Request for Information (RFI)
RFI – DARPA-SN-24-63
Understanding if and how biotechnology can support a sustainable lunar economy

Responses due [Posting Date + 30 – avoiding weekends/holidays], 4:00 PM ET
POC: Dr. Leonard Tender, DARPA/BTO, E-mail: DARPA-SN-24-63@darpa.mil
URL: http://www.darpa.mil/work-with-us/opportunities
For 65 years, DARPA has established a crucial role in the space technology R&D ecosystem: de-risking technologies pivotal to civil space. DARPA aims to continue that tradition of technology initiatives that enable U.S. space leadership, and supports a future model where NASA, international governments, and commercial industry can rapidly scale up lunar exploration and commerce. To this end, the DARPA Biological Technologies Office (BTO) seeks to gain a better understanding of biotechnological advancements that could contribute to catalyzing an economically sustainable (i.e., revenue generating) lunar economy. One example of biological advancement for consideration is lunar-based biomanufacturing in which waste streams generated by civilian lunar inhabitants (e.g., black/gray/hygiene water, CO_2, and plastics) are used as feedstocks to produce materials for constructing a lunar infrastructure. This RFI seeks technoeconomic analyses and/or business plans including underlying data and assumptions from respondents with demonstrated expertise and experience relevant to the lunar economy. Reponses should address how a DARPA-led effort derisking a specific non-military biotechnological advancement identified by the respondent, culminating with its demonstration on the lunar surface by 2029, could be a key enabler in catalyzing a subsequent sustainable commercial lunar economy.

This RFI is not intended to duplicate efforts supported by NASA or other United States agencies.

NO CLASSIFIED INFORMATION SHOULD BE INCLUDED IN THE RFI RESPONSE.

It is the submitter's responsibility to clearly label proprietary information contained in the RFI response. DARPA will not disclose information labeled as proprietary.

DARPA invites responses from all capable and qualified sources including, but not limited to, universities, University-Affiliated Research Centers, U.S. Government laboratories, Federally Funded Research and Development Centers, and private or public companies. Inclusion of any available published, preliminary, or proprietary data is encouraged.

Format
Each submission should be typed in 12-point, single-spaced font on 8.5- by 11-inch pages, with 1-inch margins. All submissions must be electronic, adhere to the content formatting described below, and use one of the following file formats: Adobe PDF or Microsoft Word.

Responses should include:
1. Cover Page (one page)
    a. Title
    b. Organization

    c. Responder's technical and administrative points of contact (names, addresses, phone numbers, fax numbers, and email addresses)
2. Technical Response (**Limited to 10 pages)**. Respondents are strongly encouraged to consider DARPA's mission to drive development of disruptive technological breakthroughs, and clearly contrast their concepts with related work being funded by other government agencies or contained within a commercial company roadmap.
    a. Clearly state the specific respondent identified non-military biotechnological advancement.
    b. Provide information pertaining to technoeconomic analyses or business plans to be used by DARPA/BTO relevant to determining if a DARPA/BTO supported effort derisking the biotechnological advancement, culminating with its demonstration on the lunar surface by 2029, could be a key enabler in catalyzing a subsequent sustainable (i.e., revenue generating) commercial lunar economy.
    c. References to previously published work (up to one page)
3. (Optional) Responder Information (up to one page):
    a. Summary of related work and previous experience of the responder(s)
4. (Optional) Published, peer-reviewed original research articles, which are directly relevant to the items requested under this RFI. (up to five papers)
    a. If more than one article is submitted, individual files must be merged together and submitted as a single file.

Submission

All technical and administrative correspondence, questions regarding this announcement, how to respond to this RFI, and submissions themselves should be sent to DARPA-SN-24-63@darpa.mil. Please refer to "Understanding the economic and technologic drivers and gaps to support sustainable civilian presence in space" RFI in all correspondence. Emails sent directly to the Program Manager may result in a delayed response or no response.

Disclaimers and Important Notes

This is an RFI issued solely for information and new program planning purposes; it does not constitute a formal solicitation for proposals. 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. Submission is voluntary and is not required to propose to a subsequent Broad Agency Announcement (BAA) (if any) or other research solicitation (if any) on this topic. DARPA will NOT provide reimbursement for costs incurred in responding to this RFI. NO CLASSIFIED INFORMATION SHOULD BE INCLUDED IN THE RFI RESPONSE. It is the submitter's responsibility to clearly define to the Government what is considered proprietary data. Any proprietary information should be clearly labeled as "proprietary." Respondents are advised that DARPA is under no obligation to acknowledge receipt of the information received or provide feedback to respondents with respect to any information submitted under this RFI.