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India space agency launches six Singapore satellites in latest successful commercial venture

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India has launched six Singapore-made satellites at 8:30pm Singapore time on Wednesday (Dec 16), marking Singapore's boldest leap yet into space.

The satellites were fired off on the Indian Space Research Organisation (ISRO)'s Polar Satellite Launch Vehicle from the Sriharikota rocket port in south-eastern Andhra Pradesh state.

It was the latest successful commercial venture for the ISRO.

The six satellites, including a primary satellite called TeLEOS-1 weighing 400 kg, two micro-satellites and three nano-satellites, are the latest in a series of commercial launches that ISRO has undertaken for foreign countries.

India's space foray started in the early 1960s to build up an indigenous programme, but it has since emerged as a major player in the multibillion-dollar space market.

In the past two decades, its space agency has launched 57 satellites from 19 countries, earning US\$102 million (S\$143.93 million). This includes not just the latest six Singapore satellites, but also the Republic's first locally built satellite launched in 2011 and a satellite by Nanyang Technological University in 2014.

Experts say commercial launches were an important part of ISRO's activities, allowing it to earn revenue and also make a name on the global stage.

"The commercial launches are one of the important part of ISRO's objectives of utilisation of space technology for the benefit of the larger global community," said Dr K. Kasturirangan, former ISRO chairman.

"One aspect is revenue. A second aspect is continuously benchmarking capabilities in the international market. Singapore would have done a global assessment and ISRO has won against stiff competition. One message is that we are capable of competing logistically and financially. This is very important."

Next, the space agency is planning to launch another 22 foreign satellites, including from Canada, Germany, Indonesia and the United States, in 2016 and 2017, according to the Indian government

But experts say the need is for ISRO to bulk up its space capabilities for domestic use. It has been trying to increase its capabilities to launch heavier payloads.

"They are not able to meet requirement from within India for remote sensing (for instance), which is needed in India," said Mr Pallava Bagla, science editor with New Delhi Television (NDTV).

More recently, the ISRO grabbed international attention for its successful Mars mission. At US\$74 million, it cost a tenth of the US Mars mission, which completed a year in orbit in September this year. The space agency also deployed its own version of the Hubble telescope in September this year.

"In the coming years, ISRO is planning to increase its capacity and this will increase availability of commercial services," Dr Kasturirangan added.

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