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Abstract

The industrialization of Earth orbit will become feasible and profitable as soon as the new Space X fully reusable vehicles will be available, likely during 2022. With Starship-likes orbiters the ticket to orbit will drop from the current >40 $m to < 1 $m. Passing such threshold manned activities in space will be convenient and profitable, more than full robotic activities. Robots and artificial intelligence are not reliable for complex operations, since they would be with no solutions for any unexpected situation. And telemetry is not possible for distances longer than LEO. Furthermore, the scope of space exploration/settlement is not to expand a population of robots in space, but to assure new space and resources to humans, for human development in space. Follow some industrial activities which could be developed in Earth Orbit, in a time compatible with a reasonable ROI, e.g.: space debris and wreckages recovering and reuse; in orbit satellites and spacecrafts assembly and maintenance: deployment, reconfiguring, life extension, orbital reposition, refueling, disposal; Earth to/from Orbit transportation for passengers and cargo; orbital space tourism; orbit to orbit transportation; low gravity products, e.g. medical items, biotech labs, hybrid metals, industrial crystals; space traffic management; space weather monitoring; space based solar power; orbital hotels for tourists and business travelers; fueling, park and servicing stations; orbital workshops, hangars, yards; space farming and agriculture; orbital real estate; orbital sport, entertainment and culture. The necessary conditions to be developed asap, in order to allow the above development: to boost the development of low cost fully reusable passenger transportation, safe and comfortable vehicles; life protection in space from cosmic radiations, artificial gravity; space safety; safe and comfortable re-enter in the atmosphere; green environment in space habitats.

A short bio

Space philosopher and small entrepreneur. President and co-founder of the Space Renaissance International 2008 - 2021. Diplomed in Industrial Electronics, Adriano studied Computer Science at University of Torino (Italia). He served as software engineer at Honeywell Information Systems Italia, and project manager in Sysdata CAP Gemini. He founded Andromeda s.r.l., dealing industrial automation and system engineering in real time and hard real time systems. He founded the web magazine Technologies of the Frontier. Published many articles and papers, on the subject of Astronautic Humanism and Civilization expansion into outer space, collaborating with many space activists world wide. Adriano also published several books, including: “A greater word is possible!”, “La Terra non è malata: è incinta”, both available on Amazon. Adriano personally manages several Space Renaissance's websites. Cv: https://spacerenaissance.space/media/AVA_BIO.pdf Linkedin profile: https://www.linkedin.com/in/adrianoautino