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DEVELOPING THE SPACE SECTOR ON INSULAR TERRITORY: REUNION ISLAND CASE STUDY

Abstract

Reunion Island (2511 km, 850 000 pop.) is a French Island located in the Indian Ocean near Mauritius and Madagascar, in the southern hemisphere. It appears that the territory offers many fertile elements.

The association "Reunion Island Space Initiative (RISI)" is set up in order to promote the space sector in Reunion Island by long term space workers and enthusiasts.

Reunion Island has the status of "outermost region of Europe" which sets a comfortable framework for ambitious projects. Also, thanks to many outreach efforts, the political community has now an open mind for listening to local space projects. In order to supplement the outreach effort, RISI plans to create in the city of Saint Pierre a space cultural center intended to share passion and knowledge with the general public, economic and academic sectors.

Moreover, the Laboratory of Electronics, Energetics and Process (LE2P) of the University of La Réunion is working toward the Wireless Power Transfer (WPT) with a specific effort towards rectenna design. This technology is leading to an application for the Solar Power Satellite (SPS) concept. It sets Reunion Island as a part of the current trends along with the Japan Aerospace eXploration Agency (JAXA), Mitsubishi and the China Academy of Space Technology (CAST).

Additionally, Reunion Island benefits from solid economic and industrial sectors, meaning they can support innovative and ambitious projects. Therefore, the University and the local industry are willing to initiate the space sector with a local-made Cubesat. This would complement the local "Cubesat Reunion Island Station – Lycée Bois d'Olives (CRIS-LBO)" currently hosted by the high-school "Bois d'Olives" and used as teaching support. The CRIS-LBO is strategically located in the Indian Ocean regarding the Amateur radio network.

Besides, locally, Reunion Island benefits from past and present volcanic and geological activities that provide environmental conditions similar to the Moon and to Mars. The site offers a volcanic landscape complemented by lava tubes offering opportunities for analogue missions.

Furthermore, the space sector is also an opportunity for the tourism. Actually, the Pierrefonds Saint-Pierre Airport located at the south of Reunion Island has the capacity and the enthusiasm to host a Zero-g flight campaign. The flight would be managed by the Japanese operator Diamond Air Service (DAS).

The paper will also address the integration of those projects within the local policy, "territorial marketing", and "Stratégie S3" for the development of Reunion Island.