Request for Information  
Department of the Navy 
Surface Combatant Software Factories

Description:
This is a Request for Information (RFI) as defined in FAR 15.201(e). The Navy is requesting information regarding industry’s capabilities and related experience to assist the Navy in new software capability development, software architecture and refactoring, and operating in a software factory. Industry capabilities will need to support software for AEGIS cruisers and destroyers, software for new construction large and small surface combatants, and software for other related programs including but not limited to Littoral Combat Ship (LCS), U.S. Coast Guard (USCG), and AEGIS Foreign Military Sales (FMS).

The NAICS code applicable to this RFI is **541512**: “Computer System Design Services”

RFI Purpose:
For this RFI, the Department of the Navy, Naval Sea Systems Command (NAVSEA), Program Executive Office Integrated Warfare Systems (PEO IWS) would like to gauge industry interest and capability in providing new software capability development, rearchitecting existing code bases, refactoring existing code, and industry’s operational capability in a “software factory” model of scaled software development.

This RFI is posted in advance of an Industry Day planned for the week of 8-12 July. This RFI will be amended to provide a final date for Industry day.

To ensure maximum opportunity for industry response, PEO IWS anticipates that interested parties may only have capabilities in select areas of the RFI. PEO IWS welcomes partial responses to the scope of work noting that company information must be included in the response. Page length limitations are described herein. PEO IWS is interested in the full potential of industry responses including small businesses.

Interested parties shall address the following in the RFI submission:

1. Company Information
   a. Provide company name, address, DUNS number, CAGE code, tax identification number, designated representative name(s) and point of contact, including phone numbers and e-mail addresses.
   b. Provide number of employees employed by company, and annual revenue/receipts for the last three (3) completed company fiscal years.
   c. Identify Government or commercial contracts within the last five (5) years with similar scope and provide a brief overview of company responsibilities and outcomes.
d. If a small business, identify type of small business (e.g. 8(a), Hubzone, service-disabled veteran-owned, economically disadvantaged women-owned, or women-owned).

2. Experience and Performance Capability Areas

a. **New Capability Development** (5-page response max for this area)

The Navy requests the company describe their current activities in software development introducing new functionality or upgrades to an existing software system. The Navy is interested in the company describing their experience with software development teams that can evaluate candidate upgrades and modifications, develop software functions for transition into a larger system and execute software integration and test. The company should describe the extent of their experience in using end-to-end software development teams, implementing cybersecurity throughout development, defining software development plans, software coding, software component testing, and documenting software trouble reports. The company should discuss utilization of agile methodologies in a Government-Owned-Contractor-Operated (GOCO) DevSecOps environment. The company should describe experience in developing capability in microservices and hardened containers (see Attachments 1 & 2 to this RFI for Office of the Undersecretary of Defense example frameworks) and identify any shortfalls/issues with the Government pursuing those techniques. The company should describe a plan for implementation of innovations in software development, such as machine learning and metadata modeling, and propose additional techniques that will reduce the Navy’s software development timelines and improve software quality, combat system performance, and cost effectiveness.

The company should describe their capability to implement and manage multiple software development teams simultaneously. The company should describe what inputs are required for effective and efficient software development.

The Navy is interested in the company describing software metrics (agile and otherwise) and data reporting that will enable the Navy to assess the efficacy of the Contractor’s software development program. This should include the definition of “done” for delivered code.

b. **Software Architecture and Software Refactor** (5-page response max for this area)

The Navy requests interested parties describe their current and past activities in software architecture development and software refactoring. The company should identify specific experience in developing, documenting, and refining software architecture in a loosely-coupled manner with common best practices and tools such as: APIs, service mesh, and microservices. The company should identify processes/procedures required to establish, and sustain an evolving software architecture. The company should describe prior experience in providing software architectural guidance recommendations. The Navy requests the company describe prior successful approaches and/or their capability for transitioning existing monolithic software systems into microservices. If the company did
not utilize a Strangler Pattern method, the company should describe the alternative approach used and its benefits vis-à-vis Strangler Pattern. The Navy requests the company describe impacts utilizing a GOCO DevSecOps environment will have on software architecture and software refactoring.

The company should describe prior success in reducing the latent defect “technical debt” of a software system and describe its approach to maintaining a low technical debt.

c. **Software Factory** (5-page response max for this area)

The Navy requests the company describe their current or past activities in software development in a capacity based “software factory” model. The company should describe how its new capability development and refactoring efforts are implemented utilizing this model. The company should describe its approach to managing an evolving capability backlog with shifting priorities, and its recommended methods of customer engagement.

The company should describe best practices for teaming with small businesses, non-traditional DoD businesses, and academia and how the company would optimize them within their software factory.

The Navy requests the company describe how they would incorporate Government system engineering into their software factory.

The Navy requests the company describe any impacts utilizing a GOCO DevSecOps environment will have on their software factory.

3. **Barriers to Development and Delivery**

Please identify any obstacles to the development and delivery of completed software in such areas as: a classified DevSecOps environment, an unclassified DevSecOps environment, Government system engineering, Government product ownership, development processes, development models, and/or scope of effort.

Identify potential benefits of innovative contracting arrangements to include non-Federal Acquisition Regulation based contracting methods.

**NOTE:** RFI responses shall be 20 pages or less with the following parameters: 5-page response max for an executive summary of company information and a discussion addressing barriers to development and delivery; 5-page response max for each one of three individual areas (a/b/c) in Section 2, “Experience and Performance Capability Areas” above. For example, if a company responds to only one area in Section 2 above, the company may only provide a 10-page response.

The Navy is conducting market research to identify qualified and responsible sources that may be interested in the requirements described in this notice. This RFI is issued for informational and planning purposes only and does not constitute a solicitation or a Request for Quote (RFQ). This
RFI is not to be construed as a commitment by the Government to issue a solicitation or award a contract. In accordance with FAR 15.201(e), responses to this notice are not offers and cannot be accepted by the Government to form a binding contract. As such, the Government will not reimburse any costs associated with responding to this notice. Information submitted in response to this RFI will become the property of the United States Government. Submitters should properly mark their responses with the appropriate restrictive markings. Information that is proprietary or competition sensitive will be protected from disclosure under the public records law only if properly labeled as such.

**RFI Responses:**

Interested companies should provide a response on or before 4:00 pm EST, 27 June 2019. The submission should include one electronic (virus scanned) copy sent via e-mail to patrick.loftus@navy.mil and jennifer.ede@navy.mil. Please include the RFI Title in the subject of the e-mail.

All information received that includes proprietary markings will be handled in accordance with applicable statutes and regulations. An acknowledgement of receipt will be provided for all responses received. If you do not receive an acknowledgement within two working days, please notify the points of contact listed in this notice.