

Working Group on the Long-term Sustainability of Outer Space Activities
**WORKSHOP OF THE WORKING GROUP ON THE LONG-TERM SUSTAINABILITY OF OUTER
SPACE ACITIVITIES**

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I. Introduction

This submission is about the topic of Ecodesign for a circular economy in space. The approaches for designing sustainable systems have gradually moved from end-of-pipe solutions, product-service systems, to most recently, the circular economy, gradually extending the perimeter of design. The circular economy combines a range of design approaches under the ecodesign umbrella, including Design for Re-X such as reuse, sharing, leasing, repair, refurbishment, remanufacturing and recycling. Space, as a rather new area of human activity, is already facing significant sustainability issues such as space debris and light pollution, increasingly raising the question of how far future space activities such as mega constellations, space resource utilization on other celestial bodies, solar power satellites, etc. should or should not be conducted. Responding to this question requires a combination of assessment methods for providing an objective basis for comparing different alternatives and ecodesign approaches which increase the sustainability-related performance of specific systems and business models.

II. Further references

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