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Author: Ms. Pavithra pavithra_pathy
Moon Village Association (MVA), Sweden

MOON VILLAGE ASSOCIATION (MVA) GLOBAL COLLABORATION FRAMEWORK FOR LUNAR MISSIONS AND OUTREACH

Abstract

The Moon Village Association (MVA), through its various working groups and projects, aims to explore how collaborations between MVA's private and institutional members can lower the entry barrier to the Lunar economy.

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 from multidisciplinary backgrounds, the MVA aims to tackle lunar missions and outreach using global collaboration and create a framework for dealing with technical, project management, legal/ethical setups and various other elements required for space teams. One such example explored is the MVA 1st Payload Project's pilot mission; sending a Camera to the Lunar Surface, which is an ongoing endeavor currently facing key planning milestones and phases. The current advancements of the organization have been made with the support of 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 or technical publications, but on the process created as a rubric for future lunar-related projects, that allows wider participation to the exploration and exploitation of the Lunar surface.

The paper outlines how the MVA network connects various stakeholder actors to address mission and/or outreach goals, with the focus being the process of creating a successful mission, efficient scientific education, communication and outreach, 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 and will continue to be 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 and also provide details on the importance of public education and outreach and how to approach the same.