

28th IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS (B4)
Interactive Presentations - 28th IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS (IP)

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INTERNATIONAL COOPERATION FOR THE DEVELOPMENT OF HUMAN CAPITAL IN
STUDENTS IN DEVELOPING COUNTRIES IN THE AEROSPACE SECTOR:

Abstract

According to the OECD in 2016, government spending on space activities in 2014 in first world countries like China was 2,662 million dollars in 2014, while in developing countries like Mexico it spent 125 million dollars in 2014. This shows a gap in the aerospace sector between first world countries and those that are developing, and shows a significant dependence on their technology and people qualified to develop it. In developing countries, making aerospace technology is very expensive, in addition to the fact that young people are not capable of developing new technologies in the aerospace sector. Without skilled youth, they cannot compete with other 1st world countries in aerospace. We propose crowdsourcing with all United Nations countries, especially those that are not world powers, for the development of projects such as CubeSats. Open source space communities will be created for the development of state-of-the-art space technology, anyone can take up this technology, without paying for its use and modification, however, they will have to upload all their advances or modifications to the community. It is also proposed to organize competitions and hackathons open to the public, where impact problems will be solved using spatial tools and technologies. This creates opportunities to develop projects and human capital. Currently young students from all over the world have won international competitions on aerospace issues, the talent there is only to give a boost with projects, such as developing a nanosatellite for a specific mission. With the development of nanosatellites, the price decreases considerably, this will allow emerging countries to take their projects into space, in addition to developing young people trained to carry out these missions. An example of a nanosatellite made by young Mexican students was the "AztechSat-1", which was coordinated by the AEM with the Popular Autonomous University of the State of Puebla (UPAEP), who designed, developed, tested and operated with the participation of students. and professors from UPAEP.

The project obtained partial financing from the Sectorial Fund for Research, Technological Development and Innovation in Space Activities CONACYT-AEM This nano-satellite shows a way to create a national industry to collaborate and compete with companies around the world, in addition to creating young people capable of developing and innovating in the aerospace sector.