Vietnam National Space Center

Vietnam

LOTUSat-1 satellite – Vietnam goes to space to mitigate the effects of climate change

Learn more about NEC at **sg.nec.com**

The Challenge

Natural disasters and climate change are major sustainability challenges that significantly impact the environment, society, and economy. Vietnam is projected to be one of the countries that will be most severely impacted by climate change – up to 12% of the country's land area may be flooded by rising sea levels by 2100.

The Vietnam National Space Center (VNSC) is looking to prevent and alleviate the devastating effects of natural calamities and climate changes, and have a solution to better monitor the country's natural resources.

The Solution

NEC partnered with the VNSC to provide "LOTUSat-1", the first Vietnamese radar satellite system to "manage and mitigate" natural disasters and climate change. The state-of-the-art satellite's synthesised aperture radar has the capability to capture high definition images of Earth under all climate conditions, day or night.

The project includes the building of a complete ground system by NEC, including a 9 metre-diameter parabolic antenna, satellite control centre, and mission data utilisation centre and user interface based on NEC's "GroundNEXTAR" software package. NEC will also train VNSC experts on using the satellite system, creating a local team that can respond speedily to the alerts.

The Benefits

The satellite system effectively forecasts and monitors natural disasters to mitigate damages and save lives

The technology also has the potential to help with urban planning, combat illegal logging, improve crop harvest forecasting, and national security

Reaching for the stars

NEC has been closely involved in the space industry since 1956. Our team of experts has developed about 80 satellites for a wide variety of purposes. In 2018, NEC launched our own satellite and established the "NEC Satellite Operation Center".

Today, our company owns and operates two Earth observation satellites, and our space technologies are used in a wide range of applications, including telecommunications, disaster management, and environmental monitoring.

A drive towards greater sustainability

01 Reducing effects of natural disasters due to global warming
Preventing loss of lives, infrastructure, and natural environments

02 Helping to prevent illegal logging
Ensuring that forests are protected, preventing further reduction of natural habitats