

The Lunar Projects Authority (LPA): An Alternative Funding and Program Management Schema for Large-scale Space Projects

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This paper will offer an alternative funding and contract management strategy for the construction and operation of very complex space endeavors with the goal of assured project completion.

The world's population includes a very small number of dedicated scientists and engineers who would like nothing more than to receive the authority to proceed on projects that will return us to the moon on a permanent basis. Those willing and able people are denied the opportunity to perform only because of lack of economic resources. In the post-Apollo era, many attempts to restart the exploration of the moon have arisen, only to be abandoned due to funding issues.

What if the money was available? Would it be squandered and trifled away, just as so many taxpayers' dollars are lost every year to inactivity, replanning and program cancellations? Or could the money be protected from redirection or loss, bolstered by periodic addition of funds, and then put to efficient, effective use?

Five major problems exist in the current Federal Acquisition Process which inhibit progress toward new lunar exploration and settlement:

1. The necessity to compete with other interests for funds
2. Emphasis on provision and dispersal of jobs
3. Enabling lengthy extensions to contract work
4. Reaching a point of no return, after which the contract must be augmented to finish the project
5. Cancellation of a project after substantial investment

An alternative strategy for returning to the moon is needed.

What if we eliminated the requirement to provide jobs as an overt agenda item during acquisition? What if we quantized projects, such that there was no need for a multi-year contract? What if we developed or acquired revenue streams as a precursor to letting contracts, allowing sufficient sustainable income to accrue before a contract is let? What if we eliminated the risk of midstream budgetary cutbacks? What if we did it all without the usual government oversight, approval or intervention? And what if we did it without expending effort on gaining public understanding and support?

This paper proposes a new customer for space projects, and uses Dr. H.H. Koelle's existing plan for a lunar base as an example application. This customer would look and act much like a municipal authority, in the mold of the Triborough Bridge and Tunnel Authority of New York City. It would secure its own revenue streams, forwarding all profits to a trust for lunar base construction and operation.

This **Lunar Projects Authority (LPA)** would also function as program management, creating and overseeing contracts let for only short periods of time. The LPA would also include a systems engineering organization that would break existing lunar base plans into discrete modular deliverables designed to be stored on Earth or left on the lunar surface for potentially long periods of time until integrated.

As an additional customer to the world aerospace industry, the LPA could analogously show how a broad range of complex projects, including medical research and environmental engineering, could be realized with low risk of failure or cancellation.

Perhaps, as this paper will attempt to show, we can incrementally build the lunar infrastructure without the present day's constraints. Consideration for an autonomous customer, the Lunar Projects Authority, may be the beginning of our return to the moon.