

Request For White Papers:
Advanced Manufacturing On Demand

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CAUTION NOTICE:

1. Solicitation for white papers, solution briefs or proposals does not guarantee that the government will make an award;
2. Offerors bear all costs to prepare and submit responses to this solicitation;
3. By submitting a response, offerors agree that the government:
 - a. Shall reproduce the response, or any portions thereof, to the extent necessary to evaluate the offer;
 - b. Shall use information contained in the brief only for evaluation purposes. DoD shall not disclose, directly or indirectly, such information to any person including potential evaluators, unless that person has been authorized to receive such information.
4. For traditional defense contractors only: statute requires¹ a cost sharing arrangement of at least one-third if a non-traditional defense contractor does not participate to a significant extent in this prototype project. A cost sharing arrangement is not a consideration for award; therefore, the government will give no evaluation preference to offerors that propose a cost sharing arrangement;
5. Any Prototype Other Transaction Agreement (“OTA”) awarded in response to this solicitation may result in the award of a follow-on production contract or transaction without the use of further competitive procedures. The follow-on production contract or transaction will be available for use by one or more organizations in the Department of Defense and, as a result, the magnitude of the follow-on production contract or agreement could be significantly larger than that of the Prototype OTA. As such, any Prototype Other Transaction Agreement will include the following statement relative to the potential for follow-on production:

In accordance with 10 U.S.C. 2371b(f), and upon a determination that the prototype project for this transaction has been successfully completed, this competitively awarded prototype OTA may result in the award of a follow-on production contract or transaction without the use of competitive procedures.

¹ 10 U.S.C. § 2371b(d)(1)(c)

BACKGROUND:

The Defense Logistics Agency (“DLA”) is the Department of Defense’s largest logistics combat support activity. DLA provides worldwide support, primarily to the military services. Other customers include US civilian entities and foreign countries. DLA manages 5.1M national stock numbers (“NSNs”) – items that military services use.

DLA struggles with backordered parts. These backorders, with some delays as long as a year, are painful for customers because equipment can remain non-operational during that period. These backorders occur for a number of reasons, but ultimately stem from DLA’s existing procurement paradigm. Specifically, DLA buys widgets from traditional resellers that specialize in navigating DLA’s small buys. Manufacturers, even ones that use advanced techniques, work almost exclusively through those resellers or do not engage with DLA at all. This project is focused on piloting a new paradigm that is more technology focused and agile. We also aim to increase our domestic vendor pool by deliberately targeting digital manufacturing firms.

One notable cause of backorders are low frequency, low demand items. A common archetype: DLA receives a purchase request for an item that we have not purchased in ten years. The customer seeks minimal quantities, even one. Traditional manufacturing firms must obtain or create production materials such as custom tooling and molds to produce the part. This additional work results in higher costs than when that part was originally produced in higher volumes, when the production tools were more readily available. Thus, the quoted price is exorbitant compared to past history and leaves DLA unable to justify the costs.

PROBLEM STATEMENTS:

A. Produce Parts on Demand

DLA buyers are unable to procure certain items in a timely manner in order to fulfill customer requirements. To increase speed and efficiency and to decrease price, DLA seeks an automated platform where buyers upload 3D files (CAD) to receive nearly instant, automated quotes. The DLA Internet Bid Board System (DIBBS) is DLA’s existing system for these types of buys. DIBBS requires sellers to search information that DLA buyers post. This DIBBS paradigm requires sellers to perpetually seek items, with some basic alert features for high-level item classes. If enough sellers do not successfully find a request, DLA does not receive adequate competition to procure the parts. By contrast, an automated platform would reduce the burden on manufacturers to find open part requests because the platform itself would push requests to ensure competition amongst in-network manufacturers.

DLA buyers would upload information such as:

- A 3D CAD file
- Preferred fabrication material
- Quantity
- ITAR/safety compliance

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The platform would return information such as:

- Algorithmic pricing: material, labor, shipping
- Turnaround time
- Manufacturing method: options for additive and/or subtractive manufacturing

Scaling Potential:

- DLA manages 5.1M NSNs and has a desire to leverage more efficient acquisition tools. The prototype contract shall focus on a small number items (tens to hundreds). Should an awardee advance to a follow-on production contract, DLA may seek to apply this process to more items.
- DLA seeks to fabricate parts as a proof-of-concept. The prototype contract shall focus on commercial, competitive items inside the Industrial Hardware and Construction & Equipment supply chains. These parts shall not be sensitive, critical safety items or IP-restricted. Should an awardee advance to a follow-on production contract, DLA may seek to address those more difficult items. Those items typically reside in DLA's Aviation and Land & Maritime supply chains.

B. CAD on Demand

DLA buyers currently rely on 2D drawings and schematics to solicit replacement parts. DLA lacks 3D CAD files for most of its parts. DLA, therefore, must turn existing 2D schematics into accurate 3D CAD models in order to leverage a greater variety of manufacturing approaches. We are solution agnostic. Approaches could include:

- Technology based - advanced OCR, computer vision that reads and converts the drawings, etc.
- Expertise based – A pool of reverse engineers use the 2D drawings to create 3D models; or
- Knowledge based - offerors obtain CADs from their own repositories based on identifying part characteristics that the government provides, like serial numbers.

Scaling Potential:

- DLA manages 5.1M NSNs and has a desire to transition to 3D models. The prototype contract shall focus on a small number items (tens to hundreds). Should an awardee advance to a follow-on production contract, DLA may seek to build a much larger database.
- Virtual warehousing. DLA currently stocks important items in DLA facilities but this takes up shelf space. DLA could generate 3D models for these items with the intent to fabricate them on-demand instead of keeping large quantities on shelves.

SUBMISSION CRITERIA & EVALUATION PROCESS

The Government shall evaluate each offeror submission on the following three technical criteria², all of equal importance. The government shall also consider price. The technical criteria, popularized by IDEO³, is a common method to drive enterprise innovation and build successful prototypes. These criteria help prevent common dead ends and drive prototypes that are actionable, which the government is likely to adopt and scale.

1. **Feasibility** – solution to problem statement is technically possible. This criterion measures whether the technology exists or is likely to be developed in the scope of this prototype effort. An example of something that is not feasible is a “Star Trek” transporter;
2. **Viability** – solution to problem statement is compatible with DoD constraints, technical environments and other organizational requirements. This criterion measures whether DoD could easily adopt the prototype. An example of something which is not viable is a technology that has no chance of passing DoD cyber security requirements; and
3. **Desirability** – solution is responsive to a problem statement. This criterion measures whether end users are likely to adopt the offeror’s prototype solution. An example of something which is not desirable is a piece of field equipment that is so uncomfortable to carry that end users refuse to bring it into the field. Another example of something which is not desirable is a feasible, viable technology that does not meet the problem that end users are trying to solve.

The government does not anticipate that offerors will have a solution that combines both problem areas. Offerors should focus their responses on the particular problem statement to which they have relevant technology. Should an offeror have technology that is relevant to more than one problem area, it may submit separate white papers. Offerors should only provide one paper per problem statement.

White papers shall conform to the following. Should offerors submit anything longer, the government will only evaluate the first five pages of a white paper.

- Four pages of technical discussion—explicitly addressing the target problem statement and how the proposed solution meets the three evaluation criteria
- A one page rough order of magnitude (“ROM”) price

Within one month, the government shall respond to each white paper submission. At that time, the government shall inform an offeror that:

- 1.) the government has not selected to move forward with the submitted white paper; or
- 2.) the government requests that the offeror participate in an in-person (or virtual) pitch.

² <https://medium.com/innovation-sweet-spot/desirability-feasibility-viability-the-sweet-spot-for-innovation-d7946de2183c>

³ IDEO is a prominent Silicon Valley-based design firm. See IDEO.org

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The government shall use the same criteria to evaluate pitches as described for white papers.

After pitches, the government shall further down-select potential awardees and issue a request for prototype proposal (“RPP”) to the remaining candidate firm(s). The RPP will have specific guidelines. Chiefly, offerors must submit a statement of work and a detailed price breakdown as it relates to payment milestones. The government shall use the same criteria to evaluate prototype proposals as described for white papers and solution briefs.

PROJECT DURATION, ESTIMATED FUNDING & AWARD DATE:

Period of Performance: Successful offerors shall receive payment upon completion of the following three project phases/payment milestones:

- 1 Collaborative Minimum Viable Product (“MVP”) Design
- 1 Evaluation, payment and go/no-go decision
- 2 Awardee delivers MVP to government
- 2 Evaluation, payment and go/no-go decision; Scope prototype requirements
- 3 Awardee delivers prototype to government
- 3 Evaluation, payment and completion

For purposes of this project, the MVP is defined as the project blue print—the first step in the iterative process. After award, the successful offeror shall work with the government’s technical team to develop this detailed project plan for the eventual prototype. The government recognizes that, prior to award, offerors will have limited knowledge of the government’s relevant IT infrastructure and this collaborative phase allows the awardee to conduct relevant beneficiary discovery.

Minimum Funding: \$500,000.

The Government reserves the right to award multiple prototypes. Depending on technical merit, the government may allocate this funding:

- across multiple awards to various companies on one problem statement;
- across multiple awards to various companies on multiple problem statements;
- on one award to a single company; or
- any other configuration/allocation, including no award.

Please direct all questions and comments before the white paper submission deadline to accelerate@dla.mil

Electronic copies of white papers due: February 18, 2020 by 1:00 PM ET.