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APPLICATIONS FROM MULTI-LEVEL DATA ACQUISITION PLATFORMS, DEVELOPMENT OF
SPACE-BASED SOLUTIONS IN COSTA RICA**Abstract**

The usage of space technology for the development of applications has been growing everyday, bringing a great benefit to sectors such agriculture, governmental planning, catastrophe management and business logistics. As many other technologies, space applications start from research in the academy, especially in developed countries; later they get accessible for more people all around the world. Being this said, Costa Rica is starting to take advantage of space technologies that have been solving several needs to the government, as well as to the private sector; and it's here were the start-up DIT Space is providing solutions. DIT Space spinned out from the small space program Ditsö, which is a project in cooperation between the Central American Association for Aeronautics and Space (ACAE) and the University of Costa Rica (UCR). Ditsö aims to research certain materials under microgravity conditions on the ISS, but on its early development, has also make the team members gain experience in rocketry and communications systems, since its first tests were onboard high-power rockets launched in Costa Rica. Thanks to this knowledge, and the network acquired in international forums, such the IAC and International Space Training for Satellite Applications from KARI, members from Ditsö founded DIT Space, with the purpose to give space applications to the industrial sector of the country. Beginning with precision agriculture solutions, the company performed the proof of concept for the first agriculture census developed in the Central American Region, completely based on satellite and UAV imagery. Then, the development of web applications to present on internet several existing information from government institutions, such the Soils' Geoportal Costa Rica 2016 www.suelos.cr. The experience has directed the company to cover other levels for acquiring information. Currently DIT Space, in partnership with the local start-up TriverLogic, is building agroclimatic stations and mobile applications to register field samples on-site. The integration of satellite imaging obtained from remote sensing companies, UAV imaginary, agroclimatic stations, and web or mobile applications to display data provide customers a complete application. As the Costa Rican territory is small to keep growing, DIT Space is taking the country as a laboratory to develop, implement, and test its technology. Being the next step grow to Latin American market. A success in this process could be another prove that developing countries can not be only consumers and redistributors of space technology, but also researches, developers, and exporters involved in this high-technology industry.