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IMPLEMENTATION OF ASSISTED SPACE TECHNOLOGY IN THE DEVELOPMENT OF  
NATIONAL INFRASTRUCTURE IN THAILAND

**Abstract**

Developing nation such as Thailand have to leverage advance technology in order to accelerate the growth of the infrastructure of the country. The infrastructure is not limited to infrastructure such as roads or rail but to human capital as well. There is a constant need to integrate new technology into every walk of lives in order to just catch up with the developed nations. Space technology in Thailand has mostly been on the edge and never use in mainstream development. However, only recently, the Government of Thailand has fully realized the potential of the Space Technology. Space assisted technology shall be integral to the development of the new high-speed railways in Thailand, both the north-south corridor and the east-west corridor. High precision positioning using Global Navigation Satellite System (GNSS) shall be used in the planning and construction phase of the rail line development while navigation and tracking with GNSS shall be implemented in the operations and maintenance phase. Geographic information systems (GIS) and very high resolution satellite images will be use to assess the terrain and plan the course of the rail lines. Track turning design shall also use satellite positioning technology for high precision. The needs for higher accuracy data in earth observation and positioning is leading to large investment by the government of Thailand in development ground based augmentation systems to fulfill the ever growing needs. With the implementation of space assisted technologies, technology transfer and capacity building has also been given high priority and this policy adheres to the national development plan of building a knowledge economy. The paper shall reflect how the use of space assisted technology have added to the value of the lives of the Thai people as well the economic returns and social value created. The uptake of the various application of satellite communications, earth observation and satellite navigation in key industry sectors as well as in academia has led to productivity gains as well as new applications through research. This has led to quantum leaps in the infrastructure development in Thailand.