

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)  
Enabling the Future - Developing the Space Workforce (5)

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OVERVIEW OF HANDS-ON SATELLITE DEVELOPMENT TRAINING OF LOCAL COMPANIES IN  
THE PHILIPPINES AS A MEANS TO DEVELOP A SPACE WORKFORCE

**Abstract**

The Philippine Space Agency (PhilSA) was established in 2019 with a mandate of promoting Space Industry Capacity Building in the Philippines. To help achieve this goal, PhilSA launched a satellite development project with local industry partners to create a local space workforce that will bring economic benefits to the country and ensure the sustainability of future space endeavors. Despite the Philippines being home to a large electronics manufacturing sector, local companies remain cautious in pursuing space development activities. To address this, PhilSA engaged engineers from these “space-adjacent” sectors, who are considered experts in their fields but had no prior experience in space development. The project, which was offered for free to private sector companies, resulted in the participation of twenty (20) Industry Engineers (IEs) from ten (10) different companies. The IEs underwent a month-long technical course on small satellites and subsystems, followed by hands-on project-based learning with PhilSA mentors. This culminated in the Preliminary Design Review held in December 2022, where the Industry Engineers presented the subsystems they developed with their PhilSA counterparts. Despite their inexperience in satellite development, the IEs were able to contribute significantly to the actual development work of the 3U cube satellite, including mechanical structure design and analysis, antenna pattern simulation, system budgets, and onboard computer architecture design. The success of the early phase of this project was evidenced by the positive feedback from the Industry Engineers and their company executives. PhilSA intends to continue this satellite development project until the operations phase, providing the companies with an opportunity to showcase the components they produced and gain space heritage, which can be leveraged to seek international customers. This paper will present the learning outcomes and future work of this unique approach to space workforce development in the Philippines.