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Space Resources, the Enabler of the Earth-Moon Ecosphere (5)

Author: Mr. Clement Loneux
ISAE-Supaero University of Toulouse, France

THE MOON'S DATA MARKETPLACE

Abstract

Five decades after the last human laid foot on our natural satellite, a Moon race of a new type has arisen. National Space Agencies, for the first time in the history of Space exploration, are taking advantage of their private industry to stimulate their ambitions, and permanently bring back Humanity and its technology on the lunar surface. In our Western countries, the main and more advanced project remains the Artemis program, sparked by President Trump in 2019. Under the leadership of NASA, and with the collaboration of the USA's industrial partners, it plans to bring back astronauts on the Moon by 2024 - with the support of an in-orbit Lunar Gateway station - and to establish a permanent surface "village" by the end of the decade.

This new Moon race is specifically characterized by two contemporary aspects. Firstly, the inclusion of private industrial partners in the exploration programs is to denote, and with it, the implicit opening of a lunar economy, inherent consequence of this involvement. As such, companies are now given the opportunity to position themselves on specific market segments of this future lunar economy. To cite a quite recent and advertised example, one may consider SpaceX' choice to get involved in the transportation segment, and thus convey astronauts and cargo between the Orbital station and the Moon's surface. Secondly, the current exploration programs of either the USA or China, for example, are clearly showing long-term development goals for a complete and complex lunar ecosystem around scientific, technological, economic, and political objectives. Having a glimpse back at our own history, this second aspect quite clearly indicates that Data needs will strongly flourish in the coming years.