

## Contribution to Sustainable Lunar Exploration and Utilization

by Dr. Giuseppe Reibaldi President of the Moon Village Association

> 58<sup>th</sup> STSC Vienna 27 April 2021

## WHAT IS THE MOON VILLAGE ASSOCIATION ?



The Moon Village Association (MVA) created in June 2017, to foster the implementation of the Moon Village. MVA is Member of IAF and Observer in United Nations - COPUOS

A forum to advance development of the Moon Village involving Industry, government, space agencies, international organizations / NGOs, and the Public at large.

A catalyst stimulating a virtuous cycle of investments for the development of a lunar economy

> 500 INDIVIDUALS INVOLVED FROM 60 COUNTRIES



>28 INSTITUTIONAL MEMBERS FROM 12 COUNTRIES



## MOON VILLAGE IMPLEMENTATION -Working Groups/Projects-



# Moon Village 2045 Reference Concept





## Moon Village Readiness Levels



Moon Village Readiness Level	<b>DRAFT – MVRL DESCRIPTION / DEFINITION – DRAFT</b>
MVRL 1	Basic market, environmental and/or physical information known relating to the Moon and/or cis-lunar space.
MVRL 2	Functional, physical or economic concept formulated for a market and/or mission activity on the Moon or in cis-lunar space, including systems and/or services.
MVRL 3	Essential characteristics of the prospective Moon Village system and/or service experimentally and/or analytically identified and/or modeled for a general class of market and/or mission activities concerning the Moon (surface or Earth-Moon space).
MVRL 4	Essential and selected additional characteristics for a potential market segment and/or mission activity concerning the Moon (surface, LLO, cis-lunar space or Earth orbit), modeled in an integrated environment and/or experimentally validated in a laboratory or analogue environment, including systems and/or services.
MVRL 5	All relevant characteristics for a specific market and/or mission activity modeled in an integrated environment or demonstrated in a relevant simulated and/or analogue environment, including systems and/or services.
MVRL 6	Market and/or mission activity demonstrated at the 'prototype level' in the expected operational environment (e.g., on the Moon and/or in cis-lunar space), including systems and/or services.
MVRL 7	Highest MVRL; market and/or mission activity fully operational on the Moon or in cis-lunar space, including systems and/or services.

## **URGENT PROBLEM**



- Many Lunar missions planned in future, from many countries/stakeholders will be conducted in close by locations (i.e. South Pole, orbit)
- > Lack of Coordination Mechanism could lead to harmful interference
- Need to Create confidence buildings and foster peaceful cooperation



## SOLUTION



MVA SET UP:

#### • GLOBAL EXPERT GROUP on SUSTAINABLE LUNAR ACTIVITIES (GEGSLA)

- Multi stakeholders:
  - □ Space Agencies/Governments
  - □ Industries,
  - □ Academia,
  - **Civil society**
  - Public

#### • DEFINE/AGREE:

- Recommended Framework and Key Elements for Peaceful, and Sustainable Lunar Activities, this will include:
  - Principles
  - □ Key Elements (i.e. information sharing)
  - Guidelines, for implementation the key elements
    - (i.e. interoperability, debris mitigation, safe operations, etc)





#### • STATUS:

- Kick-off held on 25 February
- > Monthly Meetings
- > Work will be completed by end 2022

#### • PARTICIPANTS:

- > 38 Members: 12 Space Agencies/Governments, 10 Industry, 10 Academy, 6 Civil Society
- > More than **180** Observers, so far
- More than 50 countries representatives
- Governments are welcome to become members
- Call for Observers and Sponsors open on MVA website
- DELIVERABLES:
  - □ Presented to COPUOS via MVA, draft by end 2021; final by end 2022
    - Recommended Framework and Key Elements for Peaceful, and Sustainable Lunar Activities with Guidelines
  - Proposed creation of an Agenda Item to discuss lunar governance at 65<sup>th</sup> COPUOS in 2022

# Participation of Space Emerging Countries (PECS)

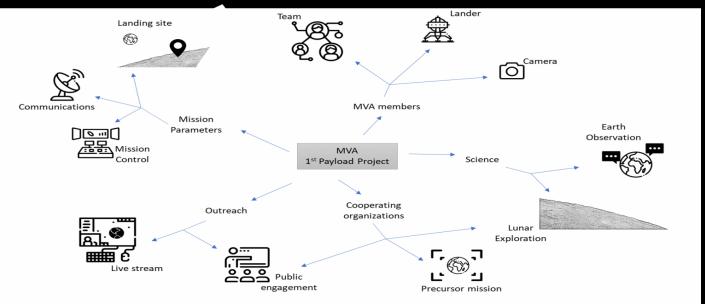


PARTICIPATION OF EMERGIN SPACE COUNTRIES 2020

## Payload Project







## MOON VILLAGE IMPLEMENTATION Global Network -



Connecting Members



The Network Provides... Direct connections with the major local stakeholders worldwide, including space agencies, experts, companies, think tanks, venture capitalists etc.

The Present Network is...

Cyprus, France, Greece, Hungary, Italy, Luxembourg, Russia, Spain, Ukraine, Jordan, Kuwait, Nepal, Thailand, USA, Brazil, Nicaragua, Cameroon, Egypt, Kenya, Mauritius, Nigeria, Senegal, Sierra Leone, South Africa..... Regional/National Coordinators Lead local MVA activities, including regional meetings, special events, and more...

## 5<sup>th</sup> Global Moon Village Workshop & Symposium



#### 6-8 December 2021

Host: Nicosia, Cyprus



#### THANK YOU FOR YOUR ATTENTION

#### New Website Ready

#### www.moonvillageassociation.org

