2022 Breakthrough, Innovative, and Game-changing (BIG) Idea Challenge
Final Scoring Matrix

TECHNICAL PAPER (Max 80 Points)	Point Scale
Verification Testing (Max 30 Points) • Did the team adequately identify and mitigate the key risks associated with development and operation of the mobility solution? • Was the testing conducted at a high enough level of fidelity to provide confidence the technology would work in a lunar environment? • Were the test results in line with the expected results developed through analytical methods? • Did the team draw adequate conclusions about their design solution?	_____ /Out of 30
Technical Credibility and Feasibility (Max 25 Points) • How well did the team's implementation of their mobility solution meet the original goals and objectives? • Did the verification testing increase the technology's TRL level, or advance the state of the art? • Did the technology reach the minimum Technology Readiness Level (TRL) of 4? • Did the team demonstrate a cost effective and viable mobility solution for their proposed lunar mission scenario? • Is the technology operationally resilient? (Ability to withstand adverse circumstances and the harsh lunar environment, the capability to degrade gracefully) • Is the technology credible? • 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? • Can the system be operated in an environment where communications may be interrupted, have high latency and limited bandwidth? • Can the system transport the payloads needed for the expected concept of operations?	_____ /Out of 25
Technical Management (Max 15 Points) • Did the team perform effective project management and demonstrate responsiveness to unplanned events? • How well did the team describe their development effort, including all design assumptions and decisions and address fabrication, materials selection, transport, deployment, operations, etc.? • How well did the team manage the project's budget, schedule, and scope? • How well did the team adhere to the provided requirements and constraints for the design competition? • Did the team provide adequate justification for exceeding any established constraints?	_____ /Out of 15
Path-to-Flight (Max 10 Points) • Did the team adequately describe the technology's anticipated path-to-flight for a mission to the Moon by 2026? • Did the team provide adequate rationale for their trades and critical modifications made to the design for use on the Moon? • Have all of the needed components been identified and assessed for operation in the expected lunar environments? • Is a viable strategy presented for a path to implementation?	_____ /Out of 10
Total Points – Technical Paper Criteria	**/80**
PRESENTATION (Max 15 Points)	**Point Scale**

• Quality of verification testing results demonstration
• Quality of presentation
  ○ Clear presentation of information provided in technical paper
  ○ Quality of response to questions for presentation, models and/or prototypes
  ○ Presence of teamwork and integration
	_____
	/Out of 15

Total Points – Presentation Criteria	**/15**
POSTER (Max 5 Points)	**Point Scale**
• Poster quality • Clear presentation of information provided in technical paper ○ *Note to the teams from the judges: When it comes to the Technical Poster, Less is More!* • Audience engagement with judges and other participants (including responses to questions)	_____ /Out of 5
Total Points – Poster Criteria	**/5**
BONUS POINTS (Max 10 Points)	**Point Scale**
• At the time of final Forum, has the technology demonstrated enough merit that NASA should consider investing in making the concept flight-ready? • Is this technology in a position to be ready for use on the Moon by 2026? • Has the technology reached a TRL of 5 or greater? • Is the technology able to transport (by carrying, pushing, dragging, etc.) objects with much larger mass than their own? • Has the mobility solution demonstrated the ability to autonomously detect and avoid mobility hazards and select and execute navigation paths?	_____ /Out of 10
Total Points – Bonus Section	**/10**

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Total Score (Max 110 points) _____