Lockheed Martin Embraces Agile Software Development To Evolve Signals Intelligence Capabilities For Air Force Weapon System

Upgraded Signals Intelligence Capabilities for Today and Tomorrow

The Distributed Common Ground System, or DCGS, is the Air Force's globally-networked intelligence, surveillance and reconnaissance planning, collection, processing and exploitation, analysis and dissemination weapon system. (U.S. Air Force photo)

NATIONAL HARBOR, Md, Sept. 18, 2018 — Working with the Air Force, Lockheed Martin (NYSE: LMT) has used agile development to evolve the signals intelligence capabilities for the Distributed Common Ground System, the Air Force's intelligence, surveillance and reconnaissance (ISR) system. The AF DCGS produces actionable intelligence from data collected by sensors on manned and unmanned ISR platforms.

"To help our customers upgrade systems, Lockheed Martin is using modern agile methodologies, which unlike other software development approaches, welcome change," said Dr. Rob Smith, Vice President of C4ISR and Unmanned Aerial Systems. "For DCGS, we worked with the Air Force to provide a spiral-based agile development and integration model leading to "continuous integration - continuous delivery."

Using this agile approach, Lockheed Martin helped the Air Force transform DCGS to a modern architecture capable of rapidly integrating new capabilities as threats evolve. Partnering with the AF DCGS requirements, acquisition, and security communities, Lockheed Martin was able to migrate the majority of DCGS signals intelligence applications onto the open architecture infrastructure for testing just 10 months after task order receipt. In the past, large system releases would begin testing event some 18 to 24 months after award. Lockheed Martin helped gain efficiencies in software development, reduce the software lifecycle time and field new capabilities quarterly, representing a 50-75 percent reduction in fielding timelines.

The enhanced AF DCGS signals intelligence capabilities will allow airmen to be faster and more effective in executing the DCGS worldwide intelligence mission. This is also a critical step in the transforming DCGS from traditional sites to a worldwide hub-based architecture, which paves the way forward for centralized processing and remote support. This hub-based architectural tenet will lead to significant cost savings in support contracts and allow that savings to be reinvested into the development of new applications and capabilities for DCGS.

This effort also demonstrates Lockheed Martin's commitment to modern agile methodologies, to field capabilities that are modular, open, non-proprietary and aligned to customer desires for faster, more cost-effective development efforts. As Lockheed Martin and government learned agile together, as a team they streamlined processes and adapted and institutionalized new methodologies. This shift toward agile processes includes guiding principles such as value stream mapping and reduced testing through increased automation.

For additional information, visit our website: Lockheed Martin C4ISR Systems.