CASIS Proposal Evaluator Instructions

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Contents

1 Purpose

This document is intended to guide proposal evaluators in assessing International Space Station (ISS) National Laboratory flight proposals submitted to the Center for the Advancement of Science in Space, Inc. (CASIS). As the manager of the ISS National Lab, CASIS is responsible for selecting research and development (R&D); technology development/demonstration; and science, technology, engineering, and mathematics (STEM) engagement proposals for flight implementation. Individual evaluators are part of an overall process described in this document and provide inputs that form the basis for selection. Using this document, evaluators should be able to complete an individual proposal evaluation and specific panel evaluations for relevant proposals.

2 Overview of the Evaluation Process

2.1 Objective of the Evaluation Process

The objective of the proposal evaluation process is to assist the CASIS final determination committee and chief executive officer in determining which of the many proposals received best demonstrate an appropriate and effective utilization of the ISS National Lab, a publicly funded asset with unique capabilities and limited capacity. To aid in determination for the many and diverse types of proposals received, instructions are provided to each proposing entity to assist in their development of a proposal that clearly states the experimental design, execution plan, and support requirements.

Proposals are evaluated along four “lines of business,” key programmatic focus areas of the ISS National Lab: 1) fundamental science, 2) in-space production applications, 3) STEM engagement and educational outreach, and 4) technology development/demonstration (see section 2.2 for additional description). Each line of business has a specific proposal evaluation framework so that proposals with similar characteristics are evaluated within a common framework. The framework is intentionally transparent, with specific criteria communicated to offerors.

Within the evaluation framework for each line of business, proposals are evaluated using scoring of criteria that fall under the following categories: scientific and technical merit, implementation feasibility, operations and ISS utilization, business and economic merit, and STEM engagement (see section 2.3 for additional description). All five categories may not be applicable to all lines of business, and proposals are evaluated only by the categories are relevant to their assigned line of business. Each category has a rubric-based scoring Excel worksheet to determine a raw score for that category. For each line of business, the criteria in each category are weighted based on the expected strength of that criteria for that particular line of business. Weighting is applied based on expected proposal content and detail, depending on the line of business.

For the evaluation of a given proposal, a panel of individual evaluators are assigned to each evaluation category applicable to the proposal’s line of business. Each evaluator reviews and scores the proposal based on the scoring rubric for each criterion within that category. In addition, evaluators are asked to provide the overall strengths and weaknesses of the proposal to substantiate the rubric score. Finally, evaluators are asked to identify “notable features” that will help the CASIS final determination committee and chief executive officer identify high-risk, high-reward proposals that may not have scored well but have high potential. Each evaluator documents their scoring, along with their

justification and any notable features, on an Excel worksheet (the Evaluator's Workbook*)* provided with these instructions.

The scoring for each evaluation category helps establish the basis for an adjectival rating for the category on a scale from "poor" to "excellent" (see section 3 for additional description). If there is a wide discrepancy in the scoring for a category, the panel of evaluators assigned to that category will be asked to participate in a CASIS-facilitated virtual panel meeting to determine a consensus evaluation for the category. Once a consensus adjectival rating is established for each category, a panel integration team is formed to determine an overall adjectival rating for the proposal across all applicable categories (see Figure 5 in section 3 of this document). These adjectival ratings are used by the CASIS final determination committee and chief executive officer to determine which proposals will be selected for award.

Note: *Decision-making is a creative and dynamic way of reaching agreement in a group. Instead of simply voting for an item and having the majority decide, a consensus group is committed to finding solutions that everyone actively supports or, at a minimum, finds acceptable.*

2.2 Lines of Business

The specific line of business a proposal is submitted under determines how the proposal is evaluated. The proposal instructions, evaluation categories, and criteria weighting for a proposal differ by business line. The applicable business line for a proposal is determined by the submitting organization based on the following definitions:

Fundamental Science: Peer-reviewed science that will lead to new discovery and knowledge, or advance our current understanding or knowledge, in various scientific disciplines through the use of microgravity, the extreme environments of space, or the unique vantage point of the ISS. Economic output from project results is not required.

In-Space Production Applications: Low-Earth orbit (LEO)-based applied R&D microgravity applications seeking to demonstrate space-based manufacturing and production activities that enable new business growth and capital investment, represent scalable and sustainable market opportunities, and produce reoccurring value with the potential to generate demand for and revenue from access to space.

STEM Engagement and Educational Outreach: Programs, projects, and public-private partnerships that leverage the ISS and space-based research to advance U.S. leadership in space-based R&D and industry-related workforce development. These programs, projects, and partnerships will engage K-12 students and enhance higher education to promote diversity and outreach into underrepresented demographics.

Technology Development/Demonstration: Applied R&D, technology demonstration, and Technology Readiness Level maturation to improve products and/or processes that will produce positive economic impact. All projects with an expressed commercial purpose or intent are included. Most of these will be sourced and/or serviced by Implementation Partners.

2.3 Evaluation Categories

There are five evaluation categories, and each line of business is evaluated across either three or four categories. Some categories do not apply to some lines of business, and the criteria within each category

are weighted differently depending on the line of business (see Table in Appendix A). The evaluator's role will focus on one of the following categories, as requested:

Scientific and Technical Merit: Evaluates the fundamental scientific investigation or technology maturation merit, including goals, objectives, level of innovation, programmatic value, analysis merit, likelihood of success, risk, and the basis and justification for use of microgravity, the extreme environments of space, or the unique vantage point of the ISS. High-scoring proposals will have a crisp purpose and a well-designed scientific investigation or technology maturation plan. Implementation is not taken into account in this category. This category is used for the evaluation of proposals in the following business lines: in-space production applications, technology development/demonstration, and fundamental research.

Implementation Feasibility: Evaluates the quality and feasibility of the implementation approach, including the design and plan for operations, suitability for addressing objectives, management approach, schedule, cost, offeror expertise and prior performance, risk, and whether the implementation would overcome strategic and operational barriers to increase the offeror's access to space-based facilities. This category is used for the evaluation of proposals in all four lines of business.

Operations and ISS Utilization: Evaluates the readiness for operations and appropriate utilization of scarce ISS resources, including power, mass, volume, and interface requirements; installation and operations impact on ISS crew time; hazards; regulatory compliance; data collection and downlink needs; and whether the project offramp or completion criteria are defined and consistent with ISS Operations sustainability. This category is used for the evaluation of proposals in all four lines of business.

Business and Economic Merit: Evaluates the market potential and application leverage of the potential solution, including market scalability and leveragability, market disruption, incremental revenue, financial commitments, and whether the project has a feasible commercialization plan and customer engagement. This category is used for the evaluation of proposals in the following lines of business: in-space production applications and technology development.

STEM Engagement: Evaluates the quality of the plan for STEM education and outreach, including the STEM goals and outreach outcomes, degree of experiential learning, social impact (including demographics of outreach outcomes), assessment and measurement plans, likelihood of success, and degree to which partnerships are utilized. This category is only used for the evaluation of proposals in the STEM engagement and educational outreach line of business.

If a category is evaluated using multiple evaluators, an evaluator panel will be convened. Each panel member will score the proposal, as described in section 3 of this document, and the panel will determine a consensus adjectival rating.

Figure 1 below depicts the process flow for each line of business through the evaluation categories.

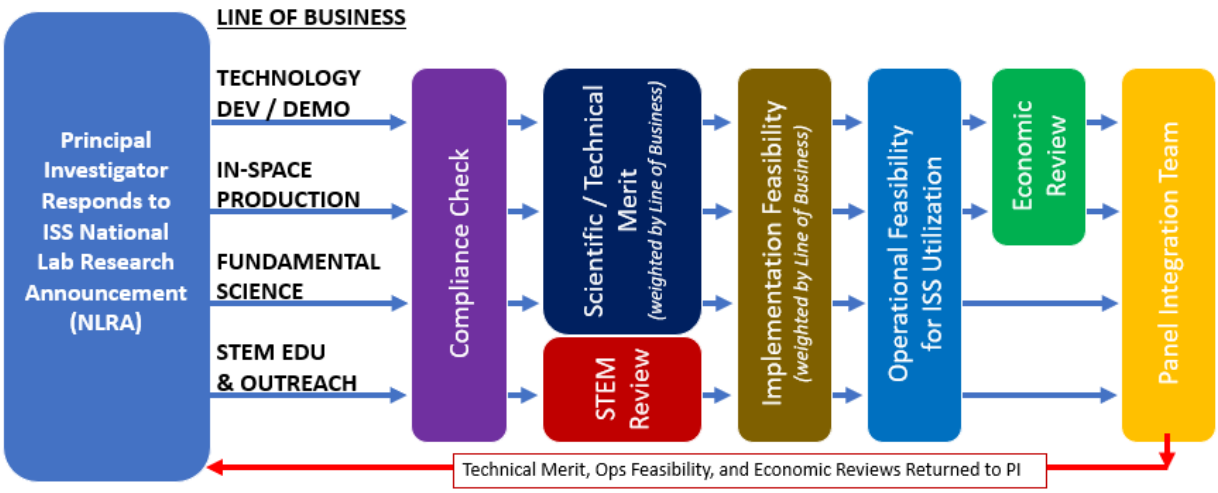

Figure 1: Proposal Evaluation by Line of Business

Once a consensus adjectival rating is achieved for each evaluation category, the proposal moves on to the panel integration team. The role of this team is to integrate the adjectival ratings for all evaluation categories applicable to a proposal, formulate an overall proposal adjectival rating, collate notable features, assess resource requirements relative to value, synthesize an overall risk assessment, prepare recommendations for the CASIS final determination committee and chief executive officer, and convey feedback to offerors.

3 Scoring Explanation

Using the provided Evaluator's Workbook (Excel file), evaluators should begin their evaluation on the "Proposal Summary" workbook tab, as shown in Figure 2. Evaluators should start by filling in the appropriate proposal name as well as their name and organization as the evaluator. To select the line of business for the proposal, evaluators should click on the arrow to the right of the blank cell and choose the appropriate line of business from the drop-down menu.

Proposal Evaluation		
Proposal		
Organization		
Evaluator		
Line of Business		Fundamental Science
Science & Technology	0.00	POOR
Implementation Feasibility	0.00	POOR
Operations & ISS Utilization	0.00	POOR
Business & Economic	0.00	NOT RELEVANT
STEM Engagement & Outreach	0.00	NOT RELEVANT
WEIGHTED TOTAL	0.00	POOR

Figure 2: Proposal Summary

For each proposal, evaluators should review for their assigned evaluation category in accordance with the criteria identified in section 4 of this document. The Evaluator's Workbook includes rubric tabs for each evaluation category to assist in the scoring along a scale from zero (noncompliant) to five (exceptional). A score of zero is indicative of a noncompliant response to the evaluation criteria and may, of itself, cause a proposal to be rejected, so evaluators are asked to use this score sparingly.

As shown in Figure 3, the rubric provides the criteria in column "A." Column "B" cross references the criteria identifier from section 4 of this document, which provides descriptions of the criteria by category. Evaluators should enter their scores in column "I."

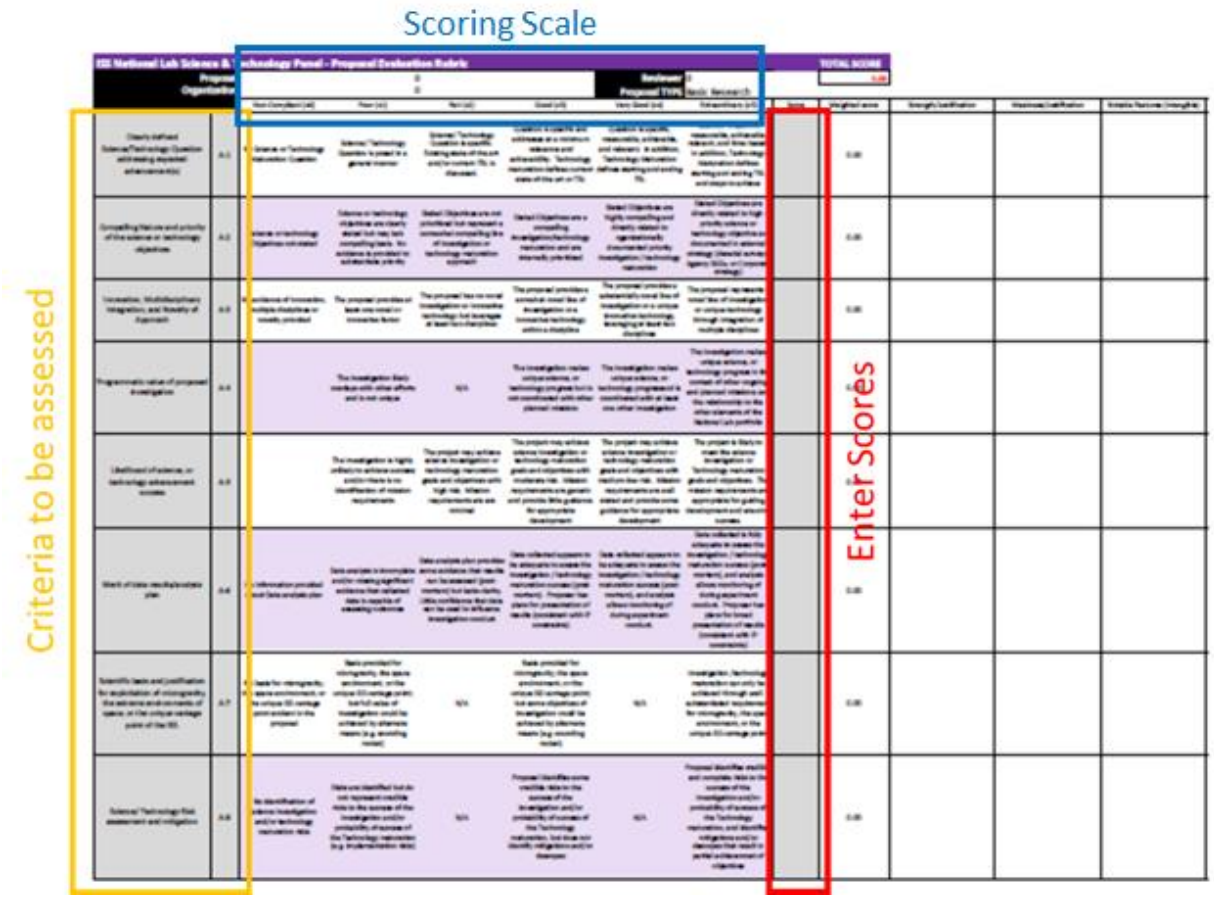

Figure 3: Rubric Scoring

The "Total Score" in cell J2 of each sheet is calculated based on a line of business–specific weighting schema. So, for any given set of criteria scores, the "Total Score" may be calculated differently for proposals in different lines of business. The weighting schema for each line of business is available for review in the "Weights" workbook tab.

Scores ***must*** be substantiated by one or more strengths and/or weaknesses. Strengths should be entered in column "K," and weaknesses in column "L" (see Figure 4 below). A well-written strength will reference the criteria standard (see section 4 of this document), citing the proposal page number that exceeds the standard. A well-written weakness will either state that the proposal fails to address the criteria or state how the proposal (cite page numbers) falls short of the standard. It is possible for both

strengths and weaknesses to be documented for any given criterion. A score of 1 (poor) or 2 (fair) should have one or more substantiating weakness statements that are more significant than any strength statements. A score of 4 (very good) or 5 (excellent) should have one or more substantiating strength statements that are more significant than any weakness statements. A score of 3 (good) should have strength and weakness statements that essentially balance.

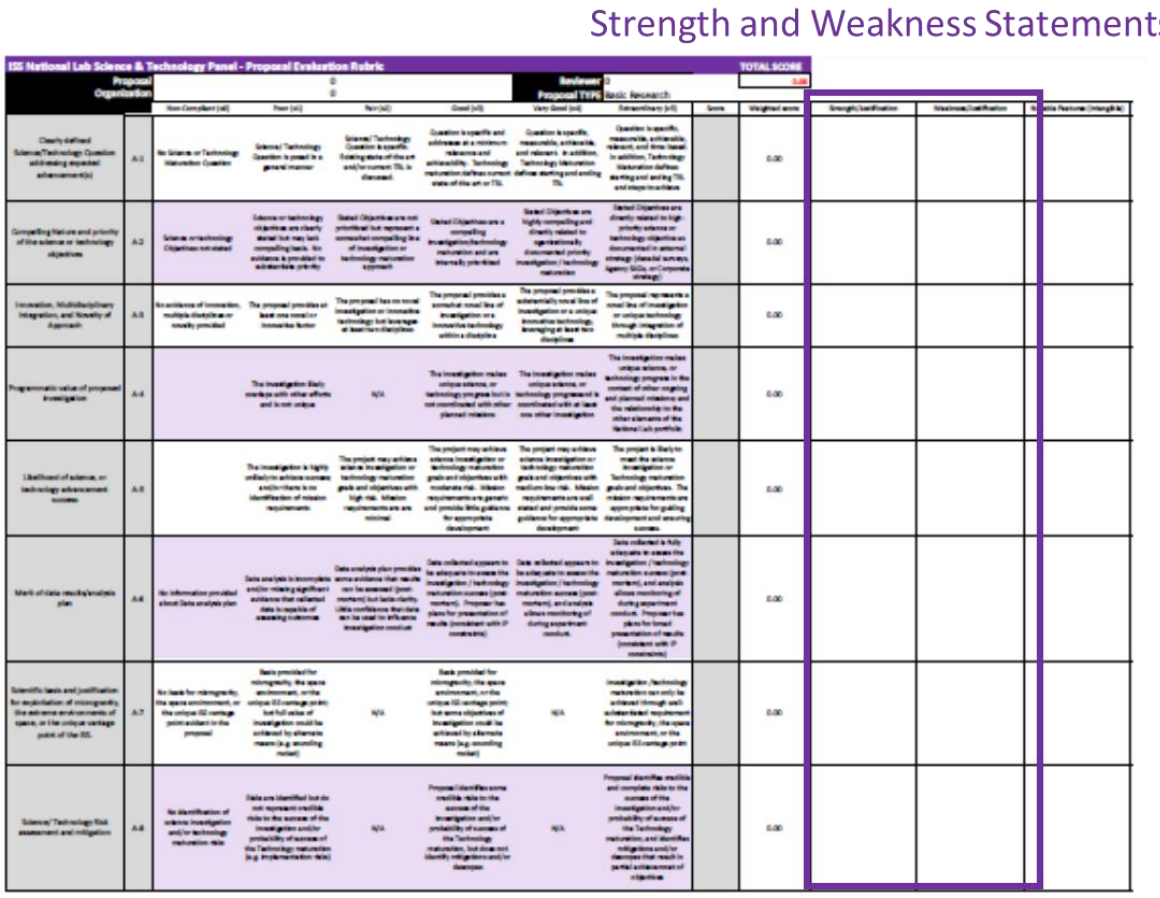

Figure 4: Strength and Weakness Statements

Please carefully capture the strength and weakness rationale, as these statements are used by the panel integration team to synthesize selection recommendations and prioritization. Strengths and weaknesses may be shared with offerors during a debrief to assist them in preparing better proposals in the future.

Additionally, evaluators should use column “M” to record any “notable features” that may help the CASIS final determination committee and chief executive officer identify high-risk, high-reward proposals that may not have scored well in the rubric but may have high potential. These comments are for the final determination committee’s consideration and will not be shared with offerors unless specifically permitted by the CASIS final determination committee and chief executive officer.

Based on the rubric scoring from evaluators, an adjectival rating (excellent, very good, good, fair, or poor) will be assigned for each category. Figure 5 shows the score-based guide referenced in assigning adjectival ratings, along with the corresponding strengths and weaknesses that would be supportive of each rating.

Score	*Adjectival Rating*	*Strengths and Weaknesses*
>85-100	**Excellent**	A truly outstanding proposal. Few, if any, weaknesses are noted, and there are many strengths. A proposal with this rating should be compelling and a top-tier effort.
>75-85	**Very Good**	A better-than-average proposal. Strengths outweigh weaknesses, and there are no meaningful noncompliant criteria responses. A proposal of this rating would have attractive features noted in strengths that would easily justify selection.
>65-75	**Good**	An acceptable proposal. Weaknesses and strengths are essentially balanced. Any noncompliant criteria responses are easily correctable. A proposal rated as "Good" in all categories would be "on the cusp" for selection.
>50-65	**Fair**	A marginal proposal. Weaknesses outweigh strengths (perhaps significantly). The evaluation may identify noncompliant criteria responses, but these should be correctable with additional effort by the offeror or Implementation Partner.
0-50	**Poor**	A nonselectable proposal. Few if any strengths and many weaknesses, some of which may include uncorrectable noncompliant criteria responses.

Figure 5: Score-Based Adjectival Rating Guide

In the case that there is a wide discrepancy in the technical scoring for Scientific and Technology Merit, the panel of evaluators assigned to that category will be asked to participate in a CASIS-facilitated panel meeting to determine a consensus adjectival rating for the category.

In the panel meeting, evaluators will be provided with the score-based adjectival rating guide shown in Figure 5 as a basis for their discussion. However, it is important to note that evaluators are *not* bound by the rubric scoring to formulate the consensus adjectival rating. The score-based adjectival rating guide is based on experience scoring proposals, but the panel of evaluators are not constrained to that method of rating during the panel meeting.

The end-result of the panel meeting is to provide a consensus adjectival rating for the given category, along with consensus strengths and weaknesses and any "notable features" to report to the panel integration team, which will determine the overall rating for the proposal. The panel lead may provide raw rubric scores to the panel integration team for their use in formulating recommendations, but these scores will not be provided to the CASIS final determination committee and chief executive officer, nor will they be included in any feedback to the offeror. Figure 6 below depicts the entire Panel Evaluation Process.

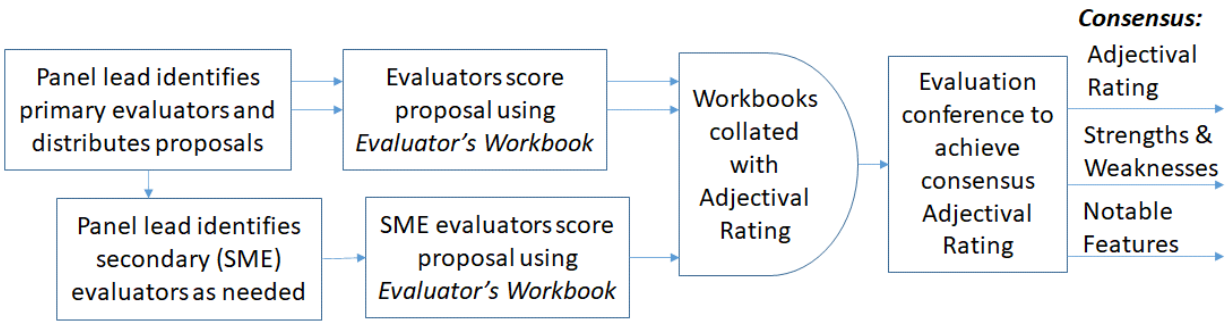

Figure 6: Panel Evaluation Process

4 Descriptions of Evaluation Criteria by Category

The following descriptions are provided to facilitate review of a proposal using the Evaluator's Workbook and should be used when scoring the criteria in the rubric. These descriptions are also supplied to offerors in the proposal submission instructions guide for the ISS National Lab. Strengths and weaknesses should be based on the degree to which the proposal is responsive to the criteria.

4.1 Scientific and Technical Merit

A-1, Clearly defined science/technology question addressing expected advancement(s)

In scoring this criterion, evaluators are asked to determine how well the offeror has stated the science question or technology maturation goals. How specific are these goals written in the proposal? Are they inherently measurable and achievable? How relevant is the scientific investigation or technology maturation? Are the time-based durations and any related events captured? For technology maturation projects, are the starting and ending technology readiness levels (TRL) and steps to achieve advancement identified?

A-2, Compelling nature and priority of the science or technology objectives

In scoring this criterion, evaluators are asked to determine the compelling nature of the project. Are the stated objectives directly related to high-priority science or technology maturation goals? For the fundamental science line of business, the objectives would ideally be related to a documented external strategy (e.g., decadal surveys, agency Strategic Knowledge Gaps (SKGs), etc.). For the in-space production applications and technology development lines of business, the objectives could be related to external industry objectives or an internal corporate strategy and should address an approach to scale the proposed technology to achieve a production-level process.

A-3, Innovation, multidisciplinary integration, and novelty of approach

In scoring this criterion, evaluators are asked to determine the degree of novelty or innovation of the project. How unique is the technology considered for maturation, or how novel is the line of investigation; or how innovative is the proposed technology? Additional credit is given to proposals that integrate multiple disciplines. This criterion can be thought of as the "inherent value" of the project.

A-4, Programmatic value of proposed project

In scoring this criterion, evaluators are asked to assess whether the project advances unique science or technology in the context of other ongoing and planned missions. A key exemplar would be the project's

relationship to the other elements of the ISS National Lab portfolio. Outside evaluators may or may not have insight into the specifics of the ISS National Lab portfolio but are asked to score this criterion within the scope of national space investments. Because this is an extrinsic criterion, lack of proposal discussion is not necessarily a reason to score this criterion poorly.

A-5, Likelihood of science or technology advancement success

In scoring this criterion, evaluators are asked to assess whether the project is likely to meet the scientific investigation or technology maturation goals and objectives. Specifically, are the proposed mission requirements appropriate for guiding development and ensuring success? Is the experimental (or technology maturation) design likely to lead to success? Because this is an extrinsic criterion, lack of proposal discussion is not necessarily a reason to score this criterion poorly.

A-6, Merit of data results/analysis plan

In scoring this criterion, evaluators are asked to determine whether data to be collected by the scientific investigation or technology maturation is fully adequate to assess the project's success, at a minimum using postmortem collected data. A higher-scoring proposal would also address whether data analysis allows monitoring during project execution to allow for in-flight adjustment. The offeror should also have plans for broad presentation of results, consistent with Intellectual Property (IP) constraints, after the conclusion of the project.

A-7, Scientific basis and justification for exploitation of microgravity, the extreme environments of space, or the unique vantage point of the ISS

In scoring this criterion, evaluators are asked to establish whether the scientific investigation or technology maturation can only be achieved through well-substantiated requirements for microgravity, persistent exposure to the low Earth orbit environment, or the unique ISS vantage point. If the proposed project could achieve substantively the same results on the ground, via sounding rocket, high-altitude balloon, reduced-gravity aircraft testing, or other mechanisms, this criterion should not be awarded a high score.

4.2 Implementation Feasibility

B-1, Adequacy and robustness of the project design and plan for operations

In scoring this criterion, evaluators are asked to assess whether the proposed implementation design of the scientific investigation, technology maturation, or STEM engagement will address the offeror's goals and objectives. Do project success criteria (for conduct and operations) demonstrate the necessary and sufficient evidence to complete the project? High-scoring proposals will clearly establish success thresholds.

B-2, Suitability of proposed hardware, software, and facilities to address objectives

In scoring this criterion, evaluators are asked to assess whether the offeror's selected hardware, software, and facilities are necessary and sufficient to complete the scientific investigation, technology maturation, or STEM engagement design as envisioned. Evaluations that identify inappropriate resources, shortfalls, or necessary hardware, software, or facilities that are not mentioned in the proposal should award lower scores.

B-3, Adequacy and robustness of the management approach and schedule

In scoring this criterion, evaluators are asked to determine whether the proposal identifies key personnel, including a principal investigator (PI) for scientific investigations or a project manager (PM). Further, evaluators are asked to determine whether the proposal establishes a clear and reasonable organizational structure. To achieve maximum score, the proposal should include a credible and detailed program schedule, including Implementation Partner interactions, if applicable.

B-4, Well-defined and credible cost of the project

In scoring this criterion, evaluators are asked to assess whether the proposed project's costs are fully described in the proposal with a detailed, substantive, and time-phased budget. High-scoring proposals should substantiate budget lines with a credible basis of estimate. Offerors should identify adequate management reserves.

B-5, Offeror's experience, expertise, and record of performance

In scoring this criterion, evaluators are asked to assess offeror's documented experience, expertise, and history of the project team, including the Implementation Partner. Is the offeror's past performance highly relevant to the proposed scientific investigation, technology maturation, or STEM engagement? Does the Implementation Partner (if applicable) have experience with similar ISS flight projects? High-scoring proposals should define roles and responsibilities of key performers and/or collaborators and provide appropriate resumes.

B-6, Uniqueness of implementation as compared with other R&D tools available to the offeror

In scoring this criterion, evaluators are asked to assess whether the proposal clearly identifies how the selected R&D tools are uniquely capable of achieving the scientific investigation, technology maturation, or STEM engagement goals. Alternate ground-based R&D tools, for example, simulation or artificial intelligence, should be explicitly considered and shown to be inadequate. Offerors should distinguish tools selection (this criterion) from the requirement for the project to be performed using the ISS (criterion A-7). For example, flame propagation in microgravity may not be physically replicable outside of the microgravity environment but may be simulated using published experimental results.

B-7, Implementation risk assessment and mitigation

In scoring this criterion, evaluators are asked to assess whether or not the proposal identifies credible and complete risks and opportunities to implement the scientific investigation, technology maturation, or STEM engagement. Proposals should not only identify the probability of occurrence and consequence of the risk but also define mitigation plans tied to project milestones.

4.3 Operations and ISS Utilization

C-1, ISS potential hazards are identified, and a mitigation plan is provided

In scoring this criterion, evaluators are asked to assess whether or not the proposal identifies potential ISS hazards clearly and completely with a relevant basis. For offerors new to the ISS environment, this criterion will largely be demonstrated by the Implementation Partner. For high-scoring proposals, hazard mitigation activities (Implementation Partner or internal) should be identified, scheduled, and costed.

C-2, Installation and operations impacts on ISS crew time are defined and sustainable

In scoring this criterion, evaluators are asked to assess whether or not the proposal's crew time estimates for installation and operation are reasonable, realistic, detailed, and credible. High-scoring proposals will show estimates of these times, substantiated by a basis of estimate.

C-3, Operational status and suitability of support equipment, logistics, and consumables

In scoring this criterion, evaluators are asked to assess whether or not the proposal identifies detailed support equipment, logistics, and consumable information, if relevant. The offeror's support equipment and data analysis tools should be credible and demonstrated to be necessary, including any needed ground analysis of return samples. This criterion is independent of ISS utilization, and may score a "5" if no ground sustainability is necessary.

C-4, Mass, volume, power, and interface requirements are defined and sustainable

In scoring this criterion, evaluators are asked to assess whether or not the proposal clearly identifies and substantiates ISS mass, volume, power, and interface requirements. Requirements should be supported by specific basis of estimates. Evaluators should assess whether the project needs are sustainable by ISS operations. Finally, any downmass requirements should be identified and reasonable.

C-5, Regulatory policies are identified and addressed

In scoring this criterion, evaluators are asked to assess whether or not the proposal clearly identifies any necessary regulatory polices (e.g., biomedical, human tissue, Earth observation, etc.). High-scoring proposals should identify reasonable and timely plans for regulatory approval.

C-6, Data collection/downlink plan is defined and sustainable

In scoring this criterion, evaluators are asked to assess whether or not the proposal identifies data collection and downlink plans (as applicable). Evaluators should assess whether these plans are sustainable by ISS services. Data collection plans should support the scientific investigation, technology maturation, or STEM engagement objectives.

C-7, Offramp/completion criteria are defined and consistent with ISS operations sustainability

In scoring this criterion, evaluators are asked to assess whether or not the proposal identifies criteria for off-ramping and/or project completion. Are minimum success criteria described? High-scoring proposals should identify both continuation and early disposal alternatives for project disposition that are sustainable by the ISS. Very rarely, a project may have no opportunities for either early termination or continuation (for example, external radiation samples) and may be scored a "5."

4.4 Business and Economic Merit

D-1, Project outcomes can be deployed to serve sizable addressable markets (scalability)

In scoring this criterion, evaluators are asked to assess whether the total addressable market (TAM)—the overall revenue opportunity that is or is expected to be available to a product or service if 100% market share is achieved—for the solution or product resulting (directly or indirectly) from this project. Is the method of calculation identified? The highest-scoring proposals should provide a TAM of $1 billion or higher.

D-2, Ability to leverage project outcomes across multiple applications, customers, or needs

In scoring this criterion, evaluators are asked to assess whether the product/solution or technology maturation is designed so that outcomes may address each or some of the following: multiple applications, needs, customers, and markets. Lower-scoring proposals will not be leverageable in several of these dimensions.

D-3, Project results in technology/products/solution innovation and/or market disruption

In scoring this criterion, evaluators are asked to assess whether the project represents or materially supports a unique innovation that will likely disrupt the targeted markets discussed in D-1. High-scoring proposals should provide supporting evidence that developed products or solutions will likely gain significant competitive advantage and have high potential to win significant (10% or more for the highest score) market share.

D-4, Project leads to incremental revenue after completion

In scoring this criterion, evaluators are asked to assess whether the revenue expectations resulting from solutions/products developed as a result of this project are well substantiated. The proposal should credibly identify expected incremental revenues and achievement timelines with supporting information. The highest-scoring proposals should credibly predict incremental revenues of $50 million or more per year, achieved within five years.

D-5, Sufficient internal/partner resource commitment is available

In scoring this criterion, evaluators are asked to assess whether funding for this project is fully available and documented in applicable commitment letter(s). Note that this criterion assesses funding availability; cost realism is assessed in criterion B-4. The highest-scoring proposals will discuss the funding needed to complete and commercialize the results, identifying additional, quantifiable, and committed capital sources (whether internal or partner-provided) to meet this funding need.

D-6, Project has feasible commercialization and customer engagement

In scoring this criterion, evaluators are asked to assess whether the proposal provides a strong statement of customer engagement progress and capabilities with a well-defined commercialization strategy. The highest-scoring proposals will sufficiently summarize their financial/operational plan and/or a well-defined business plan.

4.5 STEM Engagement

E-1, STEM engagement goals and/or outreach outcomes are clearly defined

In scoring this criterion, evaluators are asked to assess the degree to which the STEM engagement goals for direct participants are specific, clearly defined, and compelling. The proposal should identify outreach outcomes for broader demographics that are specified, planned, and address a well-defined target audience. Evaluators should assess the rationale for scaling or expanding existing programming.

E-2, Project advances U.S. leadership in space-based R&D and industry-related workforce development

In scoring this criterion, evaluators are asked to assess whether the proposal provides a plan for student STEM academic pathway and career awareness/development that is clearly defined and comprehensive. The highest-scoring proposals should provide a link between this plan and the advancement of U.S. leadership in space-based R&D and industry-related workforce development.

E-3, Degree and scope of experiential learning provided by STEM projects

In scoring this criterion, evaluators are asked to assess the degree to which the proposal's planned STEM outreach and engagement—including the plan for digital engagement and course or instructional development—is clearly defined, comprehensive, cohesive, and compelling. The highest-scoring proposals should be projects in which students are substantially involved in hands-on, problem-based learning representing at least 90% of the defined effort. Student experiential learning goals should be documented and tracked.

E-4, Outreach outcomes of STEM projects provide social impact

In scoring this criterion, evaluators are asked to assess the degree to which the STEM project delivers social impact, such as building community, inclusion, and diversity. The highest-scoring proposals should proactively address disadvantaged demographics.

E-5, Likelihood of STEM engagement and/or outreach success

In scoring this criterion, evaluators are asked to assess the degree to which the project is likely to achieve the anticipated project goals and objectives. Evaluators should examine whether mechanisms are in place to collect efficacy data. The highest-scoring proposals should include a comprehensive professional development strategy, including accreditation.

E-6, Merit and scope of STEM engagement assessment and outcome measurement plan

In scoring this criterion, evaluators are asked to assess the degree to which the anticipated data to be collected for STEM engagement assessment is sufficient to complete the project and meet its goals and objectives. Evaluators should examine the outcome measurement plan to assess whether the plan is robust and whether the outcomes can be measured using the collected data.

E-7, Degree to which partnerships are utilized in implementing STEM engagement plans

In scoring this criterion, evaluators are asked to assess the degree to which the proposal's STEM engagement involves multiple partner organizations that will provide significant funding and/or participation. The highest-scoring proposals should include a clearly defined, viable, and detailed plan to leverage partnerships to sustain the program.

Appendix – Evaluation Criteria Weighting Factors by Line of Business

	Fundamental Science	Technology Development/ Demonstration	In-Space Production	STEM Engagement
Scientific and Technical Merit				
A-1	0.2	0.2	0.2	0
A-2	0.2	0.1	0.15	0
A-3	0.25	0.15	0.1	0
A-4	0	0.1	0.1	0
A-5	0.1	0.25	0.25	0
A-6	0.15	0.1	0.1	0
A-7	0.1	0.1	0.1	0
Implementation Feasibility				
B-1	0.2	0.2	0.2	0.25
B-2	0.2	0.15	0.2	0.2
B-3	0.05	0.15	0.15	0.15
B-4	0.1	0.15	0.15	0.15
B-5	0.15	0.1	0.1	0.25
B-6	0.2	0.15	0.05	0
B-7	0.1	0.1	0.15	0
Operations and ISS Utilization				
C-1	0.1	0.1	0.1	0.1
C-2	0.25	0.25	0.25	0.2
C-3	0.1	0.15	0.15	0.1
C-4	0.2	0.2	0.2	0.2
C-5	0.1	0.1	0.1	0.1
C-6	0.1	0.1	0.1	0.25
C-7	0.15	0.1	0.1	0.05
Business and Economic Merit				
D-1	0	0.1	0.2	0
D-2	0	0.1	0.2	0
D-3	0	0.2	0.1	0
D-4	0	0.2	0.1	0
D-5	0	0.2	0.2	0
D-6	0	0.2	0.2	0
STEM Engagement				
E-1	0	0	0	0.2
E-2	0	0	0	0.1
E-3	0	0	0	0.2
E-4	0	0	0	0.1
E-5	0	0	0	0.1
E-6	0	0	0	0.2
E-7	0	0	0	0.1