

Is the Marine Corps Ready to Become an Exponential Organization?

Finding the way

by the Staff, Marine Corps Warfighting Laboratory



During the MCWL's Innovation Symposium, Marines and civilians received awards for the "top" ideas. (Photo by Matt Lyman, PAO contractor for MCWL.)

"The future is here. It's just not evenly distributed."

—William Gibson¹

The Marine Corps Warfighting Laboratory hosted the second Commandant of the Marine Corps Innovation Symposium in Quantico, VA, from 31 May to 1 June 2017. The theme of the Symposium was "Transforming

the Organization," and the purpose of the Symposium was to explore Big "L" Learning (i.e., organizational-level transformation). The Symposium focused on how the Marine Corps, as an exponential organization, could improve and apply better discipline into the Marine Corps combat development process.

Over 150 attendees (officers, enlisted, and civilians, to include representatives from industry) came to the symposium, hearing Mr. Nick Davis and Mr. Peter Wicher from Singularity University and Dr. James Canton, CEO Institute for

Global Futures, give presentations on the concept of an ExO (exponential organization). An ExO uses technology and exponential transformation principles to greatly enhance an organization's effectiveness. Additionally, the Symposium provided the opportunity for attendees to collaborate, through facilitated working groups, with subject matter experts and to propose innovative solutions to enhance the Marine Corps' combat development process and its ability to recognize and address future warfighting challenges.



The CMC during the reading of an award presentation. (Photo by Matt Lyman, PAO contractor for MCWL.)

Innovation has reached a glorified position—almost a strategic necessity—but it is hard to define. It means different things to different people. Innovation exists along a continuum, from material improvements to existing products or processes all the way to the rare disruptive innovation. Innovative thinking, like critical thinking, does not come naturally to most people. That is one reason innovation is so hard. Yale University Information Technology Services defines innovation as the process of implementing new ideas to create value for an organization. This may mean creating a new service, system, or process, or enhancing existing ones. Innovation can also take the form of discontinuing an inefficient or out-of-date service, system, or process.² This definition seems to fit perfectly with our goal of improving the combat development process.

The purpose of this article is to describe the results of the Symposium and discuss how the Marine Corps can embrace the concept of an ExO construct and leverage the potential for the Marine Corps to begin the required organizational transformation.

An effective ExO has an impact (or output) that is non-linear and disproportionately larger than that of its competitors because of the use of new organizational techniques that leverage accelerating technologies. The creation of an ExO requires the development of a

strategic plan that maps the future and reflects how the organization will be different accordingly, determines how its leaders will be trained accordingly, and then outlines how to go about building or changing the organization to fit future needs.

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defined as institutional actions taken to permanently change the warfighting capabilities of the Marine Corps through changes in DOTMLPF (doctrine, organization, training, material, leadership and education, personnel, facilities) with consideration to costs. Force development focuses on identifiable capabilities to be realized in the mid-term (3 to 5 years) and long-term (6 to 30 years).³ The nature of the current combat development process is linear and begs the question: how

fast can the process respond to non-linear technology development? Simply restated, can it be changed to leverage the coming exponential technology explosion?

The Symposium's five working group out briefs highlighted issues of consensus directly affecting the Marine Corps that must be considered if we are to become an ExO. The research questions provided to the attendees and a summary of many recommendations is provided below.

Research Question One: What would the Marine Corps look like as an ExO? What is required to enable this?

Innovation processes. If the Marine Corps expects to capitalize on coming innovation, the application of innovation must be incentivized. Evaluation criteria must be provided to identify innovative ideas among our Marines. Such efforts should be included as a future fitness report performance category. MOS advocates should develop new career and/or MOS road maps. Today, if a Marine veers from the typical path of operational tours and commands, he may be “rewarded” by failing selection for promotion or not successfully screening for command or resident PME. Personal strengths and sacrifices that benefit the organization must be recognized and rewarded. Those who take the less travelled road, if it contributes to the success of the Marine Corps, must be recognized. This will require development of measures of competence beyond fitness reports and potentially require a 360-degree evaluation rather than the current performance evaluation process.

Push innovation authority, wherever possible, down to the unit: battalions, squadrons, and perhaps lower levels. Consider initially giving only select units additional authority to innovate in certain areas. Such units could function as “incubators” for new ideas that can be tested and later shared with higher headquarters and the Marine Corps at large. Some examples include providing certain units with information technology, innovation authority, 3D printing, or robotic and autonomous systems capabilities,

or establishing base “hobby shops” for similar capabilities so that Marines who have an interest in new technologies can informally acquire the knowledge, skills, and abilities to work with and employ these technologies.

Research and development. With recent statute changes, the Marine Corps should ensure more funding is allocated to research, development, and rapid prototyping. We must continually monitor developments in the commercial world and, where appropriate, accelerate the process of acquiring COTS (commercial off-the-shelf) and experimenting with evolving technology and equipment.

The big data dilemma. Many potential capabilities will come from developments in the commercial sector. If the Marine Corps is able to utilize data so produced, then metrics can be used to support decisions and facilitate the incorporation of knowledge gained into evaluations of the operating environment and planning processes.

Standing opposing forces. Budget a rapidly-configurable standing opposing force that provides a realistic, thinking enemy perspective. Force-on-force training, with a thinking enemy, has

long been an operational shortcoming. While provision for red forces for wargames is common, we have not taken advantage of the myriad benefits provided by institutionalizing force-on-force training and experimentation.

Outsourcing. The Marine Corps may have to outsource to the commercial sector for certain capabilities, such as cyber, some logistics, transportation, and other capabilities. By activating certain elements within the Marine Corps Reserves or employing new strategies, such as the Bulgarian “minutemen” (a method of pre-identifying subject matter experts and then activating them to execute a specific task or tasks where their expertise is vital to success), the Marine Corps can find potential solutions to ongoing personnel challenges.

Research Question Two: Through the lens of the FDSP (Force Development Strategic Plan) and CBA (Capabilities Based Assessment) process, what does the combat development enterprise look like under the construct of the ExO?

Manpower management system. We must reexamine incentives for acces-

sion, reenlistment, promotion, pay, etc., ensuring the right people are in the right jobs to promote success (the “P” in DOTMLPF). The force may have to be matured as we confront the challenges of new warfighting domains and the increase in complexity and operational tempo required for technologically-advanced operations. We must also reexamine the current up-or-out policy when in many of today’s jobs it is more important to be competent and competitive in one’s specific billet rather than being the well-rounded, operational Marine. Technology may change the concept of “duty in the field” and therefore modify the concept of the 21st century Marine.

Roadshows. Establish an annual CD & I (Combat Development & Integration) roadshow, similar to the Manpower roadshow, to explain the combat development process in a way that everyone can understand and potentially contribute to its success. A possible adjunct could be a MCWL (Marine Corps Warfighting Laboratory)/Futures Directorate innovation roadshow to inform the force of future technology, potential concepts, and planned wargames and experiments. Information sessions



Symposium participants generated feedback to propel the Corp’s innovative capabilities. (Photo by Matt Lyman, PAO contractor for MCWL.)

like these could lead to crowd sourcing ideas that contribute to the knowledge and planning of headquarters entities and improve communications throughout the Marine Corps.

Rather than the annual spending spree that occurs during the last quarter of every fiscal year, establish a process to incentivize units to reallocate excess funds. Do not cut funding from year to year due to an inability to totally commit funds for any given fiscal year. One solution might be to establish a platform for identifying requirements and priorities from units to reallocate funds as needed. This would probably require legislation from Congress.

Chief data officer of the Marine Corps. As the amount of data continually increases along with the tendency to digitize everything, solutions for on-demand data retrieval are needed so that the right information goes to the right individual at the right time. One possible solution might be to retrain MIMMS (Marine Integrated Maintenance Management System) clerks as data collectors and processors.

Decentralized decision making and capabilities development. Decentralization of decisions and capabilities is needed, but on a limited basis. Too often, bureaucracies stifle innovation with one “no” in the chain of approval, which then requires a restart of the entire process. “Middle managers” should be ready to provide recommendations and comments, but final approval authority is with the decision maker. Interest was given to allowing MEF commanders to approve and validate requirements, on a limited basis, and then recommend a solution to be assessed by Headquarters Marine Corps (CD&I and MCWL) for potential funding. This would be similar to the urgent universal needs statement process and might accelerate our current slow acquisition process.

Innovative software development should be encouraged at the lowest level. Often, the users of software are able to improve the performance of provided software, but they are prohibited from using it because of proprietary issues or V&V (verification and validation) requirements. Create a methodology

for more rapidly conducting the V&V process and approving such upgrades for widespread use. As technology creeps toward AI (artificial intelligence), acquire and use AI to enable decision

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makers, whether planning, executing, or reacting, with regard to operations, particularly for combat.

In the *Marine Corps Gazette* February 2017 issue, Capt Joshua Waddell takes Marine Corps leadership to task for what he terms “its self-delusion regarding the organizational energy and innovative agility of our Marines and the depressive stagnation found within the Supporting Establishment.” Many of the issues addressed in his article were topics of discussion at this year’s Symposium. The Symposium created many recommendations that offer potential solutions to some of the Marine Corps’ most pressing future problems. The ability to institute them, however, remains subject to the vagaries of institutions that control our fate and limit our ability to enact these changes. Our challenge, is to act on those recommendations within our purview, regardless of level of authority or rank. Leaders must be prepared to take risks regarding the future course of the Marine Corps.

“Forced with the choice between changing their minds and proving that they don’t have to, everyone gets busy on the latter.”

—John Kenneth Galbraith⁴

If unable or unwilling to act, we face the real possibility of defeat, failure, or elimination as a military institution. In the end, a failure to innovate might be simply a failure of imagination. Rather than try to institutionalize innovation, the best path to success may be simply finding a way to tap into the “innovator.”

In summary, becoming an ExO is not easy. Attendees in their discussion groups quickly realized that exponential innovation is hard!⁵ This is true usually because short-term goals are the priority, there is low tolerance for risk and/or failure, incentives are misaligned, the decision-making process can be slow and consensus driven, there is no clear definition/ownership of innovation (or it is given only lip service), and red tape makes it hard. Neutralizing the “corporate antibodies,”⁶ those nay-sayers who don’t want to seek innovative solutions, is a true leadership challenge. However, through effective communications and continued forums such as the Commandants Innovation Symposium, the Marine Corps can find a way to begin the process of creating an innovative and exponential environment that best serves our future interests.

Notes

1. Mr. Nick Davis, Singularity University presentation, (presentation, Marine Corps Innovation Symposium, Quantico, VA: 31 May–1 June 2017).
2. This information is available at <https://its.yale.edu>.
3. Headquarters Marine Corps, *Marine Corps Order 3900.X, Marine Corps Force Development*, (draft, Washington, DC: 2017).
4. Mr. Peter Wicher, Singularity University presentation, (presentation, Marine Corps Innovation Symposium, Quantico, VA: 31 May–1 June 2017).
5. Mr. Nick Davis.
6. Ibid.

