

Lunar Exploration (2)
Lunar Exploration (3) (3)

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MOON VILLAGE ASSOCIATE (MVA) GLOBAL COLLABORATION FRAMEWORK FOR LUNAR
MISSIONS**Abstract**

The Moon Village Association's (MVA) 1st Payload Project Team aims to explore how collaborations between MVA's private and institutional members can lower the entry barrier to the Lunar economy. The project's pilot mission; sending a Camera to the Lunar Surface is an ongoing endeavor currently facing key planning milestones and phases. Compared to Earth orbit missions, lunar missions are less prevalent, more technically complex with extra risks and completely different investment scales and timelines. This means that non-institutional space players have fewer opportunities to participate in lunar science and the creation of the Lunar Economy. As a non-profit with a diverse and distributed international workforce comprising entirely of volunteers, MVA aims to tackle lunar missions using global collaboration and create a framework for dealing with technical, project management, legal/ethical setups and various other elements required for space teams. The team put together for this project is made up of mostly non-space volunteers from various multidisciplinary backgrounds, distributed across multiple time zones, without common working hours and a high chance of most members never meeting in person. The team is supported by the MVA's institutional members (agencies, educational institution and industry) in the form of in-kind contributions; An exchange of services, knowledge or materials in return for furthering the institutional member's own goals and interests. This paper will not focus on technical or scientific results of the 1st MVA Payload Project but on the process that will be created as a rubric for future lunar projects, that will allow wider participation to the exploration and exploitation of the Lunar surface. The paper will outline how the MVA network connects various stakeholder actors to address mission goals, with the focus being the process of creating a successful mission from the puzzle pieces provided; the offered components, the expertise volunteered etc. It details the project management intricacies involved, most common bottlenecks and critical failure risks, legal and ethical traps and activities that are crucial for project setup and success, and more. From planning to set up and further, and with the understanding that this is an ongoing process, this paper will present a guide of sorts or in the very least a detailed example of the processes necessary for private sector lunar missions that deviate from the normal client-supplier models of institutional and Earth orbit missions.