

IAF HUMAN SPACEFLIGHT SYMPOSIUM (B3)  
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THE NATIONAL TEAM'S HUMAN LANDING SYSTEM (HLS): GOING TO THE MOON - THIS  
TIME TO STAY

**Abstract**

NASA's Artemis Program has a bold challenge to land the first woman and the next man on the Moon – returning crews to the lunar surface, opening the Moon for business, and building a path to Mars. To achieve these ambitious objectives, NASA has developed an Artemis lunar architecture, the Human Landing System (HLS) program. The Blue Origin-led National Team integrates four companies each having a head start for this fast-paced program. We are working on a flexible, multi-element, commercial, and sustainable solution for NASA's HLS effort referred to as the Integrated Lander Vehicle (ILV). The National Team comprises Blue Origin, Lockheed Martin, Northrop Grumman, and Draper. Our team brings decades of experience with human space flight systems, launch vehicles, propulsion, orbital logistics, deep-space missions, interplanetary navigation, and planetary landings. The National Team's approach to long-term sustainability focuses on reusability to increase affordability. More capable and longer missions to more locations on the surface will enable permanent, sustained surface operations, habitation, and development of lunar resources. The elements can launch on various combinations of U.S. commercial or government launch systems. The system can dock directly with Orion or the lunar Gateway and can land cargo manifests ranging from one to fifteen tons on the lunar surface. The National Team looks forward to embarking on the next steps with NASA and returning to the Moon – this time to stay.