

# Innovation Information War

The known dimensions of conflict

by The Ellis Group

**T**he *Marine Corps Operating Concept* calls for a

21st Century MAGTF [that] conducts maneuver warfare in the physical and cognitive dimensions of conflict ... through a combined arms approach that embraces information warfare as indispensable for achieving complementary effects across five domains—air, land, sea, space, and cyberspace.<sup>1</sup>

This is an end point: a Marine Corps that employs the means necessary to win on the modern battlefield. What the concept does not do is provide a roadmap. It is, in and of itself, a mission-type order. The Commandant has given the Marine Corps a mission and has left it up to Marines to devise how the mission will be achieved. Nowhere is this more obvious than when it comes to information warfare. While it may not be new, information warfare is newly important. Marine Corps forces must begin to reflect that new importance. To cross the gap between the goals of the *MOC* and the Marine Corps as it is today, the Marine Corps must adapt and innovate.

The Marine Corps prides itself on its ability to adapt and overcome, but it has not always been an innovative organization. New equipment, ideas, and tactics have usually been implemented in response to specific challenges. At times, however, the Marine Corps has truly innovated. The development of vertical envelopment and the use of helicopters is one example where the Corps developed and embraced true “leap ahead” ideas. The difference between adaptation and innovation is key. Adaptation is reactive. Innovation is proactive. To maintain its relevance and its fighting ability, the Marine Corps must do both.



**The Marine Corps must adapt and innovate as it incorporates the newly important aspect of information warfare.** (Photo by LCpl Timothy Shoemaker.)

## Adapting to the Information Environment

Integrating information warfare into combined arms requires an organization to employ information-related capabilities, just as the GCE and the ACE employ ground- and air-related capabilities respectively. Adaptations in ground and air combat already occur because there is an overarching structure interested in improving those operations. Information warfare has lacked that overarching structure.

An adaption approach for information warfare is made possible by the creation of MEF information groups (MIGs). The creation of MIGs consolidates information warfare functions, capabilities, and personnel under a single organization at each MEF. While this will serve to provide better direction for

those capabilities in stride, the concepts, doctrine, and tactics will need to be developed by those Marines involved as MIGs begin to function and operate. Adaptations will have to emerge over time as the MIGs identify best practices, authorities, and processes for the employment of their capabilities.

Simultaneously, Marines not assigned to the MIGs will have to adapt to the new organization. Whereas ground or air units used to work with specific information-related units, they will now be able to direct requests for support to the MIG. Thus tactics, techniques, and procedures across the entire MAGTF will have to adapt. Many commanders and staffs view information warfare as an afterthought or an add-on to more familiar and traditional means. To adapt effectively, information warfare

will have to be truly integrated into planning and operations. Training and education in information warfare can address this issue.

### Innovating for the Information Environment

The Marine Corps reconnaissance community has a long and storied history in the Marine Corps which continues today. However, it has become increasingly obvious that the nature of reconnaissance and counter-reconnaissance will necessarily change due to proliferating unmanned intelligence, surveillance, and reconnaissance platforms, satellite imagery, and electromagnetic sensing capabilities. Marine recon units can no longer depend solely on visual means to ascertain enemy positions and actions. Simultaneously, the information revolution means that reconnaissance (gaining information about the operating environment) and counter-reconnaissance (denying information to the enemy) will become more important than ever before, and winning that competition is integral to Marine Corps operations.

Since there is already a pre-existing reconnaissance capacity, what is needed is an innovative concept to give new direction to that community. The Marine Corps is currently working on a new reconnaissance/counter-reconnaissance concept to do just that. While reconnaissance is not information warfare, information-related capabilities offer both threats and opportunities for recon units. A conceptual solution for integrating and exploiting those capabilities is needed to better support information warfare efforts and the MAGTF mission.

Once the concept is finalized and finished, reconnaissance Marines will have to devise the best and most efficient way to execute the concept on the battlefield. That will require adaptations triggered by the adoption of the new concept.

### Institutional Innovation and Adaptation

As should be clear from the above example, innovation and adaptation, while different, are nevertheless interrelated.

Indeed, the proactive development of a recon/counter-recon concept has an emergent, adaptive quality to it, as the effort grew out of communication between leaders in the recon community and the Marine Corps Warfighting Lab.

That this innovation did not occur according to a set process is a function of the fact that there is no set process. Various Marine Corps units in the Supporting Establishment perform various functions such as long-term (futures) planning, operational analysis, wargame analysis, exercise analysis, and experimentation, development, and procurement. These entities are organized along functional lines just as the Operating Forces are organized. Functional orga-

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nization, however, is usually hierarchical, and hierarchical organizations are great at control. It's why our Operating Forces are organized along hierarchical lines. According to organizational theory, however, hierarchical organizations are bad at innovation. Innovative institutions are organized like networks. That's why Silicon Valley companies are better at innovation than government ones. In order to drive innovation at the institutional level, the Marine Corps needs to release innovation from traditional hierarchical processes.

The Marine Corps Warfighting Lab is already taking steps to drive innovation forward through the extensive use of wargaming and increased willingness to look farther afield for new ideas and capabilities. The Lab has set up a web-based innovation portal to harness ideas from across the Marine Corps and instituted the NCO Fellowship to ensure that the views of the enlisted

Marines are heard. Last year, the Lab hosted an Advanced Naval Technology Exercise (ANTX) at Camp Pendleton to bring together commercial, industry, and military leaders to demonstrate cutting-edge technological solutions for amphibious and expeditionary operations. This year, the Lab will host another ANTX focused on urban warfare. These efforts are necessarily messy and chaotic, but it is through such different approaches that true innovation can be achieved. In this way, we apply the maneuver warfare philosophy of boldness and aggression to our innovation and adaptation processes just as we would on the battlefield.

### Conclusion

While the Marine Corps has always been able to adapt and overcome, it has less often turned to true innovation to keep its cutting edge. Fortunately, its smaller size in comparison to other Services is actually a strength: both adaptation and innovation can occur faster given the smaller number of Marine Corps personnel.

Thus the Marine Corps has an opportunity, even as every military organization foreign and friendly is forced to adapt to the information environment, to seek true innovation to remain ahead of other organizations. As mentioned above, the Corps should not leave its traditions of adaptation behind; it has been and will continue to be a source of strength. However, as technological innovations and progress occur seemingly continuously—and even appear to be accelerating—in the civilian sector, the Marine Corps will have to match its ability to adapt with an ability to innovate.

### Notes

1. Headquarters Marine Corps, *Marine Corps Operating Concept: How an Expeditionary Force Operates in the 21st Century*, (Washington, DC: 2016).

