Marine Corps Rapid Capabilities Office

What it is and how does it impact the FMF?

by the MCRCO Team

Gen Robert Neller, former Commandant of the Marine Corps, directed the formation of the Marine Corps Rapid Capabilities Office (MCRCO) in October 2016 to accelerate the identification, development, and assessment of emergent and disruptive technologies. Within the year, on 20 August 2017, the Deputy Commandant for Combat Development & Integration (DC CD&I) approved the MCRCO Charter, effectively establishing the organization. Since that time, the MCRCO has been able to build an initial organizational capability while successfully assessing and supporting the transition of several technologies from idea or commercial product to a Service requirement solution and eventual Service acquisition efforts.

The DOD has long had capable acquisition processes, to include methods to address urgent operational needs; however, there has been a growing recognition in recent years that these systems are often overly bureaucratic and slow to keep pace with the rapid technological advancements that are driving today's commercial sector. This shortfall has become even more pronounced as the Department has addressed concerns of future near-peer competitors in the *National Defense Strategy* and in Service documents, such as the *38th Commandant's Planning Guidance,* (Washington, DC: HQMC, July 2019). The need to meet these challenges with innovative and timely capability development has led the Department, as well as each of the Services, to search for ways to get advanced capabilities into the hands of the warfighter at ever increasing speeds. Gen Neller's 2016 directive to create the MCRCO serves as the Marine Corps' means for meeting this need.

The MCRCO was purposely placed inside of the Marine Corps Warfighting Laboratory (MCWL) where it is able to directly associate with the forward-looking divisions of the lab (Concepts and Plans, Wargaming, Experiments, and Science & Technology) and its research and development partners (such as the Office of Naval Research) while providing relevant coordination with and information to the Capabilities Development Directorate (CDD) and Marine Corps Systems Command (MCSC). This forward leaning positioning allows the MCRCO to look for up-and-coming technologies that can have a disruptive and emergent impact on the Fleet Marine Force. The MCRCO then works to quickly assess the capability in conjunction with requirements and acquisition stakeholders to transition the capability much faster than through the "standard" Joint Capabilities Integration and Development System (JCIDS) processes.

In addition to the MCRCO's positioning, another unique aspect of the organization is its manning. The office is comprised of a hybrid manpower solution which consists of MCWL, MCSC, and Naval Warfare Center (NWC) personnel who are either organic or assigned to MCWL. This diverse structure allows the office to maintain an acquisitional mindset and understanding of what is required at the end of a project for successful capability transition to MCSC while simultaneously pushing the operational and development efforts associated with the Lab.

Working from the flexibility of this organizational location and structure, the MCRCO pulls together stakeholders from across Quantico's requirements development and acquisition organizations and establishes integrated product teams (IPTs) to determine projects for the future and work on individual projects during operational assessment planning, execution, and reporting. This standardized IPT effort is one of the key strengths of the MCRCO process because it ensures buy-in and understanding from the developers at MCWL, the requirements developers at Capabilities Development Directorate, and the acquisition officers at MCSC. Another procedural strength of the MCRCO is its ability to use statutory authorities that allow for the purchase (or lease) of equipment as prototypes to conduct operational assessments that can be completed quickly and result in a recommendation toward the technology's military utility. A third key strength of the MCRCO process is its short project approval chain of command through a standing General Officers Board of Directors (GOBoD) serving as the authorizing agency for project progression and prototype procurement. The GOBoD mitigates risk and expedites decision making which enables rapid actions with less overhead. The GOBoD is chaired by the DC CD&I and is staffed by the Commander, Training and Education Command (TECOM); Commander, MCWL; Commander, MCSC; and the Director, CDD. While there is a standing, quarterly GOBoD to discuss MCRCO operations, approve projects, and determine paths forward, the ability also exists for the GOBoD

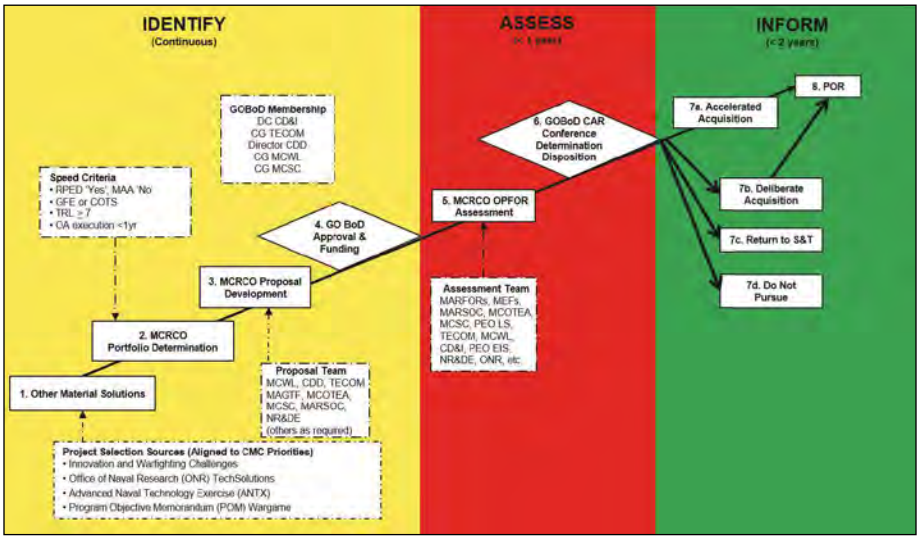

Figure 1. MCRCO governance process. *(Figure provided by author.)*

to meet electronically to review and approve projects or assessment reports in the most expeditious manner.

The ultimate goal of the processes and governance of the MCRCO is to bridge the proverbial JCIDS "valley of death" from capability R&D to a program of record, which typically spans 6–22 years. The MCRCO process is designed to develop ideas, make project proposals, purchase or lease the prototype of a capability with a Technology Readiness Level of 7 or above, spend no more than 365 days to assess the capability (once approved by the GOBoD), and then make recommendations that the GOBoD will refine or approve. Ideally, this effort results in a transition of the technology's information to CDD requirement officers and to MCSC program managers for initial operational capability fielding in less than two years. This abbreviated process requires extensive and constant coordination across all stakeholders through a seven-step series of events (see Figure 1) which allows the MCRCO to compress and consecutively complete actions that are normally sequential in the standard JCIDS process.

Step 1 of the MCRCO Governance Process identifies broad, conceptual focus areas two years prior to the execution or assessment of a project. This step is vital for projecting future years defense program fiscal requirements to HQMC (CD&I and Programs & Resources) in the planning, programming, budgeting, and execution processes. Focus Areas are established through stakeholder IPT analysis of key strategic references, such as the *Commandant's Planning Guidance* and the *National Defense Strategy*. Since the MCRCO's establishment through 2021 planning, the office has developed fifteen focus areas to seek emergent technologies with disruptive impact for the FMF (see Table 1).

Step 2 of the process occurs one year prior to project execution and narrows the focus areas into refined portfolios of possible up-and-coming technologies. These portfolios are further refined during Step 3 to provide specific project proposals to the GOBoD by March of every year. Step 3 sees the stakeholder IPTs working closely to ensure all are on-board with project proposals, holding initial discussions with vendors to determine technology feasibility and projected costs, and developing several options for the GOBoD to choose from. Project proposals are presented to the GOBoD in Step 4 for their review, refinement, and approval. As the projects are approved, Step 5 commences with prototype contracting actions and assessment planning; actual assessments typically begin with the new fiscal year. At this point it is important to note that this deliberate series of planning actions (Steps 1-3) is a "standard" development of projects; however, the MCRCO's process is flexible enough to allow emergent projects to be injected at Step 3 at any point in the fiscal year. MCRCO projects are shown in Table 2.

Prototypes are acquired, operational assessments are executed, and results are presented in the capabilities assessment

FY	Focus Area Title
FY 17	**Unmanned Logistics Transport Platform**
	Sea-Based Expeditionary Fires
	Common Laser Weapon Systems
FY 18	**Tactical Electromagnetic Spectrum Operations**
	Autonomous Unmanned Swarming
	Long Range Precision Fires
FY 19	**Urban Engagement Systems**
	Autonomy / Artificial Intelligence
	Integrated Tactical Information Warfare
FY 20	**Organic Resource Generation**
	Human Performance Augmentation
	Fight the Naval Force Forward
FY 21	**Non-Satellite Terrestrial Communications**
	Localized Micro-Aerial Superiority
	ONE CLASSIFIED FOCUS AREA

Table 1. MCRCO approved focus areas.

FY	Project Title	Transition / Status
FY 17	Tactical Decision Kit (TDK)	Transitioned to TECOM Capabilities Division and MCSC, Program Manager, Training Systems
	Autonomous Hydrographic Coastal Survey	Transitioned to CDD, Fires and Maneuvers Integration Division and MCSC Program Manager, Infantry Combat Equipment
	Unmanned Logistics Transport Platform	Transitioned to Logistics Integration Division and NAVAIR Program Manager (PMA263) Navy & MCSC Small Tactical Unmanned Aircraft Systems
FY 18	Enhanced Maintenance Operations	Results of the project assisted in the development of future requirements with TECOM Studies & Analysis, CDD Logistics Integration Division, and MCSC Program Manager Supply Maintenance Systems
	Tactical Electro-Magnetic Spectrum Operations and Support (TEMSOS)	Transitioning radio capability data to MCSC PM Communications Systems into an existing POR for Deliberate Acquisition and transitioning Electronic Warfare (EW), ISR, Mesh Networking and Own Force Monitoring modules to MCWL S&T for further development and testing.
	Organic Precision Fires (OPF)	Project on-going
FY 19	Littoral Explosive Ordinance Neutralization (LEON)	Transitioned to CDD Force Protection Integration Division and MCSC PM Engineer Systems.
	Common Ground Platform (CGP)	Project on-going
	Secure Wireless Expeditionary Command, Control and Communications (SWEC3)	Project on-going
	Persistent Communications	Project on-going
	Total Force Translation (TFT)	Project on-going/near completion
	Sensor Exploration for Adversary Forces (SEAF)	Project on-going/near completion
FY 20	Color Vision at Night	Project beginning
	Biometric Sensors	Project beginning
	Small Unit Power Management	Project beginning
	PuckBoard Aviation Schedule System	Project beginning

Table 2. MCRCO approved projects.

report (CAR) during Step 5. This step comprises the majority of the MCRCO process as the capability is assessed in coordination with Fleet Marines, or other appropriate subject matter experts, and is not intended to last any longer than 365 days. At the end of Step 5, the cross-organizational project IPT reports findings of the technology's military utility with the CAR. Step 6 consists of a CAR conference presentation to the GOBoD that is focused on the findings and recommendations of the IPT. The recommendations emphasize how the collected information and technology will be transitioned to the requirements developers at CDD and what the follow-on acquisition strategy at MCSC looks like. If the IPT determines that the capability is not ready for moving forward to acquisition, other viable recommendations could be to send it back to the S&T Division of MCWL for continued R&D or to not pursue the technology any further; all of these options provide vital data points that still help the overall knowledge of the acquisitions and R&D communities. The GOBoD's decision to accept or change the IPT's recommendations allows the Step 7 transition to close out the project with the MCRCO.

In the end, the MCRCO and its processes provide an opportunity for capabilities integration officers at CDD, acquisition officers at MCSC, or other stakeholders to introduce capabilities for rapid assessment and transitioning to the fleet. On the other hand, the MCRCO provides an opportunity for high readiness-level capabilities to be quickly assessed and introduced to the requirements and acquisitions communities outside of the normal channels. This second means of MCRCO technology assessment is especially vital for consideration of all Marines, from the lance corporal with an innovative idea to a battalion commander with a full staff's worth of creativity. There is a lot of potential already out there; we just need to tap into it.

Any questions, recommendations, or high technology readiness level capability proposals can be sent to MCWLWebMaster@usmc.mil (MCRCO in the subject line).