

**National Aeronautics and Space Administration (NASA)
Early-Stage Innovations & Partnerships (ESIP)**

NASA Space Tech Catalyst Prize
Competition Rules & Requirements
Revised: 10/10/2023

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1. Competition Background

NASA strives to create an environment that welcomes and embraces diverse ideas, experiences, and expertise as diversity drives innovation and progress for the country. The Early-Stage Innovations and Partnerships (ESIP) portfolio plays a vital role in supporting NASA's Space Technology Mission Directorate's strategy. ESIP advances aerospace research and transformative technology, contributing to the overall missions of NASA.

ESIP aligns with the strategic objectives of the Space Technology Mission Directorate by fulfilling several key aspects of its strategy. ESIP helps bring innovative technologies to flight and infuses them into both industry and NASA missions. By engaging with early-stage innovators and supporting their research and development efforts, ESIP enables the integration of cutting-edge technologies into space missions and the broader aerospace industry.

ESIP invests in paradigm-shifting technologies that have the potential to build a strong U.S. industry, generate high-quality jobs, and strengthen the nation's posture in the global aerospace sector. By providing support and resources to early-stage innovators, ESIP helps accelerate the development of breakthrough technologies that have significant economic and technological implications. Our investments span a range of technical areas to include, but not limited to, the 18 technical capabilities found in NASA's Strategic Technology Framework. To learn more, please visit NASA's [TechPort website](#) for information on NASA's technology capabilities and investments.

We aim to lead a national movement for developing and advancing current and/or aspiring technical professionals from underserved and underrepresented communities in space technology and other Science, Technology, Engineering, and Mathematics (STEM) fields. We firmly believe that diversity and inclusion encompass a wide spectrum of characteristics that represent the richness and diversity of our society. In the context of this Competition, we define underserved and underrepresented communities as those that have historically faced persistent inequity or encountered barriers that have limited their access to opportunities including Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; those who identify as women, members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.

By recognizing and addressing these inequities, we aim to create a more inclusive and equitable space technology ecosystem. We value the contributions and perspectives of individuals and groups from all backgrounds. We recognize that for many communities, there are individuals and organizations who serve as influencers, catalysts, connectors, and shepherds for students, faculty, researchers, professionals, entrepreneurs, and other space technology innovators.

2. Competition Overview and Goals

The NASA Space Tech Catalyst Prize, recognizes, and supports individuals and organizations that contribute to the growth and development of underrepresented and diverse innovators, researchers, technologists, and entrepreneurs in the field of space technology. With a total prize pool of \$500,000, this Competition aims to highlight best practices and solutions for engaging and empowering these groups, ultimately improving their chances of competing for space technology research and development awards and successfully transitioning their technology for commercial or NASA Mission infusion.

The primary goals of the Competition are threefold:

1. To identify and recognize the efforts of those who support and nurture underrepresented and diverse individuals and organizations in the space technology sector;
2. To showcase effective strategies and approaches for developing the capacity and skill sets of these groups, thereby enhancing their ability to succeed in the competitive space technology landscape; and
3. To expand the outreach and engagement efforts of the ESIP portfolio, ensuring a diverse and inclusive pool of applicants for future funding opportunities.

Through this Competition, we intend to identify, recognize, and build relationships with these connectors and shepherds. The ultimate goal is to enhance our outreach and engagement efforts to increase the number of high-quality applications from a diverse pool of proposers who might not have historically applied for ESIP funding opportunities.

Table 1. Prize Award Table

# of Awardees	Awardee Prize	Total Prizes
Up to 20	\$25,000	\$500,000

The Competition will award a total of \$500,000 in prizes, with equal prize amounts of \$25,000 awarded to the top 20 individuals and/or teams. By recognizing and supporting the efforts of those who champion underrepresented and diverse innovators, researchers, technologists, and entrepreneurs, the Competition aims to foster a more inclusive and vibrant space technology community, driving innovation and advancing the capabilities of the industry as a whole.

The awardees will form a diverse, impact-oriented cohort that embodies the spirit and integrity of the Competition's serious vision. The cohort will be invited on a paid trip to participate in an in-person convening event in Washington DC at NASA Goddard Space Flight Center to share best practices in reaching, engaging, and developing the capabilities and skill sets of diverse groups to be better prepared to apply successfully

for funding opportunities within ESIP and subsequent commercialization/ infusion success.

3. ESIP Technology Areas of Interest

Within the space technology community, researchers, scientists, engineers, and innovators collaborate to push the boundaries of human knowledge and exploration.

The pursuit of these technology areas not only facilitates technological advancements but also strengthens our understanding of the cosmos, unlocking new frontiers and transforming our relationship with space. The space technology community, supported by NASA ESIP funding priorities, encompasses a diverse range of cutting-edge technologies aimed at revolutionizing space exploration. These funding priorities prioritize rapid, safe, and efficient space transportation, expanded access to diverse surface destinations, and the ability for humans to sustainably live and work far from Earth.

Applicants to the Prize Competition must be able to demonstrate successes in supporting underserved communities in the advancement of new technologies and concepts in any of the following technology categories:

GO! Rapid, Safe, and Efficient Space Transportation:

The technology area focuses on developing advanced technologies for space transportation, including space nuclear propulsion, advanced propulsion, and cryogenic fluid management. These initiatives aim to enable fast in-space transits and enhance storage, transport, and fluid management capabilities for both surface and in-space applications. The goal is to propel future science, commercial, and exploration missions with more efficient propulsion systems.

LAND! Expanded Access to Diverse Surface Destinations:

Through precision landing and hazard avoidance technologies, the community strives to achieve lighting-independent precise landing on any terrain. Additionally, the focus is on developing capabilities that enable small to large missions to efficiently enter the atmospheres of various celestial bodies within our solar system. This includes accurate prediction of plume surface interaction for global access to the moon and Mars.

LIVE! Sustainable Living and Working Farther from Earth:

The technology area is dedicated to developing advanced habitation systems that ensure astronauts' health and productivity while residing in space and planetary vehicles. The focus is also on in-situ resource utilization, aiming to develop scalable production and utilization capabilities for sustainable commodities on the lunar and Mars surfaces. Power and energy storage systems, as well as thermal management technologies, are crucial to enable continuous lunar and Mars surface operations and survival in extreme environments.

EXPLORE! Transformative Missions and Discoveries:

The technology area focuses on several key areas including advanced avionics and the advancement of radiation-hardened spaceflight computing technologies. Both terrestrial and in-space manufacturing technologies are being developed to enhance the capabilities and affordability of commercial and exploration missions. Autonomous systems and robotics technologies are also being advanced to enable and augment a wide range of science and exploration missions. Communication, navigation, and timing approaches are being developed to support diverse asset needs, including establishing asset location in-space. In-space servicing, assembly, and manufacturing technologies expand in-space infrastructure, contributing to the creation, maintenance, and evolution of space assets. Lastly, small spacecraft technologies and responsive launch capabilities are being developed to rapidly expand space capabilities at significantly lower costs.

4. Competition Timeline

The following is an overview of the expected timeline for the Competition.

Table 2. Competition Timeline.

	Competition Timeline	
Phase	Expected Date	Description
Competition Launch	Thursday, September 28, 2023	<ul style="list-style-type: none">• Competition launches to public and ongoing promotional and communication activities begin
Open Submission Period	September 2023–February 2024	<ul style="list-style-type: none">• Informational Webinars to support registered Teams• Ongoing Promotional activities and/or other support for registered Teams
Registration Closes	Thursday, February 8, 2024 at 5 PM EST	<ul style="list-style-type: none">• Final day for organizations and individuals to register
Competition Close	Thursday, February 22, 2024 at 5 PM EST	<ul style="list-style-type: none">• Deadline for submissions
Winners Announced	Wednesday, March 13, 2024	<ul style="list-style-type: none">• Winners announced
In-person Convening	Tentative*	<ul style="list-style-type: none">• Competition winners will be invited to participate in a collaborative in-person

Event at NASA Goddard Space Flight Center (GSFC)	Thursday, April 17, 2024	event including networking, facility walkthroughs, and other engaging activities.
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5. Registration, Submission, and Judging

To participate in the Competition, follow these three steps:

1. Register for the Competition by February 8th 2024:

- a. Visit the official Competition website: spacetechnocatalystprize.org
- b. Click on the "Registration" tab to access the registration form.
- c. Complete the registration form by providing the required information.
- d. Ensure that you meet the eligibility requirements.
- e. Submit the registration form before the registration deadline (February 8, 2024 at 5 PM EST).

2. Attend an Informational Webinar (optional):

- a. We highly recommend attending an informational webinar to learn more about the Competition.
- b. The webinar will provide valuable insights and guidance on how to proceed. NASA intends to schedule multiple webinars throughout the prize submission window.
- c. More details on webinars will be posted to the Competition website.

3. Submit a Competition Entry by February 22nd 2024:

- a. Once registered, it's time to submit your Competition entry.
- b. Prepare your Competition submission according to the guidelines and requirements outlined on the Competition website.
- c. Visit the submission page on the official Competition website.
- d. Fill out the submission form with the necessary details and click 'Submit'.
- e. Submit your entry before the submission deadline (February 22, 2024 at 5 PM EST).

5.1. Registration

All interested individuals, teams, or organizations must register for the Competition by the registration deadline (February 8, 2024 at 5 PM EST) and meet the eligibility requirements in order to participate in the Competition. By registering, participants will create a user account on the Competition website. For this Competition, the registration

process will be administered by the Competition contractor, Ensemble Government Services, LLC.

Registration will take place through the official Competition website: spacetechnocatalystprize.org.

Table 3. Registration Form Components

Component	Input
First Name	Free form Text
Last Name	Free form Text
Affiliation	Drop down menu: 1. Individual or 2. Academia 3. Non-Profit or 4. Commercial company > 4. Organization or Non-Profit IF 2, 3, 4 add conditional free form text to enter the name of organization. Free form Text: Name of organization
Email *Please note your email will be used as the username for logging into the site	Free form Text
Phone Number	Numerical Inputs
Password	Free form Text

5.2. Submission

All registered individuals and teams must submit their submission form by February 22, 2024 at 5 PM EST via the Competition website submission form.

5.2.1. Submission Components

The submission elements required to enter the Competition include:

Table 4. Submission Form Components

Component	Input
First Name	Free form Text
Last Name	Free form Text
Affiliation	<p>Drop down menu: 1. Individual or 2. Academia 3. Non-Profit or 4. Commercial company > 4. Organization or Non-Profit</p> <p>IF 2, 3, 4 add conditional free form text to enter the name of the organization.</p> <p>Free form Text: Name of organization</p>
Email	Free form Text (configure for email inputs)
Phone number	Free form Text (configure for numerical inputs)
Location	Drop down of 50 States and other US territories
Select the Relevant Technology Area that you work within.	<p>Drop down menu of the following technologies, option to select more than one category:</p> <ol style="list-style-type: none"> 1. Advanced Avionics 2. Advanced Habitation Systems (AHS) 3. Advanced Manufacturing 4. Advanced Propulsion 5. Autonomous Systems and Robotics 6. Communications and Navigation 7. Cryogenic Fluid Management 8. Entry, Descent, and Landing to Enable Science Missions 9. Excavation, Construction, and Outfitting (ECO) 10. In-Situ Resource Utilization (ISRU) 11. In-space Servicing, Assembly, and Manufacturing (ISAM) and Rendezvous, Proximity Operations, and Capture (RPOC) 12. Other: Please Specify 13. Power and Energy Storage Systems 14. Precision Landing and Hazard Avoidance 15. Small Spacecraft Technologies

	<p>16. Space Nuclear Propulsion 17. Thermal Management Systems 18. 20t and Lunar/Mars Global Access 19. Other: Please Specify</p>
<p>Community.</p> <p>Define the underserved and underrepresented community or communities that you support.</p>	Free form Text
<p>Solution.</p> <p>Describe the processes, methods, strategies, or approaches you have used to enhance the capacity for underserved and underrepresented communities to pursue space and related ESIP opportunities.</p>	Free form Text
<p>Impact & Evidence.</p> <p>Describe the demonstrable impact of these processes, methods, strategies, and approaches.</p> <p>Include measurable data and/or story narratives.</p>	Free form Text
<p>Community Challenges.</p> <p>Describe the challenges, issues, or barriers facing this community as it relates to space research and development (R&D) and ESIP related opportunities.</p>	Free form Text

<p>Future Enhancements.</p> <p>Describe recommendations on how you and your organization are uniquely positioned to enhance the capacity of these communities to pursue space technology opportunities in the future.</p>	<p>Free form Text</p>
<p>References.</p> <p>Provide 2 references who were part of the capacity building efforts.</p>	<p>Multi text input for Name, Organization, Contact details (email or phone number)</p>
<p>Video Narrative.</p> <p>Submit an accessible video link telling your story in no more than 2 minutes.</p> <p>The video should be a simple screen recording video where you describe your work to enhance the capacity for underserved and underrepresented communities.</p> <p>Do not overly edit or produce the video. It should be a basic recording to help the judge panel learn more about you and your work.</p> <p>Submission Format: A shareable YouTube or Vimeo link that can be accessible to Judges.</p>	<p>Free form Text</p>

<p>Proof of Citizenship, Permanent Residency, or Primary Place of Business.</p> <p>In order to be eligible for an award, individuals must be U.S. citizens or permanent residents of the United States and be 18 years of age or older, and organizations must be an entity incorporated in and maintaining a primary place of business in the United States.</p> <p>If you are selected as a potential Winner and you are an individual, you will be asked to provide proof of citizenship or permanent residency. If you are selected as a potential Winner and you are an organization, you will be asked to provide proof of the location of your primary place of business. Please confirm that you will be able to provide one of the options below:</p>	<ul style="list-style-type: none"> ● Yes, I can provide proof of citizenship or permanent residency. ● Yes, my organization can provide proof that the location of our primary place of business is in the United States. ● No, I cannot provide proof of citizenship or proof my primary business is located in the United States
<p>Confirm that you have read and acknowledge the Competition Rules & Requirements</p> <p>Read the rules here.</p> <p>[Link to Downloadable Rules document]</p>	<ul style="list-style-type: none"> ● Yes, I have read and acknowledge the Competition Rules ● No, I have not read the Competition Rules
	<p>[Submit Button]</p>

5.3. Judging

Submissions will be evaluated by a panel of representative, expert judges. Following the submission deadline, the Judging Panel will review the submissions and discuss,

evaluate, and rank the submissions. Judges will assess submissions on the criteria described below and score submissions on a 20 point scale using a Likert-scale scoring model. Each Likert-scale question item is on a five point scale with a highest possible score of 5 and lowest possible score of 1 for each question.

Table 4. Judging Criteria

Criteria	Guiding Questions	Possible Points
Effective Engagement	<p>To what extent does the submission effectively engage underrepresented communities to pursue space technology opportunities?</p> <ol style="list-style-type: none"> 1. Ineffective Engagement 2. Very Little Engagement 3. Somewhat Effective Engagement 4. Effective Engagement 5. Highly Effective Engagement 	1-5
Impact on Communities	<p>To what extent does the submission contribute to capacity building efforts delivering impact to the community pursuing space technology funding opportunities?</p> <ol style="list-style-type: none"> 1. No Impact 2. Very Little Impact 3. Some Impact 4. Clear Impact 5. Significant Impact 	1-5
Cultural Awareness	<p>How well does the submission adapt and remain relevant within the unique cultural context of the community?</p> <ol style="list-style-type: none"> 1. Very Poorly 2. Poorly 3. Adequately 4. Well 5. Very Well 	1-5

Future Impact Potential	<p>Does the application demonstrate the potential to positively empower underrepresented individuals and communities in the space technology sector in the future?</p> <ol style="list-style-type: none"> 1. No Potential 2. Low Potential 3. Moderate Potential 4. High Potential 5. Very High Potential 	1-5
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6. Legal Requirements

6.1. In General

Thank you for your interest in the NASA Space Tech Catalyst Prize (the "Competition"). The Competition is sponsored by NASA with platform support provided by Ensemble Government Services, LLC. Please review the rules and eligibility to ensure that you meet all the necessary guidelines before submitting your entry. Please read the rules and the terms carefully, as they describe the conditions under which you are eligible to participate.

Please know that by participating in this Competition and in accordance with these Rules, you are eligible to receive various forms of recognition and a possible award from NASA of up to \$25,000 as a Winner.

Individuals and teams are responsible for understanding and complying with all Competition rules and requirements as stated below and detailed in the Eligibility Requirements Document. The following sections below summarize key elements of the Eligibility Requirements Document.

6.2 Eligibility Requirements:

NASA welcomes applications from individuals, teams, and organization or entities that have a recognized legal existence and structure under applicable U.S. law and that are in good standing in the jurisdiction under which they are organized with the following restrictions:

1. Individuals must be U.S. citizens or permanent residents of the United States and be 18 years of age or older.

2. Organizations must be an entity incorporated in and maintaining a primary place of business in the United States.
3. Teams must be comprised of otherwise eligible individuals or organizations and led by a U.S Citizen or permanent resident of the United States who is 18 years of age or older.

U.S. government employees may participate so long as they are not acting within the scope of their position, rely on no facilities, access, personnel, knowledge, or other resources that are available to them as a result of their employment except for those resources made available to all other participants on an equal basis.

U.S. government employees participating as individuals, or who submit applications on behalf of an otherwise eligible organization, will be responsible for ensuring that their participation in the Competition is permitted by the rules and regulations relevant to their position and that they have obtained any authorization that may be required by virtue of their government position. Failure to do so may result in the disqualification of them individually or of the entity which they represent or in which they are involved.

Foreign citizens may only participate as (i) employees of an otherwise eligible U.S. entity who reside in the U.S., (ii) full-time students at an otherwise eligible U.S. university or college who reside in the U.S., or (iii) owners of less than 50% of the interests in an otherwise eligible U.S. entity who reside in the U.S.

Registered competitors shall be responsible for the actions of and compliance with the rules by their employees, subcontractors, officers, owners, and other affiliated persons.

Ineligible persons or entities:

Federal entities or Federal employees acting within the scope of their employment. Employees of NASA, Ensemble Government Services LLC, and any of their subsidiaries and affiliates, as well as immediate family members or persons living in the same households of such employees.

No use of government funds:

If you or your employer is receiving Government funding for similar projects you or your employer are not eligible for an award under this Competition.

Distribution of an Award to a Team:

If a team of individuals and/or entities is selected as a Winner, any Award will be made to the person who registered the team and submitted the application. That person is

responsible for ensuring the award funds are appropriately distributed to each member of the team.

Distribution of an Award to an Organization:

If an organization is selected as a Winner, any Award will be made to the organization who registered and submitted the application. The authorized representative of the organization must provide the appropriate information for payment of the award.

Treatment and Use of Intellectual Property:

Each application should reflect the anticipated ownership, use, and licensing of any intellectual property. You represent and warrant that your Entry is an original work created solely by You, that You own all Intellectual Property in and to the Entry, and that no other party has any right, title, claim or interest in the Entry, except as expressly identified by You to us in writing in Your application. You retain all rights, title and interest in any inventions, software or work of authorship You invent or create. The ownership and use of intellectual property arising from this competition remains with You.

Indemnification

Each applicant agrees to assume any and all risks and waives claims against Ensemble Government Services LLC and the U.S. Government and its related entities, except in the case of willful misconduct, for any injury, death, damage, or loss of property, revenue, or profits, whether direct, indirect, or consequential, arising from each team member's participation in the competition, whether such injury, death, damage, or loss arises through negligence or otherwise. For the purposes of this Indemnification paragraph, the term "related entity" means a contractor or subcontractor at any tier, and a supplier, user, customer, cooperating party, grantee, investigator, or detailee.

Use of Names, Trademarks and Insignias

Participants may not use the name, trademark or insignia of Ensemble Government Services LLC, its contractors, collaborators, or NASA on its hardware and printed materials related to the participation of Participant in the Space Tech Catalyst Prize without prior written consent from Ensemble Government Services LLC, its contractors, collaborators, or NASA, whichever Party is applicable. Participant agrees that unauthorized use of such names, trademarks and insignias shall result in elimination from participation in the competition if Participant continues unauthorized use after being notified to cease and desist by Ensemble Government Services LLC or NASA as applicable.

Media Rights

Participant retains all media rights related to the story of its participation in the Competition.

Participant agrees that Ensemble Government Services LLC and NASA will retain all Media Rights related to the story of the Competition.

Each Participant agrees to let Ensemble Government Services LLC and NASA use the name of the Participant and the name and likeness of such Participant (without charge) in connection with the media material prepared and distributed by PARTNER and NASA relating in any way to the Competition.

Participant agrees to provide Ensemble Government Services LLC and NASA reasonable amounts of video footage or access for recording activities related to participation of Participant in the Competition and the right to use said footage for public affairs and/or educational purposes.

Participant agrees that its failure to furnish video footage or access for recording purposes based on Ensemble Government Services LLC's reasonable requests may result in Participant's removal from participation in the Competition.

Disclaimer of Endorsement

NASA does not endorse or sponsor any commercial product, service, or activity. NASA's participation in this AGREEMENT or provision of goods, services, facilities or equipment under this AGREEMENT does not constitute endorsement by NASA. Participants agree that nothing in this AGREEMENT will be construed to imply that NASA authorizes, supports, endorses, or sponsors any product or service of Participants resulting from activities conducted under this AGREEMENT, regardless of the fact that such product or service may employ NASA-developed technology.