

National Aeronautics and  
Space Administration



George C. Marshall  
Space Flight Center

Dual-Use Technology Development  
Cooperative Agreement Notice (CAN)

2022 Marshall CAN Overview  
to the HBCU and MSI  
Partnerships Meeting

*October 25<sup>th</sup> 2022*

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**EXPLORE**  
MARSHALL

# MSFC Dual Use Technology Development Cooperative Agreement Notice (CAN) 2023

- There will be one period instead of two to allow time for infrastructure improvement:
  - Transitioning from SharePoint on Premises to SharePoint Online
  - Semi-automating internal evaluation activities using Microsoft Power Apps
  - Potentially development of a web-app to facilitate submission of Step-1 Papers
- Technical Focus Areas for CAN23 are currently under review
- Target release of the CAN23 Solicitation will be before the end of 2022
- Step-1 Papers will be due in mid-April 2023
- Guidelines for CAN23 offers will be similar to the CAN22 Solicitation
- Release date of the solicitation is to be determined; however, a target is before the end of 2022

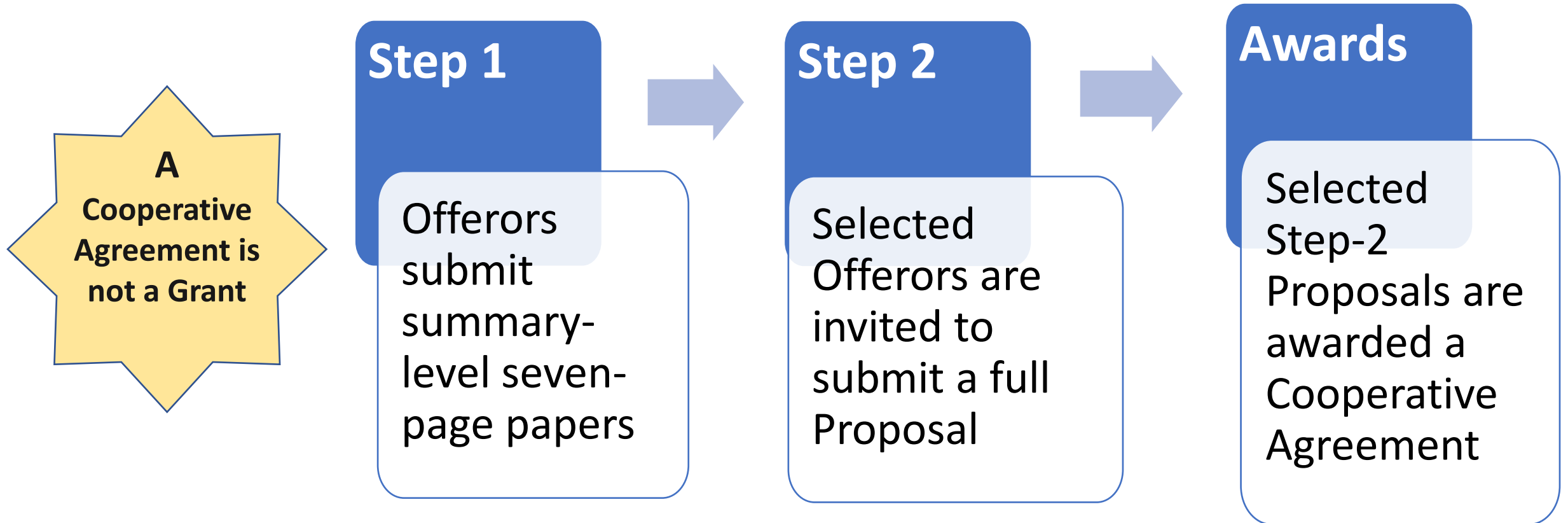
# Cooperative Agreement Notice (CAN) for Dual-Use Technology Development at Marshall Space Flight Center

*Enhance Marshall's ability to partner with U.S. universities and industry to advance a technology development objective of the Partner as well as help meet a specific NASA/MSFC mission needs.*

- Will be Posted on NASA NSPIRES and SAM.gov
- Soliciting U.S. industry and universities
- MSFC contributions to the Partner range from \$10K - \$250K in value for each awarded project, **up to 50% of the total project resources required**
- May include direct cash to the partner or in-kind contributions (MSFC labor, facility/equipment use, materials, etc.) or a combination
- Partner provides their own additional in-kind resources (partner labor, facility/equipment use, materials) **that match or exceed the total MSFC resource contribution value**
- Project Duration up to 12 months
- Multiple Cooperative Agreement awards are available
- Selection Official: MSFC Associate Director, Technical

# MSFC Dual Use Technology Development CAN Process Overview

*Typically, it takes about six months from Step-1 Paper submission to an awarded Cooperative Agreement.*



***CAN Unique Opportunity*** - Successful completion of a CAN project may lead to justification for sole-source procurement options for any directly related follow-on / next-step efforts, if desired by NASA & the partner.



# Technical Focus Areas

- Historically, the lists within the technical focus areas grew organically as technologists identified needs within their areas of expertise
- In 2023, we are revising the technical focus areas to align with the MSFC Business Units
- Section A.4.1 of the solicitation describes technical focus areas that address the needs of the Level 3 Pursuits within MSFC's Business Units
- This section is currently under review by the Level 3 Pursuit Points of Contact; so, section headings may be subject to change
- Subsection introductory paragraphs identify the Pursuits that are supported by lists of technologies in the subsections

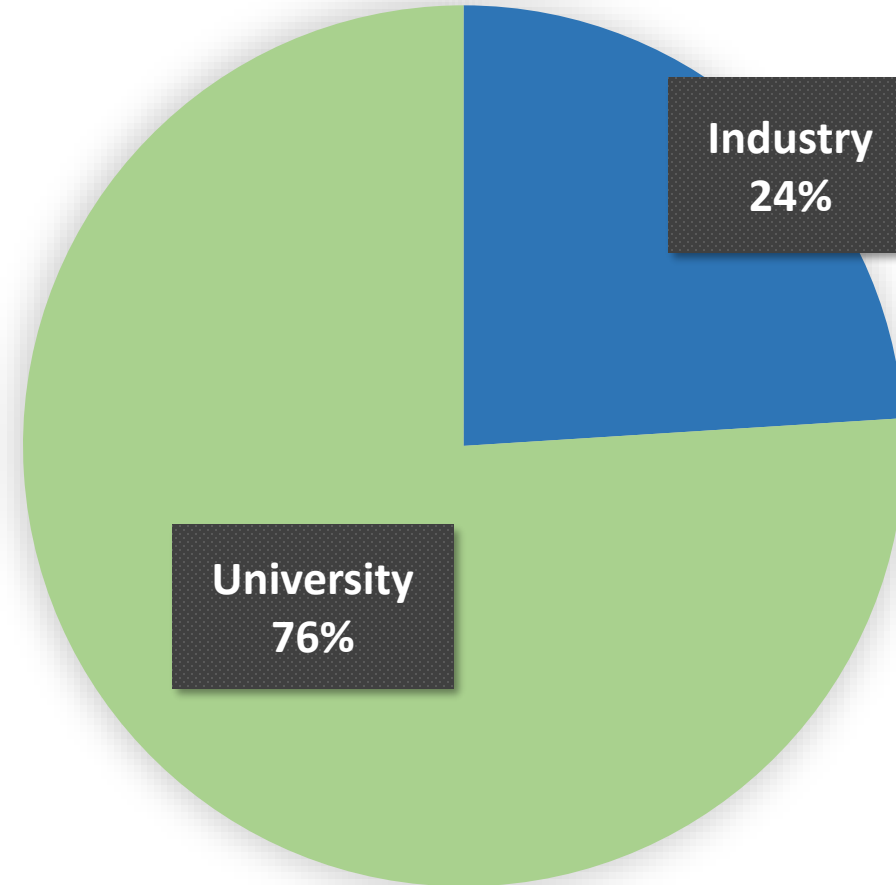
- **A.4.1 Technical Focus Areas**
- A.4.1.1 Advanced Materials, Structures, and Manufacturing (AMSM)
- A.4.1.2 Autonomous Systems and Robotics (ASR)
- A.4.1.3 Cryogenic Fluid Management (CFM)
- A.4.1.4 Dust Mitigation
- A.4.1.5 Environmental Control and Life-Support Systems (ECLSS)
- A.4.1.6 Habitation Systems
- A.4.1.7 In-Space and Surface Infrastructure
- A.4.1.7.1 In-Space Assembly and Manufacturing (ISAM)
- A.4.1.7.2 In-Situ Resource Utilization (ISRU)
- A.4.1.8 Model Based Systems Engineering (MBSE)
- A.4.1.9 Power
- A.4.1.10 Propulsion
- A.4.1.10.1 Advanced Chemical Propulsion
- A.4.1.10.2 Nuclear Electric Propulsion (NEP)
- A.4.1.10.3 Nuclear Thermal Propulsion (NTP)
- A.4.1.11 Spacecraft
- A.4.1.12 Space Domain Awareness
- A.4.1.13 Science
- A.4.1.13.1 Data Science
- A.4.1.13.2 Earth Science
- A.4.1.13.3 Heliophysics
- A.4.1.13.4 High Energy Astrophysics
- A.4.1.14 Testing
- A.4.2 2020 NASA Technology Taxonomy

**Currently  
Under  
Review**

# Categorization of CAN22 Period-1 Step-1 Offerors

|                  |    |
|------------------|----|
| Small Business   | 2  |
| MUREP Candidates | 9  |
| Industry         | 12 |
| University       | 38 |

MUREP Candidates are a subset of University.  
Small business is a subset of Industry.



# Step-1 Paper Assessment Criteria

- 1. Relevance to NASA/MSFC Need** - Does the proposed project address a specific NASA MSFC need?
- 2. Technical Quality & Appropriateness** - Technical approach including anticipated partner & MSFC project roles/tasks, the clarity of the expected outcome, the anticipated accomplishments, and the level of technical challenges versus projected benefit
- 3. Appropriateness of Cost Projections**
  - Appropriateness and suitability of the total project cost projections
  - Appropriateness and suitability of the proposed MSFC and partner resource sharing contributions to the total project cost
- 4. Recommendation** - Is it recommended to invite the Step-2 full project proposal?

# Step-2 Proposal Assessment Criteria

- **Technical Merit and Feasibility (40%)** - Project merit, approach, deliverables / personnel & facilities / Technical Schedule & Milestones
- **Business Plan (20%)** - Commercial potential
  - Industry Partner's commercial objectives for the investment
  - University Partner's research priorities and vision for eventual application to commercial use
- **Cost Plan (40%)**
  - Cost Plan elements are clearly described and complete for the scope and tasks of the project
  - Total estimated resources needed for the project are adequate, the cash & in-kind resources contributions of MSFC & the CAN project partner are appropriate for each
- **Recommendation** - Is the Proposal recommended to select for a Cooperative Agreement project?



# Contact Information

If you are interested in collaboration on a Step-1 Paper contact:

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Working with the Engineering Directorate and the Partnerships Formulation Office, we'll find subject matter experts to discuss technology needs and potential project ideas.