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Abstract

For more than 35 years the pressurized modules developed by Thales Alenia Space have supported human missions in Low Earth Orbit.

Starting from the first Spacelab flight in 1983 up to the last Cygnus launch in November 2019, the pressurized modules provided by Thales Alenia Space to both Space Agencies and commercial partners have proved to be products synonymous of success.

Factual that about one third of the pressurized volume of the International Space Station as well as 3 out of the 6 logistic vehicles used to resupply it have been developed in Thales Alenia Space facilities.

Thales Alenia Space fully shares the vision of the major Space Agencies to move toward a new era of human exploration that, from the Low Earth Orbit, will bring humankind back to the Moon and onward to Mars, through both institutional support and Public and Private Partnership with industries.

To support this vision, Thales Alenia Space decided to develop SpaceHOME (Space Habitation and Operation Module for Exploration), a family of products designed to sustain human exploration, with the objective to offer customer-standardized solutions at a fair price and with a short time to market, while keeping unchanged the level of crew comfort and safety provided until now.

This paper provides an overview of the SpaceHOME program and the associated enabling technologies development roadmaps.