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## THE THEOS-2 SMALL SATELLITE AND TECHNOLOGY TRANSFER PROGRAM

**Abstract**

Space is the final barrier for many of the developing countries. However, space application has been proved to be one of the pillars in the socio-economic development of a country and contribute significantly in the planning, assessment and monitoring of a nation's sustainability and its implementation of the Sustainable Development Goals. Keeping in line with the global trend, Geo-Informatics and Space Technology Development Agency (GISTDA), the national space agency of Thailand, has initiated the process to extend its Earth Observation satellite fleet with a contract with Airbus Defence and Space for the procurement of THEOS-2 Earth Observation System. The THEOS-2 Earth Observation System is made up of a very high-resolution satellite (THEOS-2 MainSat), a high-resolution satellite (THEOS-2 SmallSat), an Integrated Solutions Systems and an Intelligence platform which shall be the brain of the entire system. Moreover, the project also gave very high priority in the capacity building aspect. The project will have capacity building throughout, from the development and design or solutions, applications and actionable intelligence to the design and development of satellite and ground systems. This paper shall focus on the development of the THEOS-2 SmallSat and its role in the capacity building of Thailand and presents how the THEOS-2 SmallSat is a key part of the human resource development and local industry advancement in Thailand. Furthermore, the paper shall present the co-creation process between Surrey Satellite Technology Limited (SSTL), Airbus's sub-contractor and GISTDA throughout the project period. This process shall include the design and development of the satellite in Surrey, UK and the implementation of the THEOS-2 SmallSat testing in Thailand; for which the Thai government has invested in building and equipping the assembly integration and test (AIT) facility. The paper shall also describe the long-term development plan for the space industry in Thailand. This includes, but not limited to, the expansion of aerospace laboratory and testing facility of GISTDA, the Thai Space Consortium (TSC) project, the LESAsat project and THEIA satellite project. Finally, this paper shall also discuss GISTDA's open innovation platform and its plan for collaboration in space technology in the near future.