CESMII Roadmap Projects Request for Proposals (RFP-2, Wave 3) [SM Innovation Platform™ Capability Projects]

<table>
<thead>
<tr>
<th>Request for Proposals Issue Date</th>
<th>May 12, 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Informational Webinar</td>
<td>~May 14, 2020</td>
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<tr>
<td>2nd Informational Webinar</td>
<td>~May 19, 2020</td>
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<tr>
<td>Submission Deadline for full proposals</td>
<td>June 19, 2020</td>
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<tr>
<td>Expected Date for Projects Selection Notifications:</td>
<td>August 7, 2020</td>
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<tr>
<td>Anticipated Project Start Date:</td>
<td>October 26, 2020</td>
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Applications for this RFP must be received no later than 11:59 PM Eastern Time on June 19, 2020. CESMII may issue an amendment to extend the RFP subject to funding availability.

Applicants (project teams) must work together to develop a full proposal in response to this RFP. See Section 11 (APPLICATION AND SUBMISSION INFORMATION) of this RFP for more information.

Full proposals need to be submitted directly by the proposed project lead organization to CESMII by email to roadmapprojects.info@cesmii.org.

The RFP, templates and other related information are at https://www.cesmii.org/request-for-proposal/.

Questions regarding this opportunity can be submitted at roadmapprojects.info@cesmii.org. An attempt will be made to answer all questions. Questions and answers will be posted publicly on the https://www.cesmii.org/questions-and-answers/.

Informational webinars will be held. Additional information will be posted on the CESMII website: https://www.cesmii.org/request-for-proposal-webinar/.

Do not include any proprietary information in the proposals.
Modifications
All modifications to the RFP are highlighted in **yellow** in the body of this solicitation.

<table>
<thead>
<tr>
<th>Mod. No.</th>
<th>Date</th>
<th>Description of Modification</th>
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<tbody>
<tr>
<td>1</td>
<td>6/17/2020</td>
<td>Deleted “These functionalities and capabilities are depicted in Figures 2 and 3” in section 2.1</td>
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1. REQUEST FOR PROPOSAL

1.1 CESMII OVERVIEW

The objective of the Clean Energy Smart Manufacturing Innovation Institute (“Institute” or “CESMII”) is to support U.S. prosperity and security, significantly advance manufacturing within the U.S., and contribute to the creation of the Manufacturing USA network. The vision for this Institute and other Institutes within the network is to help revitalize American manufacturing and support domestic manufacturing competitiveness.

The Clean Energy Smart Manufacturing Innovation Institute (CESMII) was awarded to the University of California at Los Angeles (UCLA) under the U.S. Department of Energy (DOE) Cooperative Agreement DE-EE0007613. CESMII is a national network that brings together over $140 million in public-private investment and more than 100 partners from leading manufacturers and universities across 30+ states. The Institute will accelerate Smart Manufacturing (SM) adoption through the integration of advanced sensors, data analytics, platforms and controls to radically improve productivity, precision, performance and energy consumption.

The overall objectives of the Institute are to:

1. Lead a national effort to develop, research, test, and widely validate SM technologies and practices in a continuously evolving manner;
2. Develop a roadmap for SM technologies, practices, services, and training and update the roadmap periodically as needed;
3. Support SM Research & Development, to provide capabilities for and collaboration in open, pre-competitive work among multiple parties;
4. Establish a technical education and workforce development program that leverages regional networks;
5. Stimulate growth of a SM domestic supply chain;
6. Demonstrate participation of underrepresented groups in CESMII; and
7. Be financially self-sustaining after the five-year period of federal funding.

The above objectives and goals are driven by the overall performance metrics for CESMII, which are:

1. Energy Productivity: Energy productivity gains in U.S. manufacturing will be doubled in 10 years.
2. Energy Efficiency: 15% improvement in energy efficiency in first-of-a-kind industrial testbeds will be achieved within 5 years.
3. Industry Deployment Costs: Cost of deploying SM technologies including hardware and software in existing manufacturing processes will be reduced 50% relative to state-of-the-art in 5 years.
4. Adoption Costs: Installed and operating cost for adoption of SM technologies including hardware and software will be recovered through energy savings and productivity improvements in 10 years.
5. Workforce: SM workforce capacity in U.S. will be increased two-fold by 2020 and five-fold by 2030.
6. Supply Chain: SM supply chain will increase value and participation 40% by 2030.

CESMII and its members have worked together to develop a Roadmap to identify themes and topics that are of specific importance in the development of SM solutions necessary to achieve CESMII’s goals. Our Roadmap can be found at https://www.cesmii.org/cesmii-roadmap/.

As SM becomes the norm in U.S. manufacturing, U.S. companies will create innovations in new, integrated, systematic processes with a highly skilled SM workforce and vibrant supply chain that will lead
a global transformation of the manufacturing industry. To initiate this transformation, CESMII is utilizing an integrated technical approach of advanced sensors, controls, platforms and modeling across a diverse portfolio of technology projects.

1.2 ABOUT THIS RFP:
This Request for Proposals (RFP) is the third wave of the second round of requests (RFP2) for CESMII. It seeks to fund projects that support the objectives and goals stated above. RFP2 represents a total investment of approximately $14.6M with 50% in federal funding and 50% awardee cost-share. Wave 1 was focused on closing specific gaps in enabling R&D ($6.25M total funding) while Wave 2 was focused on education and workforce development ($1.4M total funding).

For this RFP (Wave 3), approximately $2.0M ($1M federal and $1M cost share) will be allocated toward growing the capabilities of the SM Innovation Platform™ in order to support current and future institute projects. The capabilities targeted for this RFP include Connectivity & Data Ingestion, Marketplace and Data Contextualization, and Secure Data Access, Management, and Exchange.

Additional details are provided in the subsequent sections.

This document outlines the process that CESMII will use to solicit, review, and award projects for RFP2-Wave 3. The most recent version of the RFP for this wave is available at https://www.cesmii.org/request-for-proposal/.

2. TECHNICAL AREAS OF INTEREST
2.1 BACKGROUND INFORMATION
CESMII’s goal is to accelerate Smart Manufacturing (SM) adoption through the integration of building block technologies such as advanced sensors, controls, platforms and modeling (ASCPM) to radically improve productivity, precision, performance and energy consumption. While each individual building block may on its own be useful in eliminating specific barriers to SM implementation, the information flow between these building blocks is essential to ensure that the solutions developed with these technologies are implemented in a cost effective, re-usable, secure, scalable and repeatable manner. An articulation is provide here: Building block SM technologies and information flow between them

CESMII is therefore developing an open, innovative, collaborative and vendor agnostic OT/IT (Operational Technology/Information Technology) SM Innovation Platform. The strategic objectives of the CESMII SM Innovation Platform Infrastructure include:
1. Establish reference architecture and specifications for the SM Innovation Platform
2. Provide assets needed for enterprise data connection and contextualization
3. Establish solutions of both legacy and future operational technologies and information technologies (OT/IT) and address standards that are open and interoperable
4. Engineer secure framework for multi-vendor cyber-physical systems with interoperable hardware and software solutions
5. Establish a robust, accessible SM Marketplace™ of certified and composable applications, configurations, toolkits, data, and services for accelerated development and deployment
6. Lead the development of trusted technology, organization, and business cyber security practices that underpin SM

CESMII’s approach to meeting the above strategic objectives is made up of three fundamental components: The SM Innovation Platform, SM Profiles and the SM Marketplace.

The SM Innovation Platform (SMIP) is an environment that allows individual operational technology (OT) functional components to be able to interoperate, and for data to be orchestrated between these components. The core functionalities and capabilities of the SMIP can be broadly classified into the
following:

**Functionalities:**
1. Connectivity (ability to connect to different data sources)
2. Secure Data access, management, exchange (ability to access, store, retrieve the structured data)
3. Interoperability (ability for OT components to access/interact with the structured data)

**Capabilities:**
4. Data ingestion (ability to acquire/capture data)
5. Data Contextualization (ability to organize data into a structured form)
6. Workflow orchestration (ability to orchestrate data movement between OT components)
7. Platform management (ability to create instances of the platform for creating solutions)
8. Marketplace (ability for applications to be integrated into the platform for use in developing solutions)

These functionalities and capabilities are depicted in Figures 2 and 3.

**SM Profiles** are an innovative way of representing data in structured information models that provide the ability to move “data-in-context” from source to consumption, and between components that consume the data to provide a solution. Developers and end-users will adapt or customize the information model with constructs that are specific to a particular domain, platform or application. In other words, a profile is a digital extension mechanism to seamlessly connect, collect, analyze and act at the edge, the cloud and in the apps in the SM Innovation Platform. The SM Innovation Platform and SM Profiles contribute to the creation of an open, de facto standard for how information is ingested and contextualized for consumption by any compliant application.

The **SM Marketplace** is akin to an “app store” where developers of OT applications can make their products available through the SMIP for use for developing solutions to manufacturing use cases. The marketplace also includes SM Profiles representing structured information for devices, machines and processes. These profiles and applications are then used for creating solutions to manufacturing use cases. Profiles and applications are created for the SMIP marketplace through institute funded projects, including enabling R&D projects and Innovation projects.

An overview of CESMII’s SM Innovation Platform and SM Profiles is provided in the following documents:
- SM Innovation Platform-and-SM Profiles
- Understanding the SM Innovation Platform

In August 2019, CESMII demonstrated some of the core capabilities of the SM Platform™ in a Community Technology Preview ([https://youtu.be/7I1xNVjahVY](https://youtu.be/7I1xNVjahVY)) followed by an updated demonstration in April 2020, focusing on the interoperability and openness of the platform ([https://youtu.be/j8fymUL55xk](https://youtu.be/j8fymUL55xk)). Readers are encouraged to review the information and capabilities demonstrated in these videos.

At present, SM Profiles are an in-development Open Platform Communications Unified Architecture (OPC UA) Companion specification that defines both the data set, and the data binding information for a well-defined manufacturing system (machines) or process. Later these Profiles will be agnostic to any specific standard or protocol. Efforts are currently under way to develop specifications for these SM Profiles, as well as develop software tools that will allow users to create SM Profiles for various devices, machines, processes and flow paths.

Development of a framework for the SM Marketplace is expected to begin during 2Q2020.
2.2 SM INNOVATION PLATFORM Capabilities Projects
This RFP (Wave 3) will be focused on improving the core capabilities of SM Innovation Platform and address the gaps in its core capabilities. These set of core OT/IT capabilities are required to support manufacturing use cases that cut across energy productivity improvement, energy consumption reduction, process optimization, performance and productivity improvement as well as monitoring & diagnostics.

The key themes for this category of projects are captured in the following:

- Connectivity & Data ingestion
- Data contextualization
- Secure data access, management, exchange

In reference to the themes stated above, CESMII is inviting proposals in the specific areas of interest listed in the subsequent sections:

2.2.1 CONNECTIVITY AND DATA INGESTION
The SM Profile™ will provide a semantic and structure for defining data models and binding those models to real-world manufacturing technology. While OPC UA will provide the underlying format and the initial connectivity, CESMII is inviting proposals for projects that will help expand connectivity and ingestion to cover a wide array of prevalent communication protocols and egress methods, and in patterns that would ensure simplicity in adding new protocols in the future. Ideally this will include:

- Adapters or drivers for SM Innovation Platform technology, or the extension of existing industry technology to support translation or normalization from proprietary protocols to and from an SM Profile, with a focus on MQTT, HART, CIP and Profinet, although other protocols are of interest as well.
- Adapters or translators for integrating with the specification embedded in a machine or system, such as PackML, or existing proxies for systems provided by incumbent industry software, such as ThingWorx or Asset Framework Templates.
- Support more and smaller edge devices by implementing the SMIP Connector on low-cost Linux based environments, such as Raspberry Pi.
- Extended testing for the Windows version of the SMIP Connector.
- Packaged SMIP connectors for a variety of edge hardware (e.g. Raspberry Pi, Ectron Windows PC)

2.2.3 DATA CONTEXTUALIZATION AND MARKETPLACE
Since the eventual repository of SM Profiles will be brokered by the SM Marketplace, CESMII is also interested in proposals that would support the creation of the Marketplace, including the following capabilities:

- A low-complexity marketing gateway for member technologies, where member applications, profiles and capabilities can be discovered. Initially these offerings may not be tied to the Platform, or may require manual configuration, but should expand to include capabilities for registering and ingesting Profiles and linking them to particular solutions or equipment types, for simplified discovery and acquisition.
- A mechanism for registering and ingesting Profiles and linking them to particular solutions or equipment types
- A means for Apps to identify which Profiles they work against or a means to submit new Profiles, and a means for Apps to identify which Permissions they require. A manifest-based declaration should be created to automate ingestion.
- A mechanism by which a new App can be added to the Marketplace. Includes collecting all
necessary information about the app.

2.2.4 Secure Data Access, Management and Exchange
In the context of the SM Innovation Platform, this area of interest includes ensuring secure access to the data, establishing secure methods of data exchange between data acquisition, data management and data consumption through the platform, and establishing trusted processes for communications between applications. CESMII is seeking proposals for projects that support the integration of enterprise and Cloud directory services into the SMIP, as well as tools that facilitate the application of permissions to Marketplace end-points leveraging those directories. Specific capabilities include:

- Integrating the Platform into a variety of Directory Services (e.g.: Active Directory, Google, etc...) based on prioritization from membership.
- An administrative toolset or User Interface for scaling up or down a platform instance, potentially including automatic scaling, to manage costs and growth.
- An approach to maintaining compatibility as CESMII Marketplace Apps are revised.
- Creating application permission records in the acquirer's platform instance.
- Automate the connection between the acquired app and the acquirer's app instance end-point.

3. Award Information
3.1 Award Overview

3.1.1 Estimated Funding
CESMII intends to fund Projects in this RFP with the greatest chance of achieving the goals and mission of CESMII. CESMII may award an entire proposal or any part of a proposal at a funding level that will involve negotiation with the applicant. CESMII may issue awards in one, multiple, or none of the above Areas of Interest.

CESMII expects to make approximately $1M of federal funding available for new awards under this RFP-2 Wave 3. Projects will also be required to provide matching (1:1) cost share per Section 10 below. The project funding may range from $50K-$300K (total, federal + cost share) depending upon the scope. Details are shown in Table 1.

<table>
<thead>
<tr>
<th>Technical Areas of Interest</th>
<th>Number of Awards Anticipated</th>
<th>Federal Funding Available For this RFP Wave</th>
<th>Member cost-share</th>
<th>Period of Performance</th>
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<td>SM Innovation Platform Capabilities</td>
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<td>~6-12 Months</td>
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<tr>
<td>Total:</td>
<td>~8</td>
<td>$1,000,000</td>
<td>$1,000,000</td>
<td>~6-12 Months</td>
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3.1.2 Period of Performance
For this RFP, CESMII anticipates making awards with periods of performance up to 12 months (but not less than 6 months) depending on the categories shown in Table 1. All projects will be stage-gated with Go/No-Go decisions at each stage (at least one Go/No Go decision point for every CESMII budget period). We expect that the first phase of capability projects is expected to be from October 2020 to January 2021, and a Go/No Go decision point is required at this point. The second phase will begin in February 2021. Project budgets and work scope need to be developed around this anticipated schedule. A more accurate schedule will be provided when the awards are approved. Project continuation will be contingent upon satisfactory performance and Go/No-Go decision review. Each quarter, as well as at each Go/No-Go decision point, CESMII will evaluate project performance, project schedule adherence,
meeting milestone objectives, compliance with reporting requirements, and overall contribution to the program goals and objectives.

3.1.3. CESMII / UCLA FUNDING AGREEMENTS
UCLA will negotiate a subrecipient agreement with lead organizations for each of the project teams. These agreements will include mandatory flow-down terms and conditions from the DOE-UCLA cooperative agreement.

4. ELIGIBILITY INFORMATION
Project teams consisting of CESMII members as well as non-members are eligible to submit proposals in response to this RFP. All proposals are submitted directly to CESMII Headquarters for evaluation. Proposal teams and team members (current or potential members who will be sub-recipients under UCLA) must meet the criteria set forth below to be considered for eligibility and evaluation.

4.1 Eligible Applicants
4.1.1. Project Team Members
All project team members submitting proposals to CESMII must be members in good standing by the time the project is awarded by CESMII. A member is in good standing if they have executed a membership agreement and are current with their annual dues. A potential member may submit a proposal but must be a member in good standing by the time the project is awarded. Information regarding CESMII Membership can be found on the CESMII website, https://www.cesmii.org/membership-information/.

4.1.2. Participation by Foreign Entities
Approved CESMII members who are foreign entities may apply for project funding. If any project work will be done in a foreign country, CESMII will work with the project team to complete a Foreign Work Waiver (FWW) that will be submitted to DOE for review and approval. See section 5 below for more information.

5. Performance of Work In The United States
All work must be performed in the United States unless a waiver has been approved. This requirement does not apply to the purchase of supplies and equipment; however, every effort should be made to purchase supplies and equipment within the United States.

5.1 Failure To Comply
If the Project Team fails to comply with the Performance of Work in the United States requirement, CESMII will deny reimbursement for the work conducted outside the United States and such costs will not be recognized as allowable cost share regardless of whether the work is performed by the sub-recipients, contractors or other project partners.

5.2 Waiver For Work Outside The U.S.
All work must be performed in the United States, however, CESMII may approve the performance of a portion of the work outside the United States under limited circumstances. A waiver must be submitted to CESMII and approved by DOE prior to conducting any work outside the U.S. To request a waiver, the Project Team must submit a written waiver request to CESMII, which includes the following information:
1. The rationale for performing the work outside the U.S.;
2. A description of the work proposed to be performed outside the U.S.;
3. A description of the anticipated benefits to be realized by the proposed work and the anticipated contributions to the U.S economy;
4. A description of the likelihood of Intellectual Property (IP) being created from the work and the treatment of any such IP;
5. The total estimated cost (CESMII funding and Project Team cost share) proposed for the work to be performed; and
6. The countries in which the work is proposed to be performed.

For the rationale, the Project Team must demonstrate to the satisfaction of CESMII and DOE that the performance of work outside the United States would further the purposes of the CESMII Prime Cooperative Agreement and is in the economic interests of the United States.

6. U.S. MANUFACTURING COMMITMENTS
CESMII’s U.S. Manufacturing Plan represents our commitment to support U.S. manufacturing as a result of its performance under the (DOE) Cooperative Agreement DE-EE0007613. When a project is selected for an award, the U.S. Manufacturing Plan will become part of the terms and conditions of the sub-agreement. The CESMII Manufacturing Plan can be found at https://www.cesmii.org/request-for-proposal/.

7. NEPA REQUIREMENTS
All projects awarded under this RFP are subject to the National Environmental Policy Act (NEPA) prior to commencement of work. NEPA requires all Federal agencies to integrate environmental values into their decision-making processes by considering the potential environmental impacts of their proposed actions. A completed EQ-1 NEPA form will be required after the selection of projects.

CESMII will submit all Project NEPA information and documentation to DOE for review. Prior to authorizing the use of Federal funds, DOE may require information in addition to the above in order to issue a NEPA determination for the project. Additional information in regard to the NEPA requirements can be found at https://www.eere-pmc.energy.gov/NEPA.aspx.

8. INTELLECTUAL PROPERTY PLAN
The CESMII Intellectual Property Management Plan governs the treatment of Intellectual Property and the rights between CESMII and its Members. The DOE Cooperative Agreement controls the Intellectual Property rights between DOE, CESMII, and its Sub recipients/Sub-awardees. For details and additional information, the CESMII Intellectual Property Plan can be found at https://www.cesmii.org/request-for-proposal/ and the DOE Intellectual Property Clauses pertaining to the Cooperative Agreement can be found at https://www.cesmii.org/model-sub-agreement/.

9. MODEL SUB-AGREEMENT
CESMII will negotiate sub-agreements for all selected projects. Model sub-agreements, which include mandatory flow-down clauses as required by the Cooperative Agreement DE-EE0007613, Reporting Requirements, Intellectual Property Clauses, and National Policy Assurances can be found at https://www.cesmii.org/model-sub-agreement/.

10. COST SHARING
The cost share must be at least 50% of the total allowable costs for the project (i.e., the sum of the CESMII share and the recipient share of allowable costs equals the total allowable cost of the project) and must come from non-Federal sources unless otherwise allowed by law. (See 2 CFR 200.306 and 2 CFR 910.130 for the applicable cost sharing requirements.) Although the cost share requirement applies to the project, including work performed by members of the project team, the project lead organization is responsible for ensuring that the project contributes the required cost share.

10.1 COST SHARE ALLOCATION
Each Project Team is free to determine how best to allocate the cost share requirement among the team members. The amount contributed by individual Project Team members may vary, as long as the cost share requirement for the project as a whole is met.
10.2 ALLOWABLE COST SHARE
The Team members may provide cost share in the form of cash or in-kind contributions. See 2 CFR 200.306 and 2 CFR 910.130 for information on what is allowable cost share.

10.3 COST SHARE VERIFICATION
Upon selection for award negotiations, all Project Team Members are required to provide written assurance of their proposed cost share contributions in their final SOPOs. Each organization providing cost share in support of the Project must submit a Letter of Commitment that describes the contribution and signed by an authorized representative of the organization.

11. APPLICATION AND SUBMISSION INFORMATION
   11.1 APPLICATION PROCESS
Both current and prospective CESMII members are encouraged to write proposals for submission in response to the RFP2 Wave 3. Any project team members who are not CESMII members will be required to finalize CESMII membership and be in good standing prior to the awarding of the project by CESMII Head Quarters (HQ).

Roadmap Projects follow a Stage Gate Process comprising of four stages (Refer to Figure 1) with go/no-go gates (Gate 1 to Gate 4) in which CESMII, and the DOE work together to provide guidance, review, selection and approval of projects. The basic flow of documentation begins with potential project ideas and concepts generated by the CESMII members or potential members in response to this RFP.
In stage I, CESMII CTO, CEO and COO will finalize the RFP based on the technical roadmap. The Gate is the RFP release.

In stage II, members and prospective members submit full proposals in response to the RFP. The Gate is the final selection and concurrence with the DOE on selected proposals.

In stage III, CESMII/UCLA technical and contractual teams, and Lead Organizations will negotiate final scope and budgets for the selected proposals. CESMII HQ and lead organizations will prepare final project document packages (SOPOs, Budgets, WBSs, NEPA Tables, Commitment letters, etc.) for submittals to the DOE. CESMII and DOE will enter into a final technical and financial review. The Gate is the submittal and approval of final project documentation.

In Stage IV, CESMII/UCLA and DOE will work closely to modify and approve the current Institute SOPO to include selected projects’ budgets. Upon SOPO mod approval, UCLA and CESMII will perform a final contractual review and issue sub recipient agreements to the individual project lead organizations. Ultimately and prior to work initiation, all new projects will need to be incorporated into the DOE award through a formal modification, followed by UCLA sub-recipient awards with the project performer(s). The Gate is the DOE SOPO modification approval and UCLA sub recipient agreements to lead organizations.

All proposal submissions must conform to the following form, its content requirements, (described below) and must be submitted to roadmapprojects.info@cesmii.org unless specifically stated otherwise.
Proposals must conform to the following requirements:

- Proposals must be submitted in Adobe PDF format unless requested otherwise.
- Proposals must be written in English.
- All pages must be formatted to fit on 8.5 x 11-inch paper with margins not less than one inch on every side. Use Times New Roman typeface, a black font color, and a font size of 12 point or larger (except in figures or tables, which may be a 10-point font). A symbol font may be used to insert Greek letters or special characters, but the font size requirement still applies. References must be included as footnotes or endnotes in a font size of 10 or larger. Footnotes and endnotes are counted toward the maximum page requirement.
- Submit the proposal as a single PDF file.

11.2 APPLICATION FORMS

The application guidelines and instructions are available on the CESMII website. (https://http://www.cesmii.org/request-for-proposal/)

11.3 PROPOSAL

The full proposals must address the Review Criteria as discussed in section 12 of this RFP.

Applicants must provide sufficient citations and references to the primary research literature to justify the claims and approaches made in the Technical Approach. However, CESMII and reviewers are under no obligation to review cited sources.

Proposals must be completed using the provided proposal template available on the CESMII website (https://http://www.cesmii.org/request-for-proposal/). Proposals should contain no more than 15 pages total.

12. EVALUATION & SELECTION CRITERIA

12.1 TECHNICAL EVALUATION CRITERIA

Areas of Interest: SM INNOVATION PLATFORM CAPABILITY PROJECTS

1. Technical Merit (Weight: 40%) – The extent to which the project addresses the areas of interest stated in this RFP. The extent to which the project, if successfully carried out, will make a valuable contribution to the field of smart manufacturing, SM Innovation Platform, CESMII and its members. The project objectives are clearly stated, challenging, well-conceived, and technically feasible. The degree to which this project will provide valuable new tools, engineering processes, devices, or hardware/software/data to support adjacent Institute activities. The degree to which the project aligns with, and will materially advance, the mission of the Institute. The extent to which the project will impact metrics such as energy reduction and/or productivity.

2. Technical Approach (Weight: 35%) - Adequacy and feasibility of the applicant’s approach to achieving the stated objectives of the project. The extent to which the project plan, methods, analysis, and technology are properly developed, well integrated, and appropriate to the objectives of the project. Appropriateness rationale, and completeness of the proposed Project Proposal. Degree to which the applicant has identified high risk challenges and presented reasonable mitigation strategies. There is a high degree of innovation, novelty or originality in the approach. Adequacy and appropriateness of the proposed schedule, staffing plan, and proposed travel.

3. Technical and Management Capabilities (Weight: 25%) - Likelihood that the proposed work can be accomplished within the proposed budget and performance period by the technical team, given their experience, expertise, past accomplishments, available resources, institutional commitment, and access to technologies. Clarity, completeness and appropriateness of the project plan and
timeline. Clarity, logic, and effectiveness of the project organization, including sub awardees to successfully complete the project. Credentials, capabilities, experience of the key personnel. Adequacy and availability of personnel, facilities, and equipment (both hardware and software) to perform the proposed project within the budget specified.

12.2 **PORTFOLIO SELECTION CRITERIA**

To create a balanced portfolio CESMII will select projects that are complementary and support the accomplishment of CESMII objectives. This will include the following criteria:

1. Meets strategic goals of the Institute
2. Fit with current Budget Period (BP) funding profiles
3. Cross-industry applicability and broad-based impact
4. Utilization of the SM Innovation Platform core capabilities and messages and SM Marketplace
5. Full compliance with DOE and CESMII requirements
6. Broader base application across other industries for reusability
7. High-level fit to create balance in the Institute’s project portfolio
8. Whether the proposed project will accelerate transformational technological advances in areas that industry by itself is not likely to undertake because of technical and financial uncertainty

13 **OTHER INFORMATION**

13.1 **RFP MODIFICATIONS**

Amendments to this RFP will be posted on the CESMII Website at [https://www.cesmii.org/request-for-proposal/](https://www.cesmii.org/request-for-proposal/). CESMII recommends that you check the website often to ensure you receive timely notice of any amendments to the RFP.

13.2 **INFORMAL WEBINAR**

CESMII will conduct one or more informational webinars during the RFP process. Webinars will be held after the initial RFP release but before the due date for Proposals.

Specific dates for webinars can be found on the cover page of the RFP and the CESMII website upon release of RFP.

14 **POST SELECTION REQUIREMENTS**

The following documents are required to be submitted after selection during award negotiations:

1. Project Statement of Project Objectives (SOPO- SMART deliverables and milestones)
2. EQ-1 NEPA Form
3. Cost Share commitment letters matching EERE335
4. EERE 335 forms for different team members as necessary
5. Project work breakdown structure (WBS)
6. Schedule
7. Salary waivers if necessary