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# Russian Artificial Intelligence (AI) Research, Development, Test & Evaluation (RDT&E)



## CNA Adversary Analytics Group – Russia Studies Program

- CNA is a federally funded research and development center (FFRDC) serving the U.S. Department of the Navy and other U.S. defense agencies. (Note: this webinar was not funded by the Department of the Navy or any other U.S. defense agencies.)
- Russia program research areas :
  - Russian military technology development
  - Russian military autonomy, robotics, and AI
  - Decision-making: risk calculus and escalation
  - Military capabilities and defense-industrial complex
  - Influence operations: evaluation and assessment

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- Russian unmanned military systems and AI

# Military Artificial Intelligence: Definitions

**Digitization.** “Widespread introduction, development, and application of information technology in the military.” The application of IT to the military is leading to a qualitative transformation in military capability that will dramatically affect weapons systems and the ways in which they are employed.

**Intellectualization.** Widespread implementation of AI “capable of performing creative functions that are traditionally considered the prerogative of a person (i.e., perceived by a person as reasonable).” Introduction of specially developed “intelligent” systems created by human experts, stored in databases that are created in advance, that increase the efficiency of information processes.

# Military Artificial Intelligence: Integration

- Four AI principles.
- Drive for greater autonomy but with a “human-in-the-loop.”
- Information warfare.
- Nuclear weapons.



# Military Artificial Intelligence: C4ISR

- National Defense Management Center.
- Automated Control Systems.
- Unified Tactical Control System.



# Military Artificial Intelligence: Autonomy

MOD: A system that is able to perceive information from the environment and, based on that, performs certain actions both autonomously and with an operator in the control loop. The most characteristic robotic system in the military is, in fact, an unmanned vehicle with elements of artificial intelligence and equipped with navigation devices and manipulators capable of replacing human action. Such robotic systems can be used for both combat (e.g., tank destroyers) and combat [support] (reconnaissance, mining and demining, decontamination, etc.).



# Military Artificial Intelligence

- Early warning and radars.
- Logistics, maintenance, manufacturing.
- Education.
- Electronic warfare.
- Counter-unmanned aerial systems.
- Medicine.



# Military Artificial Intelligence: RDT&E Infrastructure



# Challenges

- Developing domestic high-tech expertise.
- “Import-substitution” drive for domestic components.
- Dual-use technology development by military enterprises.
- Legal/regulatory issues.
- Cooperation with academia and industry.
- International competition.



# Questions?

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Russia Studies Program:

<https://www.cna.org/centers/cna/sppp/rsp/>

“AI in Russia” newsletter:

<https://www.cna.org/centers/cna/sppp/rsp/>