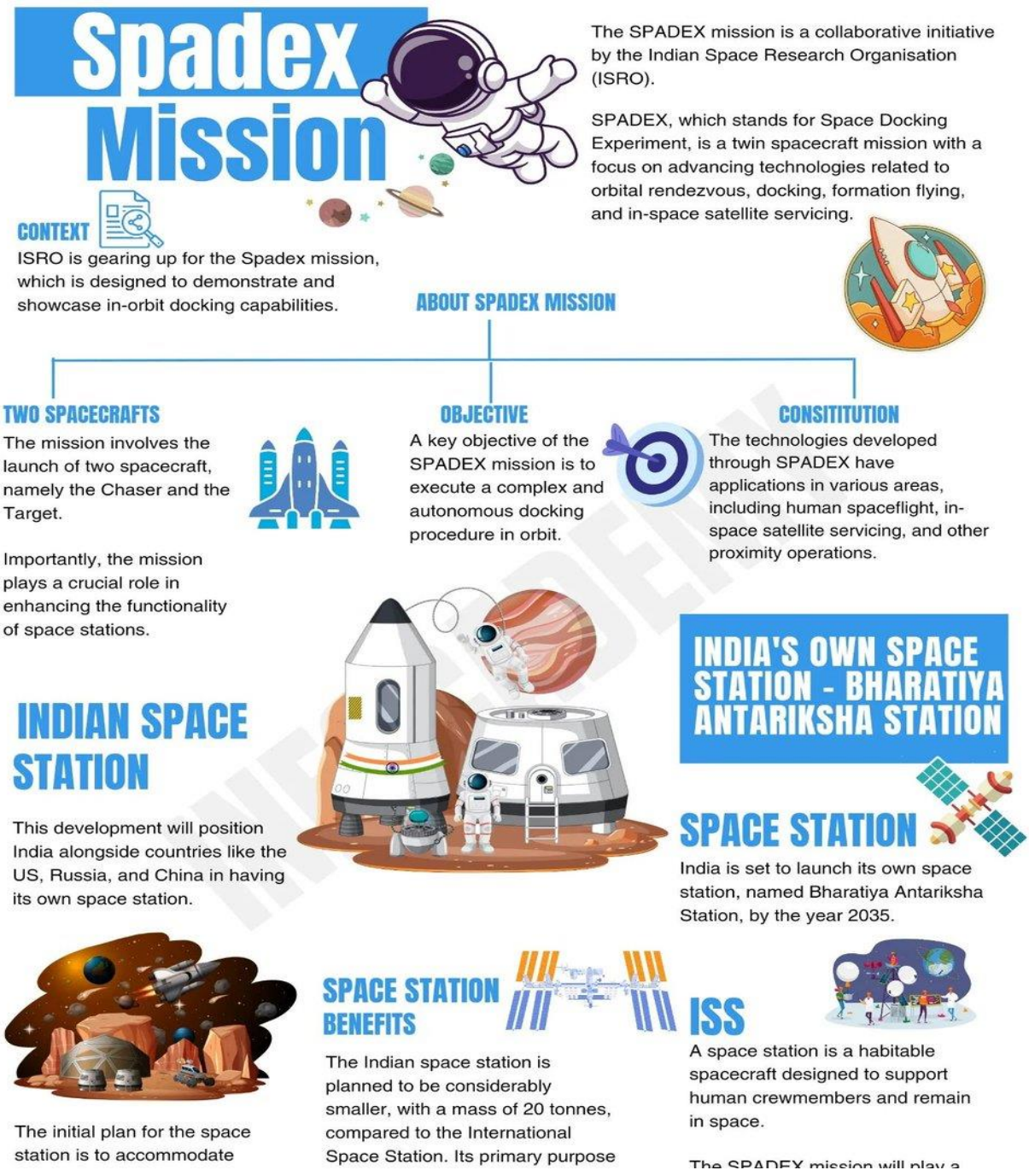
# SPACE DOCKING EXPERIMENT – SCIENCE & TECHNOLOGY

**NEWS:** Recently, Hyderabad-based company handed over two 400 kg class satellites to ISRO, which will be part of the Space Docking Experiment planned by the space agency later this year.

## WHAT'S IN THE NEWS?

## About Space Docking Experiment (SPADEX)

- One of the ISRO's significant steps toward developing autonomous docking technology.



- The mission involves two vehicles—'**Chaser' and the 'Target'**—coming together and connecting in space.
- Docking systems enable two spacecraft to be connected in orbit. This opens up critical operations like assembling a space station, refueling, or the transfer of astronauts and cargo.
- It also will showcase the capability of the integrated spacecraft for stability as well as control after docking, for smooth forthcoming missions
- India's SPADEX experiment contains a unique objective in itself, and this lies in the aspect of the development of native scalable and low-cost docking technology
- As part of this experiment, two orbiting spacecraft will automatically dock with each other demonstrating accuracy of navigation and control of great relevance to future space missions.
- SPADEX is designed to serve a wide range of spacecraft sizes and mission objectives, including potential collaborations for building space stations or deep space exploration," (END.
- October 30, 1967: the Soviets successfully executed the historic docking of Kosmos 186 and *Kosmos 188-the first fully automated docking between two unmanned spacecraft.
- Established a precedent for extended space exploratory endeavors later, such as staying on orbiting space stations.
- **Significance:** It will be an integral aspect in attaining India's long-term space exploration objectives, including manned space flight, satellites servicing, and construction of the space station later.

Source: https://www.tribuneindia.com/news/india/isro-sets-december-target-to-launch-first-space-docking-experiment/