



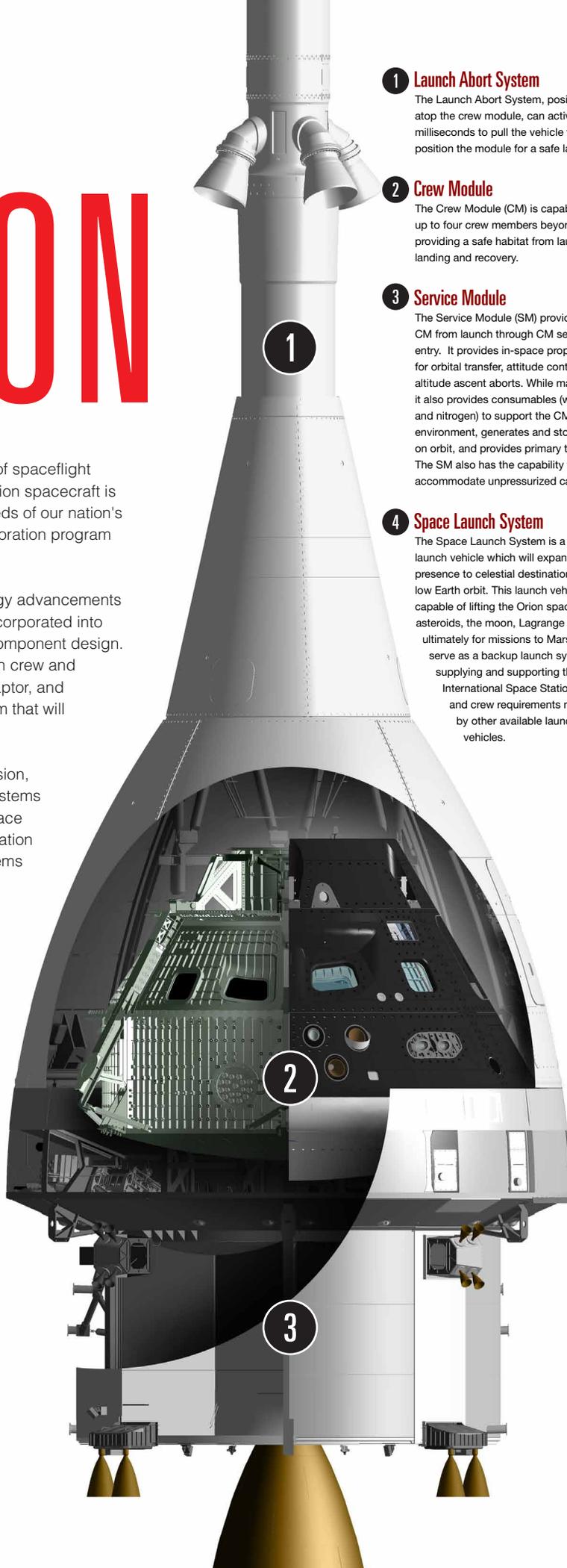
ORION

Drawing from more than 50 years of spaceflight research and development, the Orion spacecraft is designed to meet the evolving needs of our nation's beyond low Earth orbit space exploration program for decades to come.

Orion features dozens of technology advancements and innovations that have been incorporated into the spacecraft's subsystem and component design. The Orion spacecraft includes both crew and service modules, a spacecraft adaptor, and a revolutionary launch abort system that will significantly increase crew safety.

Orion's unique life support, propulsion, thermal protection and avionics systems in combination with other deep space elements will enable extended duration deep space missions. These systems have been developed to facilitate integration of new technical innovations as they become available in the future.

Orion is capable of transporting astronauts on a variety of expeditions beyond low Earth orbit – ushering in a new era of space exploration.



1 Launch Abort System

The Launch Abort System, positioned on a tower atop the crew module, can activate within milliseconds to pull the vehicle to safety and position the module for a safe landing.

2 Crew Module

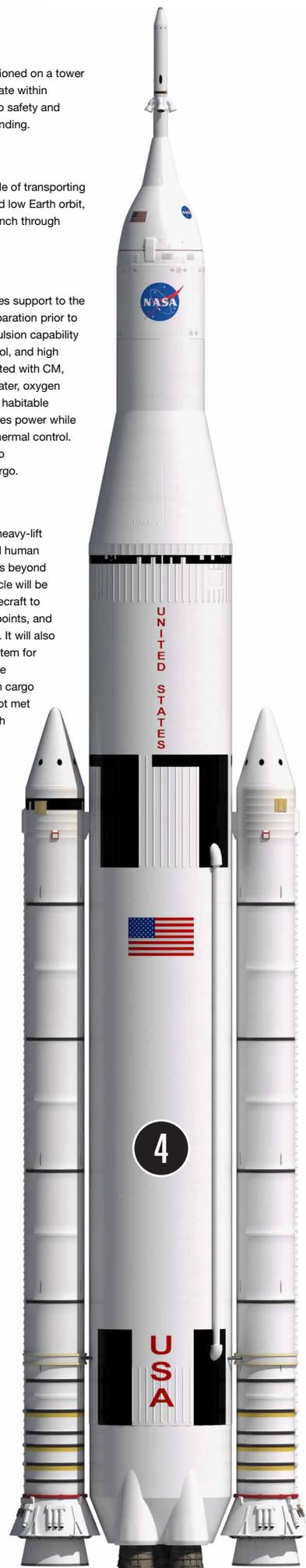
The Crew Module (CM) is capable of transporting up to four crew members beyond low Earth orbit, providing a safe habitat from launch through landing and recovery.

3 Service Module

The Service Module (SM) provides support to the CM from launch through CM separation prior to entry. It provides in-space propulsion capability for orbital transfer, attitude control, and high altitude ascent aborts. While mated with CM, it also provides consumables (water, oxygen and nitrogen) to support the CM habitable environment, generates and stores power while on orbit, and provides primary thermal control. The SM also has the capability to accommodate unpressurized cargo.

4 Space Launch System

The Space Launch System is a heavy-lift launch vehicle which will expand human presence to celestial destinations beyond low Earth orbit. This launch vehicle will be capable of lifting the Orion spacecraft to asteroids, the moon, Lagrange points, and ultimately for missions to Mars. It will also serve as a backup launch system for supplying and supporting the International Space Station cargo and crew requirements not met by other available launch vehicles.



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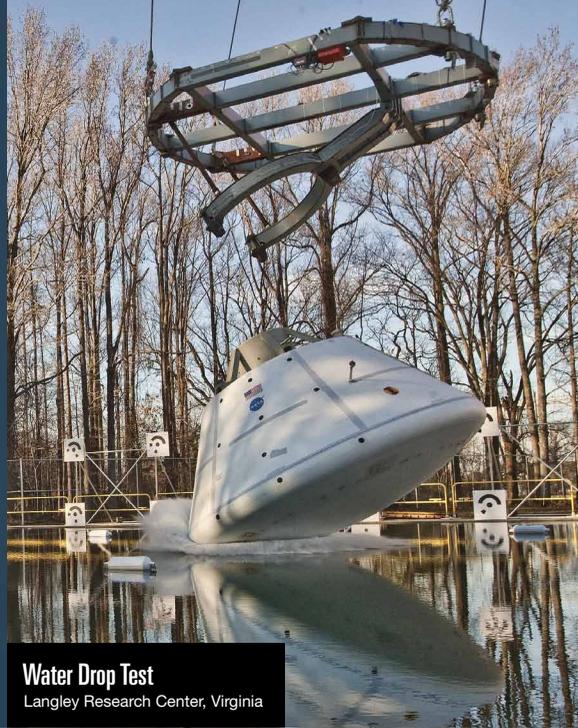
Pad Abort 1 Flight Test

White Sands Missile Range, New Mexico



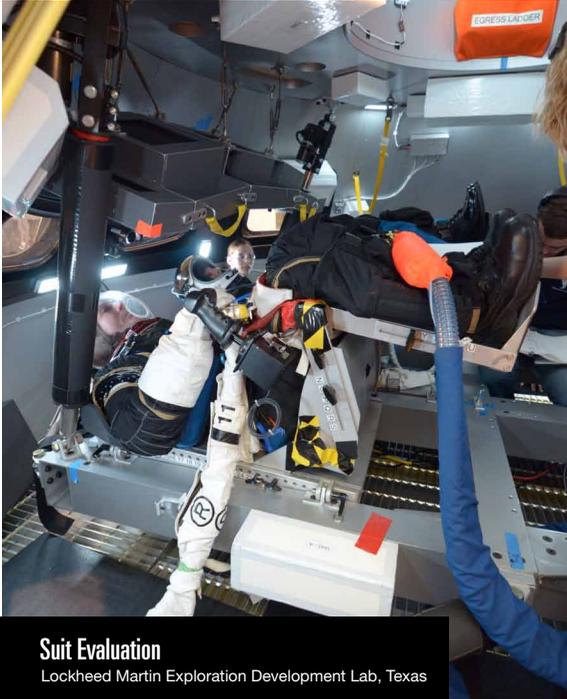
Parachute Test

Yuma, Arizona



Water Drop Test

Langley Research Center, Virginia



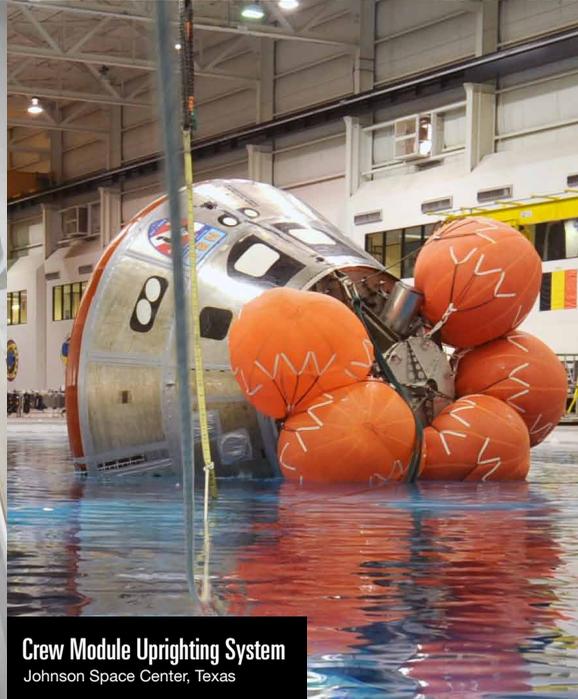
Suit Evaluation

Lockheed Martin Exploration Development Lab, Texas



Acoustic Testing

Lockheed Martin, Colorado



Crew Module Uprighting System

Johnson Space Center, Texas



Orion Mockup

Johnson Space Center, Texas



Pad Abort 1 Crew Module

Kennedy Space Center, Florida



Crew Systems Evaluation

Lockheed Martin Exploration Development Lab, Texas