

OPEN LUNAR FOUNDATION Annual Report 2024





Dear Friends,

This year, we've made steady progress toward building a peaceful and sustainable lunar future. With focus, strong partnerships, and careful work, we've advanced projects that address the real challenges of exploring and governing the Moon responsibly.

We've:

- Advanced five new ideas promoting shared infrastructure, stewardship, standards, and guidelines.
- Developed policy frameworks to support thoughtful, inclusive decisions.
- Created timekeeping solutions to improve coordination on the lunar surface.
- Created information-sharing tools that foster trust and transparency.
- Refined resource stewardship strategies to protect the Moon's environment.

These efforts reflect our commitment to a careful, collaborative approach—one that opens opportunities for everyone while preserving the Moon's long-term potential.

We are so grateful to every supporter, partner, and collaborator for making this progress possible. There's still much to do, and we're excited to move forward together.

Rachel Williams
Acting Executive Director, VP Programs



BUILDING LUNAR UTILITIES



SOURCING & INCUBATION

Today, Open Lunar builds out innovative ideas with the potential to shape responsible lunar development. Through close collaboration with visionary thinkers and partners, we bring early-stage concepts to life by providing management, resources, and expertise.

BUILDING INITIATIVES

In the next five years, Open Lunar's initiatives will be maturing entities integrating with industry. By fostering business development and strategic partnerships, we will ensure that our incubated ideas grow into structured initiatives. These projects will evolve to support a sustainable, long-lasting presence on the Moon.

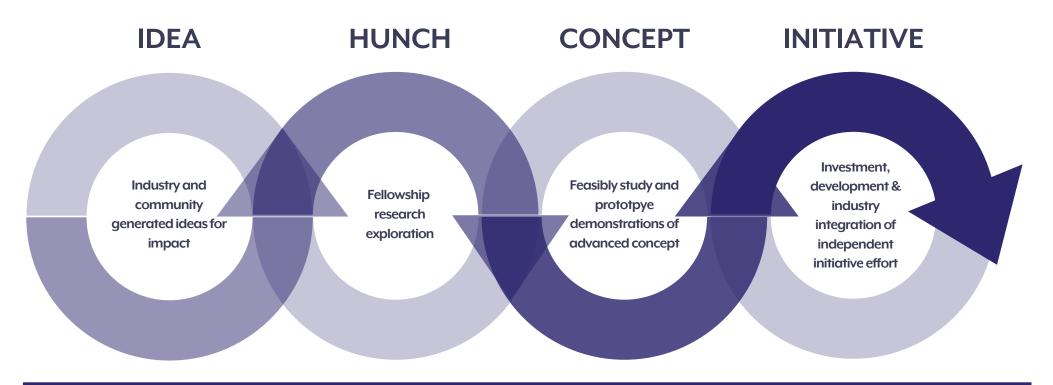
COOPERATIVE INFRASTRUCTURE

Open Lunar's ultimate aim is to transform these initiatives into operational infrastructure on the lunar surface. By establishing essential utilities—such as communication networks, shared landing pads, and sustainable habitats—we are building influence to shape a future that invites collaboration and supports humanity's peaceful, thoughtful presence on the Moon.

INNOVATION PROCESS

We use our Innovation Process as a scalable framework for turning ideas to impact.

We build projects which influence governance and norms, and incentivise cooperation through our Innovation Process. It's higher ROI than if Open Lunar ran projects only with staff, and it's higher curation and control than an accelerator or pure community approach. It leverages the goodwill of senior experts, and walks the talk of our collaborative values.



Ideas for 2025

Positioning, Navigation, and Timing Designated Lunar Activity Zones Cislunar Orbital Cartography Artemis Accords / ILRS Legal Analysis

Hunches from 2024

Shared Landing Pads
Community Payload Guidelines
Lunar Power Standards
PayloadBayX
Lunar Accidents and Issues Reporting
System

Concepts in development

Lunar Timekeeping

Initiatives

Lunar Policy Platform Breaking Ground Trust Lunar Registry of Objects and Activities

PROJECT SNAPSHOTS

Breaking Ground Trust

breakingground.space
Breaking Ground works to establish
governance frameworks for lunar resource
management.

Achievements

Memorandum of Understanding (MOU) with Orbit Fab & ispace for regolith donation on upcoming M2 mission. LOI with Intuitive Machines. DOORR convening, a cross-sector convening on resource management.

Team Contributors











Alex Gilbert, Director of Space & Planetary Regulation - Zeno Power, Jessy Kate Schingler, Dr. Peter Martinez, Executive Director Secure World Foundation, Dr. Hannah Sargeant, Planetary Scientist. Dr. Thomas Cheney, governance academic specialised in space mining.

"Normative frameworks and shared agreements are the building blocks for future trade in the solar system. We're excited to be working with BGT."

- Timothy Crain Ph.D

Lunar Policy Platform

<u>lunarpolicyplatform.org</u>
Lunar Policy Platform provides policy
guidance and norms for first movers,
decision makers and lunar governance
development.

Achievements

The Lunar Policy Priorities Report, involved 40+ industry stakeholders to understand consensus priorities in lunar policy. Consultant and advisor with UNOOSA on the ATLAC initiative and with state delegations on lunar policy issues.

Team Contributors













Antonino Salmeri, LPP & SGAC, Kevin M. O'Connell, US Office of Space Commerce, Samuel Jardine, London Politica & RUSI, Setsuko Aoki, Professor of Law, Keio University, Tanja Masson Zwaan, International Institute of Air and Space Law, Leiden University, Luis Zea, Spaceflight and bioastronautics engineer.

"Lunar Policy Platform have been able to make tremendous inroads at the international level, and in a variety of fora."

- Chris Johnson

Lunar Registry

Lunar Registry projects enable lunar information-sharing amongst actors through an open database with stakeholder incentives to participation.

Achievements

System design with 40 lunar industry, scientific, and government delegations. Joint workshop with Astra Carta SMI and UNOOSA. ICON and LUNA-10 consortia are utilizing Open Lunar's open access registry design frameworks in their systems.

Team Contributors









Samuel Jardine, London Politica, RUSI, Jonathan McDowell, Astrophysicist, Eric Cremer, CO School of Mines, Rachel Williams, Open Lunar

"A Lunar Registry could work as an essential tool for coveted locations where we will see increased activities, such as the Peak of Eternal Light or the Lunar South Pole" - Jonathan McDowell

Timekeeping

This project focuses on establishing a lunar timekeeping system to support lunar missions. It has gained international media attention, convened over 10 industry players and scientist to submit collaborative proposals and LUNA-10 consortium, and is working to create low-cost open source technology.

Fellows: Phil Linden & Ashley Kosak

Research Paper 2023:

https://www.openlunar.org/research/possib ilities-for-a-local-lunar-time-standard



Cooperative Landing Pads

This project focuses on shared infrastructure for lunar landing pads. It has received strong interest from commercial partnerships, and development steps are clear.

Fellows: Ashley Kosak

Research Paper 2024:

https://www.openlunar.org/projects/landin q-pads



Community Payload Review

This project proposes a governance system for the safe deployment of lunar payloads. It has attracted significant informal interest from stakeholders.

Fellows: Abbhinav Muralidharan

Research Paper 2024:

https://www.openlunar.org/projects/community-review

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Accidents and Issues

This project explores systems for tracking accidents in lunar missions. It has received significant interest from stakeholders and integrates well with the other registry project.

Fellows: Ali Nasseri

Research Paper 2024:

<u>https://www.openlunar.org/projects/registry-of-accidents-and-issues</u>

Lunar Power Standards

This project aims to create standards for power generation and distribution on the Moon. Early consultations have been promising, and the project is positioned for future development.

Fellows: Paolo Pino

Research Paper 2024:

https://www.openlunar.org/projects/lunarpower-standards

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PayloadX

This project explores closed loop life support systems for lunar missions, focusing on proposing technology which could significantly unlock lunar settlement.

Fellows: Daniel Tompkins

Research Paper 2024:

<u>https://www.openlunar.org/research/pay</u> <u>load-bay-x</u>



HIGHLIGHTS: A TWO YEAR SNAPSHOT

new board members: Carlos Alvarado Will Pomerantz

1:1:1

Deployment ratio project grants: guidance/coaching: overhead

research fellowships completed 3% acceptance rate

public events held, reaching 600+ participants

active projects, average 3:1 ratio of projects progressing

35

Affiliates: **Subject Matter Experts** voluntarily advising on projects

140

volunteers regularly contributing to projects

new open access white papers, publications, blogs & statements

\$683,460

project support and expenses

\$268,000 200,000

voluntary donated advisory hours

Social media impressions with a 10% engagement rate **Permanent** Observer

United Nations COPUOS. actively contributing

PERSPECTIVES ON OPEN LUNAR



Carlos Alvarado, Former President of Costa Rica

"A Moon that might be bought or owned... when you see the motivations of companies to go to the Moon to get hold of minerals... it feels that they are taking it away from you. Open Lunar is providing a dream, and building it. One foot in the technical community and one foot into the diplomatic community. Moving from sci-fi to multilateral influence."



Antonino Salmeri, Lunar Policy Platform

"There is no organisation like Open Lunar - dedicated to ensure that humanity returns to the Moon in an intentional, peaceful and cooperative way, for the benefit of all life. Over the years I have seen Open Lunar promoting insightful discussions and innovative activities that have changed the way the space community looks at lunar exploration."



Chris Johnson, Director of Space Law at Secure World Foundation

"Open Lunar—most especially through its scholarship and thought leadership—is shaping the conversation(s) that need to happen to ensure the peaceful, prosperous, and morally-centered exploration and development of the Moon."



Alex Gilbert, Director of Space Regulation @ Zeno Power

"Open Lunar is establishing itself as the leader for lunar policy development. Its wide-ranging initiatives are tackling discrete problems that oftentimes are critical gaps that government or industry are not yet able to solve.



Jonathan McDowell, Harvard-Smithsonian Center for Astrophysics

"Launches are happening, missions are flying, we've seen Hakuto-R, we've seen the Chinese sample return and other missions. It's happening now and we've got to influence now. The fact that Open Lunar incentivises the players into participating in transparent systems has a lot of potential and this is exciting"



Jatan Mehta, Journalist & Creator of 'Moon Monday'

Open Lunar brings together and enables diverse experts for developing technical and policy building blocks which explicitly foster cooperation between countries globally."





























