



U.S. ARMY

**THE IMPORTANCE OF
SENSING AND COUNTER-
SENSING:**

In the future operating environment, the ability to sense and deny sensing will determine who prevails.

The Army must enable decision advantage for our Soldiers, Joint and coalition partners.



CONNECT WITH US ONLINE

www.army.mil

Paid for by United States Army. All rights reserved.
Note: Information contained in this publication is subject to
change.

PUBLISHED Sept 2025



**U.S. ARMY
SENSING &
COUNTER-
SENSING**





OPERATIONAL CONTEXT

The Future Operating Environment will be shaped by:

- DDIL Conditions: Denied, degraded, intermittent, and limited communications.
- Threat Counter-Sensing: Adversaries will target friendly sensors and networks.
- Deception Across Domains: Use of masking, false narratives, and deception tactics.
- Massive Data Volume: Uncertain and variable data validity.
- Advances in AI and Autonomy: Faster decisions and autonomous sensors.
- Compressed Decision Timelines: Machine-speed decision-making required.
- Distributed Operations: Forces operating over vast distances.
- Increased Battlefield Depth: Intelligence must penetrate deeper into adversary areas.

Problem set: How do sensing capabilities enable Army, Joint, and multinational forces to:

- Deter adversaries in competition?
- Defeat adversaries in conflict?

SENSING ACROSS WARFIGHTING SYSTEMS

Collect and Ingest Data:

- Deploy AI-enabled, resilient, adaptive, autonomous, sensor networks.
- Utilize sensors hosted on non-intelligence platforms.
- Use AI tools to ingest relevant data from partners and open sources.

Manage, Analyze, and Share Information:

- Operate distributed, adaptive, and flexible analysis nodes for on-the-move analysis.
- Leverage AI tools for operational environment visualization and predictive analysis.

Enable Targeting and Decision-Making:

- Model threat warfighting systems to identify vulnerabilities.
- Provide support for Command and Control (C2), counter-C2 and counter-sensing.
- Multi-domain targeting, sustainment, and protection.
- Inform friendly and disrupt adversary machine-enabled decision-making.

Enable Force Protection:

- Ensure our forces to remain unseen through a cooperative mix of protection capabilities.
- Expand maneuver through diverse sensors and signals.



OPPORTUNITIES FOR INDUSTRY PARTNERSHIP

- AI-Enabled Sensors: Autonomous sensors processing data at the edge.
- Quantum Sensing: Precision detection in denied environments.
- Resilient Networks: Self-healing networks for DDIL conditions.
- Electromagnetic Warfare Tools: Systems to locate and disrupt adversary sensors.
- Attributable Platforms: Low-cost, reusable platforms for high-risk missions.
- Advanced Analysis Tools: AI tools for operational visualization and predictive analysis.