

2024 BIG Idea Challenge Final Scoring Matrix



Final Evaluation Criteria (Max 90 Points)	Excellent	Very Good	Good	Fair	Poor	Missing
Technical Paper (Max 80 Points)						
Testing Verification (Max 25 Points) <ul style="list-style-type: none"> Did the team demonstrate a working system/sub-system of the inflatable technology? Did the team adequately identify and mitigate the key risks associated with development and operation of the inflatable technology or system? Was the testing conducted at a high enough level of fidelity to provide confidence the technology would work in a lunar environment? Did the verification testing increase the technology's TRL, or advance the state of the art? Were the test results in line with the expected results developed through analytical methods? Did the team draw adequate conclusions about their design solution? 	25	20	15	10	5	0
Technical Credibility and Feasibility (Max 25 points) <ul style="list-style-type: none"> How well did the team's implementation of their inflatable technology or system meet the original goals and objectives? How well did the team describe their development effort, including all design assumptions and decisions and address fabrication, materials selection, transport, deployment, operations, etc.? Did the technology reach the minimum Technology Readiness Level (TRL) of 4? Did the team demonstrate a cost effective and viable solution for their proposed inflatable technology or system? Is the technology able to operate for the entire mission duration in the harsh lunar environment? Did the team identify the performance needs of potential stakeholders/funders (i.e., Exploration, Science, Commercial)? Will the hardware scale to meet the operational concepts? 	25	20	15	10	5	0
Innovation (Max 10 Points) <ul style="list-style-type: none"> Have any innovative or unique concepts, materials, and/or applications been demonstrated via the inflatable technology or system? Were there any innovations in the test set-up, test methodology, or test analysis? 	10	8	6	4	2	0
Technical Management (Max 10 Points) <ul style="list-style-type: none"> Did the team perform effective project management and demonstrate responsiveness to unplanned events? How well did the team manage the project's budget, schedule, and scope? How well did the team adhere to the requirements and constraints provided for the design competition? Did the team provide adequate justification for exceeding any established constraints? 	10	8	6	4	2	0
Path to Flight (Max 10 Points) <ul style="list-style-type: none"> Did the team adequately describe the technology's anticipated path-to-flight for a mission to the Moon? Did the team provide sufficient rationale for any trades conducted and modifications made for successful operation of their technology on the Moon, as opposed to operation on Earth? Have all major components been identified and assessed for operation in the expected lunar environments? 	10	8	6	4	2	0
Bonus Points (Max 10 Points)						
<ul style="list-style-type: none"> At the time of Forum, has the technology demonstrated enough merit that NASA should consider investing in making the concept flight-ready? (Max 5 points) Has the technology reached a TRL of 5 or greater? (Max 5 points) 	10	8	6	4	2	0

Assessment

Excellent = Criteria is fully met with exceptional merit, as documented by numerous or significant strengths and with no major weaknesses.

Very Good = Criteria is met with high merit and little errors; strengths fully out-balance any weaknesses and none of those weaknesses constitute fatal flaws.

Good = Criteria is met with a credible response and a few errors; strengths and weaknesses essentially balance each other.

Fair = Criteria is only nominally met and significant errors are apparent; weaknesses outweigh any strengths.

Poor = Criteria is not met and /or has serious flaws; one or more weaknesses constitute fatal flaws.

Missing = No effort was made to meet criteria.