

Force Design

It's about winning

by LtCol J. Noel Williams (Ret)

Success in battle depends on many things, some of which we will not fully control. However, the state of preparedness of our Marines (physical, psychological, and operational) is in our hands.

—**Gen Alfred M. Gray**¹

In time of peace, the Fleet Marine Force would continue to be a laboratory of ideas on amphibious tactics, technique and material.

—**Gen Archibald A. Vandegrift**²

Overview.

If you cannot describe your vision to someone in five minutes and get their interest, you have more work to do in this phase of a transformation process.

—**John P. Kotter**³

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is a trait more fundamental than that portrayed by any of these mental images: winning in combat. Marines win on the battlefield, and America loves a winner. Marines have always won the battles they fought. It is winning that makes the Marine Corps what it is to the American public today. The U.S. Army has a higher bar—to win wars; however, in our niche, fighting and winning battles, the Marine Corps excels like no other.

The Marine Corps' current *Force Design 2030* project is focused first and foremost on maintaining the winning streak and ensuring we win our future fights. It is about evolving the Corps to ensure it will continue its winning tradition despite a changing world presenting very substantial new threats.

What defines the Marine Corps? Commonly-summoned images are of the individual Marine in immaculate dress Blues or, alternatively, a grunt in grungy utilities with the sweat of exertion bleeding through. Collectively and institutionally, it is perhaps film clips of Tarawa, Iwo Jima, or Okinawa; the chill of Chosen; the jungles, hills, and vails of Vietnam; or the insalubrious sands of Iraq. But there

The *Force Design 2030* objective, in simplest terms, is a better trained and equipped distributed operations capable ground combat force, an ACE with a balanced mix of manned and unmanned systems, and a logistics element capable of sustaining distributed ground and aviation elements. This collective force can do all the missions the current force is designed to perform—and do them better. Adding some specialized capabilities for long-range precision strike to address fixed and mobile targets, a family of loitering munitions, unmanned air, ground, and surface platforms, and a range of electronic warfare and cyber warfare capabilities will not only enable us to perform current missions better but allow us to perform new missions we are not currently designed to perform.

In short, *Force Design 2030* will make us better, both at what we currently do and in several additive missions required by the fleet and the joint force. These missions entail operating effectively against adversaries that are our technological peers. In the context of our priority theater of concern, the Pacific, China can seriously challenge access to our fleet as it is currently configured, so we must assist the Navy in gaining and maintaining theater access. Analogous threats pertain in other theaters as well, including the Indian Ocean, the Middle East, and Europe.

If a town's fire department was unable to get to the fire because a bridge was out, should it sit at the station while Main Street burns, or should it find another way to the fire? The Marine Corps cannot sit back self-satisfied when our fire trucks (amphibs) cannot get to fight. We need to find another way.

Missions

The 2018 National Defense Strategy

The maintenance, equipping, and training of its expeditionary force so that it will be in instant readiness to support the Fleet in time of war I deem to be ... the most important Marine Corps duty in time of peace.

—Gen John A. Lejeune⁴

and subsequent related guidance has directed the Marine Corps to go back to its more traditional role of littoral operations with a focus on the Pacific. For much of the past one hundred years, the Pacific has been the priority of effort for the Corps, with two-thirds of its Fleet Marine Forces permanently stationed in the region. This includes during the past twenty years of wars in the Middle East.

The *National Defense Strategy* and the subsequent *Force Design 2030* have not introduced a new role and missions era, nor have they altered our historical advance base and expeditionary combined arms missions. For example, the advance base mission of early last century was a tactically defensive mission for Marines and was intended to enable offensive operations by capturing key terrain, ensuring logistics support to the fleet, and defending airbases for power projection during World War II. Today's advanced base mission adds an offensive strike capability to these expeditionary forces. Advanced base operations within a mature precision strike complex means our shore-based forces, cued by a combination of our distributed operations capable Marines and remotely piloted aircraft and other sensors in advance of them, can project long-range fires that formerly could only be done by ships or air forces. Long-range precision strike capabilities add new tools to our toolbox that are in

demand by joint force commanders and Congressional leaders. Additionally, unlike the Washington Naval Treaty era (pre-World War II), we have the ability to develop new infrastructure integrated with powerful treaty allies.

Thus, the *Expeditionary Advanced Base Operations* concept represents a traditional mission implemented with new technologies that ensures Marines remain first to fight. This new capability bolsters conventional deterrence by establishing persistent striking power forward.

Expeditionary advanced base (EAB) operations are also critical to winning the competition below the level of conflict by providing critical intelligence, surveillance, and reconnaissance (ISR) for maritime domain awareness and assured C2 to the fleet and joint force. This is a critical mission that is often overshadowed by those judging force design by just looking at charts of program divestments and investments. EAB operations and the associated naval campaign are not about fighting an inevitable war with China, Russia, or Iran. Instead, the concept is about deterring such conflicts while also providing additional ways for the United States to compete globally.

For example, EAB operations can provide ISR and assured communications not just to the Navy but also to the Coast Guard as it supports allied and partner fisheries protection and maritime law enforcement. A second example would be distributed operations capable elements aboard new light amphibious warships in conjunction with unmanned systems operating from EAB's providing video evidence of Chinese aggression against friendly shipping and destruction of the marine habitat. In several of the world's key maritime regions, our competitors have overplayed their hand, and providing pictures to prove bad behavior will be an important component of winning the competition for a free and open economic order that respects sovereignty over a lawless authoritarian model. In many ways, this is no different than the "every Marine a collector" spirit that the Corps embraced over the last two decades.

As Senators Jim Inhofe and Jack Reed, the Chairman and Ranking Member of the Senate Armed Services Committee, have stated regarding their proposed Pacific Deterrence Initiative (PDI):

New land-based, long-range strike capabilities will provide a new source of resilient and survivable U.S. power projection ... with the aim of injecting uncertainty and risk into Beijing's calculus, leaving just one conclusion: 'Not today. You, militarily, cannot win it, so don't even try it.'

Marine Corps force design will be critical to a successful PDI.

As the Senators go on to say:

Investments in theater missile defense, expeditionary airfield and port infrastructure, fuel and munitions storage, and other areas will be key to America's future force posture in the Indo-Pacific. As one example, it doesn't matter how many F-35s the military buys if very few are stationed in the region, their primary bases have little defense against Chinese missiles, they don't have secondary airfields to operate from, they can't access prepositioned stocks of fuel and munitions, or they can't be repaired in theater and get back in the fight when it counts. The Pacific Deterrence Initiative will incentivize increased focus on posture and logistics, and help measure whether these requirements are being matched with resources.

By investing in *Force Design 2030*, the Marine Corps will ensure its budget reflects PDI priorities for expeditionary capabilities vice simply requesting continued funding for traditionally favored platforms that are becoming less relevant and are in diminishing demand.⁵

Threats

The missions discussed above will require U.S. forces to operate within lethal range of adversary weapons. It is a near certainty that our adversaries will know generally where we are located, and it is likely they will often know precisely where we are. Our peer adversaries will have large inventories of long-range precision strike capabilities while our lesser adversaries will possess smaller quantities of similar systems.

In virtually all contested environments where we will operate, we will be vulnerable to attack. This will require us to develop robust organic sensing and military deception capabilities, early warning notification, and stand-off weapons to allow our mobile forces to remain survivable.

The beauty of defending against a long-range precision strike is that it is long range and it is precise. Long-range means an extended time of flight allowing an aware target time to implement countermeasures. Precision means displacement distance to avoid a munition's effects will not be great. While it is unlikely a large ship can move to a protected posture given the nature of the sea domain, it is entirely possible for properly positioned and aware ground-based units or systems to move into protected or complex terrain that affords protection without requiring the unfavorable three or greater defensive shots for every incoming shot required of an active defense. When tied to the efficiency with which ground-based forces can provide persistent presence, EAB operations offer a strong value proposition by placing resilient stand-in forces within the enemy's weapons engagement zone. It provides a survivable extension of the fleet.

Traditional ground combat operations will be influenced in similar fashion by these sensing and strike technologies. Reconnaissance and counter-reconnaissance will be critical. The ratio of indirect to direct fire systems will have to increase and ground formations will more often position for optimum indirect engagement rather than position for traditional direct assault. Our infantry units will need to possess a wider range of sensors and a family of indirect fire means, including loitering munitions of various sizes. Each echelon from squad to division will necessarily possess a limited, but complete, kill chain—with each echelon connected through a federated network architecture, so that sensing and engagement options can be shared amongst all echelons for a fully composable organizational design allowing faster engagement of complex threats. Often, infantry operations will not be

EAB operations oriented, but rather they will conduct other missions both traditional and novel (e.g., operations in the information environment). In fact, such capabilities integrated across the GCE are precisely what 3d Bn, 5th Marines recommended after the Marine Corps Warfighting Laboratory's recent SEA DRAGON experiment series and is consistent with experimentation lessons learned over the past two decades in projects such as Hunter Warrior and Urban Warrior.

It will also require Marines trained and equipped for littoral warfare, enabled by unmanned systems, and networked to employ the advanced weapons systems and firepower the joint force can bring to bear.

—Secretary of Defense Mark Esper⁷

History shows that one of the most prolific causes for failure in overseas expeditions has been the inability or failure of the naval and military commanders concerned to work harmoniously together.

—BGen Eli Cole⁸

Force Design Priorities

Throughout the Marine Corps' history, we have added new missions and shifted focus of effort as required to meet the most pressing security needs of

the Nation. Today is no different. Using excellence in combined arms combat as a foundation, we are expanding our capabilities to support advanced base operations under new technological and treaty alliance conditions. Distributed operations capable formations, with multi-axis indirect fires and organic ISR and C2, connected to adjacent and higher formations through a federated network architecture, will provide a force capable of operating across the spectrum on conflict. Unlike prior advanced base operations, technology allows us to project power at ranges only the afloat Fleet could produce in the past. Rather than protecting coaling stations for the battle force, we will provide advance bases for information—extending sensor and C2 networks in a contested electromagnetic environment to the fleet and the joint force. We will provide fires consisting of long-range cruise missiles and loitering munitions projected from long-range unmanned surface vessels (LRUSV). If allied or partner nation access is available, we will take advantage of terrain to provide survivability for our long-range precision fires. If allied or partner access is not available, we will deploy LRUSVs from surface and potentially subsurface vessels. We will task organize general purpose and specialized capabilities into force packages dictated by the mission. The anti-ship mission is important, but it is still a small percentage of the force. We are focusing attention on it because it is new, joint force commanders are demanding it, and we need to start new programs of record—but this does not mean it is the sole priority.

Personnel. This is the first priority because future distributed operations missions require better trained and more experienced Marines possessing a wider range of technical competencies. These attributes are similar to those required by Special Operations Command, and we will study how Special Operations Command handles talent management. We must keep key personnel such as squad leaders in their billets at the required rank. We will have to change how we recruit, train, and incentivize our Marines, and we will have to ensure that key billets are consistently staffed

with the proper ranks and experience levels.

Navy-Marine Corps Integration. A single naval battle approach is a critical prerequisite for successful littoral operations—interoperability is insufficient. Integration with the Navy and their kill chain will ensure we stay current with command, control, communications, and computers intelligence, surveillance, and reconnaissance technology; engagement tactics, techniques, and procedures; and supporting functions such as the processing, exploitation and dissemination (PED) of sensor data, thus ensuring we remain full players in Joint Force. It makes no sense to allow a seam that could be exploited by an adversary, so when performing anti-ship or anti-submarine offensive operations, we should be part of a single naval kill chain within a single naval battle contributing to the maritime campaign. Just as in World War II when Marines manned gun turrets on cruisers and battleships and flew missions from escort carriers in support of the naval campaign, in the 21st century, Marines will be manning “turrets” ashore, but still connected to “fire control” by an electronic C2 umbilical.

Unmanned systems. Unmanned systems will be critical enablers for every MAGTF element. The MQ-9B and follow-on medium altitude long endurance UAS will provide essential sensing capabilities and a communications gateway to connect our aviation and ground combat elements. They will also provide an air-to-ground strike capability that ground Marines and commanders have been requesting for more than fifteen years. A family of optionally manned and unmanned surface vessels with optional autonomy will help provide sensing, communications, and fires capabilities while unmanned air and ground resupply platforms will enable distributed logistics support. The most important initial investments in unmanned systems will be MQ-9B and LRUSV.

Organizational design New technologies will drive new organizations, and to get them right we will need to do significant force-on-force experimentation. The proposed infantry battalion

design is unlikely to be the final design, but it is an excellent place to start experimentation to see what works and what does not work—and why. Trying to evolve the infantry organizations by experimenting with the current structure has been tried before, and generally encumbers true experimentation and falls short in demonstrating where change makes the impact. The proposed design is not perfect, but the insights we gain for a final design make it invaluable. This same “test article” dynamic applies to the Marine littoral regiment as well.

Further, developing offensive and defensive fires organizations is a high priority. The artillery regiment and subordinate fires organizations must evolve and grow in capacity. For example, the artillery regiment could restructure into a fires group to provide air defense capabilities and employ general support loitering munitions and non-kinetic fires, as well as their traditional cannon and rocket systems. Joint tactical air controllers will become more numerous, with assignment to the platoon level and eventually to the squad level of the infantry battalion to enable employment of non-organic loitering munitions and other fires capabilities from the fires group, the aviation element, and joint force fires.

Posture

It will be important to adjust our force posture, especially in the Pacific. The PRC has developed its strategy and forces to address our current force laydown. Given the threat imposed by long-range missiles, our permanent infrastructure has provided the PRC with fixed targets around which they have developed a substantial arsenal of missiles and long-range bombers.

It would be a great disadvantage to enter into a competition where all of our plays are known in advance. We need to unhinge the PRCs projectile strategy by taking away their preplanned targets. This is ideally suited for the Marine Corps as an expeditionary force that is mobile and sustainable. While it is easier for the Marine Corps to take the targets away, we must still consider thinning out forward stationed organi-

zations. This can be accomplished while increasing engagement with allies and partners in two ways. First, by eliminating legacy systems and formations that no longer provide what joint force commanders and our policymakers require most, while also positioning formations in Alaska and in the continental United States. Second, we could place a robust group of liaison officers within host nation and ally organizations, with a specific focus on enabling the required naval kill chains to enhance conventional deterrence. This will increase actual daily combined interaction while reducing political and infrastructure burdens on our allies and partners while also placing our units where they can train effectively. A peer fight will require much higher levels of training than current challenges and placing units where they can efficiently and effectively train will be essential. Thus, our posture should be purposefully forward echeloned in depth, from continental United States to objective.

Skeptics

Some have questioned whether the Marine Corps will remain a capable crisis response force. The answer is yes. MEUs and other formations will be more capable and responsive because they will be better trained and possess a range of specialized capabilities previously only available to certain special operations forces. *Force Design 2030* reflects a purpose-built force, but it is not about optimizing the force for any single mission. Rather, it is focused on adding capabilities and aggregate utility for future operational environment vastly more challenging than the one we face today. *Force Design 2030* adds mission capabilities, it does not subtract missions.

Among the concerns voiced about whether the Marine Corps can remain appropriately capable, there has been a great deal of commentary about proposed reductions in current and planned aircraft. This is to be expected given that these aircraft are critical components of a properly structured Marine Corps, but the currently planned force has become unbalanced with a disproportionate allocation of investment dol-

lars allocated to aviation. We simply cannot afford the current Aviation Plan and still have adequately capable ground and logistics components. Moreover, even if we could afford the current Aviation Plan, we would still need to make adjustments because the role of manned aviation is changing. Given how we will employ as a stand-in force, our tactical aircraft are no longer survivable given the increasing range and precision of our adversary's missiles and their improved sensing capabilities. Manned attack helicopters are becoming too vulnerable to put pilots at such risk. Fortunately, unmanned systems will more than fill the void created by the proposed changes, and for less money. There is ample evidence from the Israeli Air Force, the U.S. Air Force, and U.S. Army MQ-1C units that remotely piloted aircraft will be an essential component of any successful air element. That said, the Marine Corps will still possess the most capable (albeit expensive) tactical aircraft as well as heavy and medium lift rotorcraft in the world. The proposed reductions are simply a proportional reduction to divestments in the ground component.

The plan to eliminate tanks concerns many. Tanks have provided tremendous contributions to combat operations in recent operations and will continue to provide utility, though in a diminishing set of circumstances. However, when viewed from a Departmental perspective, the Corps' ~150 tanks in its active formations are a very small capability that are disproportionately expensive for the Marine Corps to maintain. Increasing threats will require very substantial investments in training and countermeasures to ensure tanks remain viable. With limited training areas and such a small cadre of expertise, it is prudent to rely on the Army with its 6,000 tanks to support the Marine Corps when required, just as has been the case in every preceding war, including in Baghdad, the second Fallujah battle, and Najaf.

How does the addition of an anti-ship capability affect the Marine Corps' more traditional missions? III MEF is the initial focus of effort and there is much work to do to determine what

the final design of the Marine littoral regiment will be. It might be that Marine littoral regiments are only in III MEF, given there is no need for the three MEFs to be mirror imaged. One of the least discussed capabilities in the proposed Marine littoral regiment is the LRUSV, which is highly relevant globally against peer and non-peer adversaries alike. A family of unmanned surface vessels of different sizes and configurations allow for a vast array of potential payloads. Sensors, mesh networking, a range of anti-ship and anti-sub munitions, and offensive mining are all possibilities. Such capabilities would also likely constitute critical elements of the initial wave of any assured access mission. Also, critically, LRUSV can be employed independent of access to allied and partner territory since they can be deployed directly from amphibious ships and other platforms.

Amphibious ships remain important until new options become available and will continue to act in traditional roles, and in the future, will function as mother ships for unmanned systems. However, it is essential to work with the Navy to determine what the next amphibious ship will be. It should have mission agility and be able to perform sea control and power projection missions.⁹ It must be a fully capable combatant and not a protected transport. In the future threat environment, it will be imprudent to concentrate so many Marines and Sailors in very large ships as is currently necessary given our current fleet architecture.

Conclusion

In closing, this article has demonstrated Gen David H. Berger's force design is far from heretical. Rather than changing the culture or mission of the Corps, the Commandant is reviving it. The Marine Corps is perhaps a bit like the Scots-Irish in this regard (and as my 101-year-old Scots-Irish mother bears witness) and as former Secretary of the Navy James Webb has stated, "Change the fabric of their culture? It has not happened yet, not in two thousand years. And it will not happen now."¹⁰ Like the Scots-Irish, the Marine Corps' fundamental attribute of winning and

first to fight has not changed in three hundred years, and it will not happen now.

Notes

1. Edgar Puryear, *Marine Corps Generalship*, (Washington DC: National Defense University Press, 2006).
2. Ibid.
3. John Kotter, *Leading Change*, (Brighton, MA: Harvard Business Review Press, November 2012).
4. *Marine Corps Generalship*.
5. Reed Inhofe, "The Pacific Deterrence Initiative: Peace Through Strength in The Indo-Pacific," *War on the Rocks*, (May 2020), available at <https://warontherocks.com>.
6. See S. Cummings, J. Cummings, Kivelin, Spencer, Cuomo, "Ten Ways to Fix The U.S. Military's Close Combat Lethality," *War on the Rocks*, (March 2018), available at <https://warontherocks.com>; and Cuomo, Garard, Cummings, Spataro, "Not Yet Openly at War But Mostly at Peace," *War on the Rocks*, (February 2019), available at <https://warontherocks.com>.
7. Mark Esper, Secretary of Defense, "Commencement Address to USNA Class of 2020," (address, United States Naval Academy, Annapolis, MD, 2020).
8. Ibid.
9. J. Noel Williams, "A Fleet for the Unmanned Era," *Proceedings*, (November 2014), available at <https://www.usni.org>.
10. James Webb, *Born Fighting: How the Scots-Irish Shaped America*, (New York, NY: Broadway Books, 2005).

