FD2030 Infantry Battalion Experimentation

Phase III of *Force Design 2030*

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"The current force is not organized, trained, or equipped to support the naval force—operating in contested maritime spaces, facilitating sea control, or executing distributed maritime operations. We must change."

—Gen David H. Berger, Commandant of the Marine Corps

Following the publication of the *Commandant's Planning Guidance (CPG)*, the Deputy Commandant, Combat Development and Integration (CD&I) established twelve functionally and organizationally focused integrated planning teams (IPT) responsible for developing future-force design recommendations. The overall IPT effort started in September 2019 and is part of a three-phase future-force design campaign plan led by DC, CD&I to bring to life the Commandant's (CMC) vision of a

> Marine Corps able to fight at sea, from the sea, and from the land to the sea; operate and persist within range of adversary long-range fires; maneuver across the seaward and landward portions of complex littorals; and sense, shoot, and sustain while combining the physical and information domains to achieve desired outcomes.[1]

During *Force Design 2030* (*FD2030*) Phase I, key guidance and direction from the CMC set the stage for each of the IPTs as they tackled the difficult task of designing a future force capable of competing against and, as required, defeating future peer adversary forces. The *FD2030* Phase II planning process included numerous wargaming events and follow-on IPTs to provide an analysis of Phase I decisions. This analysis led to the final modifications and decisions on force design, which were presented to the CMC at the end of Phase II. The results were published in *Force Design 2030* in March 2020. This article will focus briefly on the recommendations of the Infantry Battalion Design 2030 IPT and cover in detail the Phase III Service-Level Infantry Battalion Experiment Campaign Plan (IBX30) designed to assess the overall effectiveness and combat functionality of the *FD2030* Infantry Battalion design.

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IBX30 builds on ongoing enhancement ot infantry entry level training. *(Photo by Cpl Devon Tindle.)*

The Infantry Battalion IPT recommended a future battalion designed to be lighter, more maneuverable and with enhanced command and control (C2), lethality, sensing, sustainment, and capabilities to operate in the information environment. Furthermore, in order to design a battalion agile enough to be able to mass effects rather than personnel from standoff, the IPT recommended a design with fewer Marines who are better educated, trained, and equipped. However, to be clear, the smaller design was not established as a cost saving criteria for the overall *FD2030* modernization effort.

In their report released in March 2020 and in follow-on briefings to senior leaders, the Infantry Battalion IPT presented a new Marine Corps table of organization (T/O) and table of equipment (T/E). The proposed T/O was designed to create a base unit for all mission sets—battalion landing teams for MEUs, littoral combat teams (LCT) in support of future Marine littoral regiments, and support to special-purpose MAGTF. This force should be both distributed operations and expeditionary advanced base operations-capable, not a force that is solely able to conduct expeditionary advanced base operations. As the Nation's premier crisis response force, the Marine Corps will need to retain the versatility to respond across the competition continuum. This T/O, paired with the ongoing 03XX entry-level training pipeline enhancements, will create the organization the CMC envisions.

Though great progress was made by the Infantry Battalion IPT, assessments of the Phase I and II *FD2030* efforts, by both the IPT members and CMC, showed capability gaps may exist in the 2030 design:

> I remain unconvinced that the specific proposed new construct makes the force more capable of distributed operations. We must conduct more live-force experimentation to ensure our proposed design results in a truly DO-capable force.[2]

As such, the CMC has not made the final decision on the *FD2030* Infantry design, resulting in the Marine Corps Warfighting Laboratory's (MCWL) tasking to conduct IBX30 experimentation.

IBX30 Experimentation Approach

The CMC formally tasked MCWL to take the lead on all experimentation within Phase III to evaluate and assess what is required to operate in a distributed manner against pacing threats. As such, IBX30 is a Service-level effort to fully investigate the recommended *FD2030* Infantry Battalion design. Multiple deputy commandants' staffs are playing an integral role in the overall design, staffing, and execution of the IBX30 Campaign Plan. The Deputy Commandant for Plans, Policies, and Operations tasked each MEF to provide one battalion per division to support IBX30 while providing overall planning guidance and prioritizing program of record fielding to the selected experimental battalions. DC, CD&I and Marine Corps System Command are working hand-in-hand with Plans, Policies, and Operations and the MEFs to ensure the most modern equipment available is provided to the IBX battalions. The Deputy Commandant for Manpower and Reserve Affairs is working with the MEFs and with Training and Education Command to ensure the IBX battalions are manned per the IBX30 Campaign Plan design and receiving the new 03XX Marines in the 3nd Quarter of Fiscal Year 21 (FY21). The Deputy Commandant for Information is supporting through the MEF information groups to ensure realistic and challenging information operations support to the overall live-force experiment plan. Finally, the Center for Naval Analysis, with the creation of the overall IBX30 Assessment Plan, is assisting with data collection and analysis during execution and will support final data analytics and report writing.

By, With, and Through the Marine Divisions

The key to success for the IBX30 Campaign Plan lies within the Marine divisions. The Marine divisions are home to the most experienced and operationally current infantry Marines. To date, the divisions have played a

key role in the overall campaign plan build, selection of infantry battalions, experiment design and planning, and event alignment. This effort will continue into execution as the three experimental battalions conduct their pre-deployment training. The division will provide critical subject matter experts for participation and evaluation, with MCWL providing experimental expertise and assessment tools. IBX30 will leverage division pre-planned exercises as experiment venues selected in coordination with division planners to ensure experiments take place in the most complex and challenging environments and mesh with each MEF's operational requirements.

The IBX30 design is based around three standing infantry battalions and their life cycle. The decision was made to select battalions that will remain within the Global Force Management cycle to truly assess the impact of the new design on the surrounding MAGTF ecosystem and the Naval Enterprise. Every aspect of a battalion's life cycle, from initial build through pre-deployment training, deployment, and redeployment, must be evaluated to ascertain the impact of the new design. Battalions were selected based on their planned deployment assignments in order to provide a wide variety of operational environments and staggered life cycles to facilitate iterative experiments with each battalion's events and lessons learned being passed on to the next battalion.

Experiment Battalion 1 will deploy with a MEU as a legacy battalion landing team with additional manning and equipment support for enhanced C2, sensing, and enhanced capability for operations in the information environment. Experiment Battalion 2 (EXB2) will reorganize with the H&S company and two line companies, reflecting the *FD2030* design. EXB2 will also build a support platoon for each rifle company and a support squad for each rifle platoon. EXB2 will deploy in support of the unit deployment program in this structure. Experiment Battalion 3 (EXB3) will be built to the full *FD2030* TO/E of 735 Marines to the closest extent possible. EXB3 will support a unit deployment program deployment as well, but they will gain additional structure to form the basis of the Marines Corps' first littoral combat team. EXB3 is the main effort in order to support the workup, deployment timelines, and experimentation in support of initial operational capability requirements for the development of the MLR. The variances in operational deployment environments and the structural differences between the infantry battalions will provide a wealth of information and data regarding the potential combat effectiveness of the *FD2030* design.

Both EXB2 and EXB3 will have a specialized T/E of MCWL science and technology bridging solutions for the battalion headquarters and one rifle company for their pre-deployment training and scheduled deployment. The bridging technologies act as surrogates for future program of record capabilities to conduct C2, sensing, and sustainment while enhancing lethality. This model allows for cost-effective vertical experimentation from the fire team to the battalion commander level and will accurately capture and evaluate the capabilities of the battalion and C2 architecture of the proposed T/O.

The focus of IBX30 remains on the T/O of the proposed infantry battalion. However, in order for these battalions to execute the mission expected of them in future operating concepts, they require supporting infrastructure. This enhanced T/E provides the C2 architecture, enabling them to distribute sensing capabilities to create intelligence-driven operations, kinetic and non-kinetic strike options to complete the targeting cycle, and expeditionary power and water to sustain operations. Supporting infrastructure for IBX30 will consist of organic precision fires, multi-domain sensing capabilities, data networked radios and digital communications, and expeditionary water and energy production down to the squad-level.

IBX30 Experiment Objectives

The *FD2030* Infantry Battalion IPT highlighted four critical change areas that will become the backbone of the future infantry battalion: C2, sensing, lethality, and sustainment. These four areas are the key drivers of the overall MCWL Assessment Plan and feed the seven IBX30 Experiment Objectives. The IBX30 Experiment Objectives are based on the experimental battalion's ability to perform the six warfighting functions in an all-domain, future-force conflict. They also serve as the focus for all *FD2030* Phase III infantry battalion wargames, modeling and simulation (M&S), and live-force experiments.

Experiment Design

The IBX30 Campaign Plan is built on three critical areas of exploration that feed into the MCWL IBX30 Assessment Plan: Wargaming/M&S, studies, and live-force experiments. Each of these areas are designed to provide critical data points that in combination will provide a holistic assessment of the *FD2030* Infantry Battalion.

Wargames/M&S are being used to replicate the future operating environment by pitting the *FD2030* Infantry Battalion against future peer competitors, both in real and virtual environments. In October 2020, the MCWL Wargaming Division held the first of several planned *FD2030* Infantry Battalion wargames named Provident Forge. The game design placed the *FD2030* Infantry Battalion in a future naval crisis response scenario in order to perform traditional expeditionary mission essential tasks against a peer adversary. The Marine Corps Intelligence Activity and the MCWL Adaptive Threat Force cadre invested a significant amount of resources to inform both the friendly and enemy force structures and tactics, techniques, and procedures. The results of the wargame will be published via separate correspondence within the Service. MCWL's Assessment Branch is also running several models designed to assess the combat effectiveness of the *FD2030* technical enhancements versus estimated peer capabilities to understand lethality and survivability of the systems in a denied and contested future operating environment. Finally, the MCWL Adaptive Threat Force and Assessment Branch are injecting multiple in-person decision makers into tactical games to build on the outputs of systems modeling.

IBX30 is developed and executed in partnership between MCWL and the Marine Divisions. ***(Photo by LCpl Abrey Liggins.)***

Studies are being used to provide data sets for areas too large or expensive for live-force experiments and to validate and challenge outputs from wargames and M&S activities. DC, CD&I's Operations Analysis Division is conducting a study using concepts of employment from the Provident Forge Wargame to examine the organic capabilities of the *FD2030* Infantry Battalion to conduct surveillance and acquire targets, provide lethal fires, and enhance survivability against a peer threat. The study will identify capability gaps and the conditions under which they occur and offer recommended solutions to achieve a more effective examination of the proposed *FD2030* Infantry Battalion TO/E. This study will also provide recommendations for enhancing the lethality and survivability of the *FD2030* Infantry Battalion during live-force experiments.

Live-Force experiments will provide the backbone of data collection for the IBX30 Plan. Using a crawl, walk, run methodology, MCWL planners will work with each division's planning team to create a series of events that incrementally increase in complexity, as the battalions gain maturity and confidence in their assigned tasks. First, the battalion's Marines will be trained on new technologies and required tactics, techniques, and procedures to gain mastery of required skills and the ability to perform individual and collective tasks. Then, unit training takes place, and units will be evaluated on their performance as a team. Finally, a live adversary force utilizing future peer-competitor capabilities will be added to apply realism and combat-related friction to the experiments. During this process, MCWL and designated observer/controllers from the division or other supporting units will use MCWL-derived data collection and assessment plan guidelines to collect data, make SME observations, and provide critical after-action remarks to the participating units. Major exercises and other MEF/MEU and battalion training events will make up the full schedule for IBX30 experiments.

Moving Forward

The structural framework of IBX30 provides a synchronizing method by which Headquarters Marine Corps and MCWL, working with the Marine divisions' infantry experts, will provide a holistic assessment of the operational effectiveness of the *FD2030* Infantry Battalion. Furthermore, collaboration between MCWL and the Marine divisions will ensure that the overall assessment is well informed by a broad set of conditions and concepts of employment. Ultimately, the findings and conclusions from individual events will be used to evaluate and assess the validity of the *FD2030* Infantry Battalion design. This effort will conclude with an assessment conference in June 2022 and a final report to the CMC in August 2022.

The CMC has not yet decided on all the changes recommended by the *FD2030* IPT. The assessments conducted by the Marine Corps and the Naval Enterprise throughout IBX30 will provide him unbiased data, actionable recommendations, and a rudder steer for refinements to the proposed *FD2030* Infantry Battalion. The assessments will also provide the CMC with an accurate and thorough analysis of the operational effectiveness of the *FD2030* Infantry Battalion as a truly distributed operations capable force. The effort outlined in this article is the starting point for a focused multi-year campaign that MCWL/Futures Directorate will execute in coordination with the Marine infantry divisions to meet the CMC's *FD2030* intent. The goal, in support of this intent, is to create a technologically advanced, modernized infantry battalion capable of supporting the fleet, allies, and partners while deterring adversaries and defeating enemies during an armed conflict in 2030 and beyond.

Notes

1. Gen David H. Berger, *38th Commandant's Planning Guidance,* (Washington, DC: 2019).

2. Gen David H. Berger, *Force Design 2030,* (Washington, DC: 2020).