The Information Warfighter Exercise Wargame

Supplement 1: Optional Rules and Considerations for Operational-Level or Competition Games

Christopher Paul
Ben Connable
Jonathan Welch
Nate Rosenblatt
Jim McNeive
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In 2020, RAND researchers developed the Information Warfighter Exercise (IWX) wargame to support IWX training events hosted by the Marine Corps Information Operations Center (MCIOC). The rules for the IWX wargame are captured in The Information Warfighter Exercise Wargame: Rulebook. This document presents an expanded set of optional rules and considerations for the IWX wargame when the simulated planning staff represents an operational (rather than tactical) headquarters or when the wargame scenario takes place in the competition range of the competition continuum (rather than conflict). These rules and considerations were developed as part of preparation for IWX 21.1 (completed in April 2021), which included both an operational-level planning staff and a competition scenario.

Challenges Posed by Conducting the IWX Wargame at the Operational Level

Discussions with and among various MCIOC personnel exposed at least two important differences between operational- and tactical-level planning for operations in the information environment (OIE). First, the activities of an operational-level headquarters are focused more on “up-and-out” coordination and deconfliction with a host of relevant stakeholders, including adjacent commands, high headquarters, interagency elements, and international partners, whereas tactical OIE planning staffs have a much narrower range of higher headquarters to coordinate with and focus much more on directly coordinating information-related capability (IRC) activities and the details of those activities. Second, operational-level process and planning produce permissions and guidance for subordinate elements to execute within, whereas tactical OIE planning produces specific and detailed planned actions. Both of these differences require consideration in the design and execution of the IWX wargame: Exercise control (EXCON) needs to consider and include (or simulate/role-play) a much wider range of stakeholders, and game play and discussion need to focus more on coordination and processes than on the details of OIE actions.

Challenges Posed by Conducting the IWX Wargame for a Competition-Focused Scenario

There is a considerable academic and policy literature on the military contribution to competition and how that contribution differs from the military role in conflict, but only a few of those differences proved to be consequential for the IWX wargame. First, because competition seeks to incrementally gain influence while avoiding escalation, play and actions during a competition scenario bias toward risk-aversion. Second, and related, competition actions tend to seek plausible, relatively mild effects and so are “easier” to execute and more likely to succeed when compared with OIE during combat. Third, actions during competition can be subtle, nuanced, or complicated, which can make it harder to measure their effectiveness and can increase the plausible time gap between the start of the action and its effect (if any) becoming observable.

These differences suggest adjustments to the IWX wargame. First, although “safe” and risk-averse actions are realistic, they make for a less exciting wargame and are less likely to stimulate the full complexities of the processes of OIE planning; this can be offset in the wargame through guidance to players, adjustments to operational guidance within the scenario, or through the use of injects. Second, the modest effects sought in competition tend to make competition wargame actions seem easier than tactical actions; IWX wargame adjudication can be slightly recalibrated to prevent too many actions from succeeding too spectacularly. Finally, understanding and exploring the subtleties of competition

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actions can require more time, both to plan and to explain and discuss sufficiently for adjudication (and learning); IWX wargame timelines and workflow can be adjusted to accommodate.

Optional Rules and Considerations for IWX Wargames in Competition Scenarios or at the Operational Level

This document presents a number of optional rules and scenario and exercise design considerations to adjust the game to contend with either or both sets of challenges. Optional rules include options for involving multiple staff layers as players, adjustments to the time allowed for different steps to accommodate other changes, and options for tailoring the adjudication scorecards to fit a specific IWX context or scenario. Considerations of note include (1) possible changes to the total number of wargame turns or the number of turns that can be completed in an exercise day and (2) the implications of hosting the IWX wargame in a distant location, in a remote location, or in the regular office environment of the players.
In 2020, the authors developed the Information Warfighter Exercise (IWX) wargame to support IWX training events conducted by the Marine Corps Information Operations Center (MCIOC). The rules for the IWX wargame are captured in The Information Warfighter Exercise Wargame: Rulebook, available at www.rand.org/t/TLA495-1. As originally conceived, the IWX wargame pits two teams of 6–10 players against each other to plan operations in the information environment (OIE) to support their respective sides in a scenario with contested outcomes.

The IWX wargame rules are scenario-agnostic and were designed to apply to a wide range of possible operations and contexts, but the original use case to which the wargame’s rules were fine-tuned was a conflict scenario in which BLUE (the marine force) was tasked with the seizure of a port and airfield against the opposition of a similar formation of RED (opposition force) forces. Operations, both the scenario-driven maneuver effort and the OIE planned by the exercise players, were at the tactical level and involved battalion-sized formations and appropriate supporting elements.

In 2021, MCIOC conducted an IWX (IWX 21.1) for Fleet Marine Forces, Pacific (FMFPAC). Tailoring the exercise and wargame to the FMFPAC training audience involved several differences from the original baseline IWX wargame. First, the training audience was an operational-level headquarters rather than a tactical unit staff, so MCIOC chose to have the exercise teams plan and play at the operational level. Second, in consultation with FMFPAC, MCIOC determined that a competition scenario, rather than a conflict scenario, would provide the most useful exercise experience. The authors supported MCIOC in applying the IWX wargame to a competition scenario played at the operational level.

This document provides supplemental rules and considerations relevant to conducting an IWX wargame at the operational level, using a competition scenario, or both. It also presents some observations and lessons learned from the playtesting and execution of the IWX wargame for FMFPAC.

This is not a stand-alone ruleset: It requires users to have and be familiar with The Information Warfighter Exercise Wargame: Rulebook (available at www.rand.org/t/TLA495-1 and hereafter referred to as the “Core Rules”).

As a supplement to the Core Rules, this companion document follows a similar section numbering scheme for easy reference. Users can refer to sections from this Supplement 1 (S1) document as, for example, “S1 Section 1.1” and to sections from the Core Rules as, for example, “Core Rules Section 1.1.”


2 According to joint doctrine (U.S. Joint Chiefs of Staff, Joint Operations, Joint Publication 3-0, January 17, 2017, Incorporating Change 1, October 22, 2018), the levels of warfare “model the relationship between national objectives and tactical actions.” The strategic level deals with the pursuit of national-level interests through the application of the national instruments of power, often framed in the “DIME” construct: diplomatic, information, military, and economic. It is important to note that U.S. national interests often overlap with those of other nations, so a key part of strategic planning involves multilateral coordination and cooperation. The operational level “links the tactical employment of forces to national strategic objectives.” This is the level at which planners apply “operational art” to devise ways to achieve high-level objectives with available resources. This is where component commands do most of their work. The tactical level is where forces focus on “planning and executing battles, engagements, and activities.” The tactical is the bread and butter of Marine Corps units.

3 On the competition continuum, cooperation characterizes activities at the most benign end of the continuum, and conflict is the most aggressive end and involves open armed hostilities. Between the two—occupying much of the spectrum—is competition, which can include a wide range of different activities at different levels of aggressiveness but is designed to stay below the threshold of open warfare. This competitive space is sometimes referred to as the “gray zone.” For a further discussion, see Lyle J. Morris, Michael J. Mazarr, Jeffrey W. Hornung, Stephanie Pezard, Anika Binnendijk, and Marta Kepe, Gaining Competitive Advantage in the Gray Zone: Response Options for Coercive Aggression Below the Threshold of Major War, Santa Monica, Calif.: RAND Corporation, RR-2942-OSD, 2019; also see U.S. Marine Corps, Competing, Washington, D.C., Doctrinal Publication 1-4, December 14, 2020.
An EXCON team might specify, for example, that “For this iteration of the IWX wargame, we will omit Step 3 (optional rule 2.3.7 in the Core Rules) and instead use a theater-level pre-approval panel (S1 Section 2.1.1.2).”

Readers interested in a broader range of consideration relevant to including operations in the information environment or information environment in general in wargames or exercises should see Opportunities for Including the Information Environment in U.S. Marine Corps Wargames.4

1.1. IWX 21.1 as an Additional Playtest of the IWX Wargame

The observations, considerations, and optional rules described here were developed as part of the process of planning and executing IWX 21.1 (including the IWX wargame) for FMFPAC. The wargame took place during April 2021 and was preceded by several months of preparation, including planning conferences, scenario preparation, MCIOC-RAND discussions, and two sessions of the wargame that served as dry runs, rehearsals, and playtests. While the wargame during IWX 21.1 was the live game for the FMFPAC training audience, it was also (from the standpoint of the authors) a playtest of several of the optional rules and an observation point for identifying issues and challenges associated with operational-level games and wargaming competition scenarios. IWX 21.1 also took place under slightly different circumstances than the typical IWX (which led to further observations and insights): IWX 21.1 took place in FMFPAC spaces in Camp Smith, Hawaii. The wargame was supported by a reduced cadre of in-person MCIOC exercise control (EXCON) personnel, with additional support available through reach-back to Quantico, because of costs associated with travel and lingering restrictions related to coronavirus disease 2019 (COVID-19). This mobile training team approach also led to the IWX timeline (including the wargame) being compressed into a single week five-day exercise period, rather than the preferred two-week exercise structure.

Although the experiences of IWX 21.1 and the associated wargame both exposed some challenges associated with the format, participants and trainers both predominantly identified the exercise as extremely valuable, and FMFPAC expressed interest in further exercise (and wargame) evolutions.

1.2. Considerations and Challenges Related to Conducting an IWX Wargame at the Operational Level

What is different about OIE planning and staffing at the operational level, and how does that need to be reflected in the IWX wargame? Discussions with and among various MCIOC personnel exposed at least two important differences between operational-level and tactical-level OIE planning. First, the activities of an operational-level headquarters are focused more on “up-and-out” coordination and deconfliction with a host of relevant stakeholders, including adjacent commands, high headquarters, interagency elements, and international partners, whereas tactical OIE planning staffs have a much narrower range of higher headquarters to coordinate with and focus much more on directly coordinating information-related capability (IRC) activities and the details of those activities. Second, operational-level process and planning identify authorities and produce permissions and guidance for subordinate elements to execute within, whereas tactical OIE planning produces specific and detailed planned actions. Both of these differences require consideration in the design and execution of the IWX wargame.

The up-and-out focus and coordinating activities of an operational-level staff require greater attention within the game to the complexity of relevant layers, tiers, and interagency stakeholders. Whereas a tactical-level staff can proceed with the employment of organic capabilities based on the approval of the plans by the S3 (operations officer) or the commander, an operational-level OIE staff needs to coordinate with, consult with, identify authorities through, or gain permission from a wider range of stakeholders. In fact, identifying the appropriate commands and organizations with which to

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coordinate and understanding the processes for such coordination (including timelines, etc.) are important learning objectives that are distinct to an operational-level IWX.

This raises at least two issues for the IWX wargame for an operational-level staff. First, exercise control (EXCON) and the IWX wargame structure need to include ways to represent or include a much wider range of stakeholders than what is included in the Core Rules. Second, questions regarding coordination are both more likely to come up and less likely to be quickly and easily resolved than during tactical-level play. These coordination questions and discussions are important to successfully meeting learning objectives at this level and are time well spent, so the wargame structure needs to allow more time for these discussions to unfold.

Because operational-level OIE planning produces guidance to structure the actions of subordinate units, operational-level actions (one of the core building blocks of the IWX wargame) are necessarily more abstract than tactical-level actions. The IWX wargame action scorecards (see Core Rules 2.4.3.8) might need to be changed or applied slightly differently to effectively evaluate and generate action target numbers for actions based on operational-level planning.

1.3. Considerations and Challenges Related to Conducting a Competition-Focused IWX Wargame

In the same way that operational-level OIE planning differs from tactical-level OIE planning, scenarios that include operations in competition differ from those during conflict. The literature on competition is voluminous, but discussions with MCIOC personnel and observations from playtests and the actual execution of the IWX 21.1 wargame revealed only a few differences that are consequential for the IWX wargame. First, because competition seeks to incrementally gain influence while avoiding escalation, play and actions during a competition scenario bias toward risk-aversion. Second, and related, competition actions tend to seek plausible, relatively mild effects and so are “easier” to execute and more likely to succeed. Third, actions during competition can be subtle, nuanced, or complicated, which can also make it harder to measure their effectiveness and can increase the plausible time gap between the start of the action and its effect (if any) becoming observable.

All these differences suggest adjustments to the IWX wargame, either in the rules, in scenario design and exercise planning, or in execution by EXCON. First, although “safe” and risk-averse actions are realistic, they make for a less exciting wargame and are less likely to stimulate the full complexities of the processes of OIE planning. A tendency toward risk-averse play could be left to run its course or could be disrupted through scenario guidance or requirements that necessitate risk, or through the addition of injects that provide needed stimuli. Second, the modest effects sought in competition tend to make competition wargame actions seem easier than tactical actions; the scorecard and system for determining an action’s target number (see Core Rules 2.4.3.8.1) might need to be adjusted to prevent too many actions from succeeding too spectacularly. Finally, understanding and exploring the subtleties of competition actions can require more time, both to plan and to explain and discuss sufficiently for adjudication (and learning); IWX wargame timelines and workflow can be adjusted to accommodate.

1.4. The Importance of Objectives in Both Competition and Operational Wargames

One of the observations from playtesting for IWX 21.1 and the exercise itself as a playtest was the increased importance of objectives. In a tactical and conflict-focused scenario, there are clear maneuver objectives for each side for each turn and for the overall operation provided by the scenario through the medium of the commander’s guidance or the instructions of the S3 role-player. An example might be “B Company will advance down Route Epsilon to...
the airfield and secure it.” This in turn leads to OIE with clear supporting objectives; for example, several IRCs might be used in concert to reduce civilian traffic or other obstructions on Route Epsilon, or a deception effort might have the objective of drawing defenders away from the airfield or causing them to orient their defense in a different direction. Even though maneuver objectives can change rapidly in a dynamic tactical environment, they remain clear, and it is relatively easy for teams of participants to nest OIE in support of those objectives. When OIE stray, it is easy for EXCON mentors or role-players to steer the team back on course: “Wait a minute . . . Bravo Company is about to advance toward the airfield on Route Epsilon. Why are you still talking about jamming comms at the port?”

This clarity and focus of objectives and ease of nesting information objectives to support maneuver actions and objectives proved to be less automatic in an operational-level competition-focused scenario. Vague (or just broadly scoped) initial guidance and operational objectives can lead to vague or imprecise information objectives that do not clearly and neatly nest within those broader objectives. “Why are you doing this?” and “What do you hope to gain through this?” became more common questions from EXCON to the players. These questions often had answers, but sometimes these answers were not fully satisfactory, and the nesting and connection to higher-level objectives was not always obvious.

This phenomenon was observed in playtests and in a wargame instance that was both operational-level and competition focused. On reflection, we believe the competition scenario was the prime driver. Competition covers a broad range of possible goals; operations during competition might seek to make miniscule gains against, or to set conditions favorable to, many of those goals, or perhaps to exploit an adversary’s misstep or a contextual opportunity. The same risk-aversion noted above as being common in competition also promotes less clear and precise initial guidance and operational goals. Future IWX wargame competition scenarios might include several characteristics that could mitigate against this challenge and promote stronger information objectives with clearer connection to broader operational objectives.

Finally, when exercising a component command currently engaged in “real-world” competition, it is important to be explicit about what is “real-world” versus what is specific to the exercise scenario. For example, component planners are familiar with standing operational plans (OPLANS), execution orders (EXORDs), and other guidance from the geographic combatant command. These provide a wealth of objectives (perhaps even an overwhelming number). To effectively exercise a scenario, clear boundaries need to be drawn between what is occurring in the real world and what guidance and events are specific to the fictional future scenario.

1.5. Organization of This Document

This document includes two additional sections. Section 2 provides additional optional rules beyond those included in the Core Rules to better support OIE wargaming at the operational level or in a competition scenario. Section 3 provides some additional considerations related to the conduct of IWX and the IWX wargame.

In more detail, Section 2.1 addresses involving multiple staff layers as players and presents several options for doing so. Rules under Section 2.1 include 2.1.1.2, which describes an optional confirmation brief to support the transition from the IWX instructional period to the wargame and simulate stakeholder approval and feedback for each team’s initial plan, and Section 2.1.1.3, which notes that a decision to include multiple staff sections on the BLUE side does not necessitate a parallel inclusion on the RED side.

Section 2.2 includes adjustments to the time allowed for different steps and activities within the IWX wargame to accommodate other changes. Most of these (Section 2.2.1) involve allowing additional time for some activities within steps, which can in turn affect the total number of turns that can be completed each day, or completed within a three-day wargame evolution (Section 2.2.2).

Section 2.3 provides options for adjusting or recalibrating the scorecards (Core Rules Section 2.4.3.8) based on the scenario or staff echelon portrayed in the game, and Section 2.4 describes options for increasing the intensity in an IWX
war-game to help overcome risk-aversion. Section 2.5 discusses different options for displaying the game board/map.

Section 3 presents considerations and options that are not rules, per se. Section 3.1 presents some scenario design options or considerations for improving the quality and nesting of objectives in players’ plans. Section 3.2 describes options and considerations related to the time represented by each wargame turn. Section 3.3 discusses the implications of hosting the IWX wargame in a distant location, in a remote location, or in the regular office environment of the players.

Table 1 summarizes all the optional rules presented in this supplement and contrasts them with the typical or default treatment of those situations in the Core Rules, providing a relevant section number reference for the Core Rules. This table is also available as a stand-alone game aid at www.rand.org/t/TL495-1.
<table>
<thead>
<tr>
<th>S1 Section</th>
<th>Supplement 1 Optional Rule</th>
<th>Core Rules Section</th>
<th>Default Treatment in the Core Rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Involving Multiple Staff Layers as Players</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.1</td>
<td>Include multiple played staff layers</td>
<td>1.3</td>
<td>A single staff layer is played; the immediately higher staff layer is represented by the S3 role-player; higher levels are abstracted</td>
</tr>
<tr>
<td>2.1.1.2</td>
<td>Include a confirmation brief to higher-echelon and external stakeholder representatives</td>
<td>None</td>
<td>Typically, an action is presented by a single presenting player</td>
</tr>
<tr>
<td></td>
<td>A single confirmation brief before the beginning of the first turn replaces Step 3 throughout the whole game</td>
<td>2.3, 2.3.7</td>
<td>Typically, actions for a turn are approved on a turn-by-turn basis during Step 3 (or optionally during Step 2)</td>
</tr>
<tr>
<td>2.1.2</td>
<td>Include both tactical- and operational-level staffs, as two separate teams or as a single larger team</td>
<td>1.3</td>
<td>Each team includes only a single played staff layer; both RED and BLUE are symmetrical in terms of number of players and staff levels played</td>
</tr>
<tr>
<td>2.2.1</td>
<td>Allow any or all of the following: extra time the first time an EXCON runs the game in a competition scenario or at the operational level; additional planning time (Step 2) if academic week is cut short or if playing extra staff layers; additional time in Step 4 for additional discussion; additional time for a coordination brief</td>
<td>3.6</td>
<td>Extra allocations exceed limits recommended in the Core Rules, could stretch total time and threaten ability to complete two turns each exercise day</td>
</tr>
<tr>
<td>2.2.2</td>
<td>Complete fewer than two game turns per exercise day; either one turn per day, one plus a fixed fraction per day, or one plus a flexible fraction per day</td>
<td>3.7</td>
<td>The Core Rules recommend two turns per exercise day for three days, for a total of six game turns; the rules do allow for variation</td>
</tr>
<tr>
<td>2.3</td>
<td>Adjusting the Scorecards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.3.3</td>
<td>Recalibrate scorecards to use +4 as the correction factor for operational-level games</td>
<td>2.4.3.8</td>
<td>Scorecards are calibrated for tactical-level combat-focused games; the default calibration modifier is +3</td>
</tr>
<tr>
<td>2.4</td>
<td>Increasing the Intensity in an IWX Wargame</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.4.2</td>
<td>Add injects to increase intensity to overcome risk-aversion</td>
<td>2.6.2</td>
<td>Injects are already an option</td>
</tr>
<tr>
<td>2.5</td>
<td>Map/Game Board Alternatives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.5.2</td>
<td>Display the game board vertically on a wall, “pin the tail on the donkey” style, with sticky notes, pins, and strings</td>
<td>3.8</td>
<td>The Core Rules describe plotter-map or horizontal game boards with standing tokens; they also mention use of an optional virtual/digital display</td>
</tr>
<tr>
<td>3.1</td>
<td>Improving Objectives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1.1</td>
<td>In scenario design, use more precise and aggressive objectives to overcome risk-aversion and enable players to nest their plans within higher-level guidance; change objectives and injects as needed</td>
<td>2.6.1.2</td>
<td>Not a consideration in the Core Rules; in a tactical-level scenario, aggression and nesting player plans with the overall scheme of maneuver comes more easily; injects already an option</td>
</tr>
<tr>
<td>3.2</td>
<td>Time Represented by Each Game Turn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2.2</td>
<td>Time passing in the scenario represented by each game turn may vary</td>
<td>1.3.2</td>
<td>Time passing in the scenario represented by each game turn may vary, but the range of variation is implied to be less</td>
</tr>
<tr>
<td>3.3</td>
<td>IWX and the Wargame On-Site, Off-Site, or as Travel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3.1</td>
<td>IWX can take place at home station in participants’ workspace, at home station in a remote location, or require travel—options that allow players to be a “captive audience” for the wargame are preferred</td>
<td>None</td>
<td>Not mentioned in the Core Rules</td>
</tr>
</tbody>
</table>
This section provides optional rules to expand the IWX wargame Core Rules to better accommodate the challenges posed by competition scenarios or playing the wargame at the operational level. Sometimes multiple optional rules are presented to address the same challenge or to add additional complexity or nuance related to the same consideration. Had the rules presented in this report appeared in the Core Rules, they would all be preceded by the OPTIONAL tag (see Core Rules Section 1.1.1). The EXCON group conducting the specific IWX wargame will need to choose which of these optional rules make sense in their game’s specific scenario context and for their training audience and learning objectives.

The optional rules presented here are numbered by section, following the convention already established in this document. Where applicable, optional rules refer to the sections in the Core Rules where they replace or modify an existing IWX wargame rule or process.

The terms used here are consistent with the terms presented and defined in Core Rules Section 1.3.

2.1. Involving Multiple Staff Layers as Players

Section 1 in the Core Rules describes the team of players for each side as representing a single information operations working group or OIE operational planning team, with the assumption that staff sections at other echelons or elements will be represented, to the extent necessary, by EXCON. What if an exercise requires or would benefit from play at multiple levels or echelons? The optional rules in this section allow for that possibility. These rules can accommodate players representing up to three staff layers, including a tactical-level staff echelon, such as a Marine Expeditionary Force (MEF) staff; an operational-level staff echelon, such as a regional component command like Marine Forces, Pacific (MARFORPAC); and a theater-level echelon, such as staff from a geographic combatant command or combined joint task force.

2.1.1. Theater-Level Participants

Representatives from a higher headquarters or inter-agency representatives can meaningfully participate in the IWX wargame, representing a higher echelon and adding both realism and a more nuanced understanding of how the exercising command should interface with other layers and organizations.

2.1.1.1. Full-Time Versus Part-Time Participants

A primary consideration in determining whether and how to include additional staff layers within the IWX wargame is the intended level of participation of the additional participants. Tactical or operational staffs should likely be represented by full-time participants in the IWX wargame, but the need for theater or similarly high-level staff echelons to be represented might be episodic: The higher echelon(s) might have an important role in certain scenarios, but once they have provided needed permissions, identified relevant authorities, issued planning guidance, or simulated high-level coordination processes, much of the game can proceed without them. If such a staff layer is represented by participants, they can be either full-time IWX participants (Section 2.1.1.1.1) or part-time participants, either on call or available and engaged only during specific pre-planned windows (Section 2.1.1.1.2).

2.1.1.1.1. Full-Time Higher-Echelon Staff

If a higher-level staff is represented by participants who are present during the entire IWX wargame, they can be part of both EXCON and the training audience. Functionally, for the wargame, they are part of EXCON; however, the interactions they have with the subordinate staffs and the likely gain in understanding of various processes at other echelons or in other organizations should be very valuable to them as learners/trainees. Participants in this role would not have their own separate workspace but would instead “reside” in the EXCON workspace, visiting the workspace for their assigned team as appropriate. During Steps 1 (Core Rules 2.1) and 2 (Core Rules 2.2), higher-echelon representatives
should be available for requests for information from subordinate staffs or to provide guidance related to processes at their echelon. During Step 3 (Core Rules 2.3), higher-echelon representatives can take the place of the S3 role-player and receive their team’s approval brief (Section 2.1.1.2) and approve or disapprove actions (Core Rules 2.3.4). Higher-echelon staff filling this role should report back to EXCON on the actions they approved (Core Rules 2.3.4.4). Also, during Step 3 and subsequent to action approval, higher-echelon representatives can support EXCON narrators in the preparation of narration for possible action outcomes (Core Rules 2.4.3.8.3.2 and 2.4.3.9.1). During Step 4, higher-echelon representatives can be present and able to respond to EXCON or team questions about processes appropriate to their echelon but would not have a role in the adjudication process.

2.1.1.2. Part-Time Higher-Echelon Staff
If representatives of higher-echelon staff (potentially including various interagency representatives) are only available for part of the wargame, they can still make valuable contributions. Depending on the extent of their availability, they could be scheduled to participate in various parts of the wargame process either at pre-scheduled intervals or on an “on-call” basis. The priorities for higher-echelon participation would be

1. sitting for a pre-approval/confirmation brief (see Section 2.1.1.2) prior to the first full turn of the IWX wargame
2. joining Step 4 of each turn to answer questions about processes at their echelon (and observe the actions and related discussion)
3. being available on call for requests for information (RFIs) or process questions from the teams during Steps 1 and 2
4. replacing or supplementing the S3 role-player and receiving the action approval brief during Step 3 (see Core Rules 2.3.4).

NOTE: When including part-time participants, there is always a certain amount of catching up for them when they return to the game. With that in mind, it is best to have them present and available from the start of a step or instructional or interactive segment so that they can be caught up once, right at the beginning. When organizing part-time participation, remember that while having them present for a full step or segment is best, it is usually better to have intermittent participants leave early than to have them arrive late. Plan accordingly.

2.1.1.2. Theater-Level Panel Pre-Approval/Confirmation Brief
Particularly in a competition scenario where rapid crisis or wartime authorities are absent and OIE need to be planned and approved well in advance, one option for involving representatives from higher-level staffs (or interagency representatives) is to form a panel of such representatives and have them receive an approval/confirmation brief of the team’s entire plan before the start of the wargame. This “turn 0” event could be the culmination of the transition between the IWX planning period and beginning the formal IWX wargame.

The panel can be assembled from available high-echelon and outside stakeholder representatives, and can optionally be filled out with EXCON role-players simulating important stakeholders not represented at the exercise.

The following guidance can be provided to panel participants and used to structure the pre-approval/confirmation brief.

The panel should aim to provide three things:

1. Education:
   - Explain, from the perspective of the stakeholder or staff echelon represented, what things would have to happen during or before an actual operation of this kind to get the plan and planned actions socialized, approved, and authorized.
   - Describe processes and timelines.

2. Feedback:
   - Give a review of the proposed plan and proposed action from the stakeholder perspective.
- Offer suggestions for improvement.
- Give an assessment of how likely such a plan would be to receive support from the represented stakeholder if proposed in the real world.

3. Approval:

- For game purposes, what in the plan is approved versus what needs revision or needs to be scrapped entirely?
- The panel should have a “bias toward approval” for game purposes: Only actions that a stakeholder would unambiguously reject should not be approved (though actions that would face barriers and challenges should have that noted as part of feedback).
- The panel should make clear what needs to be changed for marginal plan elements to be approved.

The workflow for the pre-approval/confirmation could proceed roughly as follows:

1. The team presents their plan (30–60 minutes).
2. The panel asks any questions of clarification (10–30 minutes).
3. Each stakeholder represented receives 5–10 minutes in which to provide education and feedback related to the plan, with questions from the players as needed (5–10 minutes per panel member).
4. The panel quickly confers regarding plan approval (with the possibility of either rejecting or requiring revision to some plan elements while still approving the overall plan) (5 minutes).
5. The chair of the panel conveys the results of the approval discussion to the players (5 minutes).

The above two lists are available as a one-page game aid at www.rand.org/t/TLA495-1.

Optionally, a single turn 0 pre-approval/confirmation brief panel could entirely replace Step 3 (Core Rules 2.3) in all turns (that is, if the plan is approved, a turn-by-turn approval of actions is deemed unnecessary). Or a pre-approval/confirmation brief could just be in addition to the Step 3 approval of each individual action.

If used, EXCON should provide guidance or a template for the pre-approval/confirmation brief to the teams of players. At minimum, players should be informed of the goals of the brief. This confirmation brief panel event has several goals:

- to get the players to clearly articulate their concept of support; how it connects to theater, country, and campaign objectives; and how the concept will unfold during the game
- to secure any additional approval, permission, or commitment of support required to execute the concept
- for the subject-matter expert panel to provide feedback or instruction related to the concept of support.

Players should be encouraged to not try to give a detailed description of all actions planned for all turns of the wargame, but instead to provide a broader concept of operations or concept of support briefing.

2.1.2. Including Both Tactical and Operational Staff Layers

Including theater-level representation might be attractive, but it might also be useful to exercise the interface between tactical and operational staffs. If this optional rule is included, both tactical- and operational-level staff participants should be full-time player/participants.

One option for including a tactical staff (perhaps a MEF information group [MIG] team) and an operational-level staff (such as MARFORPAC) would be to include a full team representing each staff and assign each staff its own planning room. Under this construct, the staffs would visit each other’s planning room only temporarily, to represent communication between the staffs.

The preferred option, however, is to have the two staffs playing as part of a single group and sharing the same team space, but having each player clearly assigned to one of the two echelons (tactical and operational). Under this construct, the operational staff would provide guidance, note processes and staff mechanics, and take the lead in any engagement with higher echelons (whether represented by players or role-players), and the tactical staff would focus on preparing the tactical actions and coordination of the IRCs.
Inclusion of multiple full-time-participant staffs as teams has implications for the spaces required for the wargame. If each staff is assigned its own workroom, then additional rooms are required. If multiple full-sized staff teams are used, then the space used for Step 4 will need to be larger. The Core Rules (Section 1.5) specify 6–10 personnel per team. This is a good size for a working group: It allows everyone to participate and is easily accommodated in most conference rooms or workrooms. The division of the participants into two staffs for a team, whether in separate rooms or sharing a space, might increase the number of participants beyond ten, but we caution against fully doubling it. Twelve is a reasonable target combined staff size limit—15 people might be a maximum manageable size, and 20 would almost certainly be too many.

2.1.2.1. Action Approval Between Staff Layers
If multiple staff layers are represented, there is the option of having one staff layer preside over the Step 3 action approvals for the subordinate staff layer. This was already noted in Section 2.1.1.2 as an option when including a theater-level echelon. This could also be used with an operational-level staff receiving and approving the action briefs from a tactical staff. Several considerations:

- A member of EXCON should still be present and chair the meeting to make sure that proposed actions satisfy game requirements (Core Rules 2.3.4.1) and to be able to inform the rest of EXCON about what actions are planned to support preparation of initial scorecards and outcomes narration (Core Rules 2.3.4.4).
- If the operational-level staff and tactical staff are playing as separate teams in separate workspaces, it is recommended that the operational-level team be the approvers in Step 3; providing guidance and ascertaining whether that guidance has been met becomes a major part of that staff’s role in the game.
- If the operational-level staff and tactical staff are playing as a single team sharing the same workspace but having slightly different roles, it is recommended that the operational-level team not be the approvers in Step 3. In this case, the operational-level team will already be fully aware of the details of the plans prepared by the two staffs working in concert, and the Step 3 brief would be unlikely to communicate new information in either direction. Instead, an EXCON role-player or EXCON-affiliated higher-echelon representative should conduct the Step 3 approval.
- If an EXCON role-player conducts the Step 3 approvals, some consideration should be given as to whom that individual should represent. In the Core Rules aimed at the tactical level, the role-player is the formation S3. That may or may not be the right approver for combined operational/tactical plan confirmation. One possibility is to leave the EXCON approver’s role-played position unannounced and then discuss in the first Step 3 the processes that would be necessary to get plans and actions approved at the different staff levels and announce that the EXCON role-player represents all (or some subset) of those processes.

2.1.2.2. Presenting Actions Prepared by Multiple Staff Layers
Because the core of the IWX wargame’s adjudication mechanism revolves around team actions, these must remain at the core of the adjudication process in Step 4, regardless of what and how many echelons are participating. If many staff layers are represented in the wargame, game actions will be presented in Step 4 by the lowest staff echelon represented.

- If the game includes players representing both a tactical and an operational staff, there are two options for adjustments to the Step 4 process described in the Core Rules (Section 2.4.3). In the first option, the Core Rules are left almost completely intact, and the tactical echelon players make the presentations and engage with the opposed teams. The operational echelon players are present in the engagement room and are available to answer echelon-appropriate questions from EXCON, but they otherwise have no role beyond observation; their main role (presumably) was in guidance during Step 2 and in approving the actions in Step 3. This approach has the disadvantage of giving some of the participants no significant role in the most exciting part of the wargame, and so is not the recommended approach.
A second option modifies the Core Rules such that, for each action, two presenters—one from the operational staff and one from the tactical staff—give a hybrid presentation. The presenter from the higher echelon begins the presentation and is responsible for topics related to staff mechanics and guidance given, then the subordinate echelon presenter gives execution details. Specifically, the higher-echelon presenter would brief task, purpose, and end state, then the subordinate-echelon presenter would brief methods, execution details, and measures of effectiveness, as well as presenting three reasons the action would succeed. (Hypothetically either presenter could offer reasons the action would succeed, but assigning that task to the subordinate-echelon briefer limits the number of handoffs or transitions between presenters.) The higher-echelon presenter would then be the group representative and present the counterarguments (Core Rules 2.4.3.5). In responding to EXCON queries, the presenter whose lane in which the question falls would respond.

This second option (hybrid presentation) would apply in both Step 3 and Step 4. That is, the action approval briefing in Step 3 would be conducted by presenters from both staff layers and delivered to an EXCON rep (or possibly a representative of a still higher echelon), and the engagement presentation would be made by the same two players.

Section 2.2.3.1.2 of the Core Rules states that all players for a team must present an action before a player can present a second action; that is, players must rotate presenting so that everyone gets a turn. While this rule still applies in principle in a case where players represent multiple staff layers, it must be applied thoughtfully. Specifically, if the operational staff presents staff mechanics and guidance and the tactical staff presents execution details, turn-taking should not force a player who is part of the tactical staff to present the operational portion of the briefing of vice versa. Rotation should be enforced within the represented staff, not across the whole team.

A two-presenter/two-team combined hybrid presentation format will inevitably require slightly more time. See Section 2.2.1.1 for recommended adjustments to the engagement workflow under this format.

2.1.3. Asymmetrical Design: Multiple Layers of Players for BLUE, Single Layer for RED

Many of the interesting dynamics between staff layers are of greatest interest and are easiest to depict in a wargame for the BLUE side. That is, the Marine Corps (or other BLUE) training audience is most interested in how the different layers of the friendly force and interagency are supposed to interact and coordinate to plan and conduct OIE, and the MCIROC-based (or other) EXCON are best equipped to identify and present those processes with realism and accuracy. While there is certainly value in Marine Corps training audiences understanding and playing from the perspective of an adversary or competitor force, the details of adversary bureaucracy and processes are both harder for EXCON to know in sufficient detail and of less utility to the training audience. Marines with OIE roles will have to understand and interact with multiple staff layers in their future assignments, whereas understanding a specific adversary’s approach to coordination is only potentially useful and not as high a priority.

Just because the BLUE side is broken into two or even three played staff layers does not mean that the RED side needs to be similarly structured, have the same total number of players on its side, or follow exactly the same processes. What is needed is some effort to preserve the reality and appearance of a degree of fairness. Independent of the total number of players on each side and the number of layers either side includes, the game is still fair if the scenario is relatively fairly balanced; if both sides get to present the same number of actions at the same level of detail during Step 4, adjudicated using the same scorecards; and if both sides are subject to some kind of approval process by which an action might not be approved in Step 3. Any additional activities based on or conducted by additional staff layers on the BLUE side are just additional opportunities for experience and learning, rather than unfair advantages for BLUE.

So, it is a viable option to have two or even three echelons of BLUE represented by participants, while having only a single staff on the RED side, with the contributions of other echelons covered by EXCON
RFIs and role-players (and receiving less overall attention).

NOTE: If the teams for the two sides are not symmetrical (that is, if there are more layers being played by BLUE than by RED), some effort will need to be made to assure participants that the game remains fair. The perception of fairness is almost as important as the reality of fairness. The EXCON lead should explain to all players on both sides why one side is playing more staff layers than the other side, how those staff layers are being portrayed for the “thinner” side, and that the scenario and the resources available to each side are still balanced. The explanation might note that, if anything, the side with more played layers is at a disadvantage, as there will unavoidably be more scrutiny and more that can go wrong with those additional layers and that this disadvantage will more than offset the possible advantage from increased total personnel representing the side.

During the playtests and execution of the IWX 21.1 wargame, participants identified RED subject-matter experts to help organize the RED team from both an organizational and process perspective and then advise during game play. This approach presented an additional learning opportunity for all participants but is by no means a requirement for a successful IWX wargame.

2.2. Adjusting the Time Afforded to Different Activities Within the Wargame

Observations of playtests of operational-level competition focused IWX wargames (IWX 21.1) revealed several aspects of game play that required more time than had been allocated; several of the optional rules discussed above might also require longer timelines for some steps in the wargame. Section 3.6 of the Core Rules provides estimated windows of time to allow for each step, but operational-level and/or cooperation-focused IWX wargames might require additional time in some of these steps.

2.2.1. Considerations or Changes That Might Require Additional Time

The first time an EXCON group conducts an IWX wargame, it will likely take longer than anticipated simply because of the EXCOM members’ unfamiliarity with the workflow of the game and understanding where players or activities can be expedited and where additional time needs to be allowed. Similarly, the first time a veteran EXCON team conducts a different style of IWX wargame (one at the operational level instead of at the tactical level, or with a competition-focused scenario, or with multiple staff layers all participating on one or both sides), things will take longer than anticipated. Plan accordingly.

If initial planning time is cut short, then additional planning time will need to be allocated to Step 2. Initial planning time might be reduced if IWX itself is conducted over fewer than the standard ten exercise days, or even on a ten-exercise-day model if more of the first week of IWX is spent on academics and training than on planning.

Playtesting revealed that the untimed discussion prompted by EXCON questions, which takes place during Step 4 after the timed presentation, counterarguments, and rebuttal of the two teams, is very valuable in terms of exchange of information and learning. Where possible, extra time should be allowed for this activity.
2.2.1.1. Time Cost Associated with Including Multiple Staff Layers as Players

If the game will include representatives from multiple staff layers, additional time will be required to accommodate their interaction:

- If there is an approval/confirmation briefing, time will need to be allocated for it; see Section 2.2.1.2.
- Inclusion of both an operational- and a tactical-level staff, even if combined as part of the same team, will necessitate additional time for Step 2, perhaps 10–15 more minutes.
- Inclusion of both an operational- and tactical-level staff might affect the way in which Step 3 is conducted but should not change the time required of Step 3.
- Inclusion of both an operational- and tactical-level staff will increase time required for Step 4. Not only will additional time be required to accommodate a wider range of questions and discussion prompted by the EXCON panel of judges, but the individual timed presentation periods will need to be adjusted. Specifically, rather than a single player receiving a single allocation of 5 minutes to present their action (see Core Rules 2.4.3.3), if hybrid presentations are used, more time should be allowed: either a single period of 6 minutes for the two presenters to divide as they please, or two timed periods not to exceed 4 minutes, one for each speaker. The time allocated to rebuttal and counterargument can probably remain unchanged.

2.2.1.2. Time Cost Associated with an Approval/Confirmation Briefing

Section 2.1.1.2 introduces the idea of a “turn 0” approval/confirmation briefing before the formal beginning of the cycle of wargame turns. Even though this briefing would take place outside the formal cycle of wargame steps, it still borrows from the total time during the exercise allocated to wargaming. This time must be accounted for. There are at least three options:

- Treat the approval/confirmation brief as the culmination of the education and planning portion of the IWX and take the necessary amount from that allocation of time, leaving the time allocated to the regular turns of the IWX wargame unchanged.
- Substitute the approval/confirmation brief for one of the turns of the wargame. That is, if there is time allocated for six wargame turns, instead use an approval/confirmation brief followed by only five wargame turns.
- Reduce or omit Step 3 in each regular game turn to make up the time spent on the approval/confirmation briefing.

2.2.2. Considerations Related to the Total Number of Turns or the Number of Turns That Can Be Played Each Day

The Core Rules describe a game of six turns played over three days, with two turns completed each day. Core Rules Section 3.7 already discusses various contingencies that might lead exercise organizers to reduce the total number of turns or compress or expand the number of turns to be completed in an exercise day. All the considerations listed in Section 2.2.1 of this document potentially add to the total time for completing a turn. If the time requirement grows, at some point conducting two complete turns each exercise day become untenable. This can be exacerbated for the very first turn of the game, during which players are still gaining familiarity with the process and EXCON may still be feeling out exactly how much time for each step is optimal for the specific scenario and the specific group of players.

If the time required for each turn precludes completing two turns per day, EXCON organizers are left with three options: reduce to a single turn each day; complete one plus a fractional turn each day; or a use a blend of one, two, or one plus a fractional turn, varying for each wargame day.

2.2.2.1. One Turn per Day

Even with many additional time allocations, a game turn will fit generously within an entire exercise day. Playing only one turn each day leaves ample time for breaks and educational digressions, to take more actions per turn, and to complete steps. However, completing only a single turn each day either extends the total number of days required to complete the IWX wargame or dramatically constrains the total number of turns that can be completed.
2.2.2.2. One Plus a Fractional Turn Each Day
Completing one wargame turn and part of another during each exercise day is a compromise between allowing more time for game activities and still completing a reasonable number of game turns within a reasonable total number of days. Planning for fractional turns might also take advantage of the fact that some turns, or some steps during some turns, take longer than others. For example, perhaps the early turns in a wargame result in lengthy discussions during Step 4 about coordination processes, but once these are sufficiently discussed and understood, later turns move through Step 4 more quickly. Fractional turns might also take advantage of the opportunity to leave teams with “homework” and steps or activities to complete outside of exercise hours. For example, EXCON might end an exercise day at the conclusion of Step 1 of a new turn and inform players that the next exercise day will begin with Step 3, with the players needing to complete Step 2 overnight or first thing in the morning.

If the IWX wargame is conducted using one plus a fractional turn each day, the game can be played on either a fixed schedule or an “as completed” schedule. On a fixed schedule, the time hacks for each game step would still have a fixed target time and an expected degree of progress by the end of each training day. In contrast, on an “as completed” schedule, the game would run until a target approximate time each day, with the amount of progress made toward completion of turns potentially varying each day. So, some days the game might progress through one and three-fifths of a turn, while other days the game might progress through one and one-fifth of a turn. Such an approach gives maximum flexibility to allocate needed time to wargame activities, but risks uncertainty about how many turns can actually be completed overall and would make it difficult to lock in timing for part-time participants (for example, if an interagency representative could participate for two hours each day, such a structure would make it very difficult to tell that representative ahead of time when they should plan to join the game).

2.2.2.3. Blend of Different Numbers (or Fractions) of Turns Each Day
As noted, the very first turn of the IWX wargame has the potential to be the longest turn of the exercise, as the first turn requires full exposition of each of the steps (unless a preview or demonstration turn has taken place; see Core Rules 4.1), and EXCON may still be adjusting workflows and understanding the needs of the specific training audience. Thus, another option is to allow an entire exercise day for the first turn of the wargame and then switch to either two turns per day or one plus a fraction per day for all subsequent turns.

2.3. Adjusting the Scorecards
Though designed and playtested for tactical-level play in a conflict scenario, the IWX wargame action scorecards (Core Rules 2.4.3.8) proved to be resilient in the face of IWX 21.1 and an operational staff presenting actions in a competition scenario.

In an operational-level IWX wargame without a tactical echelon playing, product mockups are not required (such mockups are tactical) and should not be expected by the judges. Judges should score mockups or other products as “not applicable (N/A)” on the scorecard.6

As noted in Section 1.3, actions proposed by players in competition scenarios tend to be both less risky and less ambitious. To calibrate the scorecards to push the average action closer to balanced chances of success, in a competition-focused scenario judges should use +4 as the correction factor on the scorecards rather than the default +3.7

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6 On the right side of the scorecard (quality of planning), the heading “quality of materials/context” includes two items, both of which should be scored “N/A” for a strictly operational-level game.

7 See the discussion in the footnote in Core Rules 2.4.3.8.1.
2.4. Increasing the Intensity in an IWX Wargame

As noted in Section 1.3, competition scenarios can promote risk-aversion. Although this may be realistic, it can lead to quiet and predictable progress during the wargame and reduced learning opportunities. Advanced or experienced players may fall into predictable patterns of actions, whether they are in competition or conflict scenarios. Risk-averse “easy win” actions may be self-evident, but there are certain cues that EXCON might watch for: If all the actions for one side are scored as “effect is easy to achieve with this action” or “magnitude of behavior change sought is tiny,” this might suggest that risk-aversion has set in. In such cases, EXCON may wish to spice things up a little by increasing the intensity of the IWX wargame.

Core Rules Section 2.6.1.2 already includes a lengthy discussion of the use of injects within the game as a form of stimulus for the players. EXCON designers for competition scenarios are urged to have a stable of injects available and ready to use.

Another option to promote aggressiveness in competition scenarios is to include clear and aggressive guidance to the players from a higher echelon. Rather than allowing teams to develop plans that contribute very slightly to vague and long-term competition goals, have their forces tasked with some more specific and more aggressive “gray zone” mission (while still remaining below the threshold of conflict) that they must support. This might involve some sort of clandestine activity, or a short-term goal to change the behavior of a specific influencer, key figure, or leader, or something else. See Section 3.1 for further discussion.

NOTE: Guidance or objectives that demand more aggressive actions could be in place from the outset in initial scenario guidelines, but do not have to be. One option for an inject in a later turn would be the arrival of orders with a new objective or orders to pursue an existing objective more aggressively.

2.5. Map/Game Board Alternatives

As originally envisioned and described in the Core Rules, the IWX wargame is played using a game board or map laid flat on a table or the floor that depicts the locale in which the scenario unfolds and allows placement of unit and capability tokens or game pieces on the map (see Core Rules Section 1.3.3 for the definition of game board; see Core Rules Section 3.8 [Figures 12–15] for examples of the icons used in IWX 20.2). IWX 20.2 included the first full iteration of the IWX wargame and employed a giant laminated plotter map on which presenting players could stand, refer to with a pointer, and move tokens around (see Figure 5 in the Core Rules). This worked well, but it is not the only possible way to present the game board.

2.5.1. Wall Map/Pin the Tail on the Donkey

Because of space constraints, during the wargame during IWX 21.1 EXCON was unable to display a large game board map horizontally on the floor or a large table. However, the space did accommodate a large plotter map hung vertically on one wall of the engagement room, which presenters were asked to stand in front of when presenting. This approach worked well and is a valid alternative to a horizontal map. Presenting players were able to refer to the map directly and were able to place and move sticky notes indicating the various IRCs and their activities. EXCON was able to note the position of other assets and to leave notes describing events from previous turns. Such notes were actually more effective than writing notes and attaching them to a floor map, as it is easier to read notes attached to a vertical surface at or above knee height than to read notes attached to the floor.

Seeing the large wall map adorned with information-laden sticky notes for the first time,
one of the authors described it as “pin the tail on the
donkey style,” an apt characterization.

A vertical game board could be even more effec-
tive with additional materials and preparation: for
example, multiple colors of sticky notes, or the capa-
bility to run a sheet of stickies through a printer and
add printed text (rather than relying on handwriting
of sometimes questionable legibility) or formal ico-
nography would be an improvement. Actually having
the map overlay a bulletin board or some other sur-
face into which pins could be inserted would be a fur-
ther improvement—stickies can and will occasionally
fall off (especially if they’ve been unstuck and restuck
repeatedly), whereas pins are much less vulnerable to
accidental displacement. Further, pins would allow
the attachment of strings, and a single location on the
map could have several strings running from it with
stickies (or just notes or cards) pinned at the ends of
the strings, clearly noting numerous capabilities or
activities at that point (rather than a massive clump
of partially overlapping stickies). Further, pins and
strings can provide good depictions and measure-
ments of radii (for example, when a broadcast radius
or jamming radius becomes operationally relevant).
This section includes some additional considerations for the design and conduct of an IWX wargame. These considerations are things that might affect scenario preparation, that might be emphasized during IWX instructional blocks, or that might affect the way in which (or the choice of locations in which) the wargame is conducted.

3.1. Improving Objectives

As noted in Section 1.4, objectives selected by players in IWX 21.1 and in related playtesting were sometimes somewhat deficient or failed to nest clearly with higher-level objectives. There are a number of steps that might be taken within the IWX wargame to improve objectives. There are two general approaches possible: first, revise the scenario-provided guidance to make it easier for players to connect good objectives; second, guide and instruct players during initial planning and Step 2 planning to improve objectives.

One way in which scenarios might be adjusted to promote better player-determined objectives is to include higher-level guidance or objectives that are more specific and easier to nest with or connect to. There is a temptation, especially when conducting a classified wargame in a realistic scenario context, to simply use existing real regional guidance and objectives. This is exactly what was done in IWX 21.1, and it has the advantage of requiring little work (the objectives and guidance already exist) and having good realism (they are the real guidance and objectives), as well as being something with which players should already be familiar or something that the exercise can help reinforce.

However, even though these objectives are realistic, they might not make for a good wargame. If theater objectives have a theater timescale, it might be very hard to imagine a meaningful increment of progress over the exercise timescale. Good guidance for an IWX wargame (be it at the tactical or the operational level) will specify objectives that can be met or meaningfully improved upon during the exercise timescale that players’ supporting objectives can then contribute to.

Scenario designers do not need to jettison the existing higher-level guidance or objectives, they just need to develop some exercise operation-specific intermediate-level objectives. For example, unpublished RAND research has identified three canonical purposes for security cooperation: building partner capacity, gaining or maintaining access and willingness, and expanding interoperability. Higher-level guidance related to competition within a specific region is likely to include variations of one or more of those themes. Given the focus of IWX on influence, “access and willingness” are likely to be points of emphasis within the game. If existing guidance mentions a desire to increase access or partner willingness, then scenario operation-specific guidance might specify a discrete step in access or willingness that the operation aspires to achieve, such as persuading certain key leaders in a partner nation to agree to a follow-on exercise or event, or getting a partner to demonstrate willingness by committing new forces to a future multinational exercise.

Scenario objectives can also be made easier to connect to by specifying clear and specific objectives for the maneuver portion of the supported effort or for the overall mission. Perhaps the RED force mission involves a hospital ship and a humanitarian mission, with some small increase in goodwill as one of the competition-type mission objectives, which will likely lead players toward safe and modest objectives. That RED force could also be given a clandestine mission, perhaps to use the presence of the forces with the ship as an opportunity to coerce or bribe a specific partner nation politician, or to stir up local animosity against the BLUE force. While still a competition-type objective (intended to stay below the threshold of conflict), the example clandestine mission will push players toward more aggressive gray zone actions that are closer to the threshold of conflict, and to actions that are riskier because of the increased risk of either failing to meet the more
immediate objective or failing to adequately support a clandestine activity through OIE.

In addition to providing players with more provocative and engaging intermediate or mission-specific objectives, players can also be instructed to propose stronger objectives and guided on how to do so. This can be a point of emphasis during exercise instructional blocks, a key area of focus for teams’ mentors, and something that approvers (either the S3 role-players or the recipients of a confirmation brief) push the players to improve.

3.2. Time Represented by Each Game Turn

Core Rules Section 1.3.2 notes that the amount of time represented by a turn within the wargame may vary throughout the game, and further notes that turns in which the tempo of maneuver forces is relatively low may represent longer periods of time. Core Rules Section 2.1.2 notes that the update briefing given in Step 1 of each turn will inform players of the amount of time the coming turn will represent. What considerations should affect EXCON decisions about how much time to make each turn represent?

Several factors matter in this decision. One is the desired span of time within the scenario that the wargame is intended to cover. This, combined with the total number of game turns intended, can give EXCON an initial rough idea of how much time each game turn should represent. However, all turns need not represent equal amounts of time. It would be perfectly reasonable to have a game in which the first turn represented a week of shaping and coordinating activities while marines are underway, and then four turns each representing a single day of action as marines come ashore and begin their operation, with the fifth turn being either another single day of operations or a longer period (three days? a week?) covering transition or consolidation efforts after the core of the operation depending on the progress along the storyline toward completion of the operation.

Other considerations include the pace of operations and the realistic pace of the staff section players represent. During high-intensity phases of operations, such as combat, turns might represent less than a day. However, it would probably be unrealistic to have turns represent any period shorter than the actual time of play (so, 3.5–6 hours) for a turn. Turns might represent longer periods (several days) or might represent a day but have a gap of several days narrated between turns.

A competition scenario rather than a conflict scenario poses additional challenges related to time represented. Conflict unfolds at high tempo and is very dynamic, often including short cycles of action and counteraction both in the information environment and in the spatial domains. Competition generally unfolds much more slowly and across a longer time span. However, as risk increases and activities come closer to the threshold of conflict, or during crises, competition activities can unfold very quickly. The IWX 21.1 scenario (a competition scenario) covered a span of about two months. Turns represented a little over a week of time, focused more on port calls and specific locations in sequence rather than precise and equal blocks of time. This worked reasonably well for the IWX 21.1 scenario. One could also imagine a competition scenario game with more uneven time representation: perhaps a turn (or two turns) of much longer term shaping or preparation efforts (a month or more each), and then short turns surrounding the core events of the game.

As general advice, EXCON should plan time represented per turn in advance and in close consideration of the overall storyline of the scenario (the way in which the scenario is expected to unfold—see Core Rules 3.4.5). Within that storyline, where are the key junctures or milestones at which teams should seek to have an impact? Ideally, each of these key junctures will take place during a single playable turn, and the time represented by each turn should be apportioned so that turns align with these key scenario junctures. In a conflict scenario, these junctures might well be combat progress milestones, and success for one side might be a delay in the other side’s progress toward the next milestone, requiring another turn of actions at the previous milestone. In a competition scenario such as IWX 21.1, each key location to be visited by the supported formation might be a key juncture or milestone, with efforts prior to departure being another possible key juncture. A crisis (perhaps a planned inject?) at one of the key locations might necessitate an extra turn at that location as the two
teams take actions and counteractions more rapidly based on the crisis and the other team’s response.

NOTE: The rules strictly forbid counteractions within the counterarguments and rebuttals (see Core Rules 2.4.3.4) unless these counteractions come from approved battle drills (see Core Rules 2.2.5.1). Because of this, when one side has the opportunity to take actions that are likely to demand a response, it is a good idea to have the time represented by the turns be short enough that actions in response taken in the next turn still feel like response actions, rather than being hopelessly late or overtaken by events.

3.3. IWX and the Wargame On-Site, Off-Site, or as Travel

IWX 20.2 and IWX 21.1 both included three-day periods of IWX wargame play. However, they employed different scenarios, were conducted at different staff levels (tactical versus operational), and occurred in different locations and under different circumstances. These and other differences led to important observable variation in the flow of the two exercises and in the effectiveness of some exercise activities. Discussions with EXCON about observed variations and their impact also led to some speculation about future IWXs: If IWX 20.2 had one characteristic with one result, and IWX 21.1 had different characteristics with a second result, what might be the impact of a future IWX with yet a third characteristic in place? One of the topics of particular emphasis in these discussions had to do with the location of the IWX (and the wargame) and the relative location of the players and the supporting EXCON.

IWX 20.2 was conducted at Marine Corps Base Quantico, Virginia. All EXCON personnel were present live and in person, and all exercise participants were also present in person and had traveled from their regular duty station or office to attend. IWX 21.1 was conducted at Camp Smith, Hawaii, in spaces belonging to FMFPAC. A cadre of EXCON personnel traveled from MCIOC (following a mobile training team model), and various additional MCIOC personnel were available via Secret Internet Protocol Router Network (SIPRNet) video teleconferences (S-VTC) for reachback support. Exercise participants were in the same facility as their duty station, with the attendant pressures and temptations of their regular workstations and duties. The authors have participated in or observed numerous other exercises and training events conducted under a wide range of circumstances and in a variety of styles, which further informed speculation about how different approaches might affect an IWX or an IWX wargame.

These experiences led to several observations.

First, it is better to have as much of the exercise staff/EXCON present in the exercise location as possible. Reachback was adequate to some exercise requirements (like answering requests for information, or delivering a block of instruction), but advising and mentoring participants (especially during the wargame) requires a level of connection and rapport that is much easier to build while onsite. An exceptional mentor or someone with whom many of the participants already have an existing relationship might be able to manage that role remotely. If an IWX wargame is conducted on a mobile training team model, it might be best to recruit mentors and advisors from among personnel local to the exercise locale and have them on-site for the exercise.

Second, there are benefits to a captive audience. If participants have traveled at least some distance and are away from their own duty spaces, then the exercise and the wargame have their full attention. This is especially true for exercises that take place in secure spaces where access to personal electronics is constrained. When participants are in or near their own desks and duties, the temptation to split time between the exercise and those duties is strong. This might be beneficial to the accomplishment of those duties, but it is not beneficial to achieving all of the learning objectives of the exercise. Where possible, participants should be removed from the temptation of their day job, either traveling as part of temporary duty to another location, or moving to a nearby location that is still “off-site”—that is, not in or within easy walking distance of their daily workspace.

If conditions require that an IWX wargame take place within participants’ regular daily workspace, steps should be taken to capture their attention for
the game. This might be accomplished in several ways. One approach would be a clear communication at the beginning of IWX by the formation commander/office manager that participants are excused from their regular duties for the duration of IWX and are expected to devote their full attention to the exercise and wargame. Another approach might involve participants and EXCON making a clear public commitment to each other to devote their full attention to the wargame during the wargame period. This latter approach could be bolstered by a symbolic gesture, either a group pledge of attention and avoidance of distraction read together by all participants at the start of the wargame or something like “stacking phones,” whereby all participants signal their commitment to be present and avoid distraction by making a pile of mobile phones (the principal distractor in many work and social situations) and giving their full attention to the group activity.8 Similarly, players might be dissuaded from routine duties through a system whereby players caught at their own workstations receive symbolic demerits or pay a nominal fine, perhaps $1 each time “caught,” with proceeds collected supporting a nicer lunch on the last day of the exercise. Under that model, if the pool of fines collected is small (indicating good levels of attention capture for the game), EXCON representatives or formation leaders could contribute to funding the nicer lunch as a reward.

8 In secure workspaces where mobile devices are already restricted, some other symbolic gesture would be required.
REFERENCES


ABBREVIATIONS

EXCON exercise control
FMFPAC Fleet Marine Forces, Pacific
IRC information-related capability
IWX Information Warfighter Exercise
MARFORPAC Marine Forces, Pacific
MCIOC Marine Corps Information Operations Center
MEF Marine Expeditionary Force
MIG MEF information group
NDRI National Defense Research Institute
NSRD RAND National Security Research Division
OIE Operations in the information environment
OPLAN operational plan
OR optional rule
RFI request for information
SIPRNet Secret Internet Protocol Router Network
S-VTC SIPRNet video teleconferences
In 2020, RAND researchers developed the Information Warfighter Exercise (IWX) wargame to support IWX training events hosted by the Marine Corps Information Operations Center. This document presents an expanded set of optional rules and considerations for the IWX wargame when the simulated planning staff represents an operational (rather than tactical) headquarters or when the wargame scenario takes place in the competition range of the competition continuum (rather than conflict). These rules and considerations were developed as part of preparation for IWX 21.1 (completed in April 2021), which included both an operational-level planning staff and a competition scenario.

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In 2020, the authors developed the Information Warfighter Exercise (IWX) wargame, which is used by the Marine Corps to provide training on operations in the information environment. This supplement presents optional rules and considerations for conducting the IWX wargame (1) at the operational, rather than tactical, level and (2) with scenarios that focus on competition rather than conflict.

This is not a stand-alone ruleset: It requires users to have and be familiar with The Information Warfighter Exercise Wargame: Rulebook, available at www.rand.org/t/TLA495-1.