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THE ROLE OF THE PRIVATE SECTOR IN ESTABLISHING AND SUPPORTING A SAFE,  
SECURE, AND SUSTAINABLE SPACE ENVIRONMENT

**Abstract**

This paper considers the role of the private sector in establishing and supporting a safe, secure, and sustainable space environment. As space becomes more accessible to commercial markets, the long-term sustainability of the space environment becomes increasingly dependent upon the investment decisions and strategic objectives of the private sector, and indeed the private sector's willingness to genuinely embrace international standards and best practice guidelines.

The first part of this paper considers the objective of the UN Committee on the Peaceful Uses of Outer Space (UN COPUOS) and considers market mechanisms that could genuinely operate to align the private sector, its investment, and strategic decisions, with the values, intentions, and objectives of organizations such as UN COPOUS. Recognizing that technological advances, along with a deliberate and appropriate application of resources, provide the private sector the opportunity to reconsider and dismiss, commercial assumptions that historically underpinned commercial decision making. Assumptions that promoted financial gain with the long-term consequence of climate change. Proven examples of Space technology, particularly in Earth Observation for building resilience to changing climate, and Space Traffic Management to manage and mitigate the magnitude of debris risk and Kessler effect, provides the engine room of the C-suite - the accountants, lawyers, and investment bankers - with the basis rethink and reset approach taken to maximize profit. A perspective, embedded at the financial core of an organization, could operate to realign the financial objectives of private sector organizations with the safe, secure, and sustainable objectives of international organizations such as UN COPOUS.

The second part of the paper considers the voluntary nature of the Guidelines for the Long-term Sustainability of Outer Space Activities, and the role of the private sector in the process of transitioning best practice guidelines into both national regulations, as well as generally accepted industry standards. It is commonly recognized that as Low Earth Orbit becomes more crowded, not all entrants have the knowledge and awareness to operate a responsible space operation where space is regarded as an environment versus a resource. A coordinated and integrated industry approach, which for example may recognize the technical, environmental, and financial benefit of standardization and interoperability to promote in orbit docking, servicing, and refurbishment, could be a key in not only supporting international initiatives such as the Space Sustainability Rating but indeed help bridge the gaps that result from advancements in technology outpacing regulatory change.