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A LEO SATELLITE CONSTELLATION AS A MEANS FOR SELF-SUSTAINABLE FUTURE
 CENTRAL AMERICAN SPACE ACTIVITIES

Abstract

The Central American region is gaining unprecedented momentum in the development of satellite capabilities. Costa Rica and Guatemala recently launched their first satellites, and Honduras is also currently developing its first satellite with Project Morazán. If this impetus is to be continued, the region shall continue investing systematically and strategically in space capabilities, in a way that still attends regional needs and is financially sustainable. This paper looks into the regional development of satellite capabilities during the following decade and proposes a Central American six-satellite constellation as a means to sustain the ongoing progress and to scale up Project Morazán's mission.

Project Morazán has already accomplished a very important step towards the future of the Central American aerospace efforts by attaining the endorsement of the Central American Integration System (SICA). SICA, as a regional political organism, is a key player in the political framework that will enable these plans. Now, further steps, built upon this initial milestone, are being taken in the form of partnerships, and additional studies are being performed to pave the required path for the advancement of future self-sustained Central American space activities.

This paper aims to present how this future state is now being built and intends to motivate developing countries with shared visions. Three fundamental pillars and enablers of this future state, which are being raised as a result of Project Morazán, are presented on this paper; first, public-private partnerships and strategic alliances with international stakeholders; second, a business case for a Central American satellite constellation with a positive return of investment; third, the simulation results of a six-satellite

LEO constellation of mixed earth-observation and telecommunications satellites that will serve for natural disasters prevention, monitoring, and mitigation.