

# Moon Village Association

## **1st Payload Project**





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# MVA presentation



- The Moon Village Association was founded as a **Non-Governmental Organization (NGO)**, registered in Vienna in 2017 with the aim of fostering the realization of the Moon Village.
- Its goal is the creation of a **permanent global informal forum** for stakeholders like governments, industry, academia and the public interested in the development of the Moon Village.
- The MVA fosters **cooperation** for existing or planned global moon exploration programs, be they public or private initiatives.
- It comprises approximately 220 members from more than **39 countries** and **25 Institutional members** around the globe, representing a diverse array of technical, scientific, cultural and interdisciplinary fields.



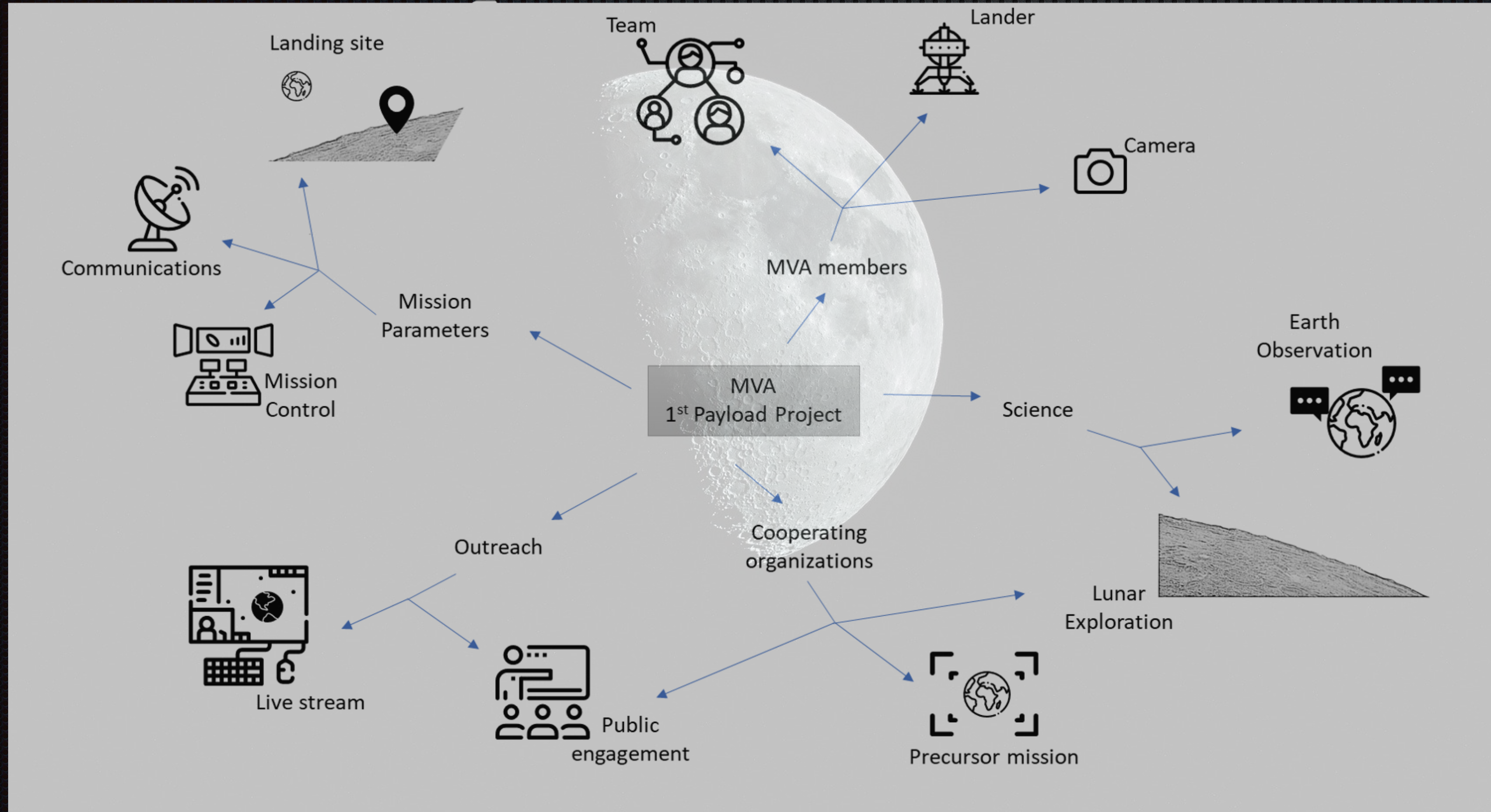
# 1st project payload goals



- ✦ To acquire images of earth from moon which have enough resolution, field of view and other performance to feel "**Overview Effect**".
- ✦ To **share usable scientific data** gathered with the payload camera, and to accelerate lunar scientific research implemented not only by scientists but also people in other sectors including the general public
- ✦ To **provide standard methodology** for future missions to access and develop lunar activities, by creating a process, templates, training materials and documents for future MVA project



# Project main components





# Project team and partners



- The **Project Team** is composed of members from **twelve countries**.
- **Partners:**

	Component	Country	Status of the cooperation
Sen Corporation Ltd	Camera	GB	Discussion on going
Office of Other Spaces	Outreach	Australia	First event held, second in planning
International Space University	Payload design	F	Discussion ongoing
Lockheed-Martin	Lander	USA	Signed NDA. Discussion on going
Cyprus Space Exploration Organisation	Support	Cyprus	Support offered (marketing, admin)
SpaceBit	Collaborative payload	UK	Discussions ongoing
The Space Treaty Project	Outreach	USA	Preliminary contact
Astrax	Outreach	Japan	Scope under discussion



# Timeframe and status



Phase	Milestone	Deadline
Pre-phase A	Mission Definition Review	December 2019 <input checked="" type="checkbox"/>
Phase A	Preliminary Requirements Review	October 2020
Phase B	System Requirements Review Preliminary Design Review	Launch - 20 months
Phase C	Critical Design Review	Launch - 15 months
Phase D	Qualification Review Acceptance Review Operational Readiness Review	Launch - 9 months
Phase E	Flight Readiness Review Commissioning Result Review Launch End-of-Life Review Mission Close-out Review	Launch - 1 months Launch - 2 weeks Launch - 0 months Launch + 1 months Launch + 7 months



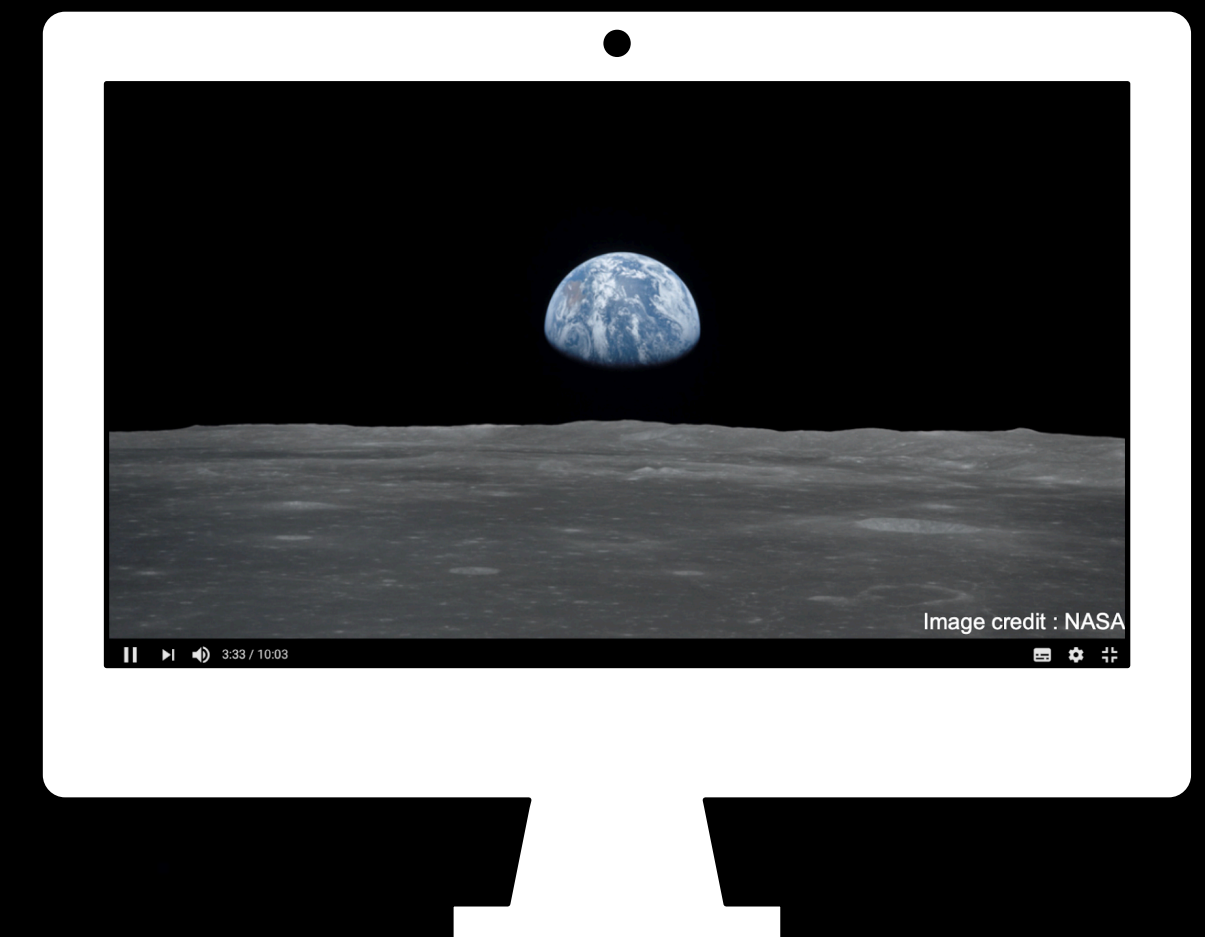
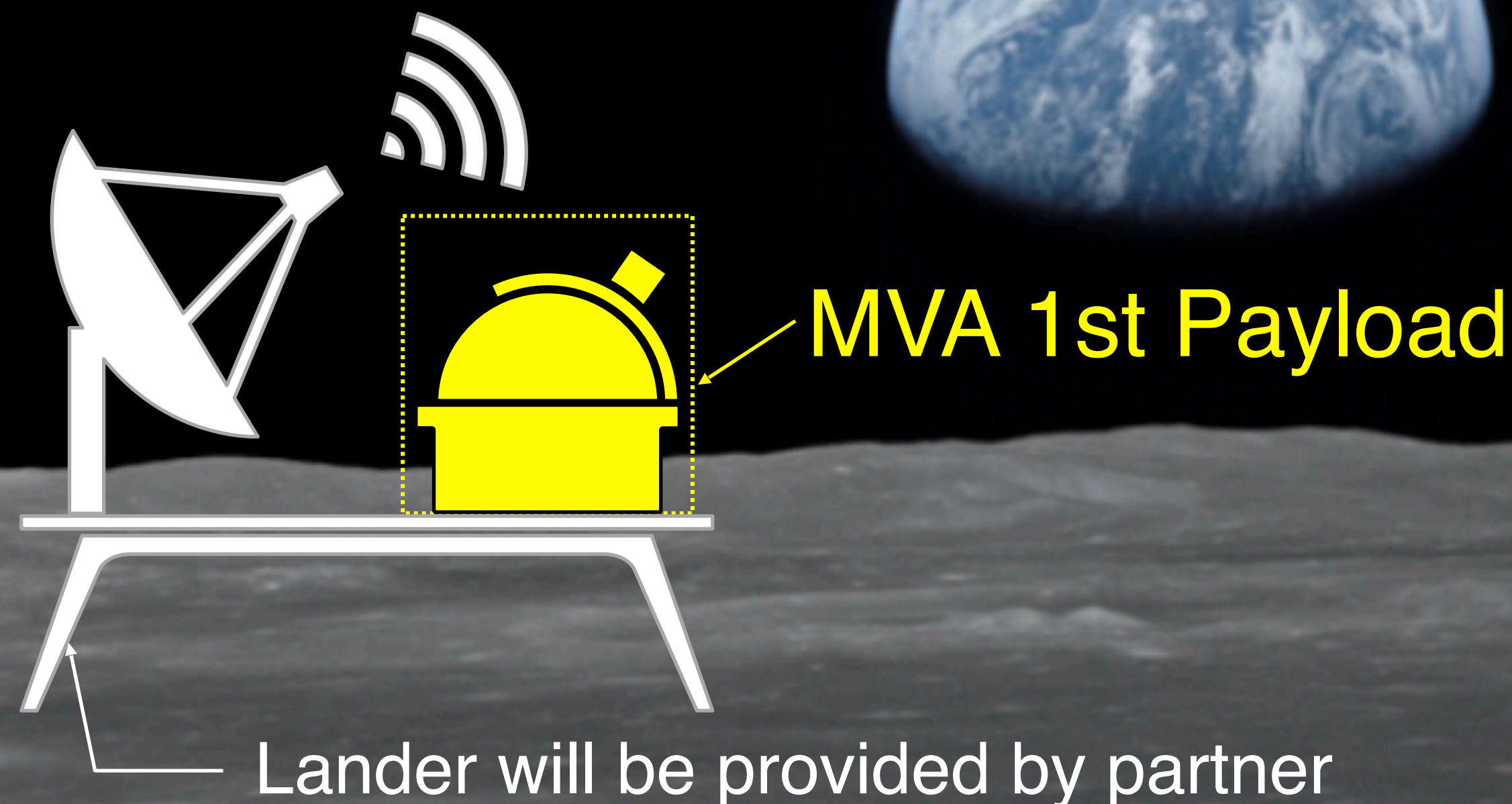
# Engineering requirements



***MVA 1st payload is "Camera"***

So, we need to ...

- Acquire Videos / Photos / Live-streaming with enough quality to feel "Overview effect"
- Control view angle and direction
- Interface with Lander

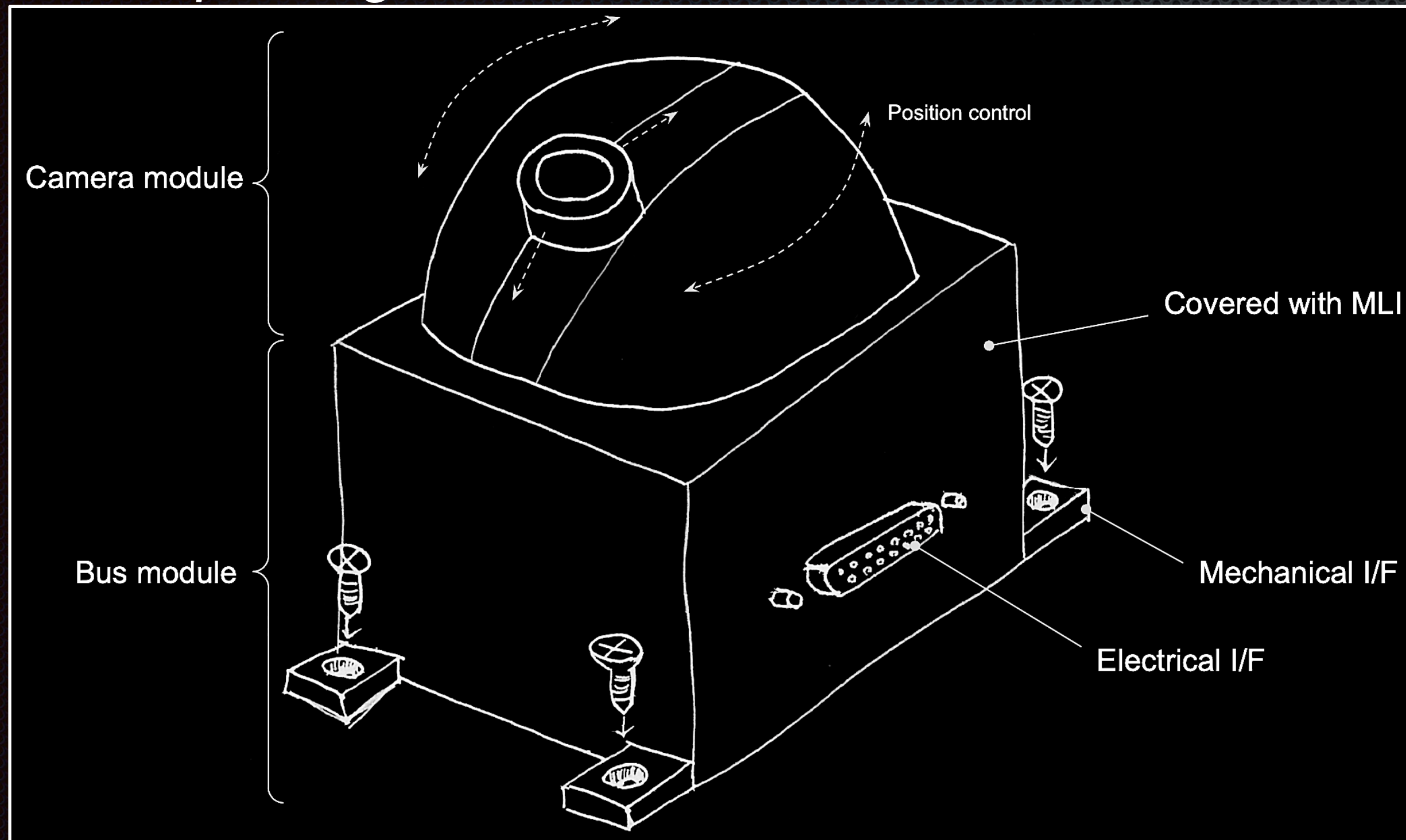




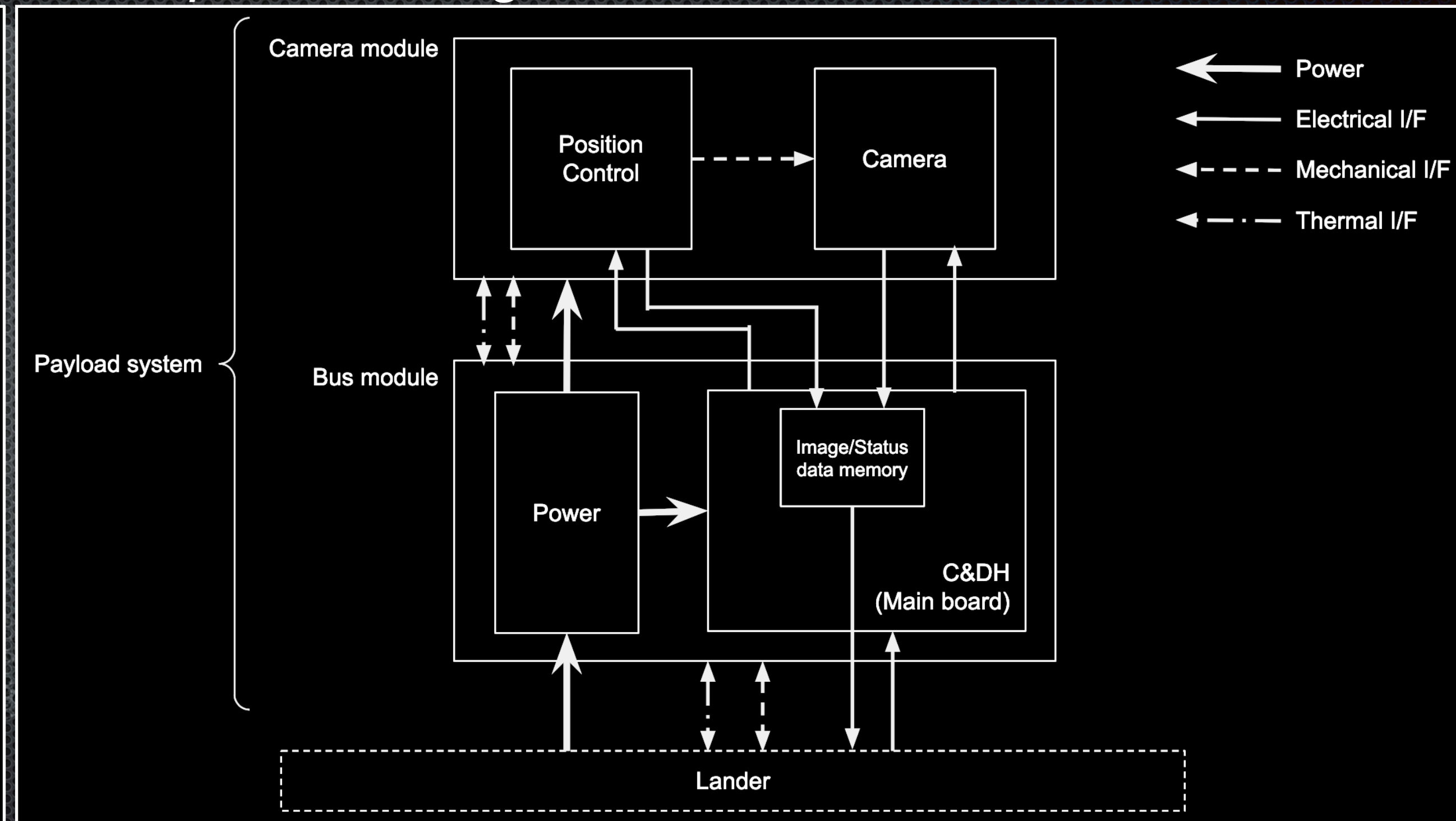
# Engineering requirements



Concept image



Concept block diagram



- Payload system {
- Camera module** : Acquire images / Control view angle and direction
  - Bus module** : Control Camera module / Interface with Lander



# Opportunities



- ✦ Coordinated **funding** with worldwide reach
- ✦ **Cost reduction** by in-kind contribution
- ✦ **Outreach** through media, education and open data
- ✦ **Scientific research** activities like space weather
- ✦ Cooperation for achieving **member goals**
- ✦ **Future projects** platform for partners and methods