

SCHIEBEL
CAMCOPTER® S-100

AIRBUS
H145

Manned-Unmanned Teaming Operations



Manned-Unmanned Teaming Operations

Manned-Unmanned Teaming (MUM-T) plays an increasingly significant, mission-critical role for army aviation. It qualifies as a force-multiplier and provides the necessary capabilities to meet the growing challenge of often dangerous operations over larger areas at increasing ranges and speeds. Leveraging the strengths of both manned and unmanned systems significantly improves situational awareness, allowing for greater mission effectiveness and efficiency while simultaneously affording safety and lower risk to operators and assets.

Providing pilots of manned aircraft the ability to control Unmanned Air Systems (UAS) enables them to take full advantage of the intelligence, surveillance and reconnaissance (ISR) capabilities of the UAS, thus enhancing decision-making and improving safety during dull, dirty and dangerous missions. The Level of Interoperability (LOI), as defined by NATO Standardization Agreement 4586 (STANAG 4586), describes the control that a user has over the Unmanned Aerial Vehicle (UAV), the payload or both. There are five different levels, with Level 5 requiring the installation of a fully Remote Pilot Station (RPS) in the manned helicopter and providing the crew with maximum control:

- Level 1** - Indirect receipt / transmission of UAV-related data and metadata
- Level 2** - Direct receipt / transmission of UAV-related data and metadata
- Level 3** - Control and monitoring of the UAV payload, not the unit
- Level 4** - Control and monitoring of the UAV, without launch and recovery
- Level 5** - Control and monitoring of the UAV, including launch and recovery

Recognizing the potential of the evolving role of UAS as the all-seeing eye fully controlled in the sky by pilots in manned aircrafts, MUM-T LOI 5 provides the following key advantages:

- Protection of expensive manned helicopters and their crews
- Opportunity to enhance the ISR capability of manned platforms especially in complex operations
- Ability of manned helicopters to explore larger areas by increasing ISR coverage from a single manned platform
- De-risking for manned helicopters and crews while exploring dangerous environments
- Lower-cost operations and greater endurance
- Low-flying, terrain-screening manned helicopters with a top-down view from UAV operating up high where its signature is low
- Enhancement of manned aircraft sensors
- Improved security of the datalink by making it more robust and harder to detect (link between manned and unmanned platform is closer, moving and far from the ground)

