

MANSCEN Capability Development and Integration Directorate: *A Force of Change*

By Mr. Vernon L. Lowrey

In October 2005, General William S. Wallace, then Commanding General of the United States Army Training and Doctrine Command (TRADOC), directed an assessment to identify and implement actions to adapt processes, relationships, and organizations to the realities of a dynamic joint operating environment. Through this effort, General Wallace approved several Center of Excellence (CoE) models that restructure TRADOC centers and schools to leverage Base Realignment and Closure Commission decisions; posture TRADOC to be more effective and to support the Army in transition; and execute doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) integration of the future force. Each CoE is to have a Capability Development and Integration Directorate (CDID) to lead the capability development process. The current TRADOC CoEs are—

- Maneuver Support—Fort Leonard Wood, Missouri
- Sustainment—Fort Lee, Virginia
- Maneuver—Fort Benning, Georgia
- Fires—Fort Sill, Oklahoma
- Signal—Fort Gordon, Georgia
- Aviation—Fort Rucker, Alabama
- Intelligence—Fort Huachuca, Arizona
- Basic Combat Training—Fort Jackson, South Carolina

TRADOC is beginning to develop a new CoE for Future Combat System capability development and training integration at Fort Bliss, Texas. The Combined Arms Center at Fort Leavenworth, Kansas, recently formed a CDID from the existing Combined Arms Center Battle Command Office.

The Maneuver Support CoE is now at full operating capability. The remainder of this article will focus on the Maneuver Support Center (MANSCEN) CDID.

MANSCEN CDID Mission

The CDID develops maneuver support-related concepts and determines maneuver support, chemical, engineer, and military police organization and materiel requirements through capabilities-based assessments and experiments to define DOTMLPF-integrated combined arms capabilities to assure the mobility, freedom of action, and protection of Army forces.

The MANSCEN CDID consists of a headquarters cell and the following subordinate elements:

- Concept Development Division (CDD)
- Requirements Determination Division (RDD)
- Rapid Transition Division (RTD)
- Maneuver Support Battle Lab (MSBL)
- TRADOC Capability Manager (TCM)—Geospatial
- Explosive Ordnance Disposal (EOD) Fusion Division

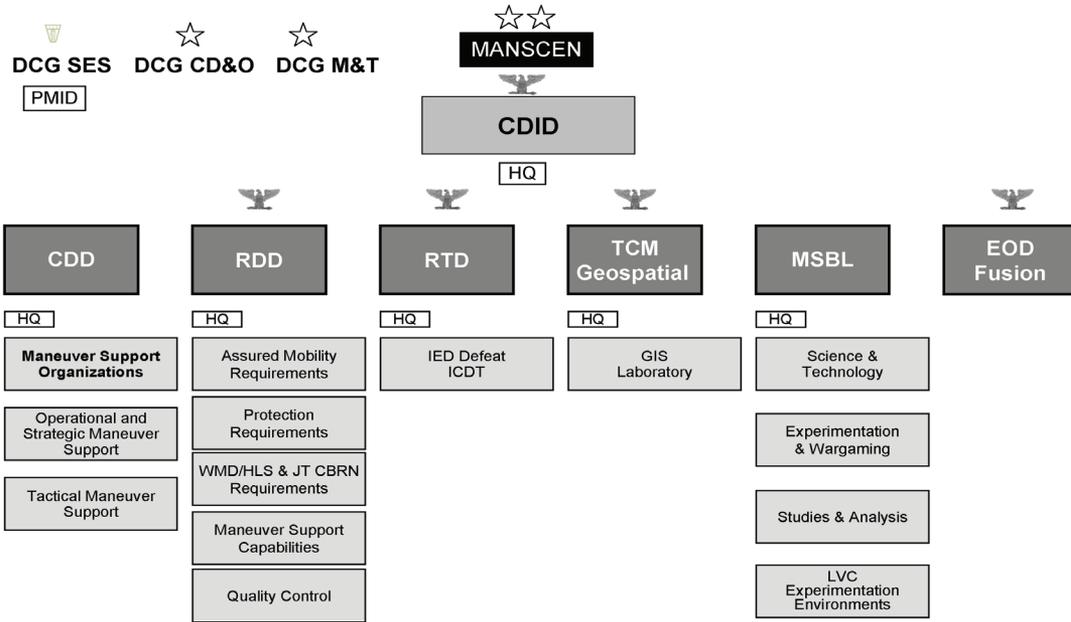
The CDID normally operates using a matrix management approach to gather necessary competencies or by forming teams to solve problems or undertake tasks.

Oversight of the CDID headquarters is accomplished through the MANSCEN governance and capability development prioritization process by deputy commanding generals (DCGs) focused on various aspects of CDID operations to ensure full DOTMLPF integration across MANSCEN, as shown in Figure 1, page 19. Each DCG sits on the MANSCEN executive board of directors with the MANSCEN commanding general. The DCG for MANSCEN is a Senior Executive Service (SES) civilian responsible for day-to-day operations of the CDID. The DCG for Concepts, Doctrine, and Organization (CD&O) is responsible for oversight across MANSCEN for each of these areas. Concepts and organization are primarily the work of the CDID CDD, while doctrine efforts are worked by the MANSCEN Directorate of Training. Currently, the commandant of the United States Army Engineer School also serves as the DCG for CD&O; the commandant of the United States Army Chemical, Biological, Radiological, and Nuclear School also serves as the DCG for Materiel and Technology (M&T).

CDID Headquarters

The CDID headquarters is responsible for vertical and horizontal integration and synchronization within the CDID; MANSCEN organizations; TRADOC Army Capabilities Integration Center (ARCIC); other TRADOC CDIDs; Headquarters, Department of the Army (HQDA); joint services; and external organizations for its core functions. The CDID complies with the Joint Capabilities Integration and Development System (JCIDS) as shown in Figure 2, page 19, going from national security strategies through conceptual, experimental, and science and technology (S&T) efforts to develop DOTMLPF solutions using detailed analysis.

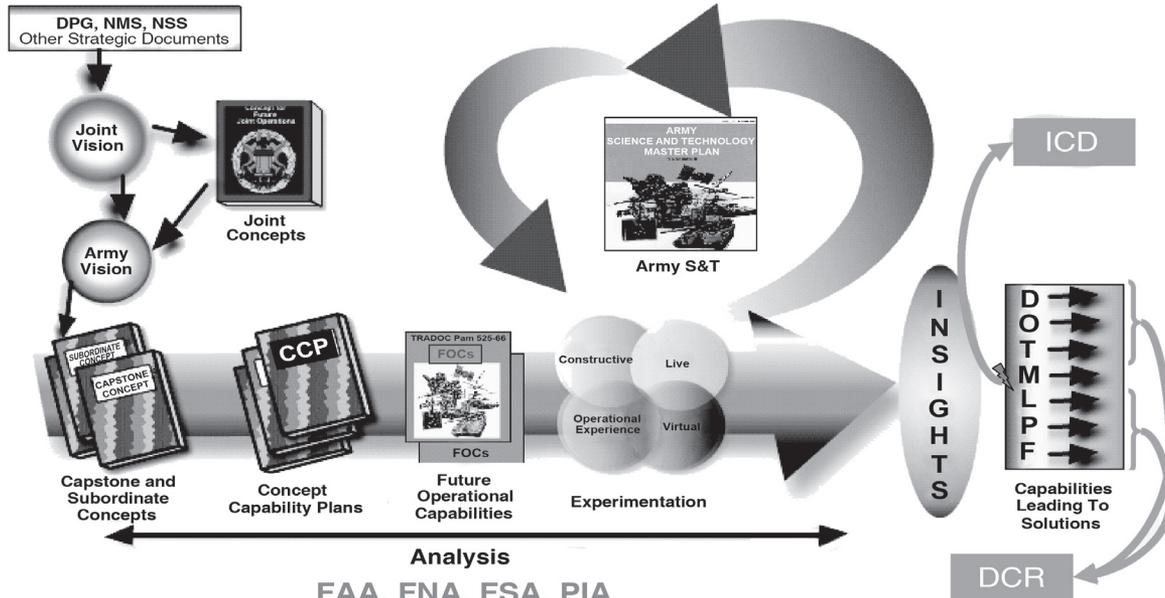
MANSCEN CDID Organization



Legend:
 GIS – geospatial information system
 HLS – homeland security
 HQ – headquarters
 ICDT – integrated capabilities development team
 JT – joint test
 LVC – live virtual constructive
 PMID – Program Management and Integration Directorate

Figure 1

JCIDS Process



Legend:
 DCR – DOTMLPF change recommendation
 DPG – defense planning guidance
 FAA – functional area analysis
 FNA – functional needs analysis
 FSA – functional solution analysis
 ICD – initial capabilities document
 NSS – National Security Strategy
 NMS – National Military Strategy
 PIA – post independent analysis

Figure 2

These JCIDS efforts normally take several months to years, with acceleration being possible when required.

Concept Development Division

The CDD leads the development of concepts that provide the context for assessment and analysis within the JCIDS process. These concepts illustrate how current and future forces will operate; describe the capabilities required to carry out a range of military operations against adversaries in the expected joint operational environment; and demonstrate how a commander, using military art and science, might employ these capabilities to achieve desired effects and objectives. The CDD Operational Maneuver Support Concepts Branch and Tactical Maneuver Support Concepts Branch perform these functions. The CDD also leads the development of organizational requirements and solutions through the Maneuver Support Organizations Branch. These organizational efforts include development of maneuver support and proponent tables of organization and equipment (TOEs), basis of issue plans, force design updates, and support to the Total Army analysis processes.

Requirements Determination Division

The RDD serves as the joint chemical, biological, radiological, and nuclear (CBRN) and Army's warfighter representative for all maneuver support, assured mobility, combating weapons of mass destruction (CWMD), and protection material requirements in order to ensure mobility, freedom of action, and protection of the supported force. The RDD is the largest division in the CDID, with the following branches:

- Assured Mobility
- Protection
- Joint CBRN and WMD
- Maneuver Support
- Quality Control

The RDD performs key roles in the JCIDS materiel acquisition documentation coming out of initial capabilities documents (ICDs) developed through capability needs analysis, primarily in the development of capability development and capability production documents. RDD also develops systems training plans for each materiel solution. The Assured Mobility Branch focuses primarily on engineer-related equipment. The Protection Branch works primarily with military police and other fixed-site protection materiel developments. The Joint CBRN and WMD Branch works joint materiel requirements for all services as the Army lead through the Joint Requirements Office for CBRN Defense at the Pentagon. (Not shown in the figure is a joint CBRN threat office attached to RDD from the Joint Requirements Office.) The Maneuver Support Branch works with materiel requirements that cross all MANSCEN proponents, such as battle command, military working dogs, Future Combat Systems, Soldier as a System, and hazard marking. The Quality Control Branch serves as a single point of contact for all JCIDS documentation efforts with TRADOC, HQDA, and the joint staff and monitors the processing and

quality of all JCIDS documents initiated by, or provided to, MANSCEN for review and action.

Rapid Transition Division

The RTD leads MANSCEN's efforts to rapidly identify, develop, integrate, and provide maneuver support forces with DOTMLPF solutions to fill or mitigate capability shortfalls in the functional areas of improvised explosive device (IED) defeat, asymmetric warfare, protection, and CBRN defense. The RTD oversees the IED defeat integrated concept development team (ICDT) for TRADOC and HQDA. RTD also monitors current Army and joint operational need statements from operational theaters and determines if newly procured capabilities are enduring and need to be rapidly acquired through the rapid acquisition process as shown in Figure 3, page 21. RTD is the MANSCEN entry point for the Army's Capabilities Development for Rapid Transition program and accelerated capability developments.

Maneuver Support Battle Lab

The MSBL conducts experimentation and analysis that support capability developments and influence science and technology to help ensure the mobility, protection, and freedom of action of Army and joint forces.

- The Experiment and Wargaming Branch serves as the focal point with ARCIC and other proponents for primarily virtual and constructive experimentation. In fiscal year 2009, MSBL will conduct two directed major experiments for ARCIC in protection strategy and CWMD, including an examination of the 20th Support Command as a potential Joint Task Force-Elimination headquarters.
- The Studies and Analysis Branch provides the analytic expertise underpinning of MSBL experimentation and other requested study efforts by working closely with the TRADOC Analysis Command.
- The Live, Virtual, Constructive Environment Branch supports MSBL experimentation and studies with facilities, software, and hardware. This branch oversees a live experimentation facility on Fort Leonard Wood and the state-of-the-art MANSCEN Digital Experimentation Center, which is connected with all other TRADOC battle labs and simulation centers through the secure Battle Lab Constructive Simulation Environment.
- The Science and Technology Branch is the focal point for S&T developments with ARCIC, Army, joint, and interagency laboratories. The CDID has several attached laboratory liaison officers and staff to assist with S&T coordination, including the Army Research Laboratory (ARL), Armaments Research and Development Center, Night Vision and Electronic Sensors Directorate, Engineer Research and Development Center, and Natick Soldier Center/Edgewood Chemical and Biological Center. The MSBL shares S&T developments with capability developers, program managers, industry, and government labs. As part of reach-out-to-industry, MSBL works in coordination with ARL and

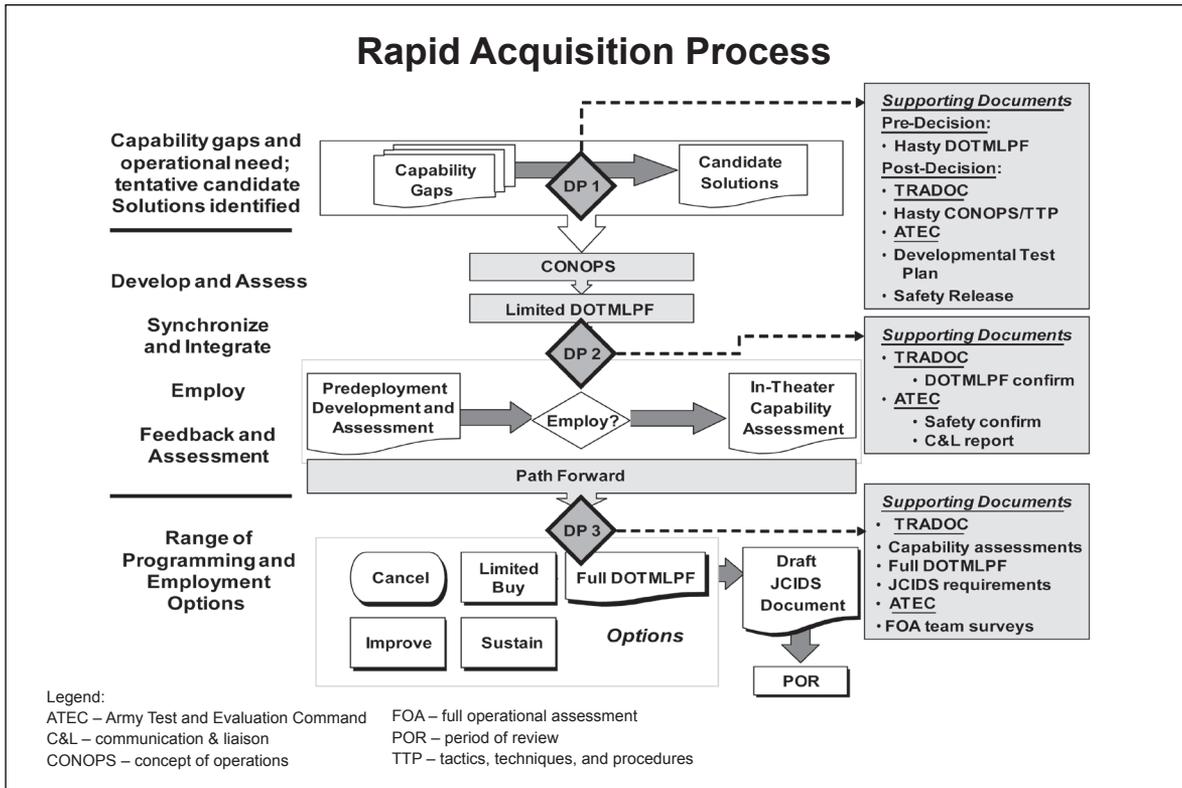


Figure 3

the newly created Leonard Wood Institute (LWI). LWI hosted a very successful MANSCEN S&T conference with industry and academic partners at Fort Leonard Wood. The S&T Branch also oversees prototype experimentation and demonstrations, getting early user feedback on potential solutions for our military forces.

TRADOC Capability Manager–Geospatial

As the TRADOC geospatial capability manager, TCM-Geospatial integrates all Army geospatial information and services capabilities to provide an interoperable geospatial enterprise supporting battle command, including operations, intelligence, mission rehearsal, and training. TCM-Geospatial tests, evaluates, and develops processes necessary to integrate the theater geospatial database and common map background for battle command.

Explosive Ordnance Disposal Fusion Division

The EOD Fusion Division oversees collaborative capability development efforts between MANSCEN and the larger EOD community, including developments in tactical and technical site exploitation; engineer explosive ordnance clearance agents; and chemical, biological, radiological, nuclear, and high-explosive (CBRNE) developments.

MANSCEN CDID Standup Observations

The MANSCEN CDID has been fully operational since September 2007. The following observations from the first year of operations have been passed along to other CoEs for consideration:

- Keep all stakeholders continuously engaged with CDID efforts.
- Recommend adding a CDID structure for current operations and accelerated capability development support.
- Consider using a CoE governance process to prioritize the CDID workload, including walk-in work.
- Use CoE commandants as DCGs to oversee functional capability as more and more support is required in classified venues.
- Establish a standard capability development resource model that helps in maintaining/gaining CDID personnel authorizations and other resources through program objective memorandum processes.

For more information about the MANSCEN CDID, call (573) 563-4082 (DSN 676-4082).



Mr. Lowrey is the deputy director of the MANSCEN CDID. His previous assignments include technical director of the MANSCEN Futures Center, technical director of the Maneuver Support Battle Lab, analysis division chief of the United States Army Engineer School Directorate of Evaluation and Standardization, and concepts officer for the United States Army Engineer School Directorate of Combat Developments. He is a retired engineer colonel from the Missouri Army National Guard.