for the Cost Proposal Spreadsheet, which should be in a Microsoft Excel 2007 compatible format. Note that offeror shall not submit its proposal through the Grants.gov portal for this Cooperative Agreement proposal, but rather through the ONR file upload link provided later in Section IV.D.

The attachments that make up the content of the proposal consist of six parts. The first or lead part is the Business Plan, which describes the proposed Institute as an operating entity. The second part consists of short proposals for each of the three example technical projects that exemplify the vision and mission of the proposed Institute. The third part is the Education and Workforce Development section, which describes the proposed approaches for education, training, and workforce development. The fourth and fifth parts are the budget spreadsheet and the cost proposal/budget. The sixth and final attachment is the Compliance Matrix.

The format of these attachments is as follows:

1. Business Plan

The main text of the business plan has a 35-page limit, exclusive of the cover page and appendices, and consists of:

- **Cover Page (not included in the 35-page limit):** This should include the words "LM3I Institute Business Proposal" and the following:
 - 1. Identity of the proposed Institute Director and affiliation,
 - 2. Technical contact (name, address, phone/fax, electronic mail address)
 - 3. Administrative/business contact (name, address, phone/fax, electronic mail address)
 - 4. Offeror's Contractor and Government Entity (CAGE) Code
- **Vision and Mission:** The vision for the Institute, including stakeholders, and the long-term mission that considers stakeholder input. This provides the context for the organization and

- operations of the Institute. These should also provide a path to the long-term operation and evolution of the Institute to meet stakeholder needs.
- **Structure:** Outline the proposed structure of the Institute, including the management, the administration, and the initial collaborating members of the Institute and their roles. This section should also include the proposed infrastructure. This includes the technical expertise, and the physical facilities (and the management and maintenance of such), and integration of these into the mission of the proposed Institute. This section should also describe the interdependencies and synergies of the Institute components, and describe how they will cooperate and collaborate effectively. Detailed lists of the stakeholders, the collaborating members and their contributions, and the infrastructure may be included as an appendix, and does not count as part of the page limit.
- **Strategy:** The plan for the Institute to be financially self-sufficient within five years; to evaluate its operations and products; and to evolve to bring in new stakeholders; evolve its mission, operations, and infrastructure; to interrelate and operate within the NNMI construct; and establish and maintain its technical project portfolio to meet the needs of its stakeholders now and in the future. The strategy should demonstrate the Institute's potential effect on market growth, innovation and US manufacturing competiveness.
- **Intellectual Property:** A summary of the plan for managing and protecting the intellectual property that the Institute creates and uses. Examples of formal IP agreements with stakeholders and/or members of the Institute may be included as an appendix, and does not count as part of the page limit.
- **Defense and Economic Impact:** A description of contributions of the proposed effort to U.S. economic impacts (job creation, spin-off companies, etc.) of technology transition for commercial applications, and the impact of the proposed technology transition to defense systems, energy reduction, and other commercial applications. This section should also describe plans for the dissemination of results from research and development within the Institute and to the broader U.S. industrial base.
- **Risk Identification:** A list of the risks to the long-term viability of the Institute that the offerors identify from the cost and cost share perspective, business plan perspective, and technical plan perspective.
- **Personnel Qualifications:** A discussion of the qualifications of the proposed key personnel of the Institute. Include resumes or curricula vitae for the Principal Investigator, other key personnel and consultants. The resumes/curricula vitae shall be attached as an appendix to the Business Plan, and do not count against the 35-page limit.
- **Start-up Schedule and Milestones:** A summary of the schedule of events and the milestones for the stand-up of the Institute and its first 18-months of operation. This should include the start-up of the core headquarters of the Institute, the start-up of the Institute's governance structure, the assembly and organization of the shared research, development, and demonstration (RD&D) infrastructure, and the selection of the initial technical project portfolio of the Institute.
- **Appendices (not included in the page limitations):** These include the lists of Institute affiliate organizations and their contributions, any example IP agreement documents, and the relevant resumes or curricula vitae for the personnel as indicated above.

2. Example Technical Project Proposal (one for each of three projects) For each of the three representative example technical projects, the offerors shall provide a technical proposal. These are NOT for specific task award.

These project proposals are examples of technical efforts that the Institute would propose and perform once established and operational. The topic areas, scopes, and approaches should demonstrate the overall understanding of the Government's goals for the Institute. The example projects should focus on improving the capabilities or providing new systems to the DoD, as well as products to the civilian community, with reduced manufacturing costs, and reduced time for delivery – for example, a 20% manufacturing cost reduction and 2X improvement in time to delivery of a bulkhead/chassis/hull section.

Each example technical project proposal shall have a maximum length of eight pages (excluding the cover page, the cost section, and the curriculum vita of the investigators) and shall be formatted as follows:

- **Cover Page (not included in the 8-page limit):** This should include the words "LM3I Institute Example Technical Project Proposal" and the following:
 - 1. Title of Project
 - 2. Identity of the Principal Investigator and complete list of project collaborators and contributors, if applicable
 - 3. Technical contact (name, address, phone/fax, electronic mail address)
 - 4. Administrative/business contact (name, address, phone/fax, electronic mail address)
 - 5. Proposed period of performance
 - 6. Offeror's Contractor and Government Entity (CAGE) Code
- **Technical Approach and Justification:** The major portion of the project should consist of a clear description of the proposed technical approach. This discussion should provide the technical foundation/justification for pursuing this particular approach/direction and why one would expect it to enable the objectives of the project.
- **Relevance:** A description of the military and economic benefit of the product, the expected return on investment for the research during the introduction of the product/system, and the contribution to the overall capabilities of industry.
- **Project Schedule and Milestones:** A summary of the schedule of events and milestones for the project.
- **Products:** The reports, software, prototypes, and other hardware resulting from the project.
- **Management Approach:** Identify which personnel and collaborators or contributors (if any) would be involved. Include a description of the facilities that are required for the proposed effort, hardware, software, and/or information required, by version and/or configuration.
- **Qualifications:** A discussion of the qualifications of the proposed Principal Investigator and any other key personnel. Include resumes or curricula vitae for the Principal Investigator, other key personnel and consultants. The resumes/curricula vitae shall be attached to the project as an appendix, and do not count against the eight page limit.
- **Cost (not included in the 8-page limit):** A summary of the cost associated with the project.

3. Education and Workforce Development

This section should contain a description of the educational and development components of the Institute, and has a limit of five pages. It should consist of:

- **Cover Page (not included in the 5-page limit):** This should include the words "LM3I Institute Education and Workforce Development Proposal" and the following:
 - 1. Identity of the proposed Institute Director and affiliation,
 - 2. Technical contact (name, address, phone/fax, electronic mail address)
 - 3. Administrative/business contact (name, address, phone/fax, electronic mail address)
 - 4. Offeror's Contractor and Government Entity (CAGE) Code
- Needs Assessment: Identification of shortages in professional and other occupational
 categories in order to increase the supply of professional staff and qualified workers in the
 relevant industries.
- **Multi-year plan:** This should consider such areas as:
 - 1. Expansion plans for the capacity of secondary and post-secondary education to meet the needs of identified stakeholder educational and training shortages.
 - 2. Plans for scholarship programs, cooperative education, and internships in the areas of engineering, engineering technology, computer science, and applied sciences that address the needs of the materials and manufacturing communities.
 - 3. Establishment of regional partnerships among the materials and manufacturing industries and the educational system to expand outreach to multicultural communities, increase the diversity of the workforce, and to promote the use of web-based technologies, and distance learning techniques.
 - 4. Strategies to recruit high school students for materials and manufacturing occupations, increasing the prevalence of materials and manufacturing occupations in high school career development programs such as academies, adult schools, and regional occupation centers and programs.
 - 5. The development of curricula to train and retrain the workforce.

This plan should include student (all levels, including community colleges), teacher, and faculty participation.

4. Cost Proposal Spreadsheet

The cost proposal spreadsheet is required, and details of the costs (including cost share portion) associated with the entire proposed Institute. The budget should be in the offeror's fiscal year. The cost proposal should assume an agreement start date of 01 January 2014.

The electronic submission of the Excel spreadsheet associated with the Cost Proposal should be in a "useable condition" to aid the Government with its evaluation. The term "useable condition" indicates that the spreadsheet should visibly include and separately identify within each appropriate cell any and all inputs, formulas, calculations, etc. The offeror should not provide "value only spreadsheets". If the ONR cannot manipulate the spreadsheets in a manner sufficient for evaluation, then the ONR will consider the proposal non-responsive and discard it.

As described above, offerors can find the Cost Proposal Spreadsheet at http://www.onr.navy.mil/en/Contracts-Grants/submit-proposal/contracts-proposal/cost-proposal.aspx. Click on the "Cost Proposal Spreadsheet" link and save a copy of the spreadsheet. The form/spreadsheet has embedded instructions for completion.

For proposed subawards or inter-organizational transfers over \$150,000, offerors must provide a separate Statement of Work and fully completed Cost Proposal Spreadsheet in support of the proposed costs – along with supporting documentation.

Note: Fee/profit is unallowable under assistance agreements at either the prime or for subawardees and subcontractors performing research.

5. Cost Proposal

This volume, including the Cost Proposal spreadsheet, has no page limits, and respondents may include as appendices any other information they feel pertinent to the proposal package. They should note, however, that they cannot use these appendices to circumvent the page limitations in the technical sections of the proposal – that is, any information included that is not relevant to the cost proposal will be ignored. The following information must be included in this volume:

- a. In addition to the cost proposal spreadsheet above, the offeror should also include as part of the cost proposal detailed information on the sources (by organization), timing, and extent (in dollars) of the required cost sharing, and the plans to ensure the financial sustainment of the Institute. This information shall include a schedule of cost sharing that shows when the proposed cost share will be available to the agreement so that the Government can evaluate the proposed equity when sharing costs, e.g., the extent to which overall cost sharing ratio is applied to each invoice vice front loading the Government's contribution.
- b. Cooperative Agreement Terms and Conditions: In this section of the cost proposal, if the offeror takes exception to any terms and conditions in the Sample Cooperative Agreement, it must describe the exceptions and indicate its desired mark-ups of the Agreement Language. Any exceptions will be considered during the source selection process in the determination of best value. If an offeror takes no exceptions to the terms and conditions, it must state that in this section. If an offeror is selected for award and does not fully disclose their exceptions during the proposal process, the Government reserves the right to award to the next highest rated proposal.
- c. Offerors should familiarize themselves with the new subaward reporting requirements set forth in the article entitled "Reporting Requirements for Subaward and Executive Compensation" in Section VI.B.4. The related information should also be provided with the Cost Proposal.
- d. The offeror shall also state in this section whether its accounting/financial systems have previously been audited by a government agency or if the offeror has a completed or inprocess audit in accordance with the OMB Circular A-133, which is the Single Audit Act. If the offeror has been audited by a government agency, the following information shall be provided: audit agency name; auditor name, telephone number, and email; type of audit: and audit report number and/or date of audit report (if known). If an audit in accordance with OMB Circular A-133 has been completed, provide the date of its completion and the

- fiscal year for which it was completed. Also, report any in-process A-133 audits and their expected completion date.
- e. The information required regarding Organizational Conflict of Interest in Section VI.B.6 shall be included in this volume.
- f. The attachment with the Offeror's representations in Section VI.B.2 entitled "Representation Regarding an Unpaid Delinquent Tax Liability or a Felony Conviction under any Federal Law - DOD Appropriations"
- g. The Cost Proposal must confirm that the offeror's proposal is valid for at least 180 days.

6. Compliance Matrix

Offerors shall provide a "Compliance Matrix" in table format (separate and exempt from total page count) that details how the offeror's proposal addresses all the Evaluation Criteria (see Section V) across each of the eight Institute Requirements that are described in Section I, Subsection B (paragraphs 1 through 8). The table's format is at the discretion of the offeror.

Additional Instructions

The full proposal package file name must have the form "LM3I_Proposal_orgname", where orgname is replaced to provide a unique identifier for the submission. The ONR requires offerors to submit its full proposal using the ONR file upload site at:

https://onroutside.onr.navy.mil/aspprocessor/332Materials/

Successful uploading will result in an automated email to the sender to confirm success.

The offeror may provide subawardee information with its uploaded proposal package or the subawardee may directly upload its package as long as it clearly links the package to the prime offeror. Any subawardee information must be received prior to the submission deadline.

NOTE: Do not send or email hardcopies of full proposals (including facsimiles) as only electronic submissions through the ONR upload site will be accepted and reviewed. Also .ZIP files, other compressed archive files, or password-protected files will not be accepted. Full Proposals received after this due date and time shall NOT be evaluated or considered for an award by the Government in accordance with Section VI.B.3.

E. ORAL PRESENTATION

The evaluation team may request an oral presentation from those offerors whose full proposal has been identified through the evaluation as one of the most highly rated full proposals to the Government. An invitation to an oral presentation does not assure a subsequent award. The purpose of the oral presentation is to better acquaint the Government with the offeror's proposal, especially in its understanding of the technical approach and impact, and allow for a revised proposal. Any offeror whose proposal was not identified as being of the most highly rated proposals to the Government is ineligible to provide an Oral Presentation under this announcement or be further considered for award. The Government will not reimburse any cost associated with participation in the oral presentation process.

Offerors whose proposals are selected for oral presentations will be invited via e-mail to the unclassified oral presentation event that is planned tentatively for the week of <u>18 November 2013</u> in Arlington, Virginia. A detailed format for the presentation will be provided in the e-mail invitation. A positive response by the evaluation team during or immediately following the presentation does not assure a subsequent award.

V. EVALUATION INFORMATION

The Government will make an award to an offeror under this solicitation, based on the evaluation criteria listed below, and program balance to provide the overall best value to the Government. The Government reserves the right to remove proposers from award consideration should the parties fail to reach agreement on award terms, conditions, and cost/price within a reasonable time, or the proposer fails to timely provide requested additional information.

A. EVALUATION CRITERIA

The evaluation criteria categories are listed in a ranked order of descending priority as follows:

- 1. Business Plan
- 2. Technical Plan
- 3. Education and Workforce Development
- 4. Cost

There is no rank ordering of specific subcriteria within each of these four categories.

All subcriteria need to be addressed in the proposal.

1. Business Plan

1. <u>Attaining Self-Sufficiency</u>. Viability of the plan for the Institute to achieve financial self-sufficiency from dedicated federal funding within a 5-year period.

Note: This criterion is a figure-of-merit, recognizing that the ultimate success of the Institute is dependent upon the core competencies discussed in the proposal and demonstrated in the Institute's execution of the award.

- 2. <u>Organizational Structures</u>. Completeness and quality of the plan for the proposed management structure and stakeholder engagement, including the level and role of academic institutions, multiple tiers of industry, end users, networked Institutes, and federal and non-federal government participation, as appropriate.
- 3. <u>Infrastructure Concept</u>. Soundness of the overall infrastructure concept proposed within existing facilities, including quality, capabilities, and availability of existing and proposed equipment. Sufficiency of geographic concentrations for the overall Institute, as well as for each of the proposed Institute technical teams to attain critical mass of capability and foster innovation.

Note: It is anticipated that multiple, distinct product/technology streams would be encompassed by the Institute. Each of these is expected to have a geographic center of gravity.

4. <u>Strategy</u>. Business and technical merits of the strategy for innovation, technology dissemination and commercial deployment. Uniqueness and creativity of the marketing/communication strategy.

Notes: Recognizing the LM3I Institute emphasis on systems level approaches to metals manufacturing and product development, the effectiveness of the proposed Institute structure and strategy to enable technological success will be evaluated. This includes: (1) the extent to which the choices of example technical projects demonstrate an understanding of the technical gaps within the lightweight metals landscape and recognition of those issues of greatest technical and economic importance to industry; and (2) the extent to which the example technical projects illustrate credible deployment/dissemination pathways to commercialization.

5. <u>Intellectual Property Management</u>. Soundness of plan for managing and protecting intellectual property (IP) and the extent to which the IP management plan incentivizes private sector involvement. Degree to which plan takes into consideration the need to make *appropriate* data available to the public and provides specific plans for management of both precompetitive and competitive data and knowledge sets.

Note: The IP Management Plan should address clearly the IP issues inherent with collaborations and/or multi-user facilities and engage multiple stakeholders. The situations associated with such collaborations include: open, pre-competitive environments such as academic research and development; closed and strictly proprietary projects; and mixed projects that include tasks of pre-competitive work within an overall proprietary project. The Intellectual Property Management plan in the proposal should address:

- a. The treatment of confidential information between members (for example, the use of non-disclosure agreements);
- b. The treatment of background IP (for example, any requirements for identifying it or making it available);
- c. The treatment of inventions made under the project (for example, any requirements for disclosing to the other members, filing patent applications, paying for patent prosecution, and cross-licensing or other licensing arrangements between the members);
- d. The treatment of data produced, including software, under the project (for example, any publication process or other dissemination strategies, copyrighting strategy, or arrangement between members), including licensing new learning materials and curriculum to the public under a Creative Commons Attribution License (CCBY) and specific datasets to be delivered in an open, machine-readable format to publically accessible data discovery platforms like www.OpenEl.org, www.data.gov or equivalent open web technologies;

- e. Any technology transfer and commercialization requirements or arrangements between the members;
- f. The treatment of any intellectual property issues that may arise due to a change in membership of the consortia or team;
- g. The handling of conflicts of interest;
- h. The handling of disputes related to intellectual property between the members; and
- i. The protection of the government's rights and license to use IP developed under the agreement.
- 6. <u>Defense and Economic Impact</u>. Relevance and U.S. economic impact (job creation, spin-off companies, etc.) of technology transition for defense and commercial applications.

Note: Includes the following:

- i. Potential relevance and contributions of the effort to industry and/or the U.S. government and DoD mission.
- ii. Adequacy and reasonableness of assumptions in estimating the potential impact of the Institute
- 7. <u>Risk identification</u>. Sufficiency of identifying risks to the Institute from the cost and cost share perspective, business plan perspective, and technical plan perspective.
- 8. <u>Management Capabilities</u>. Caliber (experience, knowledge, skills, etc.), leadership, technical capabilities and successful track record of the Lead Organization, Organization Director and key personnel. Adequacy of experience in successfully managing a collaborative and/or multi-user facility environment.
- 9. <u>Operations</u>. Adequacy and credibility of the plan for all Institute activities, with emphasis on the stand-up of the Institute, including well-developed milestones and decision points. Reasonableness of the plan to support the creation and operation of shared research, development, and demonstration (RD&D) infrastructure, emphasizing first-year activities.
- 2. Example Technical Plan (applied to each example project)
 - 1. <u>Technical Strength</u>. Overall scientific and technical merits and level of innovation of the proposed approach.
 - Note: Degree to which proposed approach is able to support innovative production methods, scale-up activities, application oriented research for new product development, support certification and validation of new materials and structures, including development using Integrated Computational Materials Engineering (ICME) approaches in the design space especially to conduct sensitivity analysis, design trade-offs and multidisciplinary optimization.
 - 2. <u>Technological Impact</u>. Relevance and potential impact of technology transition to defense systems and other government/commercial applications.

- 3. <u>Innovation Beyond Current Practice</u>. Degree to which the applicant demonstrates a deep and technically sound understanding of challenges in the technology areas and industry needs. The adequacy of the description of the role of the Institute within the context of current and future work in the technology focus areas.
- 4. <u>Personnel Qualifications</u>. The qualifications, capabilities and experience of the proposed investigators (that is, the project team personnel and not the Institute staff).

3. Education and Workforce Development

1. Quality and degree of integration of educational and workforce/professional development and training components. Consideration of all levels of education, including as a minimum 2- and 4-year undergraduate programs, graduate and post-graduate student engagement, faculty engagement, internships, sabbaticals, and professional development coursework that will be necessary to ensure that next-generation workforce is facile with the tools and application of advanced manufacturing technologies and an ICME approach. Evidence of a plan to establish career pathways that encompass secondary, 2-4 year and graduate-level institutions.

4. Cost

1. <u>Cost Effectiveness</u>. The realism, reasonableness and appropriateness of the proposed costs and levels of effort, including the reasonableness of funds distribution between technical efforts and the management of the Institute.

Note: Cost Realism Analysis will ensure proposed cost:

- Is realistic for work to be performed.
- Reflects a clear understanding of the requirements.
- Is consistent with the unique methods of performance and material described in the technical proposal.
- 2. <u>Cost Share</u>. Makeup, quality, timing, and extent of the cost share in terms of the amount, source of the cost share, and the quality/ applicability of any cost share. Timing will be evaluated for the scheduled implementation of the proposed cost share, e.g., the extent to which cost sharing is applied to each invoice, including during institute set-up, at the overall minimum ratio (or proposed ratio if higher than the minimum) vice front loading the Government's contribution.

Note: A minimum 1:1 cost share against federal dollars is required, and greater cost share is encouraged. Cost share descriptions should be provided in simple tabular form, provide a high-level summary of the proposed budget for the Institute that includes the Federal government and cost share funding and capital and operational expenses by year.

B. EVALUATION PANEL

A team of Government scientific experts will perform the evaluation of technical proposals. The Government may also involve one or more support contractors for administrative support and/or as subject-matter-expert technical consultants. The proposal selection and award decisions, however, are solely the responsibility of Government personnel. Each support contractor employee having access to technical and cost proposals submitted in response to this announcement will sign a non-disclosure statement prior to receipt of any proposal submissions.

VI. AWARD ADMINISTRATION INFORMATION

A. AWARD NOTICES

The ONR will notify all offerors when an award has been made, by letter or e-mail, and anticipates an award not later than <u>Tuesday</u>, 31 <u>December 2013</u>.

B. Administrative Requirements:

1. Certification Requirements

Note: The Offeror shall provide its Lobbying Certification below in Block 17 of the SF424.

Certification Regarding Lobbying Activities

- (a) No Federal appropriated funds have been paid or will be paid by or on behalf of the applicant, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (b) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the Federal contract, grant, loan, or cooperative agreement, the applicant shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (c) The applicant shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S.C. Any person

who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

2. Representation Regarding an Unpaid Delinquent Tax Liability or Felony Conviction under and Federal Law – DoD Appropriations

All applicants are required to submit the completed "Certification for Tax Delinquency and Criminal Violation" form. This form shall be included as an attachment to the required proposal documents submitted via Grants.gov, and may be found here: http://www.onr.navy.mil/Contracts-Grants/submit-proposal/~/media/Files/Contracts-Grants/Downloadable%20Forms/Tax-Delinquency-Criminal-Violation.ashx. This form makes

- (1) The applicant represents that it is ___ is not__ a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.
- (2) The applicant represents that it is is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

NOTE: If an applicant responds in the affirmative to either of the above representations, the applicant is ineligible to receive an award unless the agency suspension and debarment official (SDO) has considered suspension or debarment and determined that further action is not required to protect the Government's interests. The applicant therefore should provide information about its tax liability or conviction to the agency's SDO as soon as it can do so, to facilitate completion of the required consideration before award decisions are made.

3. Submission of Late Proposals

the following certification:

Any proposal, modification, or revision that is received at the designated Government office after the exact time specified for receipt of proposals is "late" and will not be considered unless it is received before award is made, the agreements officer determines that accepting the late proposal would not unduly delay the award and:

- a. If it was transmitted through an electronic commerce method authorized by the announcement, it was received at the initial point of entry to the Government infrastructure not later than 5:00 P.M. one working day prior to the date specified for receipt of proposals; or
- b. There is acceptable evidence to establish that it was received at the Government installation designated for receipt of proposals and was under the Government's control prior to the time set for receipt of proposals; or
- c. It was the only proposal received.

However, a late modification of an otherwise timely and successful proposal that makes its terms more favorable to the Government will be considered at any time it is received and may be accepted.

Acceptable evidence to establish the time or receipt at the Government installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the Government office designated for receipt of proposals by the exact time specified in the announcement, and urgent Government requirements preclude amendment of the announcement closing date, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the announcement on the first work day on which normal Government processes resume.

The agreements officer must promptly notify any offeror if its proposal, modifications, or revision was received late and must inform the offeror whether its proposal will be considered.

- 4. Reporting Requirements for Subaward and Executive Compensation
 The Federal Funding Accountability and Transparency Act of 2006 (Public Law 109-282), as
 amended by Section 6202 of Public Law 110-252, requires that all agencies establish requirements
 for recipients reporting information on subawards and executive total compensation as codified in
 2 CFR 33.110. Any company, non-profit agency or university that applies for financial assistance
 (either grants, cooperative agreements or other transaction agreements) as either a prime or subrecipient under this announcement must provide information in its proposal that describes the
 necessary processes and systems in place to comply with the reporting requirements identified in 2
 CFR 33.220. An entity is **exempt** from this requirement **UNLESS** in the preceding fiscal year it
 received: a) 80 percent or more of its annual gross revenue in Federal contracts (and subcontracts),
 loans, grants (and subgrants), and cooperative agreements; b) \$25 million or more in annual gross
 revenue from Federal contracts (and subcontracts), loans, grants (and subgrants), and cooperative
 agreements; and c) the public does not have access to information about the compensation of the
 senior executives through periodic reports filed under section 13(a) or 15(d) of the Securities
 Exchange Act of 1934 or section 6104 of the Internal Revenue Code of 1986.
- 5. Department of Defense High Performance Computing Program
 The DoD High Performance Computing Program (HPCMP) furnishes the DoD RDT&E communities with use-access to very powerful high performance computing systems. Awardees of ONR assistance instruments may be eligible to use HPCMP assets in support of their funded activities if ONR Program Officer approval is obtained and if security/screening requirements are favorably completed. Additional information and an application may be found at http://www.hpcmo.hpc.mil/.

6. Organizational Conflicts of Interest

All offerors and proposed partners, subawardees and subcontractors must affirm whether they are providing scientific, engineering, and technical assistance (SETA) or similar support to any ONR technical office(s) or Office of the Secretary of Defense (OSD) through an active contract or subcontract. All affirmations must state which office(s) the offeror supports and identify the prime contract numbers. Affirmations shall be furnished at the time of proposal submission. All facts relevant to the existence or potential existence of organizational conflicts of interest (FAR 9.5) must

be disclosed. The disclosure shall include a description of the action the offeror has taken or proposes to take to avoid, neutralize, or mitigate such conflict. In accordance with FAR 9.503 and without prior approval, a contractor cannot simultaneously be a SETA and a research and development performer. Proposals that fail to fully disclose potential conflicts of interests will be rejected without technical evaluation and withdrawn from further consideration for award. Additional ONR OCI guidance can be found at http://www.onr.navy.mil/About-ONR/compliance-protections/Organizational-Conflicts-Interest.aspx. If a prospective offeror believes that any conflict of interest exists or may exist (whether organizational or otherwise), the offeror should promptly raise the issue with ONR by sending his/her contact information and a summary of the potential conflict by e-mail to the Contracting Point of Contact in Section VII below, before time and effort are expended in preparing a proposal and mitigation plan. If, in the sole opinion of the Agreements Officer after full consideration of the circumstances, any conflict situation cannot be effectively avoided, the proposal may be rejected without technical evaluation and withdrawn from further consideration for award under this solicitation.

7. Access to your Cooperative Agreement

Effective 01 October 2011, hard copies of award/modification documents are no longer mailed to offerors. All Office of Naval Research (ONR) award/modification documents will be available via the Department of Defense (DoD) Electronic Document Access System (EDA).

EDA is a web-based system that provides secure online access, storage, and retrieval of awards and modifications to DoD employees and vendors.

If you do not currently have access to EDA, complete a self-registration request as a "Vendor" via http://eda.ogden.disa.mil following the steps below:

- Click "New User Registration" (from the left Menu)
- Click "Begin VENDOR User Registration Process"
- Click "EDA Registration Form" under Username/Password (enter the appropriate data)
- Complete & Submit Registration form

Allow five (5) business days for your registration to be processed. EDA will notify you by email when your account is approved.

Registration questions may be directed to the EDA help desk toll free at 1-866-618-5988, Commercial at 801-605-7095, or via email at cscassig@csd.disa.mil (Subject: EDA Assistance).

VII. AGENCY CONTACTS

A. Business ouestions to the Contracting POC:

Mr. Wade Wargo (wade.wargo@navy.mil)

B. TECHNICAL QUESTIONS TO THE TECHNICAL POC:

Dr. William M. Mullins (william.m.mullins@navy.mil)

APPENDIX

I. Sample Cooperative Agreement (*Note: To be Provided later in an amendment to this announcement*)

