

SYMPOSIUM ON STEPPING STONES TO THE FUTURE: STRATEGIES, ARCHITECTURES,  
CONCEPTS AND TECHNOLOGIES (D3)

Strategies and Architectures to Establish a “Stepping Stone” Approach to our Future in Space (1)

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A NEW APPROACH TO MANAGE EMERGING SPACE EXPLORATION STAKEHOLDERS

**Abstract**

Space exploration is an emblematic domain of space activities where traditionally only established space powers have been active. Today, however, space exploration has become an element of the political agenda of a growing number of countries around the world, and consequently, the space exploration environment is dramatically evolving. The new era of space exploration currently unfolding will be international, human centric, trans-disciplinary and participatory. It will also provide an opportunity to inspire, motivate and involve an ever increasing number of countries. International cooperation is another key feature of this evolving space exploration context, as well as the increasing involvement of the private sector. The rise of new space actors, environmental and social responsibility, innovations in knowledge management and innovative technology will require a flexible roadmap to implement successfully international space exploration endeavors. Consequently, the successful alignment of national and international stakeholders along lines drawn by commonality of purpose will be crucial to achieve a basis for marshalling sufficient resources for ambitious space endeavors, and to create necessary new political, economic, and legal frameworks. The successful long-term planning and development phase for major space exploration architectures will only be implemented when all stakeholders thrive toward a common goal. Consequently, to realize the aspirations of the new space exploration era a new and innovative management structure has to be implemented to reflect the current evolution of the space exploration context and particularly the rise of new stakeholders such as the private sector. Concepts for a new cooperative structure that includes different stakeholders from governments, industry, space agencies and the civil society that can provide a viable platform for a resilient long-term space exploration program is thus presented as a first reflection towards transcending existing structures. Such a new structure can be seen as an extension of public private partnerships and consortia of profit and non-profit companies and investors.