

# Delivering the World's Largest Metal Additive Machine to Manufacture Jointless Combat Vehicle Hulls, Better Protecting Service Members

*A LIFT Project / Department of Defense Manufacturing Innovation Institutes*



**Technology:** U.S. Army Jointless Hull

**Project Participants:** LIFT, U.S. Army Combat Capabilities Development Command Ground Vehicle Systems Center, Ground Vehicle System Center, Siemens, Meld Manufacturing, Ingersoll Machine Tools, Astro America

**Institutes' Role:** The Jointless Hull Project is contracted through LIFT and U.S. Army Combat Capabilities Development Command Ground Vehicle Systems Center, Ground Vehicle System Center is directing the technical program.

**Technology Description:** The machine will have the capability of a metal print size at 30 feet long, 20 feet wide and 12 feet high, utilizing Meld Manufacturing technology on an Ingersoll Machine Tools platform, driven by Siemens software. By manufacturing combat vehicle hulls without seams and/or welds, the hulls will better protect the warfighters inside the vehicle.

**Impact:** Monolithic hulls for combat vehicles have well-established advantages – especially in survivability and weight savings – but traditional manufacturing processes are not cost-effective or adaptable to full production, especially when multiple vehicle platforms are put into play.

