International Cooperation for Space Exploration (1) International Cooperation for Space Exploration (2) (2)

> Author: Dr. Matthew Bamsey Canadian Space Agency, Canada

Ms. Soyoung Chung Korea Aerospace Research Institute (KARI), Korea, Republic of Dr. Silvia Ciccarelli Italian Space Agency (ASI), Italy Mrs. Kandvce Goodliff NASA, United States Mr. John Guidi NASA, United States Mr. Marc Haese DLR, German Aerospace Center, Germany Dr. Markus Landgraf European Space Agency (ESA), The Netherlands Dr. Christian Lange Canadian Space Agency, Canada Dr. Stefaan De Mey European Space Agency (ESA), The Netherlands Mr. Naoki Satoh Japan Aerospace Exploration Agency (JAXA), Japan

INTERNATIONAL PARTNERSHIPS - CONCEPTS, CONSENSUS, PARTNERSHIPS TO PROJECTS WITH ISECG

Abstract

The international space exploration endeavour is the result of a multifaceted interaction amongst countries and space agencies merging a diverse set of national policy drivers, exploration priorities, timelines, experiences, and funding capabilities toward a common goal. This paper presents challenges and highlights strategies towards coordinating global space exploration efforts and international partnerships by leveraging a common vision and a set of shared goals to achieve national and international exploration objectives and, ultimately, generating benefits for society.

The paper leverages examples from new partnership activities created through the International Space Exploration and Coordination Group (ISECG), which is a voluntary, non-binding coordination forum of currently 26 space agencies. In 2018, ISECG released the latest version of the Global Exploration Roadmap (GER), reflecting an integrated exploration vision created from the policies and plans of 14 individual ISECG space agencies. The GER reflects the collaborative effort of space agencies for planning missions beyond low-Earth orbit, beginning with the International Space Station and continuing to the vicinity of the Moon and its surface, focused on the long-term goal of sending humans to the surface of Mars in a sustainable manner.

To further advance international collaboration in space exploration, ISECG generates a number of reports and products that serve as tools to build consensus amongst space agencies, to generate support within their respective governments, and to foster a strategic approach benefiting all participating space agencies. Examples of these ISECG products and a brief overview and their impact are described.

This paper also presents examples from initial discussions leading to conceptual agreements solidifying into funded partnerships in space science and exploration projects with considerations to national budgeting approval processes. In doing so, the paper reflects the latest space exploration plans within the international community and identify areas of further cooperation.