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Countering Advanced Drones: Military Training for the Next Generation

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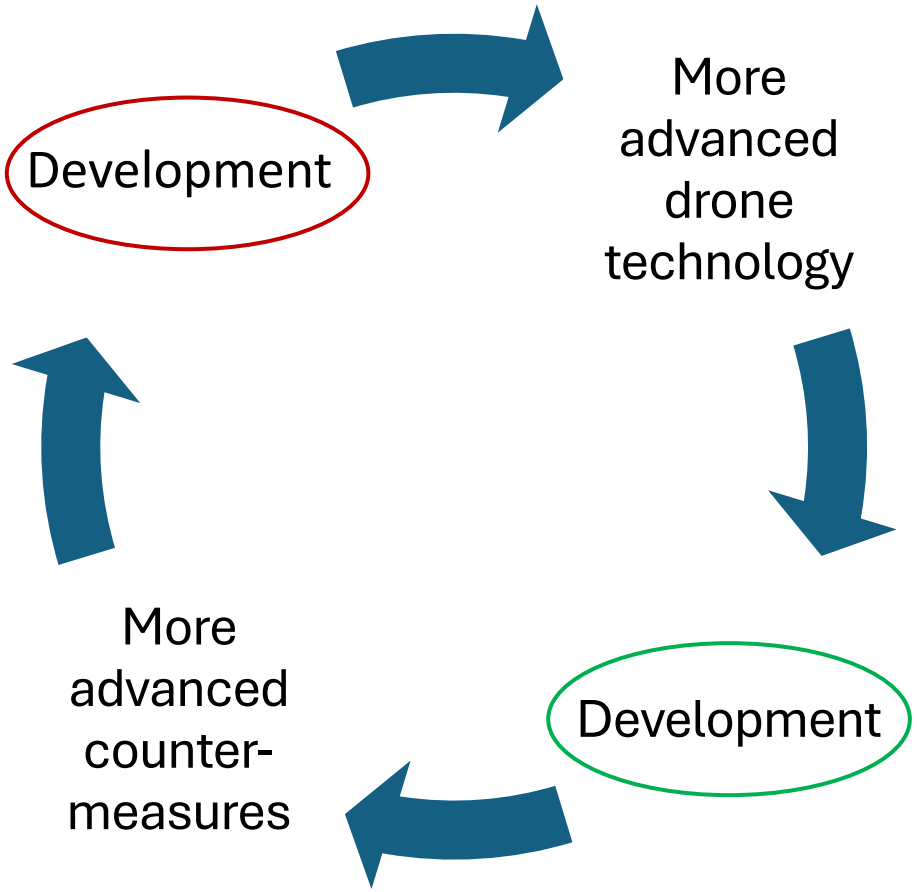
"Drone innovation is happening at warp speed, but Defense Department acquisition is happening at industrial speed"

former USAF officer Mark D. Jacobsen

This lag between offensive capabilities and defensive measures creates a growing vulnerability for (US) armed forces.

A never ending cycle …

Create an edge of the enemy



Dangerous when this lacks behind!

Drone Technology in 2040 Military Operations

Key capabilities:

- Advanced AI, thermal imaging, lidar, radar, and acoustic sensors
- Autonomous surveillance and real-time data transmission to command centers
- Deployment of countermeasures in response to threats

AI-driven tracking:

- Pattern recognition technology allows drones to identify and track individuals based on biometrics and movement

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Challenges for Soldiers on a Drone-Dominated Battlefield

Constant surveillance:

- Near-constant monitoring by drones with AI tracking capabilities

Stealth and evasion challenges:

- Traditional methods are less effective; evasion requires new tactics to defeat AI pattern recognition

Counter-Surveillance and Stealth Training

Adaptive camouflage:

- Training focuses on adaptive camouflage that blends with natural environments

Electronic warfare tactics:

- Portable jamming devices to disrupt drone sensors and communications without revealing soldier positions

Decoy techniques:

- Use of decoys emitting human-like heat signatures to mislead drones

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Movement and Evasion Tactics

Irregular movement patterns:

- Soldiers trained to use unpredictable movement to evade drone tracking

Effective use of cover:

- Utilizing natural or artificial cover to avoid detection by drones' thermal and radar sensors

Integrating Drones in Military Training

But drones could also prove useful in training!

Drones as allies in training:

- Real-time feedback during navigation and map-reading exercises
- Drones assist platoon commanders with:
  - Locating lost recruits
  - Increasing difficulty of exercises on-the-fly, adapting to real-time performance

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Enhanced Learning Through Drone Feedback

Improved training quality:

- Personalized, real-time feedback for recruits to correct mistakes.
- Continuous monitoring for better performance evaluations and tailored improvements

Mid-exercise adjustments:

- Drones provide platoon commanders with data to adjust training scenarios dynamically

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Conclusion

- Preparing for the drone-driven Battlefield:
  - By 2040, drones will redefine military operations and training.
  - Mastering both evasion from hostile drones and leveraging them for training will be essential for future military success
- The fusion of AI, surveillance, and military tactics will reshape the battlefield, requiring new skills and technology mastery
- Embrace drones to enhance military training