IAF SYMPOSIUM ON EMERGING SPACE ECOSYSTEMS (E11)
Connecting Emerging Space ecoSystems (1)

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ASSESSING SPACE ECOSYSTEM MATURITY THROUGH CASE STUDIES: LEVERAGING THE SPACE INNOVATION ECOSYSTEM MATURITY RUBRIC FOR STRATEGIC DEVELOPMENT

Abstract

The Space Innovation Ecosystem Maturity Rubric is a critical tool for evaluating the readiness and potential of national space ecosystems. Building upon the foundational research presented at IAC 2023 and the expanded framework with the additional Nascent level introduced at IAC 2024, this paper deepens the analysis through the application of the rubric across diverse case studies. These case studies span all maturity levels—Nascent, Aspiring, Emerging, and Developed—offering a comprehensive examination of ecosystem development trajectories and a robust mechanism to test the accuracy and capabilities of the tool. This case study review highlights the rubric's diagnostic power by identifying gaps, opportunities, and actionable pathways for ecosystem enhancement. The analysis underscores the rubric's adaptability, facilitating tailored recommendations to strengthen space innovation ecosystems at all stages of maturity. Through targeted actions, such as policy refinement, fostering public-private partnerships, and advancing STEM education, the rubric not only serves as a self-assessment tool but also as a strategic framework for fostering equitable and sustainable growth. By emphasising the alignment of the maturity rubric with the United Nations' Sustainable Development Goals (SDGs), the paper reinforces the critical role of inclusive and collaborative space innovation ecosystems in addressing global challenges. Furthermore, this research contributes to bridging the gap between nations, fostering a more integrated and cooperative global space economy. These case studies will allow for a deeper understanding of the global space innovation landscape, and highlight potential areas for cross-national collaboration and knowledge sharing.