MARINE CORPS

WARFIGHTING LABORATORY

laboratory fact sheet

The Marine Corps Warfighting Laboratory, originally known as the Commandant's Warfighting Laboratory, was established in 1995. It is located at Quantico, VA., and is part of the Marine Corps Combat Development Command (MCCDC).

The commanding general of the Lab also serves as the vice chief of naval research at the Office of Naval Research.

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The Lab's mission is to improve current and future naval expeditionary warfare capabilities across the spectrum of conflict by:

- Conducting concept-based experimentation and wargames in order to develop and evaluate tactics, techniques, procedures and technologies.

- Supporting the Marine Corps Warfighting Advocates (Command Element, Ground Combat Element, Aviation Combat Element and Combat Service Support Element); Marine Corps Combat Development Command; Training and Education Command; and Systems Command to meet service-specific requirements.

- Supporting Joint experimentation through MCCDC's Joint Operations Center, the assigned lead for Marine Corps participation in U.S. Joint Forces Command's Joint concept development and experimentation program.

- Forwarding results of experimentations to the Marine Corps Expeditionary Force Development System with recommendations for action.

The Lab conducts experimentation using a concept-based innovation and experimentation model. The model begins with an idea and proceeds through a capabilities refinement phase usually associated with wargaming, a capability development phase (includes training), tactics, organization, technologies, and experimentation, assessment and transition phases.

LAB ORGANIZATION

The Lab is made up of several different divisions and organizations. Major components are:

The Lab Staff. The primary staff is composed of plans, technology and operation divisions that develop and execute experiments and day-to-day functions. The technology section also searches for and develops experimental technologies.

Special Purpose Marine Air-Ground Task Force (Experimental). Established in 1996, the SPMAGTF(X) serves as the Lab's experimental unit and the training cadre for operating forces participating in experiments.

Wargaming. A division of the Lab, Wargaming serves as both a Lab and Marine Corps asset. It is responsible for carrying out the Marine Corps Wargaming Program.

Office of Science, Technology and Innovation. This office was integrated into the Lab in October 2000 with the mission to integrate and focus science and technology efforts; and to coordinate the Marine Corps science and technology process.

Center for Emerging Threats and Opportunities. A partnership between the Marine Corps and the Potomac Institute for Policy Studies, CETO was established in November 2000 as a "think tank" to develop initiatives aimed at identifying and responding to asymmetrical threats and to explore potentially transformational opportunities.

AREAS OF EFFORT

The Lab focuses on the below areas of effort that reflect both service-specific and Marine Corps contributions to future joint warfighting capabilities:

Fire and Maneuver.
Marines fight from the sea and the Lab is focused on exploring capabilities that will permit seabased Marine expeditionary forces to conduct future maneuver warfare operations fully employing precision fire, highly mobile indirect fire systems, and vehicles that will be internally transportable in future helicopters and tilt-rotor aircraft. In addition, the Lab is also responsive to our operating forces near term capability needs, such as operations on urban terrain.

Asymmetrical Warfare.
Most adversaries will no longer try to match U.S. strengths; they will attack our forces in unconventional, unexpected and innovative ways. The Lab attempts to find and refine methods to counteract the constantly evolving threat to U.S. forces and interests.

Reconnaissance, Surveillance and Target Acquisition.
Emerging sensor, optics and communications technologies promise to revolutionize traditional reconnaissance and tactical information collection processes. Such technologies specifically include mobile unmanned sensors controlled at the small-unit level. Emerging technologies integrated into a relevant system to improve tactical situational awareness in the battlespace will be key enablers of highly mobile, ground combat forces employing the array of precision weapons available to future joint forces.

Command and Control and Information.
Bridging the digital divide between the command element and the infantryman on the ground is a principle goal of the Lab. The objective of the C2/IT functional area is to exploit emerging information technologies at the tactical level to achieve transformational effects and enable true over the horizon, on the move, ship to objective maneuver.

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