

Reaching for the Moon: Designs for Australia's First Lunar Rover Excavator Revealed By ELO₂ and Freelancer.com

Winning designs of the ELO₂ Big Dipper Lunar Regolith Acquisition Challenge offer glimpse into the design of Australia's first lunar rover arm

SYDNEY, Australia - 6 February 2024 – Australian freelancing marketplace [Freelancer.com](https://www.freelancer.com) (ASX: FLN) and space consortium [ELO₂](https://www.elo2.com.au) announced the phase one winners of the [ELO₂ Big Dipper Lunar Regolith Acquisition Challenge](https://www.elo2.com.au/big-dipper-lunar-regolith-acquisition-challenge).

The Australian Space Agency, in collaboration with NASA's Artemis program, is embarking on an ambitious journey to design Australia's first lunar rover. Announced in October 2023, the [ELO₂ Big Dipper Lunar Regolith Acquisition Challenge](https://www.elo2.com.au/big-dipper-lunar-regolith-acquisition-challenge) is an open invitation for innovators and enthusiasts to be a part of this groundbreaking mission.

Hosted by [Freelancer.com](https://www.freelancer.com), the challenge revolves around the design of a Regolith Sample Acquisition Device, a crucial component of the lunar rover. This device will be responsible for collecting lunar soil samples (regolith) and transporting them to an In-situ Resource Utilisation (ISRU) facility managed by NASA. The overarching goal is to extract oxygen from the lunar regolith, paving the way for sustained human presence and exploration on the Moon and beyond.

As Phase 1 concluded, the project team engaged diverse groups across Australia to participate in putting the winning solutions to the test. These workshops aimed to gather crucial data and feedback, laying the foundation for Phase 2. Now in Phase 2, participants will leverage insights gleaned from the winning designs to craft a comprehensive set of tangible design recommendations for future lunar rover implementations.

"We are impressed with the number and quality of submissions we received in Phase 1," said Joseph Kenrick, ELO₂ Technical Director, "The different perspectives and insights from the teams is helping inform our own designs for the regolith acquisition device. We can't wait to see what comes out of Phase 2!"

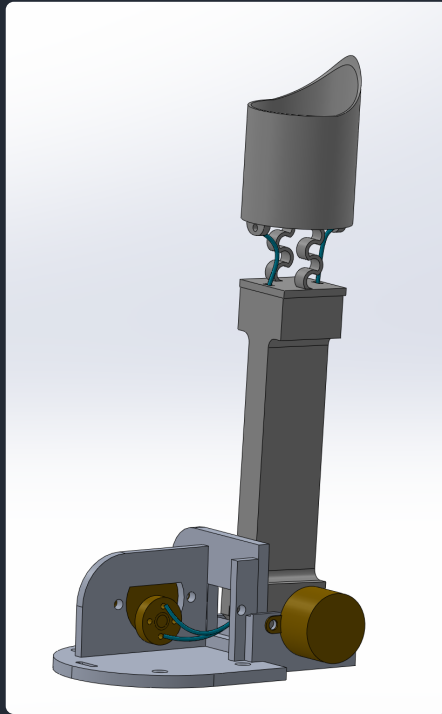
"We're excited to be part of history in helping ELO₂ design a regolith collector for Australia's first lunar rover. Phase 1 winners demonstrated creative ingenuity and innovative thinking in addressing the unique challenge brief. They're a real showcase of how open innovation challenges can help crowdsource new ideas. We look forward to seeing how these ideas come to life in Phase 2 and are adopted in the final lunar rover design," said Trisha Epp, Program Manager at Freelancer.com.

Reaching for the moon

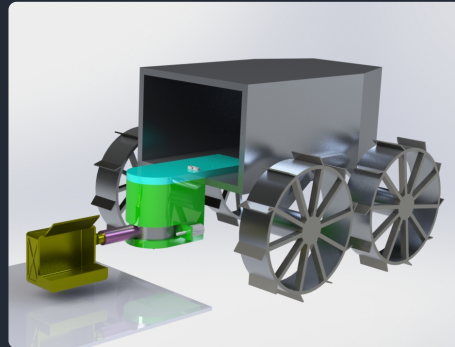
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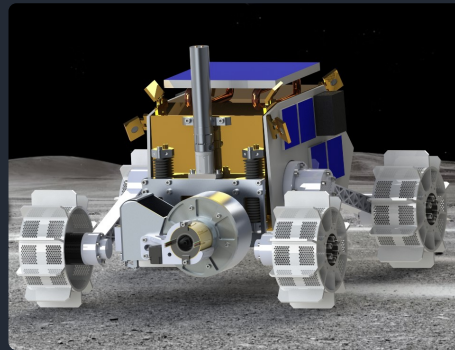
FIRST PLACE WINNERS



Entry: BICEP
Team lead: Daniel Ricardo (@danielcbricardo)
Melbourne, Australia

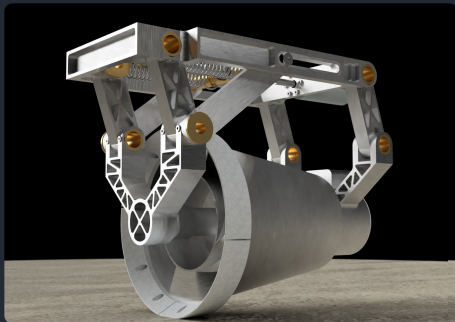


Entry: KANGA
Team lead: Chris van Dijk (@cnvandijk)
Adelaide, Australia



Entry: ROMEO
Team lead: Jason Abi Chebli (@jasonabichebli)
Melbourne, Australia

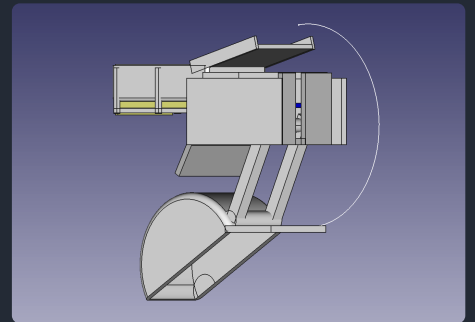
SECOND PLACE WINNERS



Entry: ARC
Team lead: James Gray (@jamesgray)
Adelaide, Australia; Team member: @yongooi



Entry: BLEW
Matthew Reimers (@mattreimers)
Sydney, Australia

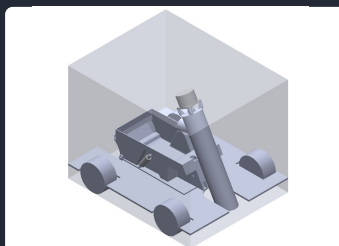


Entry: Super Duper Lunar Scooper
Jack Hammonds, Andrew Hammonds (@JackHammonds2011)
Shellharbour, Australia

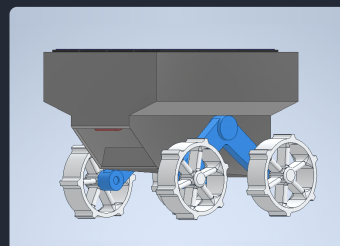
THIRD PLACE WINNERS



Entry: Central rotating drum with rear tyres
Robert Graham (@RobAust)
Melbourne, Australia



Entry: QRAS
Team lead: Vivek Nayak (@Vinayak9015)
Parramatta, Australia



Entry: E.L.R.A.S
George Polyzos (@Gpolyzos)
Geelong, Australia



Entry: Venna
Anay Ashwin (@asa103)
Melbourne, Australia

Phase 2 Challenge Overview

In Phase 2, participants are asked to create a 1-page infographic that includes insights and design recommendations applicable to any future regolith acquisition device. Participants must consider insights from Phase 1 winning solutions, as well as wider publicly available research, to develop a comprehensive set of insights and recommendations. These may address factors such as the devices' potential to withstand lunar conditions, operational longevity, and energy efficiency. Phase 2 is open to all participants, regardless of whether they participated or won in Phase 1.

Phase 2 Prizes

Winners of Phase 2 will share in a prize pool of \$3,000.

Phase 2 Challenge Schedule

Challenge Launch	29 January 2024
Submission Deadline	8 March 2024 at 11:59pm AEDT
Judging and Evaluation	5 March 2024 – 29 March 2024
Winners Announcement	1 April 2024

Challenge Rules

The challenge is open to Australian Residents/Citizens or a team where the team leader is an Australian Citizen or resides in Australia at the time of submission. All submissions must originate from Australia or have been substantially transformed in Australia. Submissions must be made in English, and communication related to the challenge will be conducted in English.

For more information about the challenge, head to: <https://www.freelancer.com/contest/2361002>

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About Freelancer.com

Twelve-time Webby award-winning Freelancer.com is the world's largest freelancing and crowdsourcing marketplace by total number of users and projects posted. More than 70 million registered users have posted over 23 million projects and contests to date in over 2,000 areas as diverse as website development, logo design, marketing, copywriting, aerospace engineering and manufacturing. Freelancer also owns Escrow.com, the leading provider of secure online payments and online transaction management, and Loadshift, an Australian enterprise freight marketplace. Freelancer Limited is listed on the Australian Securities Exchange under the ticker ASX:FLN and is quoted on OTCQX Best Market under the ticker FLNCF.

About ELO₂

The ELO₂ consortium was selected to design what could be Australia's first lunar rover under the Australian Space Agency's Trailblazer program. The ELO₂ mission is to foster new horizons in the Australian space sector, focusing on the development of essential services for lunar exploration missions. ELO₂ is dedicated to showcasing and advancing Australian exploration capabilities through the design of a cutting-edge, remotely operated and autonomous robotic asset on the lunar surface.

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