National Aeronautics and Space Administration
NASA Headquarters
Moon to Mars Program Office
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Washington, D.C. 20546-0001

Next Space Technologies for Exploration Partnerships -3 (NextSTEP-3)

Broad Agency Announcement Omnibus (NextSTEP-3_Omnibus)

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Refer To Appendices for Proposal Due Dates

Disclaimer: This document is a Broad Agency Announcement Omnibus which, by itself, is not a solicitation. Solicitations will come in the form of Appendices to this document that will be released as NASA needs warrant.

See the NextSTEP website for a listing of Appendices associated with this BAA.

NextSTEP-3 Change Log

Version	Description of Changes	Date
Original Release	-----	Sep 27, 2024

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Next Space Technologies for Exploration Partnerships-3

Scope of this Broad Agency Announcement Omnibus

This National Aeronautics and Space Administration (NASA) Broad Agency Announcement (BAA) Omnibus, titled Next Space Technologies for Exploration Partnerships-3 (NextSTEP-3), contemplates concept studies, basic and applied research and technology development and demonstrations in support of NASA's Human Spaceflight Enterprise. NextSTEP-3 is an Omnibus covering all aspects of basic and applied supporting research and technology for Human Space Exploration and robotic precursor activities. NASA's Human Spaceflight Enterprise, manages the NextSTEP-3 Omnibus. Research areas will be announced by issuing Appendices to this Omnibus, to include, but not limited to: studies to support mission architecture definition, new approaches to rapidly develop prototype systems, demonstration of key capabilities, validation of operational concepts for future human missions beyond low-Earth orbit, and end-to-end design, development, test, and in-space evaluation of future flight systems. The intent is that awards resulting from this Omnibus will enable external partnerships for robust exploration and implementation of opportunities. The Omnibus anticipates that the capabilities and technologies developed through these partnerships also will provide significant commercial applications beyond NASA. In order to ensure the offerors have the incentive to develop commercial applications, NASA highly encourages offerors provide corporate contributions in order to establish an external partnership. The long-term capability areas identified for research are intended to significantly benefit future human space exploration.

Specific research opportunities will be announced periodically as Appendices to this Omnibus. Each Appendix will contain detailed information about specific research emphases, concepts and technologies being sought, and solicitation logistics for that Appendix. The Appendices will have the funding and the specifics with regard to proposal instructions, eligibility, selection criteria and award decisions where they may differ from the content of this Omnibus. Proposal due dates will be posted at http://nasa.gov/nextstep and the links provided below. Interested Offerors should monitor http://nasa.gov/nextstep, and http://www.sam.gov(where applicable) for additional new program elements or amendments to this Omnibus through Fiscal Year (FY) 2029 with extensions possible. A web archive for amendments, clarifications, and corrections to NextSTEP can be found at http://nasa.gov/nextstep. Proposals in research areas not requested in the solicitation Appendix will be deemed non-compliant and will not be reviewed.

It is anticipated awards during the period of effectivity of this Omnibus will range from under $100K per year for focused, limited efforts (e.g., concept studies) to more than several million dollars per year for extensive activities (e.g., development of engineering prototypes, flight experiment hardware and flight experiments). The funds available for awards will be listed in the Appendices. Awards will be made as contracts based on the nature of the work proposed, the proposing organization, and/or program requirements. When appropriate, the Appendix will specify the type of contract vehicle contemplated for award and the anticipated period of performance. The period of performance typically varies and may last up to up to five years, however some opportunities may extend beyond five years in accordance with NASA FAR Supplement (NFS) 1817.204. Any contracts awarded through the Appendices of this Omnibus may continue to execute beyond the effectivity for this Omnibus.

The Appendices will specify what types of entities are allowed to submit proposals and/or participate for the particular program element research activity. Note: It is NASA policy that all investigations involving non-U.S. organizations will be conducted on the basis of no exchange of funds. Any changes or modifications
to any of the guidelines in this Omnibus will be specified in the descriptions of the relevant details in the Appendices.

Order of Precedence: In cases of contradictions or inconsistencies between texts, individual Appendices take precedence over this Omnibus. Of course, applicable federal statutes and regulations, however, continue to apply and take precedence over any solicitation or guidance.

Additional information or programmatic changes that may affect this Omnibus or any of its Appendices will be added as

a formal amendment to this Omnibus and posted on the websites identified above. It is each prospective Offeror's responsibility to check the NextSTEP website for updates concerning the Omnibus and the programs of interest. In addition, Offerors should monitor the Question-and-Answer log document posted or linked on the NextSTEP website under the applicable appendix. The Q&A log will be updated periodically with questions and answers posed by potential offerors.

1. Introduction and Background

1.1 Overview

NASA has increasingly embraced external partnerships for achieving its strategic goals and objectives for expanding the frontiers of knowledge, capabilities, and opportunities in space. The next step for human spaceflight is the development of deep space exploration capabilities and demonstrating these capabilities in cislunar space, the lunar surface, Mars, and beyond. An important part of NASA's strategy is to stimulate the commercial space industry while leveraging those same commercial capabilities through future contracts and external partnerships to deliver mission capabilities. The initial Next Space Technologies for Exploration Partnerships (NextSTEP) Broad Agency Announcement (BAA) was released in 2014 with selections made in 2015, and NextSTEP-2 was released in 2016 with an effective period through FY 2024. This effort, NextSTEP-3, will solicit additional proposals to continue NASA's development of space exploration technologies, capabilities, and concepts.

It is intended that Appendices issued under this Omnibus will be focused at a specific NASA center (e.g., Marshall Space Flight Center, Johnson Space Center, etc.).

In 2022, NASA established its Moon to Mars Blueprint strategy with input from U.S. industry, academia, international space agencies, and its workforce to guide deep space exploration. Ten goals and 63 objectives captured in NASA's Moon to Mars Strategy and Objectives Development document reflect a matured strategy for NASA and its partners to develop a sustained human presence and exploration throughout the solar system via the Moon to Mars endeavor. The goals and objectives are top-level enough to not mandate particular technical solutions or acquisition approaches, detailed enough to judge success, rigorously developed to make them resilient, and consistent with the value proposition and future trajectory. NASA's activities in the pioneering of space are driven by these goals and objectives. The Appendices under this Omnibus are envisioned to fall within or relate to the ten Moon to Mars overarching goals, which follow. Consult the "Blueprint" for more context and the objectives subordinate to each goal.

- Lunar/Planetary Science: Address high priority planetary science questions that are best accomplished by on-site human explorers on and around the Moon and Mars, aided by surface and orbiting robotic systems.
- Heliophysics Science: Address high-priority heliophysics science and space weather questions that are best accomplished using a combination of human explorers and robotic systems at the Moon, at Mars, and in deep space
- Human and Biological Science: Advance understanding of how biology responds to the environments of the Moon, Mars, and deep space to advance fundamental knowledge, to support safe, productive human space missions, and to reduce risks for future exploration.
- Physics and Physical Science: Address high-priority physics and physical science questions that are best accomplished by using unique attributes of the lunar environment.
- Science-Enabling: Develop integrated human and robotic methods and advanced techniques that enable high-priority scientific questions to be addressed around and on the Moon and Mars.
- Applied Science: Conduct science on the Moon, in cislunar space, and around and on Mars using integrated human and robotic methods and advanced techniques, to inform design and development of exploration systems and enable safe operations.
- Lunar Infrastructure: Create an interoperable global lunar utilization infrastructure where U.S. industry and international partners can maintain continuous robotic and human presence on the lunar surface for a robust lunar economy without NASA as the sole user, while accomplishing science objectives and testing for Mars.
- Mars Infrastructure: Create essential infrastructure to support an initial human Mars exploration campaign.

- Transportation and Habitation: Develop and demonstrate an integrated system of systems to conduct a campaign of human exploration missions to the Moon and Mars, while living and working on the lunar and Martian surfaces, with safe return to Earth.
- Operations: Conduct human missions on the surface and around the Moon followed by missions to Mars. Using a gradual build-up approach, these missions will demonstrate technologies and operations to live and work on a planetary surface other than Earth, with a safe return to Earth at the completion of the missions.

1.2 General Information for Participants

- **Agency:** National Aeronautics and Space Administration

- **Announcement Title:** NextSTEP-3 Broad Agency Announcement

Responsible Office: Moon to Mars Program Office, Washington, DC 20546
Point of Contact: Direct all inquiries to the NextSTEP mailbox at: HQ-NextSTEP-BAA@mail.nasa.gov

- **Notice of Intent:** To assist in the planning of the proposal evaluation process, NASA strongly encourages the submission of a Notice of Intent (NOI) to propose by all prospective offerors for each Appendix. Due dates for the NOI will be specified in each Appendix solicitation. The NOI should contain the following information: name, address, telephone number, e-mail address, and institutional affiliation of the offeror, and the solicitation topic in which you intend to propose. NOIs shall be submitted electronically to the Point of Contact e-mail address above. Please note that NOIs are strongly encouraged but are not required. Not submitting an NOI will not impact the selection process.

- **Proposal Submittals:** Proposals shall be submitted electronically in Adobe PDF format to the Point of Contact e-mail address above. Hard copies will not be accepted.

- **Inquiries:** There will be an opportunity to submit written questions for each Appendix released. The questions shall not contain proprietary information nor require proprietary information in the response. NASA will not provide evaluations, opinions, or recommendations regarding any suggested approaches or concepts. All questions shall be directed to the NextSTEP e-mail box no later than the date specified in the Appendix. Inquiries shall identify the BAA number and Appendix in the subject field of e- mails.

- **Industry Forum**: A NextSTEP Partnership opportunity forum may be held for each Appendix released and Offerors will have a chance to ask questions about that particular solicitation. The meeting agenda and related information will be posted to the NextSTEP website.

- **Website for Reference Information:** http://nasa.gov/nextstep
  Note: In the event a linked reference in this document no longer works, please consult the References section on the NextSTEP website which has links to all references in this document and will be updated as needed.

This Omnibus constitutes a BAA as contemplated by Federal Acquisition Regulation (FAR) Part 35 and NASA FAR Supplement (NFS) Part 1835.

NASA will not issue paper copies of this Omnibus. The Omnibus and associated Appendices related documents, and other information may be obtained and downloaded from the NextSTEP website or http://www.sam.gov. Offerors are encouraged to refer regularly to the NextSTEP website for updates and other information such as references. Responses to submitted questions concerning the Omnibus will be posted periodically on this website under the applicable Appendix.

2. Funding Opportunity Description

2.1 Human Spaceflight Enterprise Exploration Architecture

In NASA's Moon to Mars (M2M) Architecture Framework, described in the 2023 M2M Architecture Definition Document, multiple sub-architectures and segments will be used to ensure coherence in the elements, which may include various programs, projects, or systems. These programs and projects will be expanded or added to over time, plus additional elements with which they will need to interface within a sub-architecture. Segments will describe the relationship and cooperation across these elements. As systems mature, functions may be added or reassigned to reflect capabilities or implementations through the design or evolution of systems.

Within this framework, NASA is pursuing external partnerships to enable human space flight to become increasingly Earth independent and capable of expanding into the solar system. Through this pioneering work, we seek the capacity to learn, operate, and thrive safely in space for an extended, and eventually indefinite, period with a reduced supply chain from Earth.

2.2 Research Emphases of this Omnibus

In pursuit of NASA's strategic goal to send human missions beyond low Earth orbit and ultimately to the surface of Mars, this Omnibus contemplates concepts and technologies to demonstrate key capabilities that will further a near-Earth, cislunar, and lunar surface presence as a proving ground for future Mars exploration.

2.3 NASA Safety Policy

Safety is NASA's highest priority. Safety is the freedom from those conditions that can cause death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment. NASA's Safety and Mission Assurance requirements are identified in NPR 8715.1, NASA Safety and Health Programs. All research conducted under NASA auspices shall conform to these requirements.

2.4 Availability of Funds for Award

There is no funding associated with this Omnibus. All funding will be associated with each particular Appendix. The Government's ability to make awards is contingent upon the availability of appropriated funds and the receipt of proposals that NASA determines are acceptable for award under this Omnibus.

2.5 Funding Restrictions

The following restrictions are applicable to Appendices under this Omnibus:

- The estimated funding and number of proposals anticipated to be funded are subject to the availability of appropriated funds, as well as the submission of a sufficient number of proposals of adequate merit.
- It is not anticipated that solicitations will require the construction of facilities (i.e., buildings, structures, or other real property). However, if new or modified facilities are required to further the technology, the Offerors shall clearly state the rationale.
- U.S. award recipients may directly purchase supplies and/or services that do not constitute research from non-U.S. sources, but award funds may not be used to fund research carried out by non-U.S. organizations. However, subject to export control restrictions, a foreign national may receive remuneration through a NASA award for the conduct of research while employed either full or part time by a U.S. organization.
- Typically travel, including foreign travel, is allowed as may be necessary for the meaningful completion of the scope proposed within each Appendix.
- Costs for managing the project may be allowed. Refer to Paragraph 4 of this Omnibus (Proposal Submission Information for Appendices) or to Appendices to this Omnibus for specific cost or price proposal submission requirements. .

Personnel from NASA Centers shall propose budgets based on Full Cost Accounting (FCA) regardless of whether functioning as a Principal Investigator or as a team member. Non-NASA U.S. Government organizations shall propose based on FCA unless no such standards are in effect; in that case such Offerors shall follow the Managerial Cost

Accounting Standards for the Federal Government as recommended by the Federal Accounting Standards Advisory Board (FASAB). For further information, see the FASAB website.

If not specified in an Appendix, the NASA Awards Officer will determine the appropriate award instrument for the selections resulting from Appendices to this Omnibus. Contract awards will be subject to the provisions of the Federal Acquisition Regulation (FAR) and the NASA FAR Supplement (NFS).

2.6 Access to Research Results/Data Management Plan

In keeping with the NASA Plan for Increasing Access to the Results of Scientific Research, new provisions/terms and conditions about making manuscripts and data publicly accessible may be attached to awards that derive from this Omnibus. Proposals to NextSTEP-3 may be required to provide a data management plan (DMP) or an explanation of why one is not necessary given the nature of the work proposed. The specific research opportunity will provide additional information. As applicable, each proposal must include a DMP that describes how data generated by proposed research will be shared and preserved and how data collected will be made available to the public. If a DMP is required, the offeror must justify any exceptions to making data publicly available, explaining why data-sharing and/or preservation is not possible or scientifically appropriate. Additionally, the DMP must describe how data sharing and preservation will enable validation of results, or how results could be validated if data are not shared or preserved. DMPs must provide a plan for making all research data underlying results and findings in publications digitally accessible at the time of publication. NASA will review DMPs during the evaluation/peer review of your proposal. Costs of the DMP should be included in the proposed budget.

2.7 Intellectual Property Developed Under an Award

As noted, the objective of an award made under this Omnibus is to provide recipients with the incentive to develop commercial applications of technologies developed through the partnership. The intent is that awards resulting from this Omnibus will enable external partnerships for robust exploration and implementation of opportunities managed by the Human Spaceflight Enterprise. The Omnibus anticipates that the capabilities and technologies developed through these partnerships also will provide significant commercial applications beyond NASA. In order to ensure the offerors have the incentive to develop commercial applications, NASA highly encourages offerors to provide corporate contributions.

2.7.1 Data Rights

For data related to items, components, or processes developed at private expense by the contractor, the Government will need limited rights (i.e., the right of use (except for manufacture) by subcontractors, the right of use (except for manufacture) by other contractors participating in the same Government program, etc. – see FAR 27.404-2(c)). Generally, the Government has unlimited rights in data first produced in the performance of a contract. However, for co-sponsored research and development activities (i.e., items, components, or processes developed with both the contractor's funds and the Government's funds), the Government will consider taking less than unlimited rights (see FAR 27.408). Such lesser rights will include agreed-to Government purposes (including reprocurement rights), but will exclude rights for commercial purposes which will be retained by the contractor.

For purposes of this Omnibus and its Appendices, the term "developed" means that an item, component, or process exists and is workable. Thus, the item or component must have been constructed or the process practiced. Workability is generally established when the item, component, or process has been analyzed or tested sufficiently to demonstrate to reasonable people skilled in the applicable art that there is a high probability that it will operate as intended. Whether, how much, and what type of analysis or testing is required to establish workability depends on the nature of the item, component, or process, and the state of the art. To be considered "developed," the item, component, or process need not be at the stage where it could be offered for sale or sold on the commercial market, nor must the item, component, or process be actually reduced to practice within the meaning of Title 35 of the United States Code.

2.7.2 Patent Rights

The government will have certain statutory rights in an invention that is conceived or first actually reduced to

practice under a NASA award. 51 U.S.C. 20135 (awards to large entities) provides that title to such inventions vests in the United States, except where 35 U.S.C. 202 provides otherwise for nonprofit organizations or small business firms.

Where 51 U.S.C. 20135 applies i.e., under an award with a large entity, a recipient may request a waiver to obtain title to inventions made under the award in accordance with 51 U.S.C. 20135(g) and 14 CFR 1245 Subpart 1. Such a request may be made in advance of the award or within 30 days thereafter. Even if a waiver request is not made, or denied, a large business recipient may request a waiver on individual inventions made during the course of the award.

NASA normally grants requests for waiver unless the interests of the United States are better served by restricting or eliminating all or part of the rights of a offeror as set forth in 14 CFR 1245.104(b). Among the most important goals are providing incentives to foster inventiveness and encouraging the reporting of inventions. As noted previously, corporate contributions are highly encouraged.

For joint inventions, NASA will typically agree, pursuant to a Joint Ownership Agreement, to refrain from exercising its undivided interest in a manner inconsistent with a recipient's commercial interest.

For all recipients, the patent rights provision in a resulting award will require the disclosure to NASA of all subject inventions made under the contract. NASA considers the reporting of inventions an important metric that will be used to measure whether new technologies are being developed. Reporting of inventions also protects a recipient's ownership to such inventions since NASA has the right to obtain title in unreported inventions.

3. Eligibility Information

3.1 Eligibility of Offerors

Participation in this program is open to all categories of U.S. and non-U.S. organizations, including educational institutions, industry, nonprofit organizations, NASA Centers and other Government agencies. Principal Investigators (PIs) may collaborate with investigators from universities, Federal Government laboratories, the private sector, state and local government laboratories, and other countries. Note: Specific Appendices may limit the eligibility of Offerors. It is NASA policy that research with foreign organizations will be accomplished on a no-exchange-of-funds basis. Exceptions or amendments to the eligible participants and partnerships for each solicitation topic are specified in the Appendices to this Omnibus.

3.2 Guidelines for International Participation

3.2.1 Guidelines for International Team Members on U.S. Proposals

U.S. proposals may include international team members, subcontractors, or suppliers if proposed in accordance with the restrictions specified herein. International collaborations that demonstrate clear scientific benefits or cost savings are particularly encouraged. While Co-Investigators or collaborators employed by non-U.S. organizations may be identified as part of a proposal submitted by a U.S. organization, NASA funding through this Omnibus may not be used to support research and development efforts by non-U.S. organizations at any level. However, the direct purchase of supplies and/or services that do not constitute research from non-U.S. sources by U.S. award recipients is permitted. Furthermore, Principal Investigators and other team members, including graduate students, who are not U.S. citizens but are employed by or studying at a U.S. organization, may receive funding to support their research activities through this Omnibus.

3.2.2 Guidelines for International Proposals

NASA will consider, consistent with U.S. Government laws, policies and regulations, proposals from outside the U.S. However, foreign entities are not eligible for funding from NASA. Therefore, unless otherwise noted in the Appendix, proposals from foreign entities should not include a cost plan unless the proposal involves

collaboration with a U.S. institution, in which case a cost plan for only the participation of the U.S. entity must be included. Proposals from foreign entities and proposals from U.S. entities that include foreign participation must be endorsed by the respective government agency or funding/sponsoring institution in the country from which the foreign entity is proposing. NASA shall give careful consideration to proposals from foreign entities with such endorsements. If the proposal is selected, sufficient funds will be made available to the foreign entity by his/her country's government agency or funding/sponsoring institution to undertake the activity as proposed. The U.S. institution and the foreign entity will be responsible for ensuring they have all of the appropriate licenses required for export control purposes to allow for foreign participation.

All foreign proposals must be typewritten in English and comply with all other submission requirements stated in the Appendix. All foreign proposals will undergo the same NASA evaluation and selection process as those originating in the U.S.

Sponsoring foreign government agencies or funding institutions may, in exceptional situations, forward a proposal without endorsement if endorsement is not possible before the announced closing date. In such cases, the NASA sponsoring office should be advised when a decision on endorsement can be expected. Foreign entities that have submitted proposals, whether they have been selected or not, will be contacted directly by the NASA sponsoring office. Copies of these selection/non-selection letters will be sent to the foreign sponsor.

Should a foreign proposal or a U.S. proposal with foreign participation be selected, and if otherwise necessary, NASA's Office of International and Interagency Relations will follow the procedures specified at NASA FAR Supplement 1835.016-70(b).

NASA's policy is to conduct research with non-U.S. entities on a no-exchange-of-funds basis. For further reference, please see NASA Policy Directive 1360.2 Initiation and Development of International Cooperation in Space and Aeronautics Programs.

3.2.3 Export Control Guidelines Applicable to Proposals Including Foreign Participation

Performance of activities under this BAA may require access to data that is subject to export control regulations. Any entity proposing for a contract under an Appendix to this Omnibus in order to be considered for award shall comply with all U.S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120 through 130, and the Export Administration Regulations (EAR), 15 CFR Parts 730 through 774, and must demonstrate their compliance and process in the performance of the resulting Appendices.

The Offeror shall comply with all U.S. export control laws including Export Administration Regulations (EAR) and International Traffic in Arms Regulations (ITAR). Offerors are responsible for ensuring that all employees who will work on this contract are eligible under export control laws, EAR, and ITAR. Any employee who is not a U.S. citizen or a permanent resident may be restricted from working on this contract if the technology is restricted under export control laws, ITAR, or EAR unless the prior approval of the Department of State or the Department of Commerce is obtained via a technical assistance agreement or an export license. Violations of these regulations can result in criminal or civil penalties.

3.2.4 Assurance of Compliance – China Funding Restriction

Proposals must not include bilateral participation, collaboration, or coordination with China or any Chinese-owned company or entity, whether funded or performed under a no-exchange-of funds arrangement. By submission of a proposal, Offerors are certifying that the proposing organization has read and is in compliance with all the Certifications, Assurances, and Representations, including that proposals must not include bilateral participation, collaboration, or coordination with China or any Chinese-owned company or entity, whether funded or performed under a no-exchange-of funds arrangement.

For all proposals, the following applies—an Assurance of Compliance with restrictions:

(1) NASA is restricted from using appropriated funds to enter into or fund any agreement of any kind to participate, collaborate, or coordinate bilaterally with China or any Chinese-owned company, at the prime recipient level and at all sub-recipient levels, whether the bilateral involvement is funded or performed under a no exchange of funds arrangement.

(2) Definition: "China or Chinese-owned Company" means the People's Republic of China, any company owned by the People's Republic of China, or any company incorporated under the laws of the People's Republic of China.

(3) By submission of its proposal, the Offeror represents that the Offeror is not China or a Chinese-owned company, and that the Offeror will not participate, collaborate, orcoordinate bilaterally with China or any Chinese-owned company, at the prime recipient level or at any sub- recipient level, whether the bilateral involvement is funded or performed under a no-exchange of funds arrangement.

For contracts, Procurement Class Deviation (PCD) 12-01A instructs Contracting Officers to insert clause 1852.225-71, Restriction on Funding Activities with China and provision 1852.225-72, Restriction on Funding Activities with China – Representation, in all solicitations and awards except those for commercial and non-developmental items.

3.2.5 Corporate Contribution

For most research efforts, offerors will be required to show a specified amount of corporate contribution that is directly relevant to the proposed overall effort. Providing the required corporate contribution is an eligibility requirement for award. The level of corporate contribution will be specified in the Appendix being used to solicit proposals for the required effort. The overall effort is defined as the combination of corporate contribution and government resources required for the proposed effort. Corporate contributions are expected to be in the form of direct labor, travel, consumables, or other direct in-kind contributions. Also, other reasonable forms of corporate contribution may include investments in special contractor facilities or equipment, tooling, or other private investment. Independent Research and Development (IR&D) as defined in FAR Parts 30 and 31, regardless of its stage of development, may be proposed as corporate contribution. Once accepted by the Government in an award instrument (e.g., a contract), further development of that corporate contribution under the contract will be deemed to be required in the performance of the contract for purposes of FAR 31.205-18(a). However, when corporate funding is proposed and accepted for development or continued development, the associated development cost will be tracked and data rights will be allocated consistent with FAR 27.408 for cosponsored R&D activities (see clause "ADDITIONAL PURPOSES FOR LIMITED RIGHTS NOTICES (FAR 52.227-14, Alternate II)" on the NextSTEP website). In most cases, NASA expects proposals will have a mix of in-kind contributions to the proposed effort as opposed to claiming all corporate contributions based on prior investments.

Offerors shall describe how they intend to meet the corporate contribution eligibility requirement in the proposal. An appendix to the proposal shall be required to provide documentation showing proof of corporate contribution. An example of how to provide verifiable corporate contributions would be a table containing a full description of each IR&D activity, relevance to the solicited effort and proposal, value (e.g., Fair Market Value) of the relevant portion/aspect (e.g., item, component, process, and related data) of that activity being applied in the proposal to the proposed effort, database or project reference identifier (for example, the Defense Technical Information Center (DTIC) IR&D database source codes). For equipment or facility use, corporate contribution also should be based on "Fair Market Value" (e.g., equivalent equipment or facility rental/lease rates for the period of use for the proposed effort) with the contributions for the space or equipment limited to that necessary for the proposed effort.

For each Appendix, state and local government contributions may be included with private corporate resources.

The value of participation by federally funded participants and/or the use of federal government facilities shall be added to the price to the Government for determining whether the required level of corporate contribution for that research element has been met.

Criteria and procedures for the allowability and allocability of cash and non-cash contributions shall be governed by FAR Parts 30 and 31, and NFS Parts 1830 and 1831. NASA reserves the right to have exchanges (outside discussions) with offerors to make reasonable determinations regarding corporate contributions.

4. Proposal Submission Information for Appendices

4.1 Instructions for Proposals for Appendices

No proposals are being sought at the issuance of this Omnibus. All information needed to respond to Appendices issued in accordance with this Omnibus is contained in this Omnibus and in the relevant Appendices.

The information in this Omnibus provides additional direction consistent with the NASA FAR Supplement. Proposals that do not conform to the standards outlined in this Omnibus will be declared noncompliant and will not be evaluated.

Offerors are responsible for understanding and complying with the procedures in this Omnibus before preparing and submitting proposals. Proposals that do not conform to the requirements outlined in this Omnibus and any Appendices to it may be declared noncompliant and rejected without review. In addition, the provisions in any Appendix will apply to that specific opportunity and will supersede any conflicting provisions in this Omnibus.

Proposal submission questions will be answered and published in a Question-and-Answer log. Individual responses will not be provided. NASA will not provide evaluations, opinions, or recommendations regarding any suggested approaches or concepts. This Q&A log will be posted on the NextSTEP website and will be updated periodically between solicitation release and the proposal due date.

4.1.1 Proposal Submissions

Proposals shall be submitted electronically in Adobe PDF format to the Point of Contact e-mail address above and in the Appendices. Hard copies will not be accepted. Proposals or proposal modifications received after the latest date specified for receipt may be considered if a significant reduction in cost to the Government is probable or if there are significant technical advantages, as compared with proposals previously received.

Most appendices to this document will use a submission process consisting of a Notice of Intent (NOI) followed by a full proposal. To facilitate planning for the review process, Offerors are strongly encouraged to submit a NOI to the NextSTEP mailbox. NOIs must be electronically submitted by the date specified on the appropriate Appendix.

Offerors shall use the NextSTEP mailbox for both proposal submissions and notifications of intent (NOIs). The e-mail submission shall identify the Appendix name and Appendix in the subject field of the e-mail and whether it is a “proposal” or “NOI”.

4.1.2 Proposal Format and Contents

Format and content requirements may be tailored in each Appendix, and supersede any requirements in this Omnibus.

The proposal format and content requirements as outlined in this section below are the same for all proposals. The required sections of the proposal must be submitted as one searchable, unlocked PDF file with edit

permission enabled. Offerors must comply with the format and page limit requirements described in this Omnibus, as well as any additional requirements specified in the Appendices. The provisions in each Appendix will apply to that specific opportunity and will supersede any conflicting provisions in this Omnibus.

Only attachments that are specifically requested either in this Omnibus or in Appendices to this Omnibus should be submitted.

Proposal Section	Page Limitations
Title Page	1
Executive Summary (Section I)	1
Table of Contents	1
Proof of Eligibility (Section II)	3
System Concept & Scientific/Technical Approach (Sections III-IV)	15
Capabilities (Section V)	2
Intellectual Property (Section VI)	1
Data Management Plan (as needed)	--
Cost/Price Proposal (Section VII)	No limit
Attachments	No limit

Attachments may be specified as needed:

A page is defined as one side of a sheet, 8 1/2" x 11" with at least one-inch margins on all sides, using not smaller than 12-point font, with the exception of tables and figures, which may use 8-point font. Pages in excess of the page limits for each section will not be evaluated.

4.1.2.1 Title Page:

- Include any Notice of Restriction on Use and Disclosure of Proposal Information
- An optional graphic image may be included
- The Offeror's name of the proposal or proposed project
- Date of the proposal
- The title, solicitation number and Appendix being responded to of this Omnibus
- Organization name and address (including 9-digit ZIP+4 code, if applicable)
- Offeror Point of Contact name, title, e-mail address, and phone number

4.1.2.2 Executive Summary: Describe the proposal's prominent and distinguishing features. The Executive Summary should provide an overview of the proposed effort that is suitable for release through a publicly accessible archive should the proposal be selected.

4.1.2.3 Table of Contents: Offerors should include a one-page Table of Contents that provides a guide to the organization and contents of the proposal.

4.1.2.4 Proof of Eligibility: Provide information showing that the Respondent and all team members are eligible participants as stipulated in Section 3 of this Omnibus. Describe compliance with participation requirements as needed. As applicable, explain how the required corporate contribution, cost-sharing or matching resources will be satisfied.

4.1.2.5 System Concept: The offeror shall describe the system concept and its functions, how it addresses the objectives and requirements in this Omnibus, and its maturity (Technology Readiness Level, if appropriate).

4.1.2.6 Scientific/Technical Approach: The offeror shall describe the approach and schedule for designing, analyzing, and testing the proposed system concept, including the plans to mature key technologies.

4.1.2.7 Capabilities: The offeror shall provide evidence of existing capabilities for designing and developing space-qualified systems applicable to the objectives of this Omnibus.

4.1.2.8 Intellectual Property: The offeror shall describe the approach for data rights and inventions, and how they meet the objectives outlined under Section 2.7, Intellectual Property.

4.1.2.9 Data Management Plan (DMP): In keeping with the NASA Plan for Increasing Access to Results of Scientific Research, proposals may need to include a DMP or an explanation of why one is not necessary given the nature of the work proposed.

4.1.2.10 Cost/Price Proposal: The cost/price proposal shall include the cost/price for the concept study or capability/technology development project. The offeror shall provide total direct labor hours by skill mix, travel, and subcontracts. See a sample format in the References section of the NextSTEP website. The cost/price section shall also include the listing of GFP/GFE and the estimated fair market value or of the requested government contribution. For proposals exceeding $2M, fully certified cost or pricing data will be required unless an exception applies in accordance with FAR 15.403-1. Offerors should reference corporate resources described in Section 3 (Eligibility).

4.1.2.11 Attachments:

- **Quad chart:** For programs awarding contracts, the proposal shall contain a quad chart in MS PowerPoint format summarizing the proposed objectives, team composition and organization, major milestones, and funding requirements.

- **Resumes*:*** Resumes may be included for key personnel. In general, resumes should be limited to no more than 2 pages each.

- **Draft Statement-of-Work:** For programs awarding contracts, the offeror shall provide a draft statement-of-work that includes a work breakdown structure and a description of the major tasks, milestones, and deliverables.

- **Proposed Technical and Payment Milestones:** The offeror shall provide a list of proposed capability/technology development and demonstration milestones. Each milestone shall include a descriptive title, objective success criteria, and planned achievement dates (month and year). Milestones should represent significant technical and business progress in the program. At least one milestone per calendar quarter is recommended. The proposal shall also include payment milestones with a title, associated objective success criteria, payment amount, and planned dates for completion of the milestone. When proposing payment milestone amounts, the Offeror shall comply with all terms and conditions set forth in FAR 52.232-32 Performance-Based Payments.

- **Corporate Resources documentation (as specified):** This documentation evidences the corporate contributions or cost-sharing/matching is being proposed. Corporate Contribution Worksheets may be required, per instructions for individual appendices.

4.2 Proprietary Information

All proposals containing proprietary data should have the cover page and each page containing proprietary data clearly marked as containing proprietary data. It is the Offeror's responsibility to clearly define to the Government what is considered proprietary data.

Refer to the Appendices for specific due dates.

5. Proposal Review Information

NASA reserves the right to select for negotiations all, some, or none of the proposals received in response to Appendices related to this Omnibus.

5.1 Compliance Review

NASA will prescreen all proposals for compliance with requirements of this Omnibus and its subsequent Appendices. This includes submission of a complete proposal with all required elements:

- Submission of a proposal that is consistent with the research areas identified in the Appendix.
- Submission of a proposal from an eligible Offeror as specified in the Eligibility Information in this Omnibus and relevant Appendix.
- Submission of a budget that includes all required details and that is for a funding period and amount consistent with this Omnibus and relevant Appendix.
- Submission of a proposal that is consistent with the page limitations in the relevant Appendix and formatting guidelines specified in this Omnibus.

NASA reserves the right to conduct due diligence exchanges with offerors regarding compliance with the eligibility criteria, including how an offeror satisfies any required corporate contribution requirement or cost-sharing/matching. Non-compliant proposals will be withdrawn from the review process and declined without further review.

5.2 Evaluation

A NASA Evaluation Panel will evaluate proposals deemed compliant according to the evaluation criteria described in Section 5.5. The Evaluation Panel will summarize the strengths and weaknesses of each proposal and assign an overall consensus rating. NASA may ask about a specific point or points in a proposal and conduct fact finding or due diligence activities. These activities may result in a request for a revised proposal.

NASA has the ability to determine the appropriate method for any such communications, e.g., be in writing, virtual, or person. The information resulting from the reviews will be used to prepare selection recommendations. Selection for funding will be made by the designated NASA Selection Official.

5.3 Selection Official

The selection official shall be designated via the specific opportunity defined in the Appendix.

5.4 Personnel

NASA takes seriously its responsibility for ensuring that proposals are treated with the utmost confidentiality and are evaluated fairly and objectively without conflict of interest on the part of the reviewers. Therefore, regardless of the mailing address or website to which a funding announcement may direct proposals to be sent, it is NASA policy that NASA Civil Service personnel will be in charge of and direct all aspects of the review and selection processes, including the identification and invitation of peer review personnel, in-person monitoring of the deliberations of any peer review panel, and the adjudication of conflicts of interest that may be declared by panel personnel. Also, all non-Government reviewers are prohibited from making unauthorized disclosure of proposal information and evaluation materials and/or information.

Government employees who may be involved in the peer review process are bound by Federal Statute and regulation not to make unauthorized disclosure of trade secrets and confidential commercial and financial information contained in proposals.

NASA may use contractor support personnel to provide technical, business, and investment expertise when evaluating

proposals. Any support contractor involved in the evaluation process will be bound by appropriate nondisclosure agreements to protect proprietary and competition sensitive information and must have accepted limitations on future contracting.

5.5 Evaluation Criteria

NASA will use the following evaluation factors, with each factor having equal weight:

5.5.1 Factor 1 - Relevance:

The Government will evaluate the ability of the proposal to contribute to NASA's mission and meet the objectives stated in an Appendix of this Omnibus for which the proposal was submitted.

5.5.2 Factor 2 – Scientific/Technical Merit:

The Government will evaluate the quality, depth, and thoroughness of the proposed scientific/technical approach and the organization's capabilities and the qualifications of key personnel.

5.5.3 Factor 3 – Cost/Price:

The Government will evaluate the overall proposal in accordance with FAR 15.404-1. Also, an analysis will be done on the corporate contribution to ensure that it properly aligned with the proposed effort. As part of the panel's review, however, the evaluation may include comments regarding appropriateness of proposal budgets in relationship to the work proposed. Such comments will not be part of the scientific/technical merit evaluation.

(1) Government Task Agreements (GTAs)

Government Task Agreements may be proposed to utilize facilities and capabilities resident at NASA centers to supplement an offeror's capabilities to fulfill contract requirements. These GTAs will be precoordinated and approved with NASA prior to proposal submission and included in the Total Evaluated Cost/Price as described in the applicable Appendix. If the offeror proposes alternate standards to meet contract requirements which result in the request for GTA's through the adjudication of those proposed standards, NASA will consider any GTAs that result from that adjudication at the cost of the Government. Any subsequent GTA requested by an offeror after contract award will be at the cost of the offeror.

5.6 Cost/Price Review and Programmatic Balance

Only those proposals most highly rated under technical merit and of acceptable implementation risk to the government will be reviewed for Cost/Price and Programmatic Balance. Some proposals that may be high risk to implement that show potential for important scientific/technology gain can also advance. This review will evaluate the programmatic balance, hardware availability and cost/price of all proposals that are technically meritorious and feasible to implement. This review will be conducted by NASA program scientists and managers. Evaluation of the cost/price of a proposed effort includes the relationship of the proposed price to available funds. The evaluation of programmatic balance focuses on a comparison of the proposed cost/price in the context of the proposed scope of work and the time-phasing of payments throughout the period of performance.

5.7 Process for Appeals

5.7.1 Ombudsman Program

The NASA Procurement Ombudsman Program is available as a procedure for addressing concerns and disagreements. The clause at NASA FAR Supplement (NFS) 1852.215-84, Ombudsman, may be incorporated into each Appendix by reference.

5.7.2 Protests

Prospective Offerors seeking contract awards under Appendices have the right to file a protest as defined in FAR 33.1. The provisions at FAR 52.233-2, Service of Protest, FAR 52.233-3, Protest after Award, and NFS 1852.233-70, Protests to NASA, are incorporated into Appendices by reference.

5.8 Review of Offeror Responsibility/Qualification Information

NASA, prior to making a Federal award for contracts exceeding the simplified acquisition threshold (SAT) (currently $250,000) is required to review and consider any information about the Offeror that is in the Responsibility/Qualification Information accessible through the System for Award Management (http://www.sam.gov) (see 41 U.S.C. 2313).

An Offeror, at its option, may review information in SAM.gov and comment on any information about itself that NASA previously entered.

NASA will consider any comments by the Offeror, in addition to the other information in SAM.gov, in making a judgment about the Offeror's integrity, business ethics, and record of performance under Federal awards when completing the review of risk posed by Offerors.

6. Award Administration Information

6.1 Award Notices

At the end of the selection process, each Offeror will be notified of its selection or non-selection status by the NASA Selection Official electronically. The selection notifications and subsequent letters are not an authorization to begin performance.

This Omnibus is a BAA. BAAs are not negotiated procurements conducted on the basis of competitive proposals. Accordingly, NASA is not required to hold debriefings with offerors who submit proposals in response to this Omnibus. Following the award of one or more contracts, NASA will provide informal feedback to any offeror upon request (see NFS 1872.504). However, no formal “debriefing” (see FAR 15.506) will be provided.

For contract awards, performance shall not begin until the contract is signed by both parties. NASA contracting officers are the only personnel with the authority to award NASA contracts and obligate government funds. NASA reserves the right to offer selection of only a portion of a proposal. In these instances, the Offeror will be given the opportunity to accept or decline the offer. Any costs incurred by the Offeror in anticipation of an award are at their own risk until RECEIVING AN AWARD by a NASA contracting officer.

6.2 Administrative and National Policy Requirements

. Please note that it is expected that award recipients shall comply with Homeland Security Presidential Directive (HSPD)-12. The applicability of HSPD-12 to a particular award will be determined during negotiations held before award with those entities that submitted selected proposals.

Additionally, award recipients that have individuals working under the award who need access to NASA facilities and/or systems must work with NASA program staff to ensure proper credentialing. Such individuals include U.S. citizens, lawful permanent residents (“green card” holders), and foreign nationals (those who are neither U.S. citizens nor permanent residents).

6.3 Post-Award Program Reporting

6.3.1 Annual Reporting

For activities extending beyond a year an annual report may be required. The Appendix will define whether annual reports are required.

6.3.2 Other Reporting

If the Federal share of any award issued under this BAA is more than $10,000,000.00 over the period of performance, additional reporting requirements will apply.

7. References

See the NextSTEP website for a list of references cited in this document, as well as other useful materials such as templates.